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**HOW INSURGENTS WIN: EXAMINING THE DYNAMICS OF MODERN INSURGENCIES**

by

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Insurgent conflict has become the most prevalent form of warfare in the modern era. At the onset of conflict, an insurgent force is usually at a great disadvantage in comparison to the counterinsurgent force. Despite this, modern insurgents often win. What dynamics play into the strategy of the insurgents? How can an insurgent force best use its limited resources to increase its chances of success? This study shows that there are four best practices and two worst practices for insurgents. Beyond the dynamics of specific factors, this study also demonstrates that there are common "causal recipes" that help to explain the outcome of post World War II insurgencies. The analysis process for this thesis uses both a quantitative and qualitative method, using 21 variables to study 70 insurgency cases. Ultimately, this research demonstrates that insurgents must devote few material resources to attacking COIN forces and many material resources to influencing a population's perception. These findings are important to anyone who must understand what actions drive an insurgency toward eventual success or failure. The findings can explain past conflicts and can be applied to ongoing or future conflicts to better understand the dynamics at play.

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# HOW INSURGENTS WIN: EXAMINING THE DYNAMICS OF MODERN INSURGENCIES

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Submitted in partial fulfillment of the
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# ABSTRACT

Insurgent conflict has become the most prevalent form of warfare in the modern era. At the onset of conflict, an insurgent force is usually at a great disadvantage in comparison to the counterinsurgent force. Despite this, modern insurgents often win. What dynamics play into the strategy of the insurgents? How can an insurgent force best use its limited resources to increase its chances of success? This study shows that there are four best practices and two worst practices for insurgents. Beyond the dynamics of specific factors, this study also demonstrates that there are common "causal recipes" that help to explain the outcome of post World War II insurgencies. The analysis process for this thesis uses both a quantitative and qualitative method, using 21 variables to study 70 insurgency cases. Ultimately, this research demonstrates that insurgents must devote few material resources to attacking COIN forces and many material resources to influencing a population's perception. These findings are important to anyone who must understand what actions drive an insurgency toward eventual success or failure. The findings can explain past conflicts and can be applied to ongoing or future conflicts to better understand the dynamics at play.

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# TABLE OF CONTENTS

# LIST OF FIGURES

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# LIST OF TABLES

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# LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| COIN | counterinsurgency |
| FM | field manual |
| QCA | quality comparative analysis |
| SF | special forces |
| SOF | special operations forces |
| UW | unconventional warfare |

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# I. INTRODUCTION

## A. OVERVIEW

Insurgent conflict has become the most prevalent form of warfare in the modern era. At the onset of conflict, insurgent forces are usually at a great disadvantage in comparison to the counterinsurgent (COIN) force. Their lack of material advantage precludes them from directly confronting the COIN force. Their size disadvantage often makes potential supporters question the logic of joining the insurgency. Insurgencies expend limited resources while they struggle to grow and to prove their legitimacy and their potential. Despite this, insurgents often win.[1] What dynamics play into the strategy of the insurgents? How can an insurgent force best use its limited resources to increase its chances of success?

This thesis shows that there are four best practices for insurgent forces. Most notable is the concept that insurgents must provide better governance than the government in the area of conflict. In addition, this thesis shows that two concepts can be characterized as worst practices for insurgents. The data suggests that if the insurgents engage in more coercion/intimidation than the COIN force, then their chances of success decreases drastically. Beyond the dynamics of specific factors, a qualitative approach demonstrates that common "causal recipes" exist, which in part, explain the outcome of the cases of modern insurgencies. To reinforce the findings further, this thesis explores the interaction between the insurgent and COIN force best practices. A set-theoretic approach that uses 70 cases of insurgency and 21 variable indicators will show this correlation.[2] The statistical analysis process for this thesis consists of two overarching procedures: quantitative analysis and qualitative analysis. Ultimately, this research demonstrates that insurgents must devote few resources to attacking government forces

[1] Of the 70 cases studied in this thesis, 41 cases resulted in a political win for the insurgents. In addition to this statistic, historical analysis shows that the insurgent success rate has been rising over the past century.

[2] Set-theoretic methods are approaches to analyzing social reality through the idea of sets and their relations to specific outcomes. See, Carsten Q. Schneider and Claudius Wagemann, *Set-Theoretic Methods for the Social Sciences: A Guide to Qualitative Comparative Analysis* (New York: Cambridge University Press, 2012).

and more resources to manipulating the perception of the population, which in turn will allow the insurgency to grow. These findings are important to anyone who must understand what actions drive an insurgency toward eventual success or failure. The key findings can explain past conflicts, and they can also be applied to ongoing or future conflicts to better understand the dynamics at play.

## B. PURPOSE

> Our aim is not to provide new principles and methods of conducting war; rather we are concerned with examining the essential content of what has long existed, and trace it back to its basic elements.[3]
>
> Carl Von Clausewitz

The purpose of this thesis is to examine the actions of modern insurgents and to determine how their actions affect the outcome of the conflict. By conducting a historical analysis of the cases of insurgency from World War II to 2010, this thesis correlates common actions that may lead to either insurgency success or insurgency failure. What actions have had an impact on the outcome of the conflict? What actions are most influential in insurgent outcomes? Are there similarities among insurgencies that can be applied to future cases of conflict, or is each insurgency truly unique? In essence, this thesis seeks to identify key features from past cases of insurgency by using both a quantitative and a qualitative approach. Although the findings may be valuable to policymakers, strategists, and academics, the primary intended audience is Special Operations Forces (SOF) planners who must understand what actions drive an insurgency toward eventual success. Ultimately, the findings provide these planners with a better understanding of the operating environment surrounding an unconventional warfare (UW) campaign.

Most insurgency-centered research projects focus on the root causes of insurgent conflict. These studies seek to explain two issues. The first issue is why insurgent conflict erupts in a particular area and why it is absent in others; and second, why do some

[3] Carl Von Clausewitz, *On War*, edited and translated by Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1989), 389.

insurgencies succeed while others fail?[4] Both of these approaches seek to draw insight from past conflicts to predict the course of future conflict by focusing on observed preexisting conditions. This study does not attempt to predict where or when political violence or insurgent conflict will happen, other researchers have covered this topic. It does not study what causes an insurgency. Rather, this study looks closely at modern cases of insurgency to determine causal factors for how insurgents succeed through their actions. For a UW planner, it is more important to study how an ongoing conflict will evolve over time based on the actions taken by the insurgent group.

Recommendations of this thesis will come in the form of planning considerations for SOF planners. These considerations are not intended to be a set of stand-alone tools; rather they should be used in conjunction with other UW planning resources. This will ensure a better understanding of any UW operational environment. The applicability may vary under differing circumstances and geography, which would require planners to re-examine the data to determine how well the considerations fit with the changing political geography. This thesis will help make future analysis more complete.

## C. SCOPE OF WORK

Between the end of World War II and 1999, there were roughly five times as many wars within states as wars among states. In addition to the observed frequency of intra-state wars, these wars were just as bloody, if not more, than inter-state wars.[5] Even though not all intra-state wars are characterized as insurgent conflicts, insurgent conflict

[4] For more information on these two issues, see, David E. Thaler, Ryan Andrew Brown, Gabriella C. Gonzalez, Blake W. Mobley, and Parisa Roshan, *Improving the US Military's Understanding of Unstable Environments Vulnerable to Violent Extremist Groups* (Santa Monica, CA: RAND Corporation, 2013); United States Army Special Operations Command, *Human Factors Considerations of Undergrounds in Insurgencies* (Fort Bragg, NC: United States Army Special Operations Command, 2013); Central Intelligence Agency, *Guide to the Analysis of Insurgency* (Washington, DC: Central Intelligence Agency, 2012); James D. Fearon and David D. Laitin, "Ethnicity, Insurgency, and Civil War," *American Political Science Review* 97, no. 1 (February 2003): 75–90; Paul Collier and Dominic Rohner, "Democracy, Development, and Conflict," *Journal of the European Economic Association* 6, no. 2–3 (2008): 531–540; Joseph K. Young, "Repression, Dissent, and the Onset of Civil War: States, Dissidents and the Production of Violent Conflict," *Political Research Quarterly* 1, no. 17 (August 2012): 1–17; Ted R. Gurr, *Why Men Rebel* (Princeton, NJ: Princeton University Press, 1970).

[5] James D. Fearon and David D. Laitin, "Ethnicity, Insurgency, and Civil War," *American Political Science Review* 97, no. 1 (February 2003): 75.

has become the most prevalent form of warfare in the modern era.[6] Modern insurgencies that have occurred since 1945 frame the research pool for this thesis. The scope of this thesis will be limited to 71 insurgency cases analyzed in the RAND study entitled, *Paths to Victory: Detailed Insurgency Case Studies*.[7] This study includes a coded dataset of insurgent actions for each of the 71 cases. Each case meets two requirements that qualify it to be considered an insurgency case for this project. First, the case is an example of a modern insurgency fought between World War II and 2010. Second, the case is resolved with a winner, which is either the insurgent force or the counterinsurgent (COIN) force.[8] Chapter II goes deeper into the specifics of these cases.

Every action an insurgent force can take fits into one of two categories: actions directed at the state or COIN force or actions directed at the population, international community, or the insurgent organization itself. Insurgent actions focused toward the former elements seek to destabilize, degrade, or delegitimize their opponent; actions focused toward the latter elements seek to grow, strengthen, or legitimize the insurgency. The next chapter will include a more in-depth discussion of insurgent actions.

### 1. Research Question

At the onset of conflict, an insurgent force is often at a disadvantage in comparison to the COIN force. Their lack of material advantage precludes them from directly confronting the COIN force. Their size disadvantage often makes potential supporters question the logic of joining the insurgency. Insurgencies expend limited resources while they struggle to grow and prove their legitimacy and their potential. Gordon McCormick describes this as the insurgents' mobilization dilemma:

> Nascent insurgencies often face an opening mobili[z]ation dilemma that can cripple their ability to grow into a mature threat to the state. The source of this dilemma lies in the fact that the great majority of people who are prepared to support an insurgency in principle are only willing to

[6] Thomas X. Hammes, "Why Study Small Wars?," *Small Wars Journal* 1 (April 2005): 2.

[7] Christopher Paul, Colin P. Clarke, Beth Grill and Molly Dunigan, *Paths to Victory: Detailed Insurgency Case Studies* (Santa Monica, CA: RAND Corporation, 2013).

[8] This thesis uses only resolved cases because causal relationships and causal recipes cannot be determined for unresolved cases. One of the 71 cases falls into the unresolved category.

> do so conditionally, depending not only on the costs and benefits of their alternatives but the probabilities they assign to each side's success.[9]

These dynamics highlight the underlying questions of this thesis. How can an insurgent force best use its limited resources to increase its chance of success? Is it more effective to display strength by attacking government forces or is it more effective to portray strength by manipulating the perception of the population? Either way, the insurgent force must act in order to grow. Each course of action has its advantages and disadvantages. U.S. Special Forces (SF) doctrine states, "[i]f the irregular force begins noticeable operations too early, opposition forces may concentrate efforts on the irregular force and diminish their chances of mission success."[10] Likewise, a resistance force operating stagnantly will not demonstrate its commitment to resolving the population's grievances. The insurgency will fail to gain support from the populace. This too is acknowledged in SF doctrine. FM 3–05.130 states, "...successful missions lead to increases in recruitment, leaders should initially select confidence targets—those with a high probability of success and low risk to the irregular force."[11]

### *a. What Does the Literature Say about Insurgencies?*

From a military standpoint, this thesis does not aim to discover ways to prevent conflict; it is more concerned with managing conflicts that arise. Nonetheless, conflict prevention is a valuable field of research. The literature on insurgencies is extensive and extremely diverse. An extensive amount of research exists on the political environment in which insurgent conflicts take place. These studies take a holistic look at the risk factors

[9] Gordon H. McCormick and Frank Giordano, "Things Come Together: Symbolic Violence and Guerrilla Mobilisation," *Third World Quarterly* 28, no. 2 (2007): 295.

[10] United States Army John F. Kennedy Special Warfare Center and School, *Army Special Operations Forces Unconventional Warfare* (Field Manual 3–05.130) (Washington, DC: Headquarters Department of the Army, 2008), 4–9.

[11] United States Army John F. Kennedy Special Warfare Center and School, *Army Special Operations Forces*, 4–9.

for political violence.[12] This project takes a different approach by focusing on the dynamics of the insurgency itself. This section will focus on literature that attempts to tackle the questions surrounding how insurgencies operate, evolve, and end. The literature review is divided into five categories to explore five separate insurgent dynamics; these are insurgent safe havens, the population, insurgent strategy, conflict duration, and external participants. These are recurring themes throughout the literature on insurgencies and they will be recurring themes throughout this thesis.

(1) On Insurgent Safe Havens. If insurgents have an established and secure safe haven from which to operate, their chances of success may increase greatly. John McCuen states in his book entitled *The Art of Counter-Revolutionary War*, establishing base areas and strategic bases is a vital principal of revolutionary strategy.[13] In this book, McCuen talks about how the area of conflict is divided into three categories. These are, the area controlled by the revolutionary force, the area controlled by the government, and the contested space in between. He states that the objective for the insurgents is to expand their controlled area and, in turn, shrink the area controlled by the government; this is an insurgent strategy for success.[14]

Mao also argues the importance of safe havens for insurgents. In one of his writings, he states:

> ...it is impossible to sustain guerrilla war in the enemy's rear without base areas... What, then are the base areas for a guerrilla war? They are the strategic bases on which a guerrilla war relies for carrying out its strategic

[12] For more information on the risk factors for insurgent violence, see: David E. Thaler, Ryan Andrew Brown, Gabriella C. Gonzalez, Blake W. Mobley, and Parisa Roshan, *Improving the US Military's Understanding of Unstable Environments Vulnerable to Violent Extremist Groups* (Santa Monica, CA: RAND Corporation, 2013); United States Army Special Operations Command, *Human Factors Considerations of Undergrounds in Insurgencies* (Fort Bragg, NC: United States Army Special Operations Command, 2013); Central Intelligence Agency, *Guide to the Analysis of Insurgency* (Washington, DC: Central Intelligence Agency, 2012); James D. Fearon and David D. Laitin, "Ethnicity, Insurgency, and Civil War," *American Political Science Review* 97, no. 1 (February 2003): 75–90; Paul Collier and Dominic Rohner, "Democracy, Development, and Conflict," *Journal of the European Economic Association* 6, no. 2–3 (2008): 531–540; Joseph K. Young, "Repression, Dissent, and the Onset of Civil War: States, Dissidents and the Production of Violent Conflict," *Political Research Quarterly* 1, no. 17 (August 2012): 1–17; Ted R. Gurr, *Why Men Rebel* (Princeton, NJ: Princeton University Press, 1970).

[13] John J. McCuen, *The Art of Counter-Revolutionary War; The Strategy of Counter-Insurgency* (Harrisburg, PA: Stackpole Books, 1966), 54.

[14] McCuen, *The Art of Counter-Revolutionary War*, 53.

> tasks as well as for achieving the goals of preserving and expanding oneself and annihilating or expelling the enemy... There have been in history many peasant wars of the roving insurgent type, but they all failed. In the present age of advanced communications and technology, it is more than ever an entirely groundless illusion to attempt to win victory after the fashion of the roving insurgents.[15]

More recent literature focuses on how ungoverned spaces can provide insurgents with a secure place from which to operate. These areas may be within the area of conflict or within neighboring areas.[16] Either way, the results may be the same. Insurgents with an area where they are free to train, plan, and reorganize may have a better chance of success over the insurgents that do not. These are by no means the only literary works covering the use of safe havens by insurgent groups. Almost every book, article, or research project on the topic of insurgent conflict will contain a section that highlights the importance of safe havens. The works included in this thesis simply state this dynamic in the most powerful way.

(2) On the Population. A pivotal study *Rebellion and Authority; an Analytic Essay on Insurgent Conflicts*, by Leites and Wolf, describes an insurgency as an operating system.[17] This model suggests all insurgencies receive inputs from the environment, and this, in turn, is converted into outputs or actions. This process is cyclical and constantly changing. Inputs include everything that the insurgency needs to survive, grow, and operate. Inputs mainly come from the population. Outputs include actions directed at both the population and the government/COIN force. In turn, these actions feed back into the environment and shape what inputs the insurgency receives in the next cycle.[18] This study also talks about the damage both sides inflict on the population. The authors state that individuals within the population change sides

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[15] Mao Zedong, "Problems of Strategy in Guerrilla War Against Japan," in *Selected Military Writings of Mao Zedong* (Peking [Beijing]: Foreign Languages Press, 1963), 135.

[16] See, Robert D. Lamb, *Ungoverned Areas and Threats from Safe Havens* (Washington, DC: Office of the Deputy Assistant Secretary of Defense for Policy Planning, 2008); Daniel Byman, Peter Chalk, Bruce Hoffman, William Rosenau, and David Brannan, *Trends in Outside Support for Insurgent Movements* (Santa Monica, CA: RAND Corporation, 2001).

[17] Nathan Leites and Charles Wolf, *Rebellion and Authority; an Analytic Essay on Insurgent Conflicts* (Chicago: Markham Publishing Company, 1970).

[18] Leites and Wolf, *Rebellion and Authority*, 174.

depending on the costs associated with their decision. They make their decisions out of fear.[19] This would suggest that insurgents should recruit from the population with intimidation, if necessary. While these are only a few concepts covered in this study, it is important to this thesis because it supports the premise that insurgent actions shape how a conflict evolves. Additionally, based on feedback, an insurgency can adapt its actions to maximize its likelihood of success.

In his book entitled *Rules for Radicals: a Primer for Realistic Radicals*, Saul David Alinsky argues that the primary task for any insurgent or outside organizer is to overcome suspicion and establish legitimacy among the local populace. He goes on to argue that next, "the organizer must then agitate the local population by stirring resentments and hostilities in order to overcome apathy and encourage participation."[20] Alinsky suggests that this is one way for insurgents to overcome the free rider problem. Mark Irving Lichbach discusses this free rider problem more; he calls it the rebel's dilemma.[21] This dilemma suggests that rebellion should never occur. If everyone expects to benefit from the outcome of the conflict, then there is little reason to pay the costs associated with joining the insurgents. In Lichbach's book, he discusses solutions to the problem and provides evidence that "the processes used in overcoming the problem of collective action in protest and rebellion are similar to the processes used in overcoming problems of collective action in any given situation, not just conflict."[22]

(3) On Insurgent Strategy. Ivan Arreguín-Toft explains how the weak win wars. Arreguín-Toft suggests that both actors can fight in either a direct or an indirect fashion. When both actors take the same approach, the strong actor wins. On the other hand, when the two actors pursue different approaches, the weak actor wins.[23] Figure 1 illustrates these findings. While this study provides a useful explanation of why

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[19] Leites and Wolf, *Rebellion and Authority*, 127.

[20] As quoted by, United States Army Special Operations Command, *Irregular Warfare Annotated Bibliography* (Fort Bragg, NC: United States Army Special Operations Command, 2011), 7.

[21] Mark Irving Lichbach, *The Rebel's Dilemma* (Ann Arbor, MI: University of Michigan Press, 1998), 15.

[22] United States Army Special Operations Command, *Irregular Warfare Annotated Bibliography*, 19.

[23] Ivan Arreguín-Toft, "How the Weak Win Wars: A Theory of Asymmetric Conflict," *International Security* 26, no. 1 (2001): 93–128.

insurgencies adopt the indirect approach, it does not address specific actions they must take within this approach. Should insurgents take an indirect approach by attacking the government or should they indirectly weaken the government by providing support and services to the population?

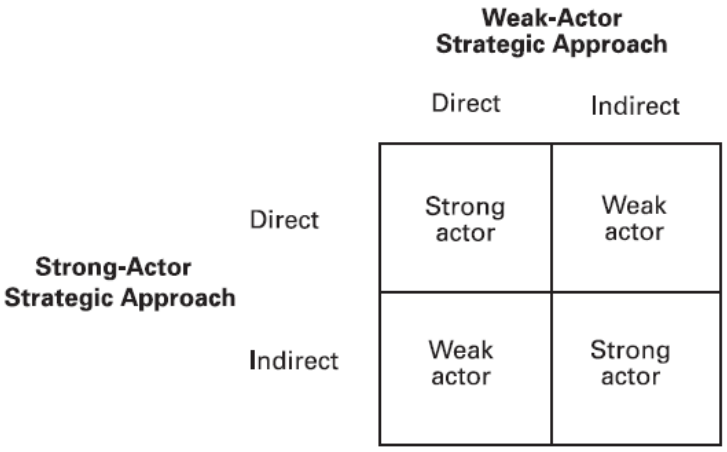


Figure 1. Expected Effects of Strategic Interaction on Conflict Outcomes (Expected Winners in Cells).[24]

Insurgents must determine which strategy to use depending of their specific circumstances. The interactions between the insurgency, the state, and the population are important aspects of any conflict. Insurgents can focus either on positively engaging the population or fighting rival elements. Some researchers study historical cases to explain how different strategies affect the outcome of a conflict, and some researchers have developed models to simulate the different strategies. One historical study from which this thesis takes its data looks at actions that the COIN force controls. *Paths to Victory* identifies 24 COIN concepts that were tested against 59 core cases of insurgency. The findings in the report indicate that 17 of the 24 concepts had strong support to suggest that they are effective against an insurgent force. Three of these concepts are considered a priority (tangible support, commitment and motivation, and flexibility and adaptability)

[24] Arreguín-Toft, "How the Weak Win Wars," 108.

because they were present in every case where the COIN force won. One concept ("crush them") had strong evidence against its effectiveness.[25] Are there also insurgent concepts that increase their effectiveness?

Shifting now to research that focuses on modeling different strategies; two writings by Scott D. Bennett simulate the interactions between the actors in a conflict. "Governments, Civilians, and the Evolution of Insurgency: Modeling the Early Dynamics of Insurgencies" and "Recruiting Your Way to Victory: Varying Strategies in Insurgent/Counterinsurgent Warfare" both model the dynamics of an insurgency using computer simulations.[26] The first simulation suggests that it is more important for the COIN force to avoid collateral damage than it is to capture members of the insurgency during an operation.[27] This suggests a population focused strategy. The first study focuses heavily on the COIN force so Bennett went on to complete a second study, which focuses on the insurgency. Bennett's second study adds the option for insurgents to recruit supporters rather than undertaking military attacks, which reflects the idea that an insurgent force should also focus its actions on the population and not on the government. In addition, Bennett's study found that recruitment is more beneficial for both sides rather than undertaking military action.[28]

(4) On Conflict Duration. In "Things Come Together," Gordon McCormick and Frank Giordano explore how an insurgency survives in its beginning stages. The study identifies that every insurgency has an opening mobilization dilemma and that the insurgency must grow in order to pass its "insurrection point."[29] This is the point at which the insurgency is expanding because of the bandwagon effect. They suggest that to reach the insurrection point, an insurgency must:

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[25] Christopher Paul, Colin P. Clarke, Beth Grill and Molly Dunigan, *Paths to Victory: Lessons from Modern Insurgencies* (Santa Monica, CA: RAND Corporation, 2013), xix–xxii.

[26] Scott D. Bennett, "Governments, Civilians, and the Evolution of Insurgency: Modeling the Early Dynamics of Insurgencies," *Journal of Artificial Societies and Social Simulation* 11, no. 4 (October 2008): 1–7; Scott D. Bennett, "Recruiting Your Way to Victory: Varying Strategies in Insurgent/ Counterinsurgent Warfare," August 2010, http://dx.doi.org.libproxy.nps.edu/10.2139/ssrn.1661172.

[27] Bennett, "Governments, Civilians, and the Evolution of Insurgency," 6.

[28] Bennett, "Recruiting Your Way to Victory," 14.

[29] McCormick and Giordano, "Things Come Together," 305.

> depend on its ability to create a false reality through the perceptual effect of its armed actions. To the degree that it is able to do so, it will have created the opportunity to turn its generated images into facts and resolve its opening mobili[z]ation dilemma. While the insurgency must still be able to effectively exploit this opportunity to win, it will have overcome a primary barrier to its success.[30]

(5) On External Participants. External participants may play a major role in insurgent conflict. This dynamic may aid the insurgents in several different ways. With few resources, insurgents may gain strength and capability by receiving money, equipment, and training from outside actors. External military elements may even engage in active conflict alongside or even on behalf of the insurgents. This type of support may provide the insurgent force with an incredible advantage over what they would have had otherwise. In *The Art of Counter-Revolutionary War*, McCuen describes outside support as a vital principal of revolutionary war. In this book, he states, "Outside support is often decisive in a revolutionary war."[31] He goes on to say, without support from an external participant, it is unlikely that either side will prevail or the conflict will result in a stalemate. McCuen quotes both Mao and Vo Nguyen Giap to provide support for his claim that outside support is a fundamental insurgency dynamic. Mao wrote, "International support is necessary for the revolutionary struggle today in any country or of any nation."[32] Giap said during a lecture in 1950:

> ...We will have to receive aid from abroad in order to be able to carry out the counter-offensive, but to count solely upon it without taking into account our own capabilities is to show proof of subjectivism and lack of political conscience. But on the other hand we cannot deny the importance of such aid.[33]

Some researchers argue that the nature of external support for insurgents has shifted in recent years. They state that outside *state* support is much less necessary now than it was before the end of the Cold War. Five researchers from RAND produced a

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[30] McCormick and Giordano, "Things Come Together," 318.

[31] McCuen, *The Art of Counter-Revolutionary War*, 69.

[32] Mao Zedong, *On the Protracted War* (Peking [Beijing]: Foreign Languages Press, 1960), 239.

[33] Giap as quoted in McCuen, *The Art of Counter-Revolutionary War*, 65.

report titled, *Trends in Outside Support for Insurgent Movements*. In this study, the authors concluded that other types of outside support play an increasing role in insurgent conflict.

> Indeed, state support is no longer the only, or necessarily the most important, game in town. Diasporas have played a particularly important role in sustaining several strong insurgencies. More rarely, refugees, guerrilla groups, or other types of non-state supporters play a significant role in creating or sustaining an insurgency, offering fighters, training, or other important forms of support.[34]

### *b. What Gaps are in the Literature?*

It is evident from the literature covered in the previous section that more research must be conducted to determine how insurgencies influence the course of a conflict by using different tactics. The literature above may answer questions about why insurgencies start, why insurgencies end, how insurgencies operate, and even how a COIN force wins. However, the literature does not adequately address specific insurgent actions and their results. This is the principal gap that this thesis seeks to fill.

Historical case studies of a few specific conflicts only provide a portion of the picture. They do suggest how the insurgent prevailed in that specific case, but fail to show if the findings are universal. This thesis fills another gap by providing insight into a wide range of cases across different regions, timeframes, and cultures.

Some literature suggests that the preexisting conditions may decide the outcome of intra-state conflict.[35] Therefore, the outcome can be may be determined before fighting has even begun. This thesis, however, assumes that the outcome of a conflict is not necessarily predetermined. While preexisting conditions or risk factors play a role in starting insurgent conflict, the actions of the insurgent force and the COIN force determine the outcome.[36] Studying the political and social environment surrounding a

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[34] Byman et al., *Trends in Outside Support for Insurgent Movements*, xiii.

[35] For example, see, Frank H. Zimmerman, "Why Insurgents Fail: Examining Post-World War II Failed Insurgencies Utilizing the Prerequisites of Successful Insurgencies as a Framework" (master's thesis, Naval Postgraduate School, 2007).

[36] Chapter III includes a supplementary analysis on insurgent/COIN force interactions. The methodology section, to follow, discusses this analysis in more detail.

conflict is only half of the process in understanding how insurgents win. While it is important to understand that factors like poor governance, disenfranchised minorities, poverty, and ungoverned space help decision makers recognize where and why conflict exists, it will not help decision makers shape the outcome of ongoing conflicts. There is no doubt that the insurgent's narrative and motivations are initially vital for mobilizing support and gaining legitimacy. Over the long-term however, other factors play into the dynamics of every insurgent conflict.

## 2. Hypotheses

This thesis separates the theories discussed in the previous literature review into five independent hypotheses. Each hypothesis focuses on a specific insurgent dynamic that may affect the outcome on a conflict. The five most influential insurgent dynamics are safe havens, the population, insurgent strategy, conflict duration, and external participants. The primary focus of this project is to determine the soundness of the five hypotheses. This thesis also seeks to understand the insurgent best practices. It is possible that a combination of variables or a few specific variables are always necessary to show a correlation between insurgent actions and the outcome of the conflict. The five hypotheses include:

- Hypothesis 1: Insurgents require a safe haven from which to operate.
- Hypothesis 2: The insurgent force cannot be perceived as worse than the COIN force in the area of conflict.
- Hypothesis 3: It is better for insurgents to provide or ensure basic services for the population than to focus on discrediting or delegitimizing the COIN force/government.
- Hypothesis 4: Longer conflict duration does not necessarily correlate with an insurgent win.
- Hypothesis 5: External support is neither necessary nor sufficient.

One main counterargument exists that opposes the hypotheses offered above. One could argue that insurgent actions have little influence on the outcome of an insurgency. This argument may suggest that the actions of the government or COIN force are what determine the outcome of a conflict. In most cases, the government has more forces, more equipment, more security, and more support. Simply because they are in control of

the state, the government has some level of legitimacy. The government may also control a majority of the resources upon which the population depends. Lastly, the government has a media advantage and can access the population more openly and more frequently than the insurgents. This suggests that the government may be able to gain supporters from the population more easily if their messages are effective or if they address the reasons for the insurgency.

One rebuttal to this argument is that the insurgents have the information advantage. The insurgents know where the COIN force is located, and they can pick the time and place in which to act. They also hold the initiative. If the insurgents fear defeat, they can choose not to act. The government does not have the benefit of knowing where the insurgents are located. Therefore, the government's advantages of resources, media, security, and support, do not aid their efforts in countering the insurgents. Even though this is a two-sided game, the actions of the insurgents may determine the pace and direction of the conflict.

## 3. Methodology

This thesis uses both a quantitative and qualitative approach to determine if there is a causal relationship between the actions of modern insurgents and the outcome of the conflicts in 70 modern cases using set-theoretic analysis methods. The main question to be addressed is which actions play a role in determining insurgent success? This study is explicitly different from the RAND study, discussed earlier, because it focuses solely on actions that the insurgents influence, rather than actions of a COIN force. Data correlation, using 21 independent variables, will determine the best and worst insurgent practices and reveal a set of causal recipes, which will define how an insurgency can best use its limited resources. After these factors are identified, this thesis will conduct a brief supplementary analysis, using the same methods, to compare the interactions between the insurgent and COIN force best practices.[37] These interactions are critical in developing a full understanding of the dynamics within any conflict; however, this thesis only attempts

[37] COIN force best practices are pulled from, Paul et al., *Paths to Victory: Lessons from Modern Insurgencies*, xxvi.

to analyze them within the scope of this study. The primary focus remains on the insurgent dynamics. The interaction dynamics require further research. Data was collected from several established and reputable sources. Predominantly, this thesis uses the dataset accompanying *Paths to Victory: Detailed Insurgency Case Studies*.[38]

### *a. Dependent Variables*

The primary dependent variable for this thesis is the outcome of the conflict as identified in the *Paths to Victory* study. The aforementioned project categorizes the cases of insurgency in terms of either a COIN win or a COIN loss. This thesis uses the same assessment but reverses the determination to identify each case as either an insurgent win or loss. Many of the cases produced complicated outcomes. That is, when the conflict ended the winner was still unclear. In order to include these cases in the research, the *Paths to Victory* study used the flowchart illustrated in Figure 2 to determine if these cases could be considered a COIN win or loss.[39] This thesis also adopts this approach to determine the conflict outcome from the insurgent standpoint.[40]

[38] Paul et al., *Paths to Victory*: *Lessons from Modern Insurgencies*.

[39] "First, for each case, we asked whether the government targeted by the insurgency stayed in power through the end of the conflict and whether it retained sovereignty over the region of conflict. If insurgents either deposed (or otherwise led to the fall of) the government or won de facto control of a separatist region, then the COIN force did *not* win. If the government remained in power and the country intact, then we further considered whether the government had been forced to (or chose to) make major concessions to the insurgents, such as through power sharing or loss of territory or other sovereign control, or was otherwise forced to yield to insurgent demands. If the government stayed in power, the country remained intact, and no major concessions were granted to the insurgents, then the COIN force unambiguously won. If, however, major concessions were made, then the outcome was mixed. In all cases, what constituted a 'major' concession and who (the COIN force or the insurgents) had the better of a mixed outcome was determined at the discretion of the individual case analyst and was based on the distinct narrative of that case." Paul et al., *Paths to Victory: Lessons from Modern Insurgencies*, 16–20.

[40] See Chapter II for the determined outcome in each of the 70 cases.

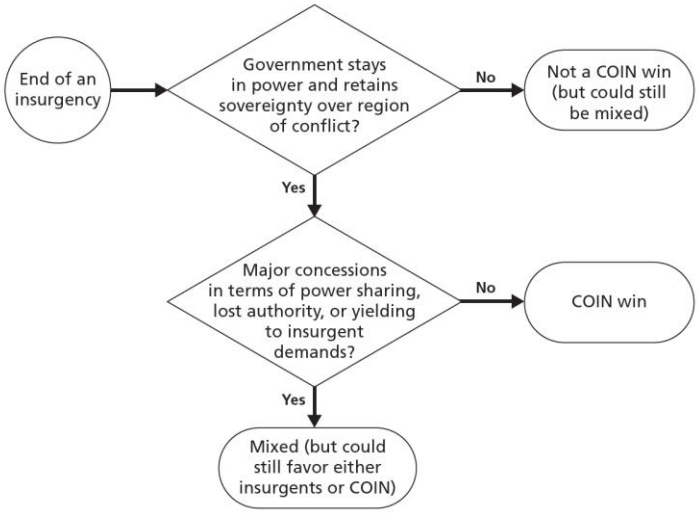


Figure 2. Logic for Assignment of Case Outcomes[41]

### *b. Independent Variable Groupings*

All the independent variables used in this thesis are combined into five categories, which this study calls independent variable groupings. These groupings are labeled H1–H5 and each relates back to one of the five hypotheses. For example, grouping H1 relates to hypothesis 1, and so on. All of the variable groupings contain several specific actions (indicators) that are coded in the dataset to be used during the correlation process. Chapter II covers the complete list of factors and their subset indicators. The framework for these variables was partially derived from a list of insurgent actions found in the *Guide to the Analysis of Insurgency*.[42] The five independent variable groupings are:

- H1, insurgents established a reliable and secure safe haven.
- H2, insurgents effectively shaped the perception of the population.
- H3, insurgents effectively displaced government structure and functions.
- H4, insurgents effectively managed the duration of the conflict.
- H5, insurgents enlisted help from an external participant.

[41] From, Paul et al., *Paths to Victory: Lessons from Modern Insurgencies*, 17.

[42] Central Intelligence Agency, *Guide to the Analysis of Insurgency* (Washington, DC: Central Intelligence Agency, 2012), 27.

### *c. Statistical Analysis*

The statistical analysis process for this thesis consists of two overarching procedures; these are quantitative analysis and qualitative analysis. Each type of analysis requires two steps and each step is used to refine the results and test their robustness. First, the quantitative approach focuses on frequency analysis and proportion comparison. This procedure is used to narrow the number of variables and eliminate any factors that show weak results. Second, the qualitative approach uses the remaining strong variables to determine which factors show a direct correlation with the desired outcome, which is an insurgency win in this study. This is achieved by using a set-theoretic method called qualitative comparative analysis (QCA). Two types of QCA are used, the crisp set method and the fuzzy set method.[43] The crisp set method uses binary indicators, whereas, the fuzzy set method uses percentage indicators. By using both of these methods, this thesis will be able to determine the durability of the key findings.

## D. ORGANIZATION OF THESIS

This thesis is organized into four interrelated chapters. The following chapter covers the approach to data analysis. First, it identifies and defines the cases of insurgency, the actions of the insurgencies in each case, and what constitutes a case to be categorized as either an insurgent win or loss. The second chapter also outlines both the quantitative and qualitative data analysis processes. The third chapter discusses the key findings of the research project by illustrating the data correlation results and comparing the results with the hypotheses offered in Chapter I. The third chapter also offers the broader findings from the quantitative and qualitative analysis processes, to include the validity of the 21 factors and the insurgent best and worst practices. The fourth and final chapter discusses the larger significance to the insurgency field of research. It suggests recommendations for evaluating ongoing insurgencies, UW planning considerations, and areas of further research. Finally, the thesis includes five appendices. Appendix A

[43] See, Nicolas Legewie, "An Introduction to Applied Data Analysis with Qualitative Comparative Analysis (QCA)," *Forum: Qualitative Social Research* 14, no. 3 (September 2013) and Rick Davies, "Qualitative Comparative Analysis," BetterEvaluation, last modified January 13, 2014, http://betterevaluation.org/evaluation-options/qualitative_comparative_analysis.

contains the frequency quad-charts for all five independent variable groupings. Appendix B contains the cross-tabulation charts used to determine the strength of each factor. Appendix C includes the qualitative analysis results, including the full list of causal recipes. Appendix D shows the results of a sensitivity analysis, which determines the robustness of the key findings. Appendix E includes a quick reference guide, which contains the hypotheses, independent variable groupings, and the 21 insurgent factors.

# II. APPROACH TO DATA ANALYSIS

## A. THE CASES AND THEIR OUTCOMES

This thesis starts by looking at all 71 cases of modern insurgencies, which are identified in the *Paths to Victory* study. Only modern insurgencies are studied because the scope of this thesis is limited by the available cases in the *Paths to Victory* dataset. No insurgency that occurred before World War II is used in this thesis. This study identifies that one case does not meet the second requirement stated in the first chapter. La Violencia in Colombia (1948–1958) was excluded because its outcome was mixed and a holistic winner could not be determined. This limits the study to 70 remaining modern cases of insurgency.

This thesis adopts the outcome assessment found in the *Paths to Victory* data to determine the results of the 70 cases. These binary outcomes act as the dependant variables for the analysis process. The RAND data codes each case as either a holistic COIN win or loss. This thesis uses the same assessment but reverses the determination to identify each case as either an insurgent win or loss. For the COIN force, this thesis defines a win as winning without conceding "major" concessions to the insurgents.[44] If the COIN force did not achieve this, the case is coded as an insurgent win. Likewise, if the data identifies that the COIN force won in a stable and lasting way, the case is coded as an insurgent loss. Table 1 includes the complete list of cases and their outcome. According to this assessment, 41 of the 70 cases resulted in an insurgent win.

Table 1. 70 Modern Cases and Their Outcome

| Case | Date Span | Outcome |
|---|---|---|
| UK in Palestine | 1944–1947 | Insurgent Win |
| Greek Civil War | 1945–1949 | Insurgent Loss |
| Indochina | 1946–1955 | Insurgent Win |
| Philippines Huk Rebellion | 1946–1956 | Insurgent Loss |
| Malaya | 1948–1955 | Insurgent Loss |

[44] Major concessions may include power-sharing, loss of authority, or yielding to insurgent demands. Paul et al., *Paths to Victory: Lessons from Modern Insurgencies*, 17.

| Case | Date Span | Outcome |
|---|---|---|
| Kenya | 1952–1956 | Insurgent Loss |
| Algerian Independence | 1954–1962 | Insurgent Win |
| Cyprus | 1955–1959 | Insurgent Win |
| Cuba | 1956–1959 | Insurgent Win |
| Tibet | 1956–1974 | Insurgent Loss |
| Oman | 1957–1959 | Insurgent Loss |
| Indonesia/Darul Islam | 1958–1962 | Insurgent Loss |
| Laos | 1959–1975 | Insurgent Win |
| Guatemala | 1960–1996 | Insurgent Loss |
| Namibia | 1960–1989 | Insurgent Win |
| South Africa | 1960–1990 | Insurgent Win |
| South Vietnam | 1960–1975 | Insurgent Win |
| Angolan Independence | 1961–1974 | Insurgent Win |
| Eritrea | 1961–1991 | Insurgent Win |
| Kurdistan | 1961–1975 | Insurgent Loss |
| Guinea-Bissau | 1962–1974 | Insurgent Win |
| Mozambique Independence | 1962–1974 | Insurgent Win |
| Yemen | 1962–1970 | Insurgent Win |
| Uruguay | 1963–1972 | Insurgent Loss |
| Zimbabwe/Rhodesia | 1965–1980 | Insurgent Win |
| Oman Dhofar Rebellion | 1965–1975 | Insurgent Loss |
| Cambodia | 1967–1975 | Insurgent Win |
| Argentina | 1969–1979 | Insurgent Loss |
| Northern Ireland | 1969–1999 | Insurgent Loss |
| Jordan | 1970–1971 | Insurgent Loss |
| Bangladesh | 1971 | Insurgent Win |
| Philippines (MNLF) | 1971–1996 | Insurgent Loss |
| Baluchistan | 1973–1978 | Insurgent Loss |
| Angola (UNITA) | 1975–2002 | Insurgent Loss |
| Lebanese Civil War | 1975–1990 | Insurgent Win |
| Indonesia/East Timor | 1975–2000 | Insurgent Win |
| Western Sahara | 1975–1991 | Insurgent Loss |
| Indonesia Aceh | 1976–2005 | Insurgent Loss |
| Mozambique (RENAMO) | 1976–1995 | Insurgent Loss |
| Sri Lanka | 1976–2009 | Insurgent Loss |
| Nicaragua (Somoza) | 1978–1979 | Insurgent Win |
| Afghanistan (anti-Soviet) | 1979–1992 | Insurgent Win |
| Kampuchea | 1979–1992 | Insurgent Win |
| El Salvador | 1979–1992 | Insurgent Loss |

| Case | Date Span | Outcome |
|---|---|---|
| Peru | 1980–1992 | Insurgent Loss |
| Somalia | 1980–1988 | Insurgent Win |
| Nicaragua (Contras) | 1981–1990 | Insurgent Win |
| Senegal | 1982–2002 | Insurgent Loss |
| Sudan | 1984–2004 | Insurgent Win |
| Turkey (PKK) | 1984–1999 | Insurgent Loss |
| Uganda (ADF) | 1986–2000 | Insurgent Loss |
| Papua New Guinea | 1988–1998 | Insurgent Win |
| Liberia | 1989–1997 | Insurgent Win |
| Moldova | 1990–1992 | Insurgent Win |
| Rwanda | 1990–1994 | Insurgent Win |
| Sierra Leone | 1991–2002 | Insurgent Loss |
| Afghanistan (post-Soviet) | 1992–1996 | Insurgent Win |
| Algeria (GIA) | 1992–2004 | Insurgent Loss |
| Croatia | 1992–1995 | Insurgent Loss |
| Georgia/Abkhazia | 1992–1994 | Insurgent Win |
| Nagorno-Karabakh | 1992–1994 | Insurgent Win |
| Bosnia | 1992–1995 | Insurgent Win |
| Tajikistan | 1992–1997 | Insurgent Win |
| Burundi | 1993–2003 | Insurgent Win |
| Chechnya I | 1994–1996 | Insurgent Win |
| Afghanistan (Taliban) | 1996–2001 | Insurgent Win |
| Kosovo | 1996–1999 | Insurgent Win |
| Nepal | 1996–2006 | Insurgent Win |
| Zaire (anti-Mobutu) | 1996–1997 | Insurgent Win |
| Congo (anti-Kabila) | 1998–2003 | Insurgent Win |

## B. ACTIONS OF THE INSURGENTS

Early in the study, it was determined that the list of insurgent factors would need to be narrowed to a number that could be realistically analyzed within the scope of this thesis. The method for reducing the number of independent factors is a three-step process. First, all of the factors included in the RAND study were reviewed and all factors pertaining to the COIN force, government, political situation, or social system were rejected. This thesis only retains factors that are related to the dynamics of the insurgents. This step reveals roughly 100 factors, which is still too many to analyze using

the methods in this thesis. Step two merges similar factors and eliminates any factor that does not relate, to some extent, to one of the five hypotheses. This step reveals 21 insurgent concepts. These factors act as the independent variables for both the quantitative and qualitative analysis methods. Each factor was assigned to a specific hypothesis, which forms the independent variable groupings. This is a critical step in the analysis process because each factor acts as an indicator for a specific hypothesis. Step three is conducted during the quantitative analysis process. This process analyzes the 21 independent variables and only the factors that demonstrate strong support for or against their respective concept are used in the final qualitative comparative analysis (QCA) process. Table 2 includes the 21 insurgent actions, their factor number, and the independent variable grouping of each. For brevity reasons, this thesis sometimes uses an abbreviated form of the word "factor." The factor numbers, listed in Table 2, are used in place of the entire word; for example, "f1" is used to replace "factor 1."

Table 2. List of Insurgent Actions Used

| Variable Grouping | Factor Number | Concept |
|---|---|---|
| H1 | f1 | Parts of the area of conflict were no-go or otherwise denied to the COIN force |
| H1 | f2 | Military action outside of host-nation borders (if insurgents relied on cross-border support or havens) |
| H1 | f3 | Terrain played a major role because it provided sanctuary for the insurgents (COIN forces could not/would not enter terrain) |
| H2 | f4 | Insurgents collateral damage not perceived by population in area of conflict as worse than COIN force |
| H2 | f5 | Insurgents exploited deep-seated/intractable issues to gain legitimacy |
| H2 | f6 | Insurgents demonstrated potency through impressive or spectacular attacks |
| H2 | f7 | Insurgents engaged in more coercion/intimidation than COIN force |
| H2 | f8 | Insurgents employed unconstrained violence (against civilians) to create and sustain insecurity and instability (purposely or otherwise) |

| Variable Grouping | Factor Number | Concept |
|---|---|---|
| H2 | f9 | Insurgents delegitimized due to civilian casualties or other unacceptable behavior |
| H2 | f10 | Insurgents forcibly recruited from civilian population |
| H3 | f11 | Insurgents provided better governance than government in area of conflict |
| H3 | f12 | Insurgents provided or ensured provision of basic services in areas they controlled or claimed to control |
| H3 | f13 | Insurgents discredited/delegitimized COIN force/government |
| H4 | f14 | Insurgents mostly avoided engaging in large-scale operations against better-equipped regular troops and resorted primarily to guerrilla tactics (e.g., sniping, sabotage, small-scale ambushes/hit-and-run attacks, IEDs) |
| H4 | f15 | Conflict caused significant host-nation economic disruption |
| H4 | f16 | Fighting primarily force-on-force conventional engagement |
| H4 | f17 | Insurgents switched from guerrilla to conventional tactics |
| H4 | f18 | Insurgents switched from conventional to guerrilla tactics |
| H5 | f19 | Insurgents received external support from strong state/military |
| H5 | f20 | External professional military engaged in fighting on behalf of insurgents |
| H5 | f21 | External support continued to sustain conflict that otherwise would likely have ended |

## C. QUANTITATIVE ANALYSIS

### 1. Step One: Frequency

To illustrate the frequency of each factor, this thesis uses a basic quad-chart for each of the five independent variable groupings. Each independent variable grouping corresponds with a hypothesis and contains anywhere from three to seven indicators or factors. For example, independent variable group H1 corresponds with hypothesis 1 and includes f1–f3. The X-axis of the each frequency quad-chart divides cases of insurgency win from cases of insurgency loss; the Y-axis divides cases where the factor was present from cases where the factor was absent. The number in each quadrant represents the number of cases that meet those respective criteria. See Figure 3. The upper left quadrant contains the number of cases where the factor was absent and the insurgents won; the

lower left quadrant contains the number of cases where the factor was absent and the insurgents lost. Conversely, the upper right quadrant contains the number of cases where the factor was present and the insurgents won; the lower right quadrant contains the number of cases where the factor was present and the insurgents lost. Factors in the upper right and lower left quadrants support the hypothesis; whereas, factors in the upper left and lower right quadrants undermine the hypothesis. Appendix A contains the frequency quad-charts for each hypothesis.

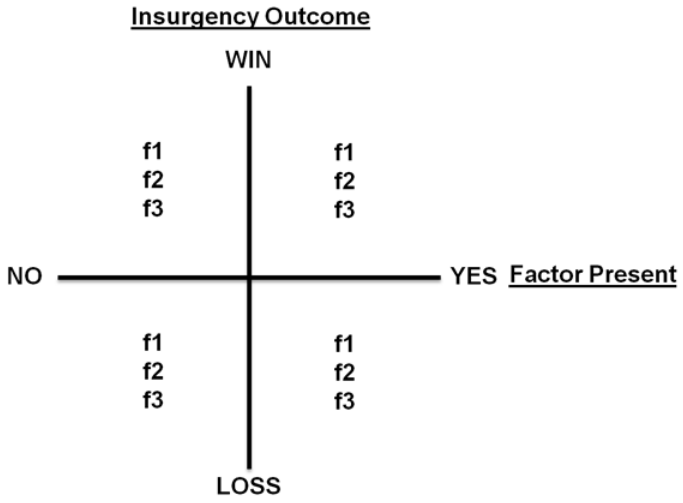


Figure 3. Example Independent Variable Group Frequency Quad-Chart.

### 2. Step Two: Cross-Tabulations

The second step in the quantitative process is to look at frequencies at a deeper level and examine the proportion of cases in each quadrant. This will give insight into which factors have an effect on the outcome. To visualize this process, this thesis uses cross-tabulation charts. These charts are initially produced using the QCA program, but are later reproduced in Excel so that they can be easily included in this project. Appendix B contains the full set of cross-tabulation charts. There is a single chart for each factor sorted by independent variable grouping. The following cross-tabulation example illustrates the occurrence percentages for the frequency data in each case. See Table 3. Columns separate the number of cases where the factor was present from the number of

cases where the factor was absent. Rows separate the cases of insurgency win from cases of insurgency loss. The four sets of numbers inside of the enclosed boxes represent the number of cases, their row percentage, their column percentage, and their total percentage respectively. The numbers at bottom of each chart show the column totals and the numbers at the far right show the row totals.

Table 3. Example Cross-Tabulation Chart

| | Factor **(f#)** | | |
|---|---|---|---|
| Outcome | NO (0) | YES (1) | |
| WIN (1) | N<br>Row %<br>Column %<br>Total % | N<br>Row %<br>Column %<br>Total % | # WIN |
| LOSS (0) | N<br>Row %<br>Column %<br>Total % | N<br>Row %<br>Column %<br>Total % | # LOSS |
| | # NO | # YES | |

## D. QUALITATIVE ANALYSIS

The qualitative approach used in this thesis is based on crisp and fuzzy set qualitative comparative analysis (QCA). QCA was also the method of analysis used in the *Paths to Victory* study and the approach seems to be the most appropriate for this thesis as well.[45] QCA is a type of research method within the broader set-theoretic method used in the social sciences. Set-theoretic research methods share three features: "first, they work with membership scores of cases in sets; second, they perceive relationships between social phenomena as set relations; third, these set relations are interpreted in terms of sufficiency and necessity, as well as forms of causes that can be derived from them..."[46] More specifically, QCA is a case-based historical analysis tool

[45] Paul et al., *Paths to Victory: Lessons from Modern Insurgencies*, 193–196.

[46] Schneider and Wagemann, *Set-Theoretic Methods for the Social Sciences*, 3.

designed to "assess configurations of case similarities and differences using simple logical rules."[47] In this project, the process for analyzing crisp and fuzzy sets is the same and the only difference is the data used at the start. For this reason, this thesis will explain the QCA process first and then define and explain how the crisp and fuzzy datasets are derived from the RAND *Paths to Victory* data.

To ensure that the qualitative analysis process produces accurate and relevant results, this thesis follows a QCA format presented by Carsten Schneider and Claudius Wagemann in their guide to QCA.[48] This "recipe for a good QCA" recommends 10 steps.

- The appropriateness of the set-theoretic methods
- The choice of the conditions and the outcome
- The choice of the QCA variant
- Calibration of set-membership scores
- Analysis of necessary conditions
- Analysis of sufficient conditions
- Presentation of results
- Interpretation of results
- Reiteration of the research cycle
- The use of software

Beyond the process itself, six terms need to be understood. These terms show up in the final QCA results and they are used to gauge the appropriateness of the causal conditions. A *causal recipe* is a formula of factors that are combined to explain the outcome. *Consistency* indicates to what degree the data is in line with the assumed causal conditions. *Raw coverage* indicates the extent to which a specific combination of factors can explain the outcome. *Unique coverage* indicates the number of cases that can be explained exclusively by that combination of factors. *Solution consistency* indicates the combined reliability of all the causal recipes. *Solution coverage* indicates the combined coverage of all the causal recipes.[49]

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[47] Paul et al., *Paths to Victory: Lessons from Modern Insurgencies*, 193.

[48] Schneider and Wagemann, *Set-Theoretic Methods for the Social Sciences*, 275–284.

[49] Legewie, "An Introduction to Applied Data Analysis," 20.

### 1. Crisp Data

Crisp data is strictly binary. A crisp set allows only full membership and full non-membership for each factor. Either the factor is present or it is absent. The RAND *Paths to Victory* data fits this description. This thesis uses the data from that study with one fundamental modification that allows this project to use both QCA processes. The RAND data separates each case into phases. This project combines these phases so that each case has a single data point for each factor. If the factor is observed in 50 percent or more of the phases, the factor is coded as full membership. If the factor is observed in less than 50 percent of the phases, it is coded as full non-membership. The resulting crisp data is then analyzed using the steps described above.

### 2. Fuzzy Data

A fuzzy dataset is a set,

> ...which allows for partial membership, in addition to full membership and full non-memberships. Translated into the social sciences, it enables the researcher to work with concepts for which the establishing of differences in degree among qualitatively similar cases is both conceptually plausible and empirically feasible.[50]

Factors in this dataset are coded with the percentage of time they are observed. The only difference between the fuzzy set data and the crisp set data is the numbers assigned to each factor during the case phase combination process. Simply put, the fuzzy set values equal the number of phases in which the factor was present divided by the total number of phases in that case. For example, a case with four phases had a factor that was present in three of the four phases; the fuzzy set value for that factor would equal .75. It indicates 75 percent membership. In the crisp set, that same factor would equal one because it was present 50 percent of the time or more. Fuzzy set QCA will produce results that are more precise. By using both of these QCA methods, this study will be capable of determining the robustness of the findings and ultimately, how well the findings apply to other cases.

[50] Schneider and Wagemann, *Set-Theoretic Methods for the Social Sciences*, 326.

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# III. FINDINGS

## A. KEY FINDINGS

### 1. Evaluating the Hypotheses

This section will review the five hypotheses and the independent variable group, which includes several indicators, used to test each premise. This section will go on to discuss the soundness of each hypothesis based on the findings presented within this chapter. Ultimately, the purpose of this section is to apply the results of the data analysis process and to demonstrate how they either support or oppose the concepts outlined in the first chapter.

#### *a. Hypothesis 1: Insurgents Require a Safe Haven from Which to Operate*

The independent variable used to test this hypothesis was if the insurgents established a reliable and secure safe haven. This variable contains three indicators. The analysis shows that only one indicator or factor has a considerable effect on the outcome of the conflict. This indicator is f1 (parts of the area of conflict were no-go or otherwise denied to the COIN force), therefore, it is the only factor within this variable grouping that is used in the QCA process. Over 80 percent of the cases studied show that the insurgents used some type of safe haven. The data shows that a terrain based safe haven actually produces a negative effect for the insurgents. Frequency analysis shows that the insurgent's success rate when they have a safe haven is only slightly higher than when they did not have a safe haven (85 rather than 83 percent). The act of establishing a safe haven does not show up in any of the significant causal recipes, see Tables 6 and 7. These findings suggest that this first hypothesis is unsound. Insurgents do not require a safe haven and in fact, some types of safe havens hurt the insurgent's ability to succeed. While it may be true that some specific insurgencies did benefit greatly from a reliable and secure safe haven, this assessment demonstrates that the concept is not universal.

### *b. Hypothesis 2: The Insurgent Force Cannot be Perceived as Worse Than the COIN Force in the Area of Conflict*

The independent variable used to test this hypothesis was if the insurgents effectively shaped the perception of the population. This variable contains seven indicators. The analysis shows that three factors have a considerable effect on the outcome of the conflict, two of which are positive and one is negative. Avoiding excessive collateral damage and demonstrating effectiveness through impressive attacks are dynamics that aid in insurgency success. On the other hand, the use of intimidation or coercion negatively influences the population and undermines the insurgent's goals. All four significant QCA causal recipes contain at least one of these three factors. Factor 7 (engaged in more coercion or intimidation) is by far the most influential. When it was absent, the insurgents won in 69 percent of the cases studied. These findings suggest that this hypothesis is sound. The perception of the population matters a great deal and the insurgents must strive to appear more legitimate than the COIN force. At this level of analysis, it seems that actions focused on the population generate the strongest effects for an insurgency.

### *c. Hypothesis 3: It is Better for Insurgents to Provide or Ensure Basic Services for the Population Than to Focus on Discrediting or Delegitimizing the COIN Force/government*

The independent variable used to test this hypothesis was if the insurgents effectively displaced government structures and functions. This variable contains three factors. The findings show that two factors have strong support and one factor has weak support. Factor 12 (providing basic services) has minimal impact on the outcome according to all the types of analysis used in this thesis. The proportion of wins and losses are roughly the same in cases where the factor is present and absent. This finding suggests that it is not important for the insurgents to provide basic services to the population. The findings for f11 (provide better governance) and f13 (delegitimized government) suggest that it is very important for the insurgents to discredit the government/COIN force. Factor 11 is the most significant concept throughout all aspects of the data analysis process. It has substantial support from the quantitative approach and

even more support from the qualitative approach. This is an important factor in all four of the QCA causal recipes. Factor 13 is not nearly as significant as the previous factor; however, it is present in one of the fuzzy QCA recipes. This implies that it may be more effective for insurgents to discredit the government indirectly by providing better governance to the population than it is to delegitimize them directly. These findings suggest that the wording of this hypothesis is unsound. In fact, the findings show the opposite; it is better for insurgents to discredit or delegitimize the COIN force/government than provide or ensure basic services for the population.

### *d. Hypothesis 4: Longer Conflict Duration Does Not Necessarily Correlate with an Insurgent Win*

As the first chapter discussed, conflict duration may be an important dynamic in insurgent conflict. The independent variable used to test this hypothesis was if the insurgents effectively managed the duration of the conflict. This variable contains five factors. Two of these factors demonstrated strong support during the quantitative analysis process but neither proved important in the QCA process. The four significant causal recipes contain none of the factors within this variable group. Therefore, these two methods could not determine the soundness of this hypothesis.

To understand how the length of the conflict affects the outcome, this thesis looks at the conflict duration data found in the dataset. Figure 4 shows the outcome of all 70 cases in relation to their duration in months. The Y-axis represents the conflict duration in months and the X-axis represents the individual cases. The square markers indicate the losing insurgency cases and the triangle markers indicate the winning insurgency cases. This graph illustrates that the duration of both the winning and losing cases range from short to very long. The average length of the 41 winning cases is 112 months; the average length of the 29 losing cases is 152 months. Six of the longest 10 conflicts resulted in an insurgency loss. Likewise, eight of the 10 shortest conflicts resulted in an insurgency win. These findings suggest that this hypothesis is sound. It is false to assume that longer conflict durations favor the insurgents. The data demonstrates that duration in and of itself favors neither side.

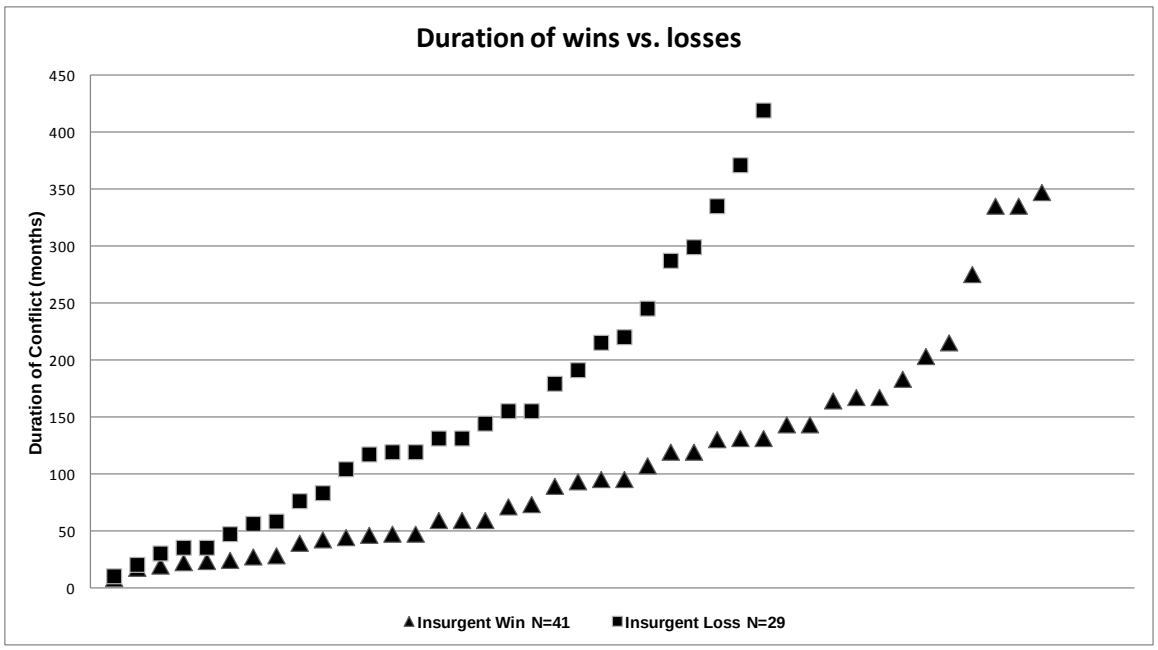


Figure 4. Duration of the 70 Cases

### *e. Hypothesis 5: External Support is Neither Necessary nor Sufficient*

The independent variable used to test this hypothesis was if the insurgents enlisted help from an external participant. This variable contains three factors. Two of these three indicators are used in the QCA process because they showed strong support in the quantitative analysis process. Factor 20 (external military engaged in fighting on behalf of the insurgents) is a negated factor in one of the significant fuzzy set recipes.[51] In other words, the recipe required that the insurgents not allow an external military to engage in the fighting on their behalf. One factor within the recipe relates to the perception of the population, so an external actor may hurt the insurgent's legitimacy in these cases. Factor 19 (support from strong state/military) is a factor in the second crisp and fuzzy set recipe along with demonstrating potency through attacks. These attacks may not have been possible without outside support. Frequency analysis shows the insurgents won 15

[51] A significant causal recipe is a recipe with a raw coverage score greater than .25. To see the full list of causal recipes, see Appendix C.

percent of the time with no outside support and lost 59 percent of the time with support. This would suggest that this hypothesis is sound. For an insurgency, external support is not necessary and by no means is it sufficient.

### 2. Answering the Questions

Next, one must look back at the research questions posed in the first chapter to see if any answers are now available. How can an insurgent force best utilize its limited resources to increase its chance of success? Is it more effective to display strength by attacking rival elements or is it more effective to portray strength by manipulating the perception of the population? The answers to these questions are now somewhat apparent. With little resources, insurgents should focus on the best practices and avoid the worst. A majority of their efforts should focus on legitimacy and proving this legitimacy to the population. This research found that the specific tactics or ways of operating have much less impact on the outcome than the time and effort spent on shaping the perception of the population. Therefore, they must devote few resources to attacking rival elements and many resources to manipulating the perception of the population, which in turn will allow the insurgency to grow. Focusing on the population is necessary for insurgent success but this strategy is not necessarily sufficient in and of itself. At some point in the conflict, the insurgents may need to increase their focus on demonstrating military capabilities to grasp victory before the government can respond to the insurgent expansion.

## B. BROADER QUANTITATIVE FINDINGS

### 1. Frequency Analysis

The first step in testing the validity of the 21 independent factors is to look at the frequency in which each indicator occurs across all 70 cases. Analyzing frequency is the quantitative step to identify which factors strongly support the hypotheses. Chapter II describes how the quad-charts are organized and used. Appendix A contains the frequency quad-charts for each hypothesis. This chapter only highlights three important takeaways from this initial step in the analysis process. First, grouping H1 shows that insurgents relied on safe havens within the area of conflict three times more often than

they relied on cross-border movements for safe havens. Additionally, the insurgents had some type of save haven in 80 percent of the cases studied. While it is apparent that a vast majority of insurgencies utilize a safe haven, at this point in the study it is unclear how this affects the outcome of the conflict. Second, grouping H4 contains three factors that are the most unevenly distributed between the frequency chart quadrants. Factor 17 (insurgents switched from guerrilla to conventional tactics) was present in only seven of the cases. Factor 16 (fighting was primarily force-on-force conventional engagement) and factor 18 (insurgents switched from conventional to guerrilla tactics) were present in only eight of the cases. In other words, these factors were present in only 10 percent of the cases studied. This is interesting because the finding goes against the theory that insurgents must switch between guerrilla and conventional style tactics depending on their capability and the evolution of the conflict. These factors deserve more analysis in the following sections. Third, grouping H5 shows that the insurgents had some sort of external support in more than 70 percent of the cases. Much like the first finding, support from an external actor cannot be linked directly to insurgent success at this point. Ultimately, the validity of the factors and the degree to which they support the hypotheses is still undetermined and this requires a second step in the quantitative process.

### 2. Proportion Analysis

The next step in the quantitative analysis process is to examine the cross-tabulation chart for each of the factors. Chapter II describes how the cross-tabulations are organized and used. Appendix B contains a cross-tabulation chart for each factor. Cross-tabulation analysis is a good method for studying general tendencies across all cases. It will help reduce the number of factors used in the subsequent qualitative steps to only those with a high degree of support.[52] Table 4 is an example of a simplified chart that shows the relationship between the four possible scenarios (cells 1–4) and the validity of the factor's concept (causal condition). Analysis of the cross-tabulation charts suggests that 10 concepts have strong support and are therefore valid. All of the following factors

[52] Charles C. Ragin, *Redesigning Social Inquiry: Fuzzy Sets and Beyond* (Chicago: University of Chicago Press, 2008), 21.

showed strong support for their respective concept except for f7 (engaged in more coercion or intimidation), which showed strong support against the concept. Below is a description of each valid concept and the indicators that demonstrate the assessment.

Table 4. Conventional Cross-tabulation of Presence/absence of an Outcome Against Presence/absence of a Causal Condition[53]

| | Causal Condition Absent | Causal Condition Present |
|---|---|---|
| Outcome Present | Cell 1: Cases here undermine researcher's argument | Cell 2: Cases here support researcher's argument |
| Outcome Absent | Cell 3: Cases here support researcher's argument | Cell 4: Cases here undermine researcher's argument |

### *a. Factor 1*

Parts of the area of conflict were no-go or otherwise denied to the COIN force. The chart for this factor shows that when the factor was present, 62 percent of the time the insurgents won. When it was absent, the insurgents won only 50 percent of the time. Forty-one of the 70 cases support the concept. Out of the three factors in independent variable grouping H1, this is the only factor that seems to have a visible effect on the outcome.

### *b. Factor 4*

Insurgents collateral damage was not perceived by population in area of conflict as worse than COIN force. The chart for this factor shows that when the factor was present, more than 60 percent of the time the insurgents won. Likewise, the factor was present in 63 percent of the 41 winning insurgency cases. When the factor was absent, the number of wins and the number of losses were almost equal.

### *c. Factor 6*

[53] Ragin, *Redesigning Social Inquiry: Fuzzy Sets and Beyond*, 21.

The insurgents demonstrated potency through impressive or spectacular attacks. This factor is one of only six factors that suggest the insurgents are more likely to win if the factor is present and more likely to lose if it is absent. For instance, the cross-tabulation chart for this factor shows that when the factor was present, the insurgent's success rate was 64 percent. When it was absent, their success rate dropped to 27 percent. This factor was present in almost 93 percent of the 41 winning insurgency cases.

### *d. Factor 7*

Insurgents engaged in more coercion/intimidation than COIN force. The chart for this factor shows that when the factor was present, 51 percent of the time the insurgents won. When it was absent, the insurgents won 69 percent of the time. This is the only factor that showed strong support against the concept. The insurgents engaged in this action in 51 percent of the winning cases and in 69 percent of the loosing cases. Factor 8, insurgents employed unconstrained violence against civilians, is very similar in nature to f7 but it shows results that provide no support for or against the concept. The cross-tabulation percentages for f8 are almost equal in cases where the factor was present and absent. This suggests that the population may view intimidation or coercion as worse than insurgent violence.

### *e. Factor 11*

Insurgents provided better governance than the government in the area of conflict. This factor produced the strongest results in support of the concept. When the factor was present, 77 percent of the time the insurgents won. When it was absent, the insurgents won only 30 percent of the time. The insurgents provided better governance in 80 percent of the winning cases and did not provide better governance in 65 percent of the losing cases. Fifty-two of the 70 cases (74 percent) support this concept.

### *f. Factor 13*

Insurgents discredited and/or delegitimized the COIN force/government. This factor was present in 61 of the 70 cases. Out of these 61 cases, 39 or 64 percent resulted in an insurgency win. There are only two cases, 5 percent, where the factor was absent

and the insurgents won. These findings show that the insurgents are more likely to win if the factor is present and more likely to lose if it is absent.

### *g. Factor 15*

The conflict caused significant host-nation economic disruption. The cross-tabulation chart shows that when the factor was present, the insurgent's success rate was better than 69 percent. When it was absent, their success rate dropped to 33 percent. This factor was present in 82 percent of the 41 winning insurgency cases. Again, the insurgents are more likely to win if the factor is present and more likely to lose if it is absent.

### *h. Factor 17*

Insurgents switched from guerrilla to conventional tactics. When the factor was present, the insurgents won 71 percent of the time. However, this only equals seven cases. The factor was absent in 90 percent of the cases. In the 29 cases of insurgency loss, the factor was absent 93 percent of the time. In the 41 cases of insurgency win, the factor was absent 88 percent of the time. As stated earlier, this finding opposes the theory that insurgents must switch between guerrilla and conventional style tactics depending on their capability and the evolution of the conflict.

### *i. Factor 19*

Insurgents received external support from a strong state/military. This factor also shows that the insurgents are more likely to win if the factor is present and more likely to lose if it is absent. The chart shows that when the factor was present, the insurgent's success rate was better than 72 percent. When it was absent, their success rate dropped to 37 percent. This factor was present in 76 percent of the 41 winning insurgency cases.

### *j. Factor 20*

An external professional military engaged in the fighting on behalf of insurgents. When an external professional military fought for the insurgents, their success rate was 80 percent. Without an external professional military fighting for the insurgents, the

success rate was 53 percent. While the insurgents can achieve success on their own, these results suggest that an external actor greatly helps their chances for success.

### 3. Validity Matrix for All Factors

Table 5 shows the results of the quantitative analysis by assigning a degree of support to each factor. Consistent with the *Paths to Victory* study, factors were tested for support in both kind (for or against) and degree (strong or weak).[54] Just as in the previous sections, each factor is listed in order according to its factor number and sorted by independent variable grouping. A short explanation of the factor's concept is provided in the center column followed by the factor's degree of support. The findings produced five levels of support. Strong support for and strong support against a factor indicates that it had a considerable effect on the outcome of the conflict. Weak support for and weak support against a factor indicates that it had a slight effect on the outcome. No support for or against a factor indicates that the factor had neither a positive nor a negative effect on the outcome of the conflict.

Only about half of the 21 factors studied display strong support for the concept that they represents. In fact, nine factors display strong support for and two factors display weak support for the concept. On the other hand, only one factor displays strong support against and four display weak support against the concept. Five factors have no support for or against their respective concepts according to the data and the methods covered in the previous sections. One finding that these results suggest is actions that produce positive results for the insurgents are much more powerful than actions that produce negative results. In other words, if an action is productive for the insurgents, it will most likely have either a strong effect or no effect at all on the conflict outcome; there is very little in-between on this side of the spectrum. On the other end of the spectrum, actions that are counterproductive for the insurgents have only weak effects on the outcome and it is hard for an action to fall into the "strong support against" category. This suggests that insurgents have more "room for error" in executing negative actions than the government or COIN force.

[54] Paul et al., *Paths to Victory: Lessons from Modern Insurgencies*, 136–138.

Table 5. Validity Matrix of all 21 Insurgent Factors

| Variable Group | Factor Num. | Concept | Degree of Support |
|---|---|---|---|
| H1 | f1 | No-go areas for COIN force | Strong Support For |
| H1 | f2 | Cross-border safe haven | Weak Support For |
| H1 | f3 | Terrain safe haven | Weak Support Against |
| H2 | f4 | Collateral damage not perceived as worse | Strong Support For |
| H2 | f5 | Exploited deep-seated issues | Weak Support Against |
| H2 | f6 | Demonstrated potency through attacks | Strong Support For |
| H2 | f7 | Engaged in more coercion or intimidation | Strong Support Against |
| H2 | f8 | Employed unconstrained violence | No Support For or Against |
| H2 | f9 | Delegitimized due to civilian casualties | No Support For or Against |
| H2 | f10 | Forcibly recruited from population | Weak Support Against |
| H3 | f11 | Provided better governance | Strong Support For |
| H3 | f12 | Provided basic services | Weak Support For |
| H3 | f13 | Discredited government or COIN force | Strong Support For |
| H4 | f14 | Avoided large scale operations | Weak Support Against |
| H4 | f15 | Caused significant economic disruption | Strong Support For |
| H4 | f16 | Primarily force-on-force engagement | No Support For or Against |
| H4 | f17 | Switched from guerrilla to conventional tactics | Strong Support For |
| H4 | f18 | Switched from conventional to guerrilla tactics | No Support For or Against |
| H5 | f19 | Support from strong state/military | Strong Support For |
| H5 | f20 | External military engaged in fighting | Strong Support For |
| H5 | f21 | External support sustained the conflict | No Support For or Against |

Beyond the degree of support for each factor, quantitative analysis brought to light three factors that demonstrated results that were counterintuitive to what is commonly accepted as good insurgency characteristics. First, there is weak support against the concept that a terrain-based sanctuary (f3) would produce positive results for the insurgents. When this factor was present, the insurgents won in 55 percent of the cases; when it was absent, they won in 63 percent of the cases. Likewise, in all the cases of insurgency win, the insurgents used a terrain provided sanctuary 51 percent of the time. In all the cases of insurgency loss, the insurgents used a terrain provided sanctuary 59 percent of the time. While these numbers do not provide strong support against a sanctuary using terrain, they are counterintuitive because this thesis assumes that any safe haven would benefit the insurgents. One possible explanation for this finding is that terrain not only separates the insurgents from the government/COIN force, it also

separates them from the population. This limits their ability to gain resources like people, guns, or money. Second, there is weak support against the concept that insurgents should avoid engaging in large-scale operations (f14). When the insurgents did avoid large-scale operations, they won 55 percent of the time, but when they did not avoid large-scale operations, they won 69 percent of the time. Likewise, in all the cases of insurgency win, the insurgents avoided large-scale operations 73 percent of the time. In all the cases of insurgency loss, the insurgents avoided large-scale operations 83 percent of the time. Again, this finding is counterintuitive to conventional wisdom but it is not enough to justify insurgents using large-scale operations if they do not have the resources to do so successfully. A deeper look at the cases where insurgents used large-scale operations with a successful outcome may show that these insurgencies were well established and strong enough to conduct these types of operations. Third, there was strong support for switching from guerrilla to conventional tactics (f17). As mentioned earlier, the insurgents won in 71 percent of the cases that this factor was present. The insurgents also won in 36 cases where the factor was absent. This shows that an insurgency can win without switching to conventional tactics, but if they do switch it is likely that the action will result in success. One explanation for this finding is that the insurgents may have switched to conventional tactics at the right time and grasped victory before the COIN force could react. Again, the dynamics of these specific cases require deeper analysis.

## C. BROADER QUALITATIVE FINDINGS

The previous section revealed 10 concepts that showed strong support. The next step in the analysis process is to determine which combinations of factors have the most significant impact on the dependent variable, which is the outcome of the conflict. This qualitative comparative analysis (QCA) will reveal a set of causal recipes. In the end, the insurgent best and worst practices can be deduced from the commonality of factors within these recipes. This thesis suggests that there is no definitive recipe for success in an insurgency. No one factor and no specific combination of factors can explain success in every case but some factors seem to have more of an effect than others do on the outcome. This is unlike the findings in the RAND study, *Paths to Victory*. The authors

found four COIN factors that were present in every case that resulted in a COIN win.[55] This thesis did not find such a universal combination of factors. This does not mean that they do not exist for an insurgency; it only means that there may be additional factors that need to be researched and included in the data. Appendix C contains the complete set of QCA results to include truth tables and set solutions.

To illustrate the QCA results much clearer than those depicted in Appendix C, this thesis uses a framework that Nicholas Legewie presented in a 2013 article entitled, "An Introduction to Applied Data Analysis with Qualitative Comparative Analysis." In this article, he describes how to create an enhanced table of QCA results.[56] He suggests,

> such a table combines the results from the formalized QCA with additional information. It provides a comprehensive, concise representation of the outcome that can serve as a point of quick reference when re-analyzing cases in the light of QCA results.[57]

This section includes an enhanced table of QCA results for both the crisp and fuzzy datasets. Each table shows the recipe and solution parameters and includes the consistency scores, coverage scores, and the simplifying assumptions.

### 1. Crisp Set Results

Table 6 highlights two of the most significant recipes from the crisp set analysis. First, when the insurgents provided better governance than government in area of conflict (f11), demonstrated potency through impressive or spectacular attacks (f6), and did not engage in more coercion/intimidation than COIN force (f7) the insurgents won 93 percent of the time. This is crisp set recipe 1. Recipe 1 covers 14 of the 41 winning insurgency cases. Recipe 2 covers 23 of the 41 winning cases but it has a much lower consistency score. This recipe is 88 percent consistent across all cases where these factors were present. However, exclusively, these two recipes can explain only 19 cases. In other

[55] "In the 59 core cases, every winning case implemented these four concepts, [commitment and motivation, tangible support reduction, flexibility and adaptability, and at least two of the following: unity of effort, initiative, and intelligence] and no losing case had all four of them..." Paul et al., *Paths to Victory: Lessons from Modern Insurgencies*, 149–150.

[56] Legewie, "An Introduction to Applied Data Analysis," 21.

[57] Legewie, "An Introduction to Applied Data Analysis," 22.

words, other combinations of factors exist that can also explain how the insurgents won. Recipes 1 and 2 are the focus of this section because they show the greatest amount of coverage. Crisp set analysis suggests that the recipes cover 90 percent of the winning insurgency cases and combined they are 90 percent consistent. The next section will test if these findings withstand analysis that is more precise.

Table 6. Enhanced Table of Crisp QCA Results

| **Recipe Parameters** | **Recipe 1: f6 + ~f7 + f11** | **Recipe 2: f6 + f11 + f19** |
|---|---|---|
| Consistency | 0.93 | 0.88 |
| Raw Coverage (# of cases) | 0.34 (14) | 0.56 (23) |
| Unique Coverage (# of cases) | 0.12 (5) | 0.34 (14) |
| **Solution Parameters** | **All Recipes** | |
| Consistency | 0.90 | |
| Coverage (# of cases) | 0.90 (37) | |
| Unique Coverage (# of cases) | 0.46 (19) | |
| Overlap (# of cases) | 0.44 (18) | |
| Simplifying Assumptions | Condition f1 (present) | No-go areas for COIN force |
| | Condition f4 (present) | Collateral damage not perceived as worse |
| | Condition f6 (present) | Demonstrated potency through attacks |
| | Condition f7 (absent) | Engaged in more coercion or intimidation |
| | Condition f11 (present) | Provided better governance |
| | Condition f13 (present) | Discredited government or COIN force |
| | Condition f15 (present) | Caused significant economic disruption |
| | Condition f17 (present) | Switched from guerrilla to conventional tactics |
| | Condition f19 (present) | Support from strong state/military |
| | Condition f20 (present) | External military engaged in fighting |

### 2. Fuzzy Set Results

Looking at how these results hold up using the fuzzy set method of QCA, this research found some similarities and some differences. As discussed in Chapter II, the fuzzy data was derived from the same data as the crisp set. Fuzzy set QCA gives the analysis a greater level of certainty. Table 7 shows the significant results of the fuzzy set QCA process. Just as with the crisp set results, this approach also reveals two causal recipes with a significant proportion of raw coverage, that is, "the extent to which each recipe can explain the outcome."[58] First, recipe 1 explains the outcome in 13 of the 41

[58] Legewie, "An Introduction to Applied Data Analysis," 19.

winning insurgency cases. Moreover, when f7 (engaged in more coercion or intimidation) was absent, f11 (provided better governance), and f13 (discredited/delegitimized COIN force/government) were present there was an 89 percent consistency within all the winning insurgency cases. This recipe is similar to the most significant recipe in the crisp analysis, but factor 13 replaces factor 6. Second, recipe 2 explains the outcome in 20 of the 41 winning insurgency cases. Combined, the two most noteworthy fuzzy set solutions can account for the desired outcome in 87 percent of the cases studied. Recipe 2 exactly matches the second recipe from the crisp analysis. In both cases, this recipe has a lower consistency score than recipe 1. This suggests that recipe 2 is a reliable factor combination but when f7 is absent and f11 is combined with another best practice, the insurgents have a greater likelihood of success. This section improves on the findings in the previous section and suggests that no factor or combinations of factors are necessary for success but two combinations are very close to being sufficient.

Table 7. Enhanced Table of Fuzzy QCA Results

| **Recipe Parameters** | **Recipe 1: ~f7 + f11 + 13** | **Recipe 2: f6 + f11 + f19** |
|---|---|---|
| Consistency | 0.89 | 0.85 |
| Raw Coverage (# of cases) | 0.31 (13) | 0.48 (20) |
| Unique Coverage (# of cases) | 0.03 (1) | 0.12 (5) |
| **Solution Parameters** | **All Recipes** | |
| Consistency | 0.87 | |
| Coverage (# of cases) | 0.79 (33) | |
| Unique Coverage (# of cases) | 0.15 (6) | |
| Overlap (# of cases) | 0.64 (27) | |
| Simplifying Assumptions | Condition f1 (present) | No-go areas for COIN force |
| | Condition f4 (present) | Collateral damage not perceived as worse |
| | Condition f6 (present) | Demonstrated potency through attacks |
| | Condition f7 (absent) | Engaged in more coercion or intimidation |
| | Condition f11 (present) | Provided better governance |
| | Condition f13 (present) | Discredited government or COIN force |
| | Condition f15 (present) | Caused significant economic disruption |
| | Condition f17 (present) | Switched from guerrilla to conventional tactics |
| | Condition f19 (present) | Support from strong state/military |
| | Condition f20 (present) | External military engaged in fighting |

### 3. Insurgent Best and Worst Practices

Factors that produce the best results for the insurgents based on the qualitative analysis are:

- f6, Insurgents demonstrated potency through impressive or spectacular attacks (H2).
- f11, Insurgents provided better governance than government in area of conflict (H3).
- f13, Insurgents discredited/delegitimized COIN force/government (H3).
- f19, Insurgents received external support from strong state/military (H5).

Factors that produce the worst results for the insurgents based off the qualitative analysis are:

- f7, Insurgents engaged in more coercion/intimidation than COIN force (H2).
- f20, External professional military engaged in fighting on behalf of insurgents (H5).

Of the four best practices, f11 (provided better governance) is by far the most powerful concept. It is the only factor present in all four of the significant causal recipes. This concept also produced considerable support in the both quantitative steps. This suggests that insurgents should focus their actions on gaining the capability and resources to provided better governance than government in area of conflict. Of the two worst practices, f7 (engaged in more coercion or intimidation) has the strongest support for avoiding this concept. It is present in both of the causal recipes that produced the greatest consistency. Insurgents should avoid engaging in coercion/intimidation if it is going to make them look less legitimate than the COIN force.[59]

### 4. Insurgency and COIN Force Interaction

Now that the best practices for the insurgents are identified, it is quite simple to use QCA to see how these factors interact with five similar COIN best practices

[59] To strengthen the arguments discussed throughout Chapter III, this thesis conducted a sensitivity analysis to determine the robustness of the principal findings. This process produced results that reinforce all of the key findings. It shows that the most significant factors remain dominant when the data is randomly varied by as much as 15 percent. Above that percentage, the set of meaningful attributes becomes less dominate and the disparity between all 10 factors begins to decrease. For more information on the sensitivity analysis process and the robustness of the findings, see Appendix D.

identified in the RAND *Paths to Victory* study.[60] The COIN best practices used in this section are found in Table 8, and are identified by the "r" before their RAND factor number. This section illustrates the results of this process and identifies three interesting takeaways. Section E of Appendix C contains the full results for these interactions.

Table 8. Enhanced Table of Crisp Interaction QCA Results

| **Recipe Parameters** | **Recipe 1: f6 + f11 + f19 + ~r4** | |
|---|---|---|
| Consistency | 0.95 | |
| Raw Coverage (# of cases) | 0.51 (21) | |
| Unique Coverage (# of cases) | 0.31 (13) | |
| **Solution Parameters** | **All Recipes** | |
| Consistency | 0.95 | |
| Coverage (# of cases) | 0.51 (21) | |
| Unique Coverage (# of cases) | 0.31 (13) | |
| Overlap (# of cases) | N/A | |
| Simplifying Assumptions | Condition f6 (present) | Demonstrated potency through attacks |
| | Condition f11 (present) | Provided better governance |
| | Condition f13 (present) | Discredited government or COIN force |
| | Condition f19 (present) | Support from strong state/military |
| | Condition r1 (present) | Improvements in infrastructure |
| | Condition r3 (present) | Perception of security maintained |
| | Condition r4 (present) | COIN force est. secure area |
| | Condition r11 (present) | COIN force avoided excessive force |
| | Condition r39 (present) | COIN force est. positive relations w/ pop. |

The first finding from this supplementary analysis is that one significant causal recipe emerges. This recipe is identical to the second recipe produced in both the crisp and fuzzy analysis with the only difference being factor r4 (COIN force established a secure area). When the COIN force failed to establish and expand their secure area, the consistency of the recipe increased from 88 percent in the previous crisp set study to 95 percent in this study. Therefore, if the COIN force fails to address this issue the insurgents will have a greater likelihood for success. The second finding is that factor 11 (provided better governance) remains an important concept for the insurgents. It is present in all significant causal recipes in this thesis. In addition to f11, f6 (demonstrated

[60] Paul et al., *Paths to Victory: Lessons from Modern Insurgencies*, xxvi.

potency through attacks) is present in the most significant interaction recipe. It was not present in one of the initial fuzzy set recipes. The final finding is that most of the COIN best practices included in this analysis seem to have an effect on the outcome if the insurgency follows the best practices. This suggests that the actions of the insurgency outweigh the actions of the COIN force. This reinforces a point made in the first chapter; the actions of the insurgents may determine the course of a conflict.

# IV. CONCLUSION AND RECOMMENDATIONS

## A. CONCLUSION

The insurgent's efforts should focus on legitimacy and demonstrating this legitimacy to the population. Specific tactics or ways of operating have much less impact on the outcome than the time and effort spent on shaping the perception of the population. Therefore, the insurgent force must devote fewer resources to attacking rival elements and many resources to manipulating the perception of the population, which in turn will allow the insurgency to grow. Focusing on the population is necessary for insurgent success but this strategy is not necessarily sufficient in and of itself. At some point in the conflict, the insurgents may need to increase their focus on demonstrating military capabilities to grasp victory before the government can respond to the insurgent expansion.

Above all, this thesis found that if the insurgent force focuses its actions on the population to increase legitimacy, it has a higher likelihood of success. In cases where the actions reflect a focus on the population, a win for the insurgent force was observed more often than not. Conversely, a trend of insurgent losses occurred in cases where the insurgents focused their actions on the government or COIN force. In addition to this overarching aspect of insurgent conflict, this thesis also argues the reliability of five dynamics. One, insurgents do not require a safe haven and in fact, some types of safe havens hurt the insurgent's ability to succeed. Two, the insurgents must strive to appear more legitimate than the COIN force. Three, it may be more effective for insurgents to discredit the government indirectly by providing better governance to the population than it is to delegitimize them directly. Four, it is false to assume that longer conflict durations favor the insurgents. Five, external support for the insurgent force is not necessary and by no means is it sufficient.

Four actions can help an insurgent force win. One, the insurgents must provide better governance than the government in the area of conflict. Two, the insurgents must discredit or delegitimize the COIN force and government. Three, demonstrating potency

through impressive or spectacular attacks aids the insurgent's efforts only if they also take actions to shape the perception of the population. Four, the insurgents benefit from receiving external support from a strong state or military only if this support is accompanied by the ability to provide better governance than the government. Conversely, two actions hinder an insurgent force. If they engage in more coercion or intimidation than the COIN force or if an external professional military engages in the fighting on behalf of the insurgents, the likelihood of insurgent success decreases. Three and possibly all four of the best insurgent practices center on the population. Success in the 70 cases directly correlates with these actions. In the end, it is obvious that the population is the center of gravity for the insurgents.

While this study did not find a combination of variables or a few specific variables, which are always necessary to show a correlation between insurgent actions and the outcome of the conflict, it did find that some factors are much more influential than other factors. Table 9 is a summary of the results presented throughout this thesis. The most influential action that an insurgent force can pursue is to provide better governance than the government in the area of conflict. This factor was present in 100 percent of the noteworthy combinations of actions. The next most influential action is to avoid engaging in more coercion or intimidation than the COIN force. This factor was present in 50 percent of the noteworthy combinations of actions. Both actions pertain to the perception of the population and affect the legitimacy of the insurgency. When these two actions are combined, the findings show that just over 30 percent of the winning insurgency cases contained these two actions. This suggests that they are not necessary for success. More interesting is the fact that this combination may be sufficient for success if these factors are implemented in conjunction with any one of the remaining insurgent best practice. When the insurgents employed these two actions together, only an average of four cases resulted in a loss for the insurgency. This is one potentially reliable pathway to success for an insurgency.

Table 9. Thesis Results Summary[61]

| Concepts and Valid Insurgent Actions | Results | Coverage |
|---|---|---|
| **Insurgents require a safe haven (H1)** | **Unsound** | |
| No-go areas for COIN force (f1) | Strong support | 0% |
| **Cannot be perceived as worse than the COIN force (H2)** | **Sound** | |
| Collateral damage not perceived as worse than govt. (f4) | Strong support | 0% |
| Demonstrated potency through attacks (f6) | Strong support: Best insurgent practice | 50% |
| Did not engage in more coercion/intimidation than govt. (~f7) | Strong support: Worst insurgent practice | 50% |
| **It is better to provide or ensure basic services (H3)** | **Unsound** | |
| Provided better governance than govt. (f11) | Strong support: Best insurgent practice | 100% |
| Discredited government or COIN force (f13) | Strong support: Best insurgent practice | 16% |
| **Conflict duration does not correlate with outcome (H4)** | **Sound** | |
| Caused significant economic disruption (f15) | Strong support | 0% |
| Switched from guerrilla to conventional tactics (f17) | Strong support | 0% |
| **External support is neither necessary nor sufficient (H5)** | **Sound** | |
| Support from strong state/military (f19) | Strong support: Best insurgent practice | 66% |
| External military did not engage in fighting for insurgents(~f20) | Strong support: Worst insurgent practice | 16% |

## B. RECOMMENDATIONS

### 1. UW Planning Considerations

Look for ways to interact with and engage the population. Focus on the best practices and determine which actions can be achieved depending on the unique operating environment of the specific conflict. Once a conflict starts, nothing matters more than the actions of the actors involved. Specifically, the interactions section of this thesis suggests that the actions of the insurgents have more influence on the outcome of the conflict than the actions of the COIN force. When planning a future UW operation or evaluating one that is underway, a planner must pay special attention to the actions the insurgents are pursuing. These actions may very well determine the outcome of the conflict; this outcome could be a win or a loss for the insurgency. Do not focus too closely on the enemy's actions; the insurgent force cannot influence this dynamic directly.

Experiment by using different actions to determine which will achieve effects in your specific operating environment. An insurgent force cannot be constrained by a single strategy and this study suggests that insurgents have more "room for error" in

[61] The final column titled "coverage" indicates the percentage of time the factor was present in the parsimonious causal recipes whose raw coverage score was greater than .25. To see the full list of causal recipes, see Appendix C.

executing negative actions than the government or COIN force. Only a few actions demonstrate strong support against their respective concept and many actions demonstrate weak support. This leaves room for some level of trial and error for the insurgents.

Construct an analysis tool to determine the capacity and capability of the insurgent force. Determine what resources are needed to execute the desired actions and reallocate other resources if they are not in line with the desired intent. If more resources are needed, take the time to develop ways to secure these resources and avoid actions that cannot be conducted to the preferred standard. This will eliminate any unneeded strain on the insurgent's ability to train, equip, grow, and carry out their best practices.

### 2. Areas of Further Research

One additional area of future research could include other dynamics (risk factors or preexisting conditions) to determine how they influence the actions and to determine how they affect the outcome. This would add another level of analysis to the understanding of insurgent conflict. A project with this topic would bridge the gap between the areas of research that were discussed in the first chapter with the area researched in this thesis.[62] How do the insurgent's motivations or narratives affect the outcome? How do the political dynamics within an area of conflict affect how the insurgents operate? Several of these social, economic, and political dynamics are also available in the RAND dataset.

A second topic for further analysis could include a deeper look into the interactions between the insurgents and the COIN force or government. This study could take a more in-depth look at the best practices outlined in this thesis and in the *Paths to*

[62] An extensive amount of research exists on the political environment in which insurgent conflicts take place. These studies take a holistic look at the risk factors for political violence. For more information, see, David E. Thaler, Ryan Andrew Brown, Gabriella C. Gonzalez, Blake W. Mobley, and Parisa Roshan, *Improving the US Military's Understanding of Unstable Environments Vulnerable to Violent Extremist Groups* (Santa Monica, CA: RAND Corporation, 2013); United States Army Special Operations Command, *Human Factors Considerations of Undergrounds in Insurgencies* (Fort Bragg, NC: United States Army Special Operations Command, 2013); Central Intelligence Agency, *Guide to the Analysis of Insurgency* (Washington, DC: Central Intelligence Agency, 2012); Ted R. Gurr, *Why Men Rebel* (Princeton, NJ: Princeton University Press, 1970).

*Victory* study to determine the most influential factors for either side. Does either side have a naturally occurring advantage over the other? Are there any insurgent actions that negate the best practices of the COIN force? Just as in the previous recommendation for further research, the data and framework for this topic are available and can be easily adapted to meet the research requirements.

Finally, one could mirror this project and or the *Paths to Victory* study using different quantitative or qualitative research methods to determine if the findings hold up. Quantitatively, it would be interesting to see if the significant factors and causal recipes remain important using traditional mathematical procedures, which could include multi-variable regression and mathematical modeling. Qualitatively, additional research could be conducted using a traditional case study approach. Using the finding in this thesis as a framework, a researcher could apply the concepts to specific cases to determine if they are applicable. This would add a level of historical detail to this field of research.

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# APPENDIX A. FREQUENCY QUAD-CHARTS

This appendix contains the frequency quad-charts for all factors grouped with their relevant hypothesis. See Figures 5–9. The X-axis of the each frequency quad-chart divides cases of insurgency win from cases of insurgency loss; the Y-axis divides cases where the factor was present from cases where the factor was absent. The number in each quadrant represents the number of cases that meet those respective criteria. The upper left quadrant contains the number of cases where the factor was absent and the insurgents won; the lower left quadrant contains the number of cases where the factor was absent and the insurgents lost. Conversely, the upper right quadrant contains the number of cases where the factor was present and the insurgents won; the lower right quadrant contains the number of cases where the factor was present and the insurgents lost.

## A. INDEPENDENT VARIABLE GROUP H1

*Hypothesis 1*: Insurgents require a safe haven from which to operate.

*Independent Variable:* Insurgents established a reliable and secure safe haven.

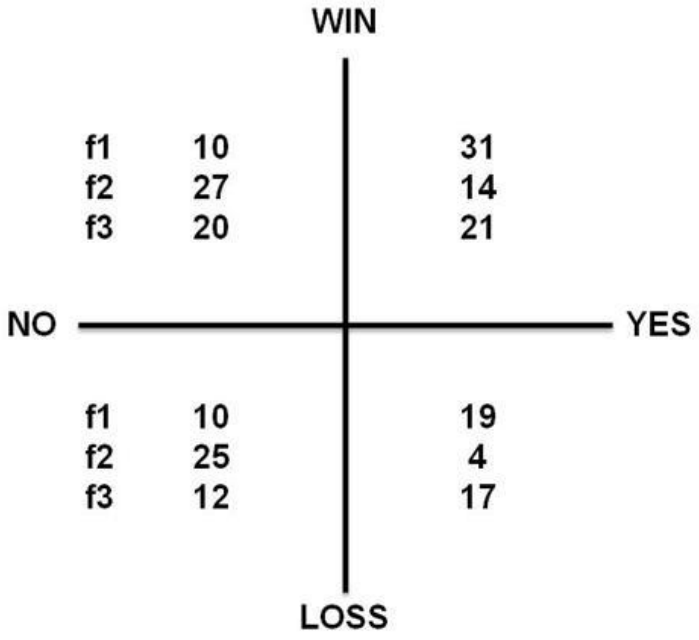


Figure 5. H1 Frequency Quad-Chart

## B. INDEPENDENT VARIABLE GROUP H2

*Hypothesis 2*: The insurgent force cannot be perceived as worse than the COIN force in the area of conflict.

*Independent Variable:* Insurgents effectively shaped the perception of the population.


Figure 6. H2 Frequency Quad-Chart

## C. INDEPENDENT VARIABLE GROUP H3

*Hypothesis 3*: It is better for insurgents to provide or ensure basic services for the population than to focus on discrediting or delegitimizing the COIN force/government.

*Independent Variable:* Insurgents effectively displaced government structure and functions.

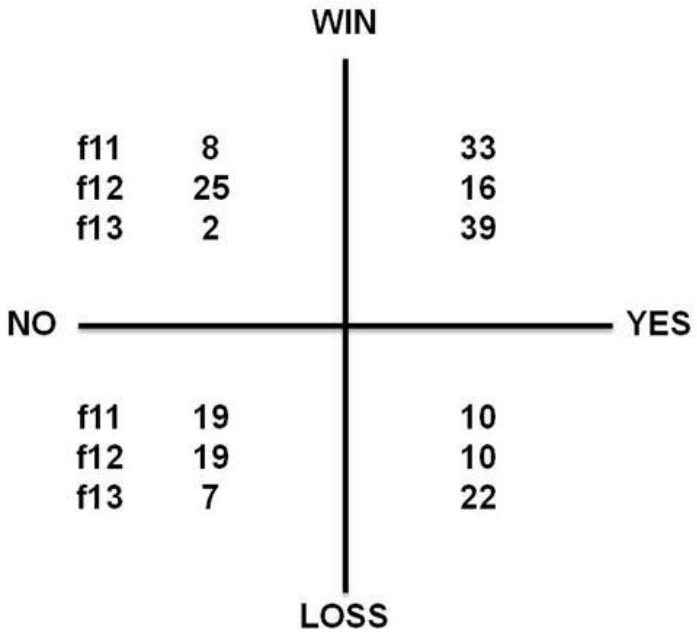


Figure 7. H3 Frequency Quad-Chart

## D. INDEPENDENT VARIABLE GROUP H4

*Hypothesis 4*: Longer conflict duration does not necessarily correlate with an insurgent win.

*Independent Variable:* Insurgents effectively managed the duration of the conflict.

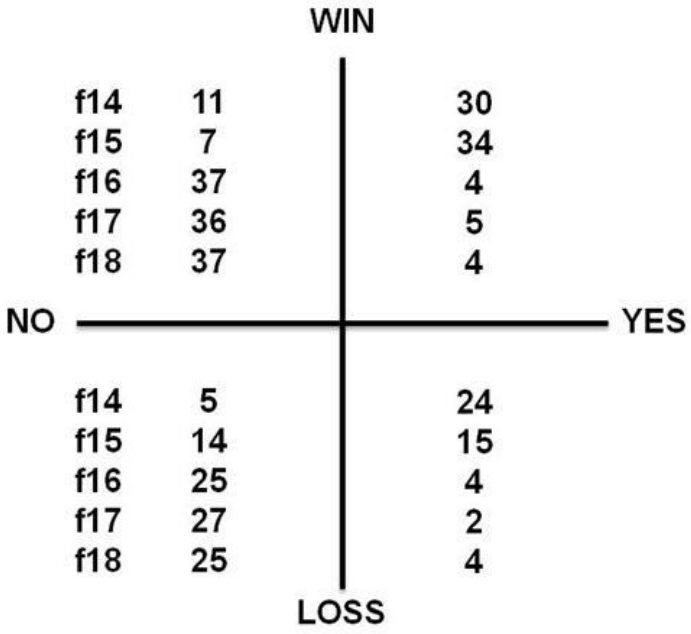


Figure 8. H4 Frequency Quad-Chart

## E. INDEPENDENT VARIABLE GROUP H5

*Hypothesis 5*: External support is neither necessary nor sufficient.

*Independent Variable:* Insurgents enlisted help from an external participant.

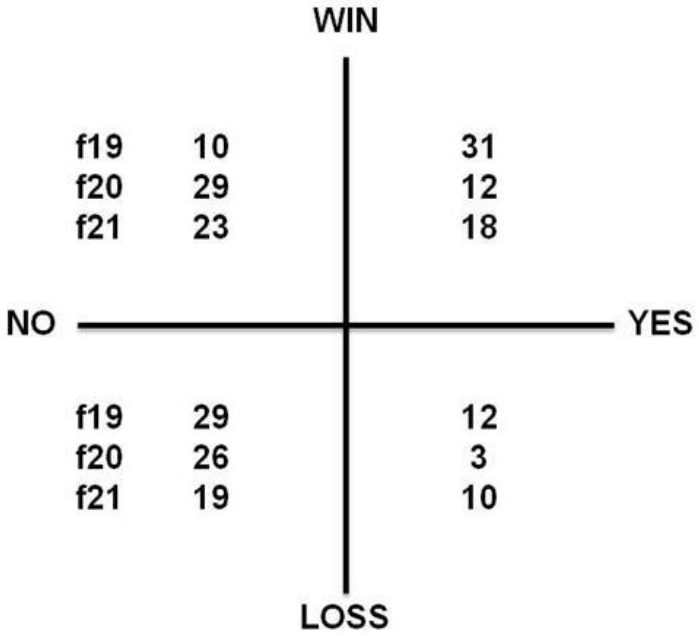


Figure 9. H5 Frequency Quad-Chart

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# APPENDIX B. CROSS-TABULATIONS

The following cross-tabulations illustrate the occurrence percentages for the frequency data in each case. Columns separate the number of cases where the factor was present from cases where the factor was absent. Rows separate the cases of insurgency win from cases of insurgency loss. The four sets of numbers inside of the enclosed boxes represent the number of cases, their row percentage, their column percentage, and their total percentage, respectively. The numbers at bottom of each chart show the column totals and the numbers at the far right show the row totals.

## A. FACTORS WITHIN GROUPING H1

| Outcome | Factor **(f1)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 10 | 31 | 41 |
| | 24.4 | 75.6 | |
| | 50.0 | 62.0 | |
| | 14.3 | 44.3 | |
| LOSS (0) | 10 | 19 | 29 |
| | 34.5 | 65.5 | |
| | 50.0 | 38.0 | |
| | 14.3 | 27.1 | |
| | 20 | 50 | |

| Outcome | Factor **(f2)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 27 | 14 | 41 |
| | 65.9 | 34.1 | |
| | 51.9 | 77.8 | |
| | 38.6 | 20.0 | |
| LOSS (0) | 25 | 4 | 29 |
| | 86.2 | 13.8 | |
| | 48.1 | 22.2 | |
| | 35.7 | 5.7 | |
| | 52 | 18 | |

| Outcome | Factor **(f3)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 20 | 21 | 41 |
| | 48.8 | 51.2 | |
| | 62.5 | 55.3 | |
| | 28.6 | 30.0 | |
| LOSS (0) | 12 | 17 | 29 |
| | 41.4 | 58.6 | |
| | 37.5 | 44.7 | |
| | 17.1 | 24.3 | |
| | 32 | 38 | |

## B. FACTORS WITHIN GROUPING H2

| Outcome | Factor **(f4)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 15 | 26 | 41 |
| | 36.6 | 63.4 | |
| | 55.6 | 60.5 | |
| | 21.4 | 37.1 | |
| LOSS (0) | 12 | 17 | 29 |
| | 41.4 | 58.6 | |
| | 44.4 | 39.5 | |
| | 17.1 | 24.3 | |
| | 27 | 43 | |

| Outcome | Factor **(f5)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 7 | 34 | 41 |
| | 17.1 | 82.9 | |
| | 63.6 | 57.6 | |
| | 10.0 | 48.6 | |
| LOSS (0) | 4 | 25 | 29 |
| | 13.8 | 86.2 | |
| | 36.4 | 42.4 | |
| | 5.7 | 35.7 | |
| | 11 | 59 | |

| Outcome | Factor **(f6)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 3 | 38 | 41 |
| | 7.3 | 92.7 | |
| | 27.3 | 64.4 | |
| | 4.3 | 54.3 | |
| LOSS (0) | 8 | 21 | 29 |
| | 27.6 | 72.4 | |
| | 72.7 | 35.6 | |
| | 11.4 | 30.0 | |
| | 11 | 59 | |

| Outcome | Factor **(f7)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 20 | 21 | 41 |
| | 48.8 | 51.2 | |
| | 69.0 | 51.2 | |
| | 28.6 | 30.0 | |
| LOSS (0) | 9 | 20 | 29 |
| | 31.0 | 69.0 | |
| | 31.0 | 48.8 | |
| | 12.9 | 28.6 | |
| | 29 | 41 | |

| Outcome | Factor **(f8)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 19 | 22 | 41 |
| | 46.3 | 53.7 | |
| | 59.4 | 57.9 | |
| | 27.1 | 31.4 | |
| LOSS (0) | 13 | 16 | 29 |
| | 44.8 | 55.2 | |
| | 40.6 | 42.1 | |
| | 18.6 | 22.9 | |
| | 32 | 38 | |

| Outcome | Factor **(f9)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 20 | 21 | 41 |
| | 48.8 | 51.2 | |
| | 58.8 | 58.3 | |
| | 28.6 | 30.0 | |
| LOSS (0) | 14 | 15 | 29 |
| | 48.3 | 51.7 | |
| | 41.2 | 41.7 | |
| | 20.0 | 21.4 | |
| | 34 | 36 | |

| Outcome | Factor **(f10)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 26 | 15 | |
| | 63.4 | 36.6 | 41 |
| | 63.4 | 51.7 | |
| | 37.1 | 21.4 | |
| LOSS (0) | 15 | 14 | |
| | 51.7 | 48.3 | 29 |
| | 36.6 | 48.3 | |
| | 21.4 | 20.0 | |
| | 41 | 29 | |

## C. FACTORS WITHIN GROUPING H3

| Outcome | Factor **(f11)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 8 | 33 | |
| | 19.5 | 80.5 | 41 |
| | 29.6 | 76.7 | |
| | 11.4 | 47.1 | |
| LOSS (0) | 19 | 10 | |
| | 65.5 | 34.5 | 29 |
| | 70.4 | 23.3 | |
| | 27.1 | 14.3 | |
| | 27 | 43 | |

| Outcome | Factor **(f12)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 25 | 16 | |
| | 61.0 | 39.0 | 41 |
| | 56.8 | 61.5 | |
| | 35.7 | 22.9 | |
| LOSS (0) | 19 | 10 | |
| | 65.5 | 34.5 | 29 |
| | 43.2 | 38.5 | |
| | 27.1 | 14.3 | |
| | 44 | 26 | |

| Outcome | Factor **(f13)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 2 | 39 | |
| | 4.9 | 95.1 | 41 |
| | 22.2 | 63.9 | |
| | 2.9 | 55.7 | |
| LOSS (0) | 7 | 22 | |
| | 24.1 | 75.9 | 29 |
| | 77.8 | 36.1 | |
| | 10.0 | 31.4 | |
| | 9 | 61 | |

## D. FACTORS WITHIN GROUPING H4

| Outcome | Factor **(f14)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 11 | 30 | 41 |
| | 26.8 | 73.2 | |
| | 68.8 | 55.6 | |
| | 15.7 | 42.9 | |
| LOSS (0) | 5 | 24 | 29 |
| | 17.2 | 82.8 | |
| | 31.3 | 44.4 | |
| | 7.1 | 34.3 | |
| | 16 | 54 | |

| Outcome | Factor **(f15)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 7 | 34 | 41 |
| | 17.1 | 82.9 | |
| | 33.3 | 69.4 | |
| | 10.0 | 48.6 | |
| LOSS (0) | 14 | 15 | 29 |
| | 48.3 | 51.7 | |
| | 66.7 | 30.6 | |
| | 20.0 | 21.4 | |
| | 21 | 49 | |

| Outcome | Factor **(f16)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 37 | 4 | 41 |
| | 90.2 | 9.8 | |
| | 59.7 | 50.0 | |
| | 52.9 | 5.7 | |
| LOSS (0) | 25 | 4 | 29 |
| | 86.2 | 13.8 | |
| | 40.3 | 50.0 | |
| | 35.7 | 5.7 | |
| | 62 | 8 | |

| Outcome | Factor **(f17)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 36 | 5 | 41 |
| | 87.8 | 12.2 | |
| | 57.1 | 71.4 | |
| | 51.4 | 7.1 | |
| LOSS (0) | 27 | 2 | 29 |
| | 93.1 | 6.9 | |
| | 42.9 | 28.6 | |
| | 38.6 | 2.9 | |
| | 63 | 7 | |

| Outcome | Factor **(f18)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 37 | 4 | 41 |
| | 90.2 | 9.8 | |
| | 59.7 | 50.0 | |
| | 52.9 | 5.7 | |
| LOSS (0) | 25 | 4 | 29 |
| | 86.2 | 13.8 | |
| | 40.3 | 50.0 | |
| | 35.7 | 5.7 | |
| | 62 | 8 | |

## E. FACTORS WITHIN GROUPING H5

| Outcome | Factor **(f19)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 10 | 31 | 41 |
| | 24.4 | 75.6 | |
| | 37.0 | 72.1 | |
| | 14.3 | 44.3 | |
| LOSS (0) | 17 | 12 | 29 |
| | 58.6 | 41.4 | |
| | 63.0 | 27.9 | |
| | 24.3 | 17.1 | |
| | 27 | 43 | |

| Outcome | Factor **(f20)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 29 | 12 | 41 |
| | 70.7 | 29.3 | |
| | 52.7 | 80.0 | |
| | 41.4 | 17.1 | |
| LOSS (0) | 26 | 3 | 29 |
| | 89.7 | 10.3 | |
| | 47.3 | 20.0 | |
| | 37.1 | 4.3 | |
| | 55 | 15 | |

| Outcome | Factor **(f21)** NO (0) | YES (1) | |
|---|---|---|---|
| WIN (1) | 23 | 18 | 41 |
| | 56.1 | 43.9 | |
| | 54.8 | 64.3 | |
| | 32.9 | 25.7 | |
| LOSS (0) | 19 | 10 | 29 |
| | 65.5 | 34.5 | |
| | 45.2 | 35.7 | |
| | 27.1 | 14.3 | |
| | 42 | 28 | |

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# APPENDIX C. QUALITATIVE COMPARATIVE ANALYSIS RESULTS

## A. CRISP SET TRUTH TABLE

Table 10. Complete Crisp Set Truth Table from fsQCA

| f1 | f4 | f6 | f7 | f11 | f13 | f15 | f17 | f19 | f20 | Num | Win | Raw |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 4 | 1 | 1 |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 3 | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 3 | 1 | 1 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 1 |
| 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 2 | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 4 | 1 | 0.8 |
| 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 3 | 0 | 0.7 |
| 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0.5 |
| 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 0.5 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0.5 |
| 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 |
| 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 |

## B. CRISP SET SOLUTIONS

--- COMPLEX SOLUTION ---
Frequency cutoff: 2.000000
Consistency cutoff: 0.750000

| Solution Recipe | Raw Coverage | Unique Coverage | Consistency |
|---|---|---|---|
| f4*f6*~f7*f11*f13*~f15*~f17*~f19*~f20 | 0.097561 | 0.097561 | 1.000000 |
| f4*f6*~f7*f11*f13*f15*~f17*f19*~f20 | 0.121951 | 0.121951 | 1.000000 |
| f1*~f4*f6*f7*f11*f13*f15*~f17*f19 | 0.170732 | 0.073171 | 1.000000 |
| f1*f6*f7*f11*f13*f15*~f17*f19*f20 | 0.170732 | 0.073171 | 0.875000 |

Solution coverage: 0.463415
Solution consistency: 0.950000

--- PARSIMONIOUS SOLUTION ---
Frequency cutoff: 2.000000
Consistency cutoff: 0.750000

| Solution Recipe | Raw Coverage | Unique Coverage | Consistency |
|---|---|---|---|
| **f6*~f7*f11** | **0.341463** | **0.121951** | **0.933333** |
| **f6*f11*f19** | **0.560976** | **0.341463** | **0.884615** |

Solution coverage: 0.682927
Solution consistency: 0.903226

--- INTERMEDIATE SOLUTION ---
Frequency cutoff: 2.000000
Consistency cutoff: 0.750000

| Solution Recipe | Raw Coverage | Unique Coverage | Consistency |
|---|---|---|---|
| f13*f11*~f7*f6*f4 | 0.292683 | 0.170732 | 0.923077 |
| f19*f15*f13*f11*f6*f1 | 0.439024 | 0.317073 | 0.947368 |

Solution coverage: 0.609756
Solution consistency: 0.925926

## C. FUZZY SET TRUTH TABLE

Table 11. Complete Fuzzy Set Truth Table from fsQCA

| f1 | f4 | f6 | f7 | f11 | f13 | f15 | f17 | f19 | f20 | Num | Win | Raw | PRI | SYM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 3 | 1 | 0.9 | 0.9 | 0.9 |
| 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 2 | 1 | 0.8 | 0.8 | 0.8 |
| 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 2 | 1 | 0.8 | 0.8 | 0.8 |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 3 | 1 | 0.8 | 0.8 | 0.8 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0.8 | 0.8 | 0.8 |
| 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0.8 | 0.8 | 0.8 |
| 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 3 | 1 | 0.8 | 0.8 | 0.8 |
| 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0.7 | 0.7 | 0.7 |
| 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0.6 | 0.6 | 0.6 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0.6 | 0.6 | 0.6 |
| 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 0.6 | 0.6 | 0.6 |
| 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0.6 | 0.6 | 0.6 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0.5 | 0.5 | 0.5 |
| 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0.5 | 0.5 | 0.5 |
| 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0.5 | 0.5 | 0.5 |

| f1 | f4 | f6 | f7 | f11 | f13 | f15 | f17 | f19 | f20 | Num | Win | Raw | PRI | SYM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0.5 | 0.5 | 0.5 |
| 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0.4 | 0.4 | 0.4 |
| 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0.4 | 0.4 | 0.4 |
| 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0.4 | 0.4 | 0.4 |
| 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0.4 | 0.4 | 0.4 |
| 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0.3 | 0.3 | 0.3 |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0.3 | 0.3 | 0.3 |
| 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0.2 | 0.2 | 0.2 |
| 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0.2 | 0.2 | 0.2 |
| 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0.2 | 0.2 | 0.2 |
| 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0.1 | 0.1 | 0.1 |
| 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0.1 | 0.1 | 0.1 |
| 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0.1 | 0.1 | 0.1 |
| 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |

## D. FUZZY SET SOLUTIONS

--- COMPLEX SOLUTION ---
Frequency cutoff: 1.000000
Consistency cutoff: 0.790625

| Solution Recipe | Raw Coverage | Unique Coverage | Consistency |
|---|---|---|---|
| f1*f4*~f7*f11*f13*f15*~f17*f19*~f20 | 0.151220 | 0.032683 | 0.837838 |
| f4*f6*~f7*f11*f13*f15*~f17*f19*~f20 | 0.145122 | 0.026585 | 0.873715 |
| f1*~f4*f6*f7*f11*f13*f15*~f17*f19 | 0.200000 | 0.083415 | 0.873269 |
| ~f1*f4*f6*~f7*f11*f13*~f15*~f17*~f19*~f20 | 0.048780 | 0.048780 | 0.800000 |
| ~f1*f4*~f6*~f7*f11*f13*f15*~f17*f19*f20 | 0.024390 | 0.024390 | 1.000000 |
| f1*f4*f6*~f7*f11*f13*f15*f17*f19*f20 | 0.026341 | 0.018293 | 1.000000 |
| f1*f6*~f7*f11*f13*f15*~f17*f19*~f20 | 0.128293 | 0.000000 | 0.859477 |
| f1*~f4*f6*f11*f13*f15*~f17*f19*~f20 | 0.134390 | 0.000000 | 0.822388 |

Solution coverage: 0.447805
Solution consistency: 0.886100

--- PARSIMONIOUS SOLUTION ---
Frequency cutoff: 1.000000
Consistency cutoff: 0.790625

| Solution Recipe | Raw Coverage | Unique Coverage | Consistency |
|---|---|---|---|
| ~f1*~f7*f11 | 0.148293 | 0.048781 | 0.855134 |
| **f6*f11*f19** | **0.476829** | **0.121951** | **0.849262** |

| | | | |
|---|---|---|---|
| **~f7*f11*f13** | **0.307317** | **0.032439** | **0.891720** |
| f11*f19*~f20 | 0.350976 | 0.000000 | 0.736815 |
| ~f7*f11*f19 | 0.277805 | 0.000000 | 0.818247 |

Solution coverage: 0.623171
Solution consistency: 0.817077

--- INTERMEDIATE SOLUTION ---
Frequency cutoff: 1.000000
Consistency cutoff: 0.790625

| Solution Recipe | Raw Coverage | Unique Coverage | Consistency |
|---|---|---|---|
| f13*f11*~f7*f6*f4*~f1 | 0.123902 | 0.089512 | 0.831424 |
| f19*f15*f13*f11*f6*f1 | 0.364146 | 0.221220 | 0.870554 |
| f20*f19*f15*f13*f11*~f7*f4 | 0.069024 | 0.024390 | 1.000000 |
| f19*f15*f13*f11*~f7*f4*f1 | 0.175610 | 0.032683 | 0.857143 |

Solution coverage: 0.510732
Solution consistency: 0.872500

## E. INTERACTIONS OF INSURGENTS/COIN FORCE BEST PRACTICES

--- PARSIMONIOUS SOLUTION ---
Frequency cutoff: 1.000000
Consistency cutoff: 0.916667

| Solution Recipe | Raw Coverage | Unique Coverage | Consistency |
|---|---|---|---|
| f11*f19*r1 | 0.195122 | 0.024390 | 1.000000 |
| f11*r1*~r3*~r11 | 0.195122 | 0.024390 | 1.000000 |
| **f6*f11*f19*~r4** | **0.512195** | **0.317073** | **0.954545** |
| f11*f13*~r3*r4*~r11 | 0.073171 | 0.048780 | 1.000000 |
| f6*~r4*r11 | 0.097561 | -0.000000 | 1.000000 |
| f6*~f11*~f13*f19 | 0.024390 | -0.000000 | 1.000000 |
| f6*f13*r11*~r39 | 0.097561 | -0.000000 | 1.000000 |
| f6*f13*~r1*r11 | 0.097561 | -0.000000 | 1.000000 |
| f6*~f11*~r1*r4*~r11 | 0.024390 | -0.000000 | 1.000000 |
| f6*~f11*~r1*r4*~r5 | 0.024390 | -0.000000 | 1.000000 |
| f6*~f11*~r1*~r3*r4 | 0.024390 | -0.000000 | 1.000000 |
| f6*~f11*~f13*r4*~r11 | 0.024390 | -0.000000 | 1.000000 |
| f6*~f11*~f13*r4*~r5 | 0.024390 | -0.000000 | 1.000000 |
| f6*~f11*~f13*~r3*r4 | 0.024390 | -0.000000 | 1.000000 |
| f6*~f11*f19*~r1*r4 | 0.024390 | -0.000000 | 1.000000 |

Solution coverage: 0.707317
Solution consistency: 0.966667

# APPENDIX D. SENSITIVITY ANALYSIS

Even though the results detailed in Chapter III answer the research questions using a large number and wide variety of cases, some readers may doubt the durability of the findings. Do the results remain the same if the QCA value assigned to each action varies slightly? What is the maximum percentage of random variation that the significant factors can withstand? To strengthen the argument, it was necessary to conduct a sensitivity analysis to determine the robustness of the principal findings. The literature on the QCA process talks very little about the procedures for testing the robustness of important findings. This is a critical step in traditional quantitative methods and some QCA experts argue that, "robustness tests, using systematic procedures, should be regarded as an important, and maybe even indispensable, analytical step in configurational [sic] comparative analysis."[63]

The sensitivity analysis used to test the robustness of the key findings centers around the fuzzy data used in the previous chapters. The fuzzy data is the only dataset used in this section because it allows for membership scores beyond the binary crisp scores. The same QCA steps were used to analyze 30 variations of this original data. The value of each significant factor used in the QCA analysis process was randomly varied using functions in the Excel dataset. The original score for each factor was randomly varied plus or minus 10 percent. Ten percent variation was used because anything less produced results that were very similar to the original findings and anything more produced results that were inconclusive.[64] Using this technique, a factor with an original membership score of .50 could produce a new score anywhere between .40 and .60. This randomly produced both stronger and weaker scores for each factor within the 70 cases

[63] Svend-Erik Skaaning, "Assessing the Robustness of Crisp-set and Fuzzy-set QCA Results," *Sociological Methods & Research* 40, no. 2 (April 2011): 391.

[64] The analysis shows that the robustness results remain approximately the same up to a variation of plus or minus 15 percent of the original factor membership score. Above that percentage, the set of meaningful attributes becomes less dominate and the disparity between all 10 factors begins to decrease. See Figures 12 and 13.

studied. The 30 dataset variations were ran through the QCA software and each iteration produced a new set of causal recipes, which varied between one and 13 recipes in each set.

The sensitivity analysis process produced results that reinforce the original findings. This suggests that these findings are, in fact, robust and they can withstand a 10 percent variation. Figures 10 and 11 illustrate the results. These two figures show the frequency each factor occurred in the causal recipe variations. Figure 10 accounts for only the most significant recipe from each iteration. That is, the recipe that produced the highest percentage of raw coverage. In this instance, the maximum possible frequency for any factor is 30 because that is the total number of repetitions. Figure 11, on the other hand, accounts for the two most significant recipes. Therefore, the maximum possible frequency for any factor is 60.

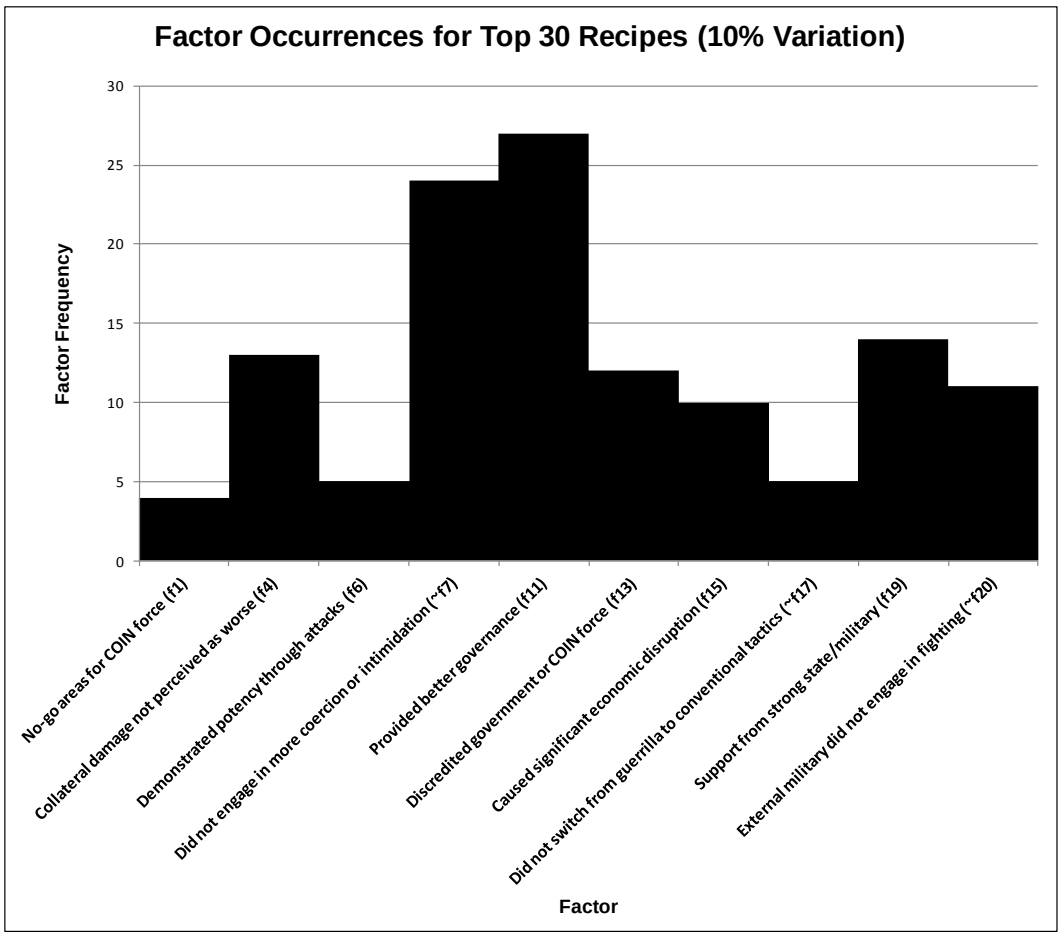


Figure 10. Frequency in 30 Most Significant Recipes (10% Variation)

Figure 10 shows that providing better governance than the government in the area of conflict (f11) and not engaging in more coercion or intimidation than the COIN force (~f7) remain the most influential action for an insurgent force. Factor 11 was present in 90 percent of the recipes and a negated factor 7 was present in 80 percent of the recipes. This process also reinforces all of the remaining best and worst insurgent practices except demonstrating potency through impressive or spectacular attacks (f6). This suggests that factor 6 is much more sensitive to changes in its membership score.

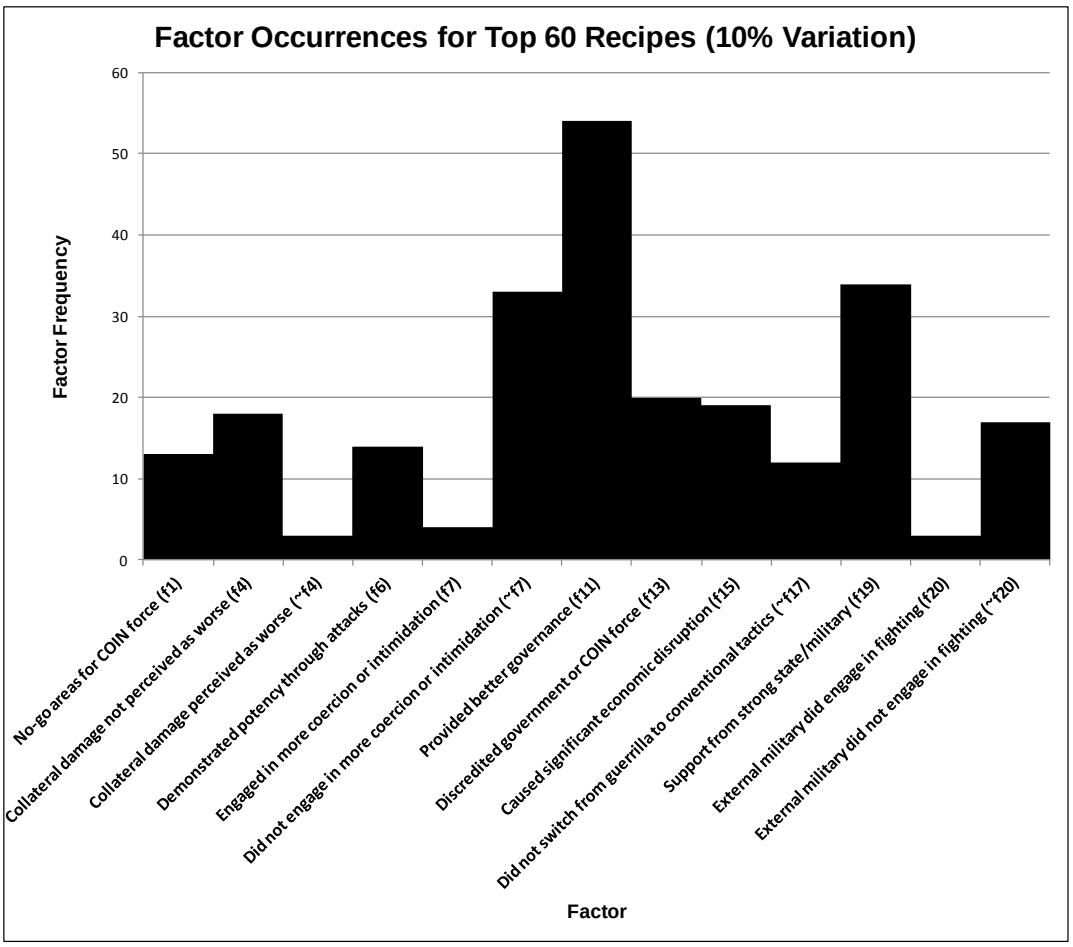


Figure 11. Frequency in 60 Most Significant Recipes (10% Variation)

Figure 11 shows similar results for the important factors with one key difference. Receiving external support from a strong state/military (f19), emerged as the second most influential action behind the factor 11 (providing better governance). This is important because it suggests that external military support is a sensitive factor and if the degree of support changes it could have an effect on the conflict outcome. However, this finding does not change the soundness of the original external support hypothesis (H5). External support is not necessary and by no means is it sufficient.

Lastly, it is essential to show how the results change as the variation percentage increases. At 25 percent variation in the original factor scores, the importance of each factor becomes much less evident. Figures 12 and 13 demonstrate that several factors appear to be significant at higher levels of variation. This finding suggests that the

original conclusions of this thesis are robust to some degree. However, it also highlights the fact that each factor has a maximum variation threshold. Above this threshold, the QCA causal recipes suggest that almost all factors are important to an insurgent force.

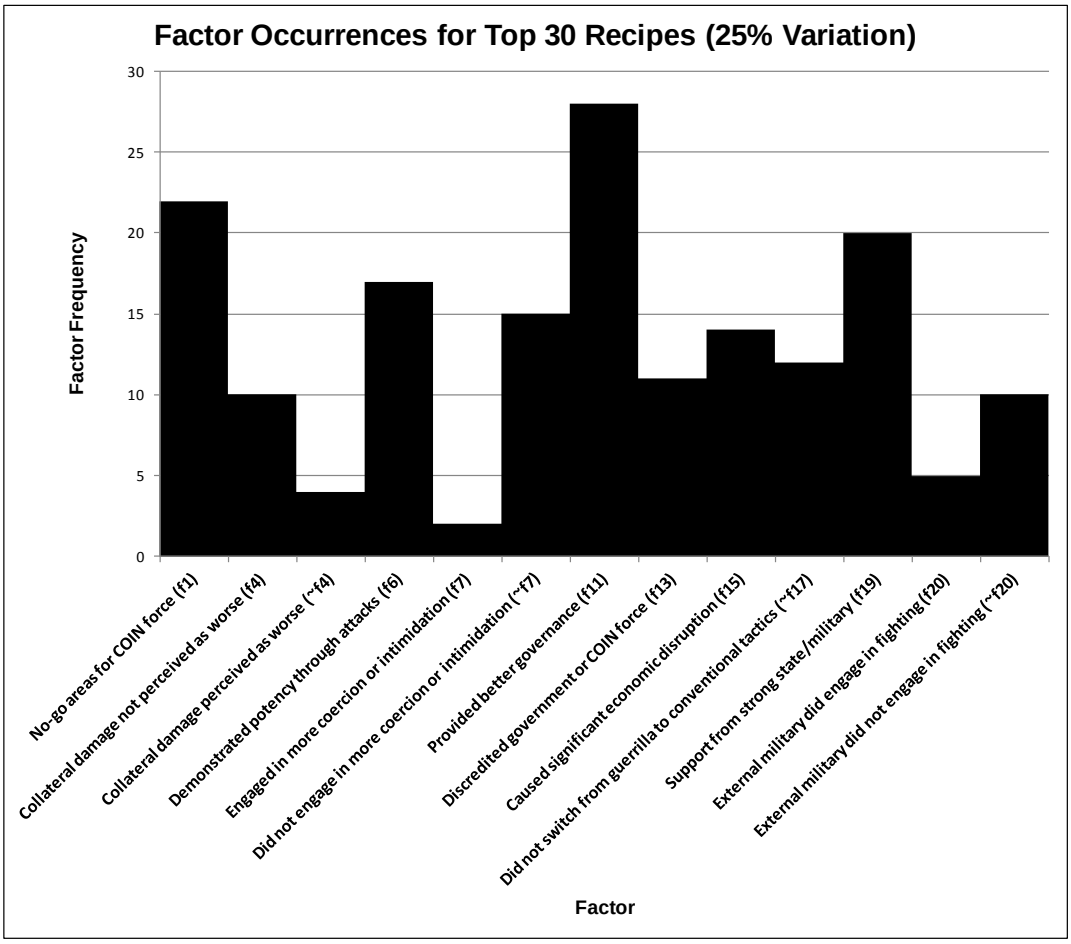


Figure 12. Frequency in 30 Most Significant Recipes (25% Variation)

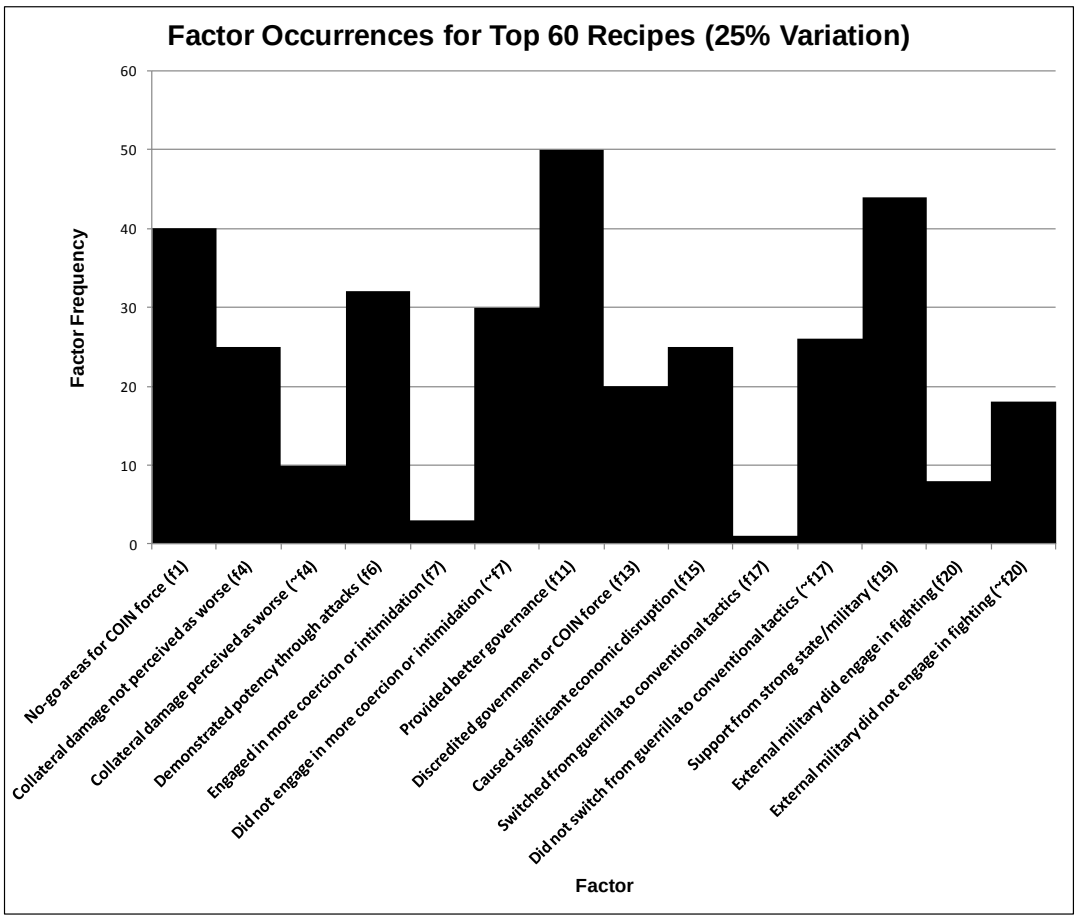


Figure 13. Frequency in 60 Most Significant Recipes (25% Variation)

# APPENDIX E. DATASET QUICK REFERENCE GUIDE

## Hypotheses

Hypothesis 1: Insurgents require a safe haven from which to operate.

Hypothesis 2: The insurgent force cannot be perceived as worse than the COIN force in the area of conflict.

Hypothesis 3: It is better for insurgents to provide or ensure basic services for the population than to focus on discrediting or delegitimizing the COIN force/government.

Hypothesis 4: Longer conflict duration does not necessarily correlate with an insurgency win.

Hypothesis 5: External support is neither necessary nor sufficient.

## Variable groupings and factors

### (H1) Insurgents established a reliable and secure safe haven

f1. Parts of the area of conflict were no-go or otherwise denied to the COIN force
f2. Military action outside of host-nation borders (if insurgents relied on cross-border support or havens)
f3. Terrain played a major role because it provided sanctuary for the insurgents (COIN forces could not/would not enter terrain)

### (H2) Insurgents effectively shaped the perception of the population

f4. Insurgents collateral damage not perceived by population in area of conflict as worse than COIN force
f5. Insurgents exploited deep-seated/intractable issues to gain legitimacy
f6. Insurgents demonstrated potency through impressive or spectacular attacks
f7. Insurgents engaged in more coercion/intimidation than COIN force
f8. Insurgents employed unconstrained violence (against civilians) to create and sustain insecurity and instability (purposely or otherwise)
f9. Insurgents delegitimized due to civilian casualties or other unacceptable behavior
f10. Insurgents forcibly recruited from civilian population

### (H3) Insurgents effectively displaced government structure and functions

f11. Insurgents provided better governance than government in area of conflict
f12. Insurgents provided or ensured provision of basic services in areas they controlled or claimed to control
f13. Insurgents discredited/delegitimized COIN force/government

### (H4) Insurgents effectively managed the duration of the conflict

f14. Insurgents mostly avoided engaging in large-scale operations against better-equipped regular troops and resorted primarily to guerrilla tactics (e.g., sniping, sabotage, small-scale ambushes/hit-and-run attacks, IEDs)
f15. Conflict caused significant host-nation economic disruption
f16. Fighting primarily force-on-force conventional engagement
f17. Insurgents switched from guerrilla to conventional tactics
f18. Insurgents switched from conventional to guerrilla tactics

### (H5) Insurgents enlisted help from an external participant

f19. Insurgents received external support from strong state/military
f20. External professional military engaged in fighting on behalf of insurgents
f21. External support continued to sustain conflict that otherwise would likely have ended

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