

BEYOND PAYOFFS: UNDERSTANDING SUSTAINABLE ECONOMIC INCENTIVES AT THE TACTICAL LEVEL

**A Monograph
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Abstract

BEYOND PAYOFFS: UNDERSTANDING SUSTANABLE ECONOMIC INCENTIVES AT THE TACTICAL LEVEL by MAJ Jonathan K. Shaffner, U.S. Army, 39 pages.

Broadly applied strategy-driven initiatives in a local environment may have unintended effects on the targeted nation's local economy. In addition to direct influences, a foreign force's service and resource requirements have the potential to restructure a local economy in a manner that is unsustainable when the force leaves. The question becomes, how can a tactical commander better understand these effects on their operating environment and work to lessen their ill effects? Building an understanding of the local economy's history to its current state is essential for tactical leaders to integrate strategic initiatives and the economic inputs of their presence in the same manner that they would integrate military operations.

Conflicting guidance from Department of Defense publications that formed the basis of Army Doctrine coupled with the traction current initiatives such as those of Expeditionary propagated by Carl Schramm and others are strategic in nature with little construct to translate their ideas to the tactical level. Ultimately, these new initiatives, similar to those of the past, will have an effect for better or worse on the local economy and its related political and social power systems. Tactical commanders must work through this confusion to build on a unit's understanding of their local economy as necessary for the conduct operations that will have a positive effect, or at least minimize negative effects, on their local economy. Commanders do not need a model on which to base their local economy; they must continuously build a model that best represents their local economy.

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Introduction: Economic Incentives and the Lack of Focused Tactical Application

“Because that’s where the money is.” – Quote attributed to noted criminal Willie Sutton when asked why he robbed banks, forming the basis of “Sutton’s Law.”¹

Historically, tactical commanders end up working as jacks-of-all-trades in a counterinsurgency, stability or reconstruction operation. From military governors charged with reconstructing the south in the United States Civil War, to military governors in World War Two concerned with rebuilding Europe and Japan to the present day where a commander conducts multi-faceted interaction with the populations of Afghanistan, the commander’s involvement includes far more than military operations. Tactical commanders should embrace their multi-functional role and conduct operations that consider all aspects of the society that they serve. The ability to communicate potential costs and benefits of an economic initiative in their area as readily as those of a combat operation becomes an essential element of post combat operations.

The military has the majority of the manpower available to support government interaction with foreign nations yet political rhetoric and even policy in recent years favors an expanded Department of State and other support agencies to cover the non-military requirements such as governance building and facilitating economic growth in battle-damaged, unstable foreign countries.² However, despite the rhetoric, the government has not sufficiently funded an expanded Department of State or actually fielded the programs necessary to increase their deployable capability. The onus therefore continues to fall on the military to conduct and support stability and reconstruction operations when required, often in concert with a full spectrum of operations. The current core army concept recognizes the need to balance

¹ “*City Lore; Willie Sutton, Urbane Scoundrel*,” New York Times, February 17, 2002.

² The Reconstruction and Stabilization Civilian Management Act of 2008 addresses planning, personnel and program management needs and places the responsibility to for preparing and developing intra-agency strategy on the U.S. Department of State in coordination with USAID. Special Inspector General for Iraq Reconstruction, *Hard Lessons* (Washington, D.C.: U.S. Government Printing Office, 2009), 338.

offensive, defensive and stability operations in foreign theaters and consider operations in each context during planning and execution.³ The army needs to embrace these tasks rather than continue its attempt to push the responsibility onto other incapable agencies. Reconstruction, stability and counterinsurgency are operations closely tied to a population and military leaders at all levels should find great motivation to do them correctly and sufficiently.

National Security Presidential Directive 44 directs the Department of State to coordinate and lead the conduct of integrated reconstruction and stabilization regardless of the security situation.⁴ The Department of State created this document in cooperation with the Department of Defense Directive 3000.05, which was overridden by the less prescriptive Department of Defense Instruction 3000.05, covering military actions in support of stability and reconstruction. While the documents still prescribe a cooperative relationship in stability operations led by the Department of State, the army's task to support reconstruction and stability does not translate very effectively to the tactical level.

This monograph focuses on the economic aspects of stability, reconstruction and counterinsurgency operations and presents a method for tactical commanders to first understand the economic system in their operating environment, identify their potential for intentional and unintentional influence of the economic system, and manage the effects of such influences. Ultimately, tactical commanders can develop a level of understanding where they can communicate and positively manage tactical level economic effects of strategic policies and military occupation. The tactical commander's understanding of his local economy will further allow him to be more able to influence the long-term sustainment of the host nation economy. The concept of sustainability is essential to building a combined

³ U.S. Department of Defense, *U.S. Army Field Manual 3-0, The Operations Process* (Washington, D.C.: U.S. Government Printing Office, February 2008), 3-1.

⁴ Frequently asked questions from National Security Policy Document (NSPD) 44 [Internet online] available from: <http://www.crs.state.gov/index.cfm?fuseaction=public.display&shortcut=49QT> [30 December, 2010].

security, political and economic system that will not implode when the foreign force and its financial input departs.

Additionally, each economic venture undertaken by a foreign force produces change in the governance, social and informational aspects of their environment. This paper presents a method to use existing software programs to develop and track this interconnectedness to monitor and assess progress across different lines of operation, but also to avoid damaging effects of misguided influence. Developing more detailed economic links and nodes will undoubtedly provide insight into other aspects of the tactical commander's environment such as potential insurgent funding or political influence wrangling. The law enforcement adage "follow the money" not only provides a better understanding of the operational environment as a whole but also allows tactical commanders to more positively influence a local economy. Finally, the text offers a method for commanders to "sell" their projects to other government agencies, non-governmental organizations or the host government since every good business plan has an exit strategy.

An analysis of current United States Army Field Manuals forms the initial argument of this monograph. The doctrine, while recognizing the importance of an economy, does not provide tactical commanders with a method to build understanding beyond that of broad considerations. A recent publication contracted through the RAND Corporation to fill identified gaps in these publications provides more substance to a commander's considerations of economy and an initial understanding of how their influence may disrupt a local economy. This document still fails to provide commanders at the tactical level the tools necessary to use this understanding to provide sustainable influence and growth to the economy in their operating environment. It seems that civilian and military leadership expects that economic influence, support and growth at the tactical level finds root in the tactical commander's intuition or influence of other governmental or non-governmental agencies whose presence at the tactical level is often very limited. This monograph will attempt to provide substance to a commander's understanding of his local economy, how to limit damage and provide sustainable, supportable growth.

Outside, uncoordinated influence on an economy, especially by a temporary, massive and relatively needy entity such as a deployed combat unit, creates unsustainable forces. Commanders must understand that there are long-term considerations for each unit of currency spent in their operating environment that has potentially more capability for harm or good than each drop of blood spilled. This injection of potential wealth, unlike a deadly munition, has a virtually unlimited time of flight allowing it to influence several individuals, entities and entire systems. Recent concepts such as money as a weapons system, the Sons of Iraq program and desynchronized, unregulated Commander's Emergency Response Program (CERP) spending demonstrate that the army often does not recognize the difference between short-term payoff and sustainable growth. This monograph will offer several case studies to illustrate potential applications of economic incentive in addition to providing substance to the systemic method of understanding and application presented here.

The iterative systems analysis and the principles of a socio-cultural system, developed by Jamshid Gharajedaghi, provide the basis for a commander's effort to build an understanding of the economy in his operating environment. This systemic view provides a tactical commander with an overarching method to both decipher existing forces within his local economic system and measure the response of that system to his presence and incentives he provides. This systemic approach combined with existing software capability further provides a method for a commander to create an output narrative and diagram to pass on his understanding to follow-on units, to "sell" a project to an outside organization or to build understanding within his staff and partners.

Useful Finance and Business Understanding at the Tactical Level

"Business is business and business must grow, regardless of crummies in tummies, you know." – The Lorax (Dr. Seuss)⁵

⁵ Dr. Seuss, *The Lorax* (New York, NY: Random House, 1971), 21.

An occupying or expeditionary force has difficulty constructively changing anything in a foreign land. A local economy in peace determines who lives and dies by the bounty it provides and in war provides those who wage it with their monetary, material and manpower means.⁶ The local economy is an inseparable part of the culture, society and government. It supports through subsistence, infrastructure or taxation all entities inside and outside its immediate boundaries. Because of these reasons, changing an economy from the outside is a complex if not impossible task. Whenever a force attempts to irrationally influence the economy through injections of aid, supporting illicit trade or misrepresented goods and services they disrupt the local economy and form a ripple from the specific point of injection across the other interrelated aspects of the society. Tactical commanders are often closest to the origin of these ripples, likely the most immediately effected by them and sometimes the cause of them.⁷

Understanding of the complexities of a local economy can reveal much deeper indications of the true forces at work in an operating environment. The interconnectedness of a culture and the economy that supports it breeds a myriad of considerations that current military doctrine attempts to capture. Multiple lists of considerations exist to assist commanders at all levels to better understand a local economy.⁸ However, this monograph seeks to provide commanders a process which they can use to develop a dynamic situational understanding and develop an increasing knowledge of the economic aspect of their operating environment and recognition of how and why it interrelates with the other types of power at play.

⁶ The definition of economy used here is the activities related to the production and distribution of goods services in a particular geographic region. From www.investorwords.com [5 December, 2010].

⁷ Keith Crane et al., *Guidebook for Supporting Economic Development in Stability Operations* (Santa Monica, CA: Rand Corporation, 2009), 52, 105.

⁸ The United States Army Field Manuals 3-07 and 3-24 provide extensive lists of economic considerations for use during stability operations and counterinsurgency respectively. While they often mention the interrelatedness of different elements of national power and these considerations, they provide limited description to how or why the relationship exists. This connectivity is most important to a tactical commander's understanding.

Economic, social, cultural and political considerations are frequently mentioned as a collective across army doctrine and other agency publications. The interrelatedness of these aspects of a society no matter its location or current state of affairs creates the contextual lens through which a commander must view his operating area to ensure sustainable success. The sheer complexity inherent in these multi-dimensional relationships and the potential size of the system they create does not lend itself to modeling with a catchy acronym. However, an iterative method of understanding a sociocultural system as proposed by Jamshid Gharajedaghi offers a process that works under the recognition that these factors create an ill-structured environment. Through building an understanding and knowledge of the system, tactical commanders will develop the capability to better influence their local economies positively and identify potential negative effects from initiatives driven from the higher chain of command.

Gharajedaghi describes a sociocultural system as “a voluntary association of purposeful members who themselves manifest a choice of both ends and means.”⁹ Critical in understanding a social system is that it has a purpose or it does something. This sociocultural and now purposeful system is part of a larger purposeful whole just as an economic system joins with a legal system and other systems to create a social system. Common objectives and accepted ways of meeting them create the bounds that hold the members of these systems together. The culture in which the system exists provides the arrangement of a system with other systems to create the cohesive and recognizable whole.¹⁰ Without this common purpose or objective, a system will fall into disarray.

Five principles interact to define the essential characteristics of a sociocultural system and provide grounds for assumptions of future behavior of the entity. These principles are openness, purposefulness, muliti-dimensionality, emergent property and counter-intuitiveness. The variables as

⁹ Jamshid Gharajedaghi, *Systems Thinking: Managing Chaos and Complexity: A Platform for Designing Business Architecture* (Oxford, UK: Elsevier Science and Technology Books, 2006), 12.

¹⁰ Ibid., 13.

defined in the following paragraphs form the basis for constructing and mapping an operating environment, specifically the economic portion, and include considerations that are essential to understand in an iterative learning cycle.

Openness means that an observer can only understand the behaviors of a system in the context of the environment in which it operates. Knowledge of the contextual variables in an environment provides investigators both predictive ability and limitations in understanding the behavior of a system. Current army doctrine provides many considerations which can assist a commander in building this sort of understanding. To control a system an actor must produce an action that is necessary and sufficient to lead to a desired outcome, but often these actions lack the necessary degree of force required to achieve the desired change.¹¹ However, as knowledge of the system increases, the ability to influence specific variables and outcomes also increases. An actor can influence these variables, in the form of people, entities and relationships, which become the transactional environment. This transactional environment grows to include all the potential actors of a system and as each entity learns to influence and attempts to control certain aspects of the system. A by-product of the influenced-influencer relationship is that the influenced entities become less predictable and stable as outside forces provide significant input to their actions and patterns.¹² In other words, the application of more control removes the importance of existing contextual considerations and creates a less resilient system.

Purposefulness provides an understanding of why actors in a system perform certain actions.¹³ The understanding of why an actor performs an action has basis in the culture, emotions and rationality of the entity. The actor makes a rational choice out of self-interest, an emotional choice out of perceptions of beauty or excitement and cultural choices from a base in the collective norms of the group. These

¹¹ Ibid., 31.

¹² Donella H. Meadows, *Thinking in Systems, A Primer* (White River Junction, VT: Chelsea Green Publishing, 2008), 77.

¹³ Gharajedaghi, 33.

concepts compliment or even provide category for many of the considerations recommended in army field manuals.¹⁴

Multidimensionality is the ability to determine complimentary relations in a dichotomy and create a viable whole out of unviable parts.¹⁵ An actor's investigation of a culture's seeming dichotomies often results in a realization that these opposing tendencies are not mutually exclusive and ideas a group views as opposites are not actually on such a spectrum. Tendencies that a population generally holds as dichotomies can interact and integrate to form new situations. Similarly, if two variables show a relationship, there is likely some point where that relationship either ceases or becomes opposite depending on the emphasis and points of distinction. Points of distinction signify where the seemingly dependent variable is qualitatively affected rather than in the quantitative relationship it was party to until the distinctive point.¹⁶ As an example, hostilities between two forces may continue to escalate until one side capitulates or integrates leading to a change in the violent relationship to potentially a political interaction. Plurality is an important sub-principle to multidimensionality in that it demonstrates that a single system may have multiple functions, purposes and governing processes. This leads to the possibility of a plurality of function where a system performs several implicit and explicit functions, structures where the actors in a system can form many different groups or relationships, and processes where several routes lead to a common final state or even a single route may lead to several final states. The existence of plurality should cause commanders to question the "that is how we did it last time" mantra and search for the deeper cause and effect relationships in their operating environment.

¹⁴ United States Army Field Manuals 3-24 and 3-07, on counterinsurgency and stability operations, offer a myriad of economic and social considerations to a commander. However, it is important to note that some of these considerations are contradictory, even within the same manual and a thorough understanding of both manuals is necessary as a start point to describing potential initiatives.

¹⁵ Gharajedaghi, 38.

¹⁶ Ibid., 41.

Emergent properties are those without causal explanations, one cannot describe them as a function of a part or several parts of a system, but rather it is the interaction of relatively small interrelated variables that creates these properties.¹⁷ While the manifestation of a property is observable, an attempt to measure it is problematic. Observable actions that may be at times part of the concert that demonstrates emergent properties are not in themselves always a part of this property. These properties can exist in the form of accidents, or by products but are not easily replicated or investigated due to their seeming unintentional creation. The atmospheric input to snowflake formation is a natural example of emergence. Nationalism's emergence in societies around the world is an excellent social example of this tendency.¹⁸

Counterintuitiveness is a key concept for military planners and commanders since it seemingly flies in the face of the intuition that leaders hold dear. In this case, counterintuitiveness is when a set of actions believed to lead to one endstate actually lead to an opposite endstate.¹⁹ Economists often find counterintuitive answers to their experiments. Social programs meant to help individuals rejoin productive society often foster abusers who only work to stay on the system just as improperly apportioned economic aid can create a reliance on an artificial supply. Cause and effect in these cases are delayed, circular or delinked in time and space making long-term results a factor of long range effects of several immediate actions. In these cases an outside economic input into a society has an indeterminate half-life and can manifest itself in a multitude of potential downstream outputs.

These principles provide the basis for further construction of a systemic understanding of an operating environment. Jamshid Gharajedaghi developed this method with business and economic applications in mind, but uses a myriad of examples to demonstrate the principles' functional

¹⁷ Ibid., 46.

¹⁸ Various articles describe the "emergence" of nationalism from the American Colonies, and Revolutionary France to current situations in India and African States. In each of these cases the commonly understood idea of nationalism comes about by different means in the context of different societies and countries.

¹⁹ Gharajedaghi, 49.

applicability. By keeping these principles as a foundation for study of an operating environment, commanders and their staffs will create a deeper and more thorough understanding of the economic system in their area. For a commander or other tactical practitioner to get the maximum benefit out of these principles, they must develop an iterative learning activity where their present knowledge builds on the past and the influences they observe on the system.

The existence of externalities is an economic consideration that is essential to further understand Gharajedaghi's principles of emergence and counterintuitiveness. Externalities are outcomes of an economic activity that are generally described as indirect effects on portions of the environment not involved in a transaction.²⁰ These effects are generally non-price related, for example the effect of pollution from production on the environment surrounding a facility or congestion from commercial traffic on a highway. These have a direct relation to military operations, increased traffic control, changed local rituals and other side effects are common in military operations and occupations. These are non-pecuniary externalities, as in they do not directly affect prices. However, a main consideration for military operations should be pecuniary externalities. These externalities are where commercial exchanges produce indirect interdependence and affect prices outside of those entities performing a transaction.²¹ The direct military example of a pecuniary externality is where the arrival of a military force willing to pay a local premium for products and services drives the price of such items above where locals can afford them although there may be sufficient supply to service both customer's needs.

²⁰ Steven N. Darlauf and Lawrence E. Blume eds. *The New Palgrave Dictionary of Economics* (New York: Palgrave MacMillan, 1987), vol II.

²¹ Cristiano Antonelli, *Pecuniary Knowledge Externalities: The Convergence of Directed Technological change and the Emergence of Innovation Systems*, in *Industrial and Corporate Change*, Volume 17, Number 5 (Oxford, UK: Oxford University Press, 2008), 1050.

“Iteration is the key for understanding complexity.”²² Developing an understanding of the interrelated variables of a complex system requires an iterative inquiry. In this situation, an entity applies simple rules to change systems, functions and processes and then examines the validity of these change assumptions in the behavior of the elements in a defined system. This repeated testing results in a method that builds until the entity conducting the tests can examine their own theories by influencing the systems’ functions, context, structure and processes, see Figure 1, below. The base function of a system is what it contributes to its environment. The structure is the framework within which it produces its contribution while the process is how the system produces a change in its environment. The context of the system is the considerations of the environment that the system cannot influence.²³ The iterative model forces its user to build an understanding of the system and how it connects to its environment in a sense of expanding scale and scope. This practice leads to a greater definition of components of a system, their interaction and potential boundaries of purpose. Keeping the principles of systems in mind, and thus knowing that total knowledge is likely unattainable, this deeper understanding will allow the entity who conducted the iterative process to more easily influence and interact with the targeted system in a way that pushes it towards a desired endstate.

²² Jamshid Gharajedaghi, “Systems Methodology, A Holistic Language of Interaction and Design, Seeing Through Chaos and Understanding Complexities,” (2004) [Internet online]; available from <http://www.acasa.upenn.edu/JGsystems.pdf> [30 December 2010].

²³ Ackoff, Russell L. and Jamshid Gharajedaghi, *A Prologue to National Development Planning*, (Westport, CT: Greenwood Press, 1986), 88.

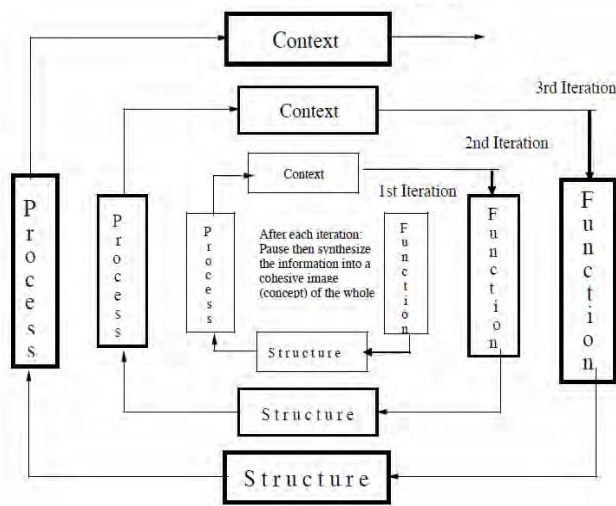


Figure 1 Iterative process of inquiry for understanding complexity²⁴

The output or tracking methodology used to define an economy must contain as many considerations as possible, their linkages to other nodes and the nature of these linkages. This methodology both supports systems methodology, and provides a relatively easy to understand, if however complex, graphical interpretation of the system. This construct provides a more manageable frame for educating necessary personnel and should ease the turnover of the system to incoming units or portions of it to other agencies for continued improvement. While Figure III-2 of *Joint Publication 5-0, Joint Operational Planning*, offers a basic representation of “The Interconnected Operation Environment,” it does not fully define what potential nodes or linkages represent. Such a systemic representation can quickly become very complex, but various link analysis tools exist in the intelligence community to better define and study these linkages. Commanders could and should utilize these tools to represent their system as a whole, not just the adversarial portions. These charts will allow commanders to further understand that linkages between individuals, businesses, government agencies and defined groups have multiple definitions such as communication, direct contact, monetary flow, geographical

²⁴ Jamshid Gharajedaghi, “Holistic Language.”

considerations and a multitude of others that can span across the economic, cultural, political and social realms of interaction.²⁵ Imagination is the only limitation to this type of analysis and as work progresses, operators will likely identify that certain types of nodes and linkages have greater importance than others. These nodes and links will become identified drivers of the system which a tactical commander can influence with any of his available means then iteratively measure the effects as the system responds to his inputs.

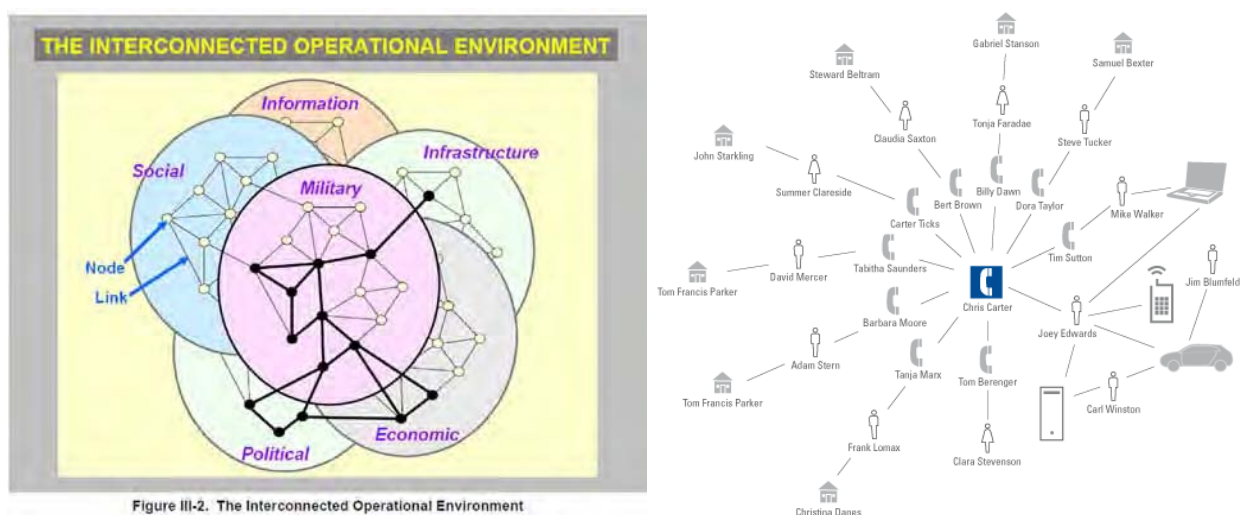


Figure 2 Joint Publication 5-0 page III-17 and an example of an intelligence linkage diagram.²⁶

In addition to the broad context with which to look at an economic system, tactical commanders must understand the requirement for them to hand over their entire operating environment at some point to another military commander, agency or the host government. In this regard, commanders should be keen to the requirements of these agencies and entities. *Field Manual 3-07* offers the USAID principles for construction in Appendix C. Commanders should use this or a similar construct to define context when building cases to capture the economic systems involving individuals, entities, capabilities and

²⁵ Visit <http://www.centrifugesystems.com/blogs/?p=1> for a multi-disciplinary lesson on intelligence-style link analysis and its managerial uses.

²⁶ Commercial software produced linkage diagram from Elaman German Security Solutions, [Internet online]; available from <http://www.elaman.de/speech-identifying.php> [8 December 2010].

resources in their operating environment. US military must utilize the USAID principles when developing economic plans so they are more easily passed on to other governmental agencies and the non-governmental organizations they routinely work with.

While all of the USAID principles are important and at times interdependent, a commander should keep Sustainability and Selectivity at the forefront of their efforts when determining where to spend manpower and financial incentive. A commander's context of sustainability rests on two premises, natural resources and the political, social and economic requirements of a certain plan or program.²⁷ Further, a commander must consider the impacts on local resources and capabilities of each of his inputs into the local socio-cultural system especially when deciding to work for a "quick win" when the long-term sustainability of the project is in question. Each program a commander supports must eventually work without outside backing to ensure that military and other assistance personnel can leave the economy to those who are participating in it.

Finally, this systemic understanding and iterative investigation supports the tactical commander's ability to measure the system's response to his inputs in the form of tactical bets, initiatives or activities seeking to influence links or nodes of the various interrelated systems in his operating environment. The true value of a systemic approach, rooted in an iterative investigation, is that a tactical commander can attempt to influence his environment in many ways or at different scales and the iterative model provides the means to test the outcomes of this influence. Using his intelligence-based modeling software and a narrative to record these experiments, his understanding of his local system will grow with each iteration and attempt to explain the driving connections in his system.

²⁷ U.S. Department of Defense, *U.S. Army Field Manual 3-07, Stability Operations* (Washington, D.C.: U.S. Government Printing Office, October 2008), C-3.

Economics: Often Mentioned but Rarely Addressed

The United States military conducted several revisions to their doctrine in light of experiences in the Balkans, the Horn of Africa, the Caribbean and ongoing operations in Iraq and Afghanistan. Many of these revisions demonstrate an understanding of the resultant complexities in counterinsurgency, stability and reconstruction operations, especially when these operations take place amongst ongoing kinetic activities. Some changes reflect newfound respect for operations conducted in Vietnam or, depending on the source, a thinly veiled reverence to French actions in Algeria. While these changes acknowledge the need for a whole of government approach, and mention the word economy or economics as if it were permanently connected to social or political considerations, even making it an operational variable, they fail to fully expound on the United States Army tactical leader's involvement in the economy of their operating environment and its necessity for a sustainable success.

Using current Field Manuals (FM), contracted research documents and military source directives and instructions, this review will discuss the context in which these publications mention economics and the depth they venture to explain applications at the tactical level. The United States Army operations and planning manuals, FM 3-0 and FM 5-0, form the nucleus for army planning and operations. Further, FM 3-07 and FM 3-24 provide guidance for stability and counterinsurgency operations. FM 3-07.1 and FM 3-24.2 provide tactics, techniques and procedures for peace operations, an intra-service translation of stability operations, and counterinsurgency operations. To address identified gaps in understanding and documentation, the army contracted the RAND Corporation to address the FM 3.07 stability task to support economic development with the research and publication of the *Guidebook for Supporting Economic Development in Stability Operations*. Finally, this monograph reviews the source policy for military stability operations, Department of Defense Instruction 3000.05 published on September 16, 2009 and its precursor, Department of Defense Directive 3000.05 published in 2005.

Field Manual 3-0, *Operations*, mentions the word economy or economics over 50 times. However, nearly half of the mentions discuss economy of force operations. The first paragraph addressing economy in depth is paragraph 1-30 which discusses the connection between local economy and local

politics and lists factors affecting an individual's incentives to change the status quo. These factors include technical knowledge, decentralized capital flow, investment, price fluctuations, debt, financial instruments, property rights and black market activity.²⁸ While many of these terms represent relatively advanced economic understanding at a national level, at the local tactical level they translate into basic supply and demand issues. This thought qualifies the manual's later mention of the interrelatedness of security, economic health and government capability.²⁹

The most direct economic guidance in the manual potentially demonstrates its greatest misunderstanding of the importance of economic stability by stating that basic infrastructure must be functioning before shifting efforts to stabilize the economy.³⁰ In fact, reconstituting the power, transportation, communication, health and sanitation, firefighting, mortuary services and environmental control capabilities of a country should be integrated with the unit's overall economic development plan as these services provide both a large source of employment to an area and much of the structure required to advance business. The manual lists four all-inclusive elements of economic stabilization – restoring employment opportunities, initiating market reform, mobilizing domestic and foreign investment, supervising monetary reform and rebuilding public structures.³¹ While these elements of stabilization are not similarly mentioned in FM 3-07, *Stability Operations*, they have merit at a national level. However, only portions of two, rebuilding public structures and restoring employment opportunities, are applicable at the tactical level.

While FM 3-0, *Operations*, makes limited mention of economic considerations, it does not provide any depth of understanding to tactical commanders regarding their economic concerns.

²⁸ FM 3-0, 1-7.

²⁹ Ibid., 3-13.

³⁰ Ibid., 3-16.

³¹ Ibid., 3-16.

Additionally, the document's listing of economic considerations does not reference or directly align with guidance in FM 3-07, *Stability Operations*. Overall the document does not usefully address economic concerns, considerations or potential actions at the tactical level.

Field Manuals 5-0, *The Operations Process*, and FM 6-0, *Mission Command: Command and Control of Army Forces*, make roughly ten mentions each of the word economy. In the only specific explanation of the word, FM 5-0 makes mention of economy as an influencing factor in an operating environment in the context of an operation variable.³² Again, these two manuals do not offer assistance to a tactical commander's understanding of the importance of the economy or potential interactions with it at their level.

Field Manual 3-07, *Stability Operations*, mentions economy or economics over 200 times in its text and provides the most detailed explanation of considerations of military interaction with and shaping of the host country economy. Department of Defense Directive 3000.05 published in 2005 which has since been overwritten by the less prescriptive Department of Defense Instruction 3000.05 provides the basis for ideas on this manual. Under direction from the former document, this manual describes a military necessity to rebuild the government and develop a market economy and provides several vignettes in its first chapter describing how a leader can influence local economies.³³

A common theme in the manual is the connection of political and economic goals and the importance of understanding both policies and their interaction two levels up and down. Further, the document describes a direct connection between political and economic freedom that goes as far as referencing national security strategy that links a market economy and independent business as a trait of a

³² U.S. Department of Defense, *U.S. Army Field Manual 5-0, The Operations Process* (Washington, D.C.: U.S. Government Printing Office, March 2010), 1-1.

³³ FM 3-07, vi.

legitimate, effective state.³⁴ The manual addresses the primary stability task of Support to Economic and Infrastructure Development in the context of each subsequent chapter.

The context setting first chapter ends by providing an important consideration to commanders at all levels, that the immediate post-conflict economy is ripe for quick gains.³⁵ This section, titled Sustainable Economy, is the most instructive portion in any field manual regarding potential tactical level application of economic influence. It describes how at the end of a conflict, the local government is often in a state of decreased capability and military forces have the opportunity to immediately begin reconstruction efforts. These efforts should be focused on aspects of the economy that support its ability to self-sustain rather than looking for rapid, but temporary gains.³⁶ These tactical-level projects include rebuilding physical infrastructure, establishing a viable workforce, business development and effective management of natural resources. The manual further recognizes that non-governmental and governmental aid agencies rush to provide aid in the immediate post-conflict economy, but describes this aid as a temporary and undirected injection into the economy. This short description of a framework assists in a tactical commanders' immediate development of a post-conflict economic understanding but does not describe actions further.

Chapter two describes stability in the context of full-spectrum operations, describing how stability, offense and defense are present in all phases of military operations. The chapter describes the Department of State's stability sectors, since they are by policy in the lead of stability operations. Most notable regarding this monograph is the economic stabilization and infrastructure sector which was arguably born from the same national security strategy as the primary stability tasks, since they mirror each other directly. Meaningful reference to the economy begins in paragraph 2-40 which begins a series

³⁴ Ibid., 1-10 and 1-29.

³⁵ Ibid., 1-18.

³⁶ Ibid., 1-18.

of sections titled Economic Stabilization and Infrastructure after the introduction of the primary stability task. This section provides a limited framework for initial economic stabilization activities in a post-conflict country focusing on basic policy establishment and securing and rebuilding existing economically important physical and process structures.³⁷ However, the publication also sees the post-conflict environment as an opportunity to build private sector capabilities into a previously oppressive or government controlled economy. Economic growth becomes directly linked to government support to, regulation of and capability to secure economically viable areas and activities.³⁸

Chapter three provides detail in determining which of the primary stability tasks or their subcomponents will become essential stability tasks. The chapter leads a reader to recognize the necessity to link efforts across stability sectors, such as from economy to governance and security, and that military forces must understand the economy of their sector knowing that it will be a foundation for future development.³⁹ Further, the monitoring of price fluctuations that result from military inputs is an important impact of military presence. Examples of this are local buying by military forces that drive prices or availability of commodities out of range of the rest of the population. Military operations must reach a balance between immediate concerns, long term growth opportunities and what is immediately available in an area regarding what workforce and the economic infrastructure they must develop.⁴⁰

While FM 3-07 provides the most detailed planning and execution tool regarding economic development in the United States Army's manual library, it provides mostly considerations, not sources of applicable tactical techniques. While mentioning the phenomena, it does not fully recognize the interconnectedness of all aspects in a society with the economy. The most glaring examples of this are in

³⁷ Ibid., 2-8 and 2-9.

³⁸ Ibid., 2-12.

³⁹ Ibid., 2-14.

⁴⁰ Ibid., 2-15.

chapter one where the manual separates infrastructure from the economy and places security and restoration of essential services as a greater necessity than economic support rather than operations that can support all three simultaneously. The subordinate to FM 3-07, Field Manual 3-07.31, *Tactics, Techniques and Procedures in Peace Operations*, mentions economics as a consideration, but provides no further depth to tactical operations to support economic activity.

Field Manual 3-24, *Counterinsurgency*, and FM 3-24.2, *Tactics, Techniques and Procedures in Counterinsurgency*, provide more detailed actions for military forces with regard to local economies, but do so in the context of their titles. These manuals see economic disparity as a driver to insurgency and inequities as a source of unrest. Additionally, the authors of this manual see the economy as a source of power through formal and informal commerce.⁴¹ Economy does become an example logical line of operation in chapter five but is considered as a function or outcome of a legitimate government rather than an integral requirement of a sustainable society.⁴²

The final chapters and appendices provide some mention of possible tactical applications of economic incentives. However, they are focused on counterinsurgency application rather than economic growth. According to these chapters, the economic stability and support must support the achievement of objectives along other lines of operation rather than an integrated plan where all lines support each other.⁴³ Since they present a measurable output, these manuals encourage counterinsurgency commanders to utilize economic outputs as indicators of mission effectiveness. While they do offer guidance to not disrupt the local status-quo with military injection of funds, these manuals go on to provide examples of

⁴¹ U.S. Department of Defense, *U.S. Army Field Manual 3-24, Counterinsurgency* (Washington, D.C.: U.S. Government Printing Office, December 2006), 3-10.

⁴² *Ibid.*, 5-17.

⁴³ *Ibid.*, 8-1.

tactical applications of economic incentive specifically to disrupt the status-quo, in some instances quite deeply.⁴⁴

Field Manuals 3-24 and 3-24.2 provide many examples of tactical application of economic incentive. However, commanders cannot describe most of these applications as economic stability operations since they provide economic incentive for an activity or service that is outside the interests or needs of a population and is rather a method to change a local powerbase. These operations are not directly conducive to producing a long term viable economy. Using money as a weapons system is an expensive investment since it literally changes the local economic system with an artificial input that commanders must continuously support or risk losing gains achieved.⁴⁵ Further, although the manuals provide many valuable considerations regarding the economy, they provide little in the way of describing how to build a viable, self-sustaining economy.

To address identified shortfalls in current doctrine, specifically in building a tactical-level understanding of the economy in an operating environment, The United States Army contracted research and a guidebook from the RAND Corporation. The 2009 document acknowledges that although U.S. Army personnel have become more involved in providing assistance to local economies and infrastructure, there is little guidance in existence below the national level despite requests for assistance at the tactical level.⁴⁶ The guidebook is a useful source for the kinds of information required to explain economic situations in an intelligence preparation of the battlefield, potential approaches during mission analysis and course of action development. It further describes definitions of the roles and capabilities of

⁴⁴ Ibid., D-7 discusses how not to disrupt the status-quo with CERP funds but FM 3-24.2 discusses tactics on how to use money as a weapon system to distribute or support powerbases on pages 3-11 through 3-13.

⁴⁵ Sons of Iraq are a prime example of the necessity of long-term involvement in reaching an immediate end. By paying the Sons of Iraq, the military was arguably taking bodies away from the insurgency; however, the necessary continued payment became an issue, especially when the Government of Iraq was to provide payment to these individuals after the Status of Forces Agreement.

⁴⁶ Crane et al., xi.

non-military players who may be able to assist with mission tasks, and how to measure progress and success.⁴⁷

The RAND document's authors designed it to "help U.S. Army personnel to more effectively use economic assistance to support economic and infrastructure development."⁴⁸ It received influence from the USAID produced *Guide to Economic Growth in Post-Conflict Countries* from October 2007 and is specifically geared to tactical commanders. The Department of Defense contracted the manual to help these commanders choose and implement programs in and better understand the economic context of their environments. It draws heavily on best-practices in micro-case studies gleaned from ongoing operations in Iraq and Afghanistan, through commander interviews, publications and interaction with military and civilian personnel with experience in exercising military support to self-described economic development. The authors of the document experienced these activities in current theaters as well as Liberia and other areas that recently experienced unrest.

The authors divided the extensive book into several semi-stand alone chapters including: What You Need to Know Before You Go; Players, Coordination and Resources; Humanitarian Assistance; Infrastructure and Essential Services; Agriculture; Currencies, Budgets, Finance and Foreign Trade; Private Sector Development and Employment Generation; Natural Resource Management; The Effects of the U.S. Military on Local Economies. Each of these chapters begins with frequently identified problems at the tactical level regarding the section's focus topic then moves into tasks for the Host Government, Civilian Agencies and NGOs. Following this sub-section the chapters list and discuss potential army assessment, support and security tasks. This guidebook operates on the premise that military manpower exists in a theater to support those tasks operated by the above mentioned Host Government, Civilian

⁴⁷ Ibid., 5.

⁴⁸ Ibid., iii.

Agencies, NGOs and State-Owned Enterprises.⁴⁹ Ideally, this method should breed success, but in light of the situation in Iraq and Afghanistan and its lack of sufficient civilian expertise at the tactical level the document seems to miss the mark in supporting DOD 3000.05. Given the document's defined context as the conflict and post-conflict environment, the seemingly heavy reliance on other than military initiation for and management of projects, especially at the tactical level, is unrealistic.⁵⁰ It seems to work on the assumption of a massively expanded Department of State, USAID and NGO expeditionary framework.

The assumption of larger participation from non-military organizations limits the direct applicability of the study. However, the tasks identified in each chapter are useful considerations for commanders at all levels and provide a relatively well explained reason for each task's ability to support economic development. The book echoes these inferences in Chapter 1:

“While these operations are often conducted in support of a host-nation or interim government, they may also be executed as part of a military occupation or under other circumstances where no functioning government exists. Moreover, while stability operations are best conducted in coordination with other instruments of national power, the U.S. military should also be prepared to act in those circumstances that preclude collaboration from civilian agencies and actors. This is particularly important in the transition from high-intensity conflicts to stability operations insofar as the U.S. military may be the only actor capable of carrying out this role.”⁵¹

While this statement greatly expands most commanders' interpretations of full spectrum operations, understanding these additional burdens is important in estimating troops to task down to the lowest tactical level. The document reiterates the importance of economic support and its linkages to security and governance throughout and works to create an understanding that economic support operations must be in conjunction with security and support to governance activities.

⁴⁹ Ibid., v-ix.

⁵⁰ Ibid., xii.

⁵¹ Ibid., 1.

The introduction moves into greater interpretation of the economic and infrastructure support task of stability operations. The differentiation between humanitarian tasks and development tasks is important because recognizing that such activities are separate will lead commanders to better understand their effects on their environment's economy.⁵² Humanitarian tasks are generally in response to a population's emergency needs while development tasks may support broader mission goals or focus on fostering long-term economic growth.⁵³ The tactical application of the economic and infrastructure support task translates into the creation of a local economic environment where individuals engage in legal economic activities while military forces work to further secure the area.⁵⁴ The guidebook recommends a pragmatic approach where expectations must be realistic and closely managed, especially between the local commander and his civilian contacts. Additionally, commanders should understand that they must manage their expectations with higher headquarters and non-military organizations present in their environments. The authors state that economic support operations are often frustrating for all involved in the pace and scope of work that actually happens. They further prescribe an expectation of slow progress, setbacks and ill-defined requirements.⁵⁵

The *Guidebook for Supporting Economic Development in Stability Operations* continues through its explanatory chapters to describe the resources and capabilities of non-military players and host government entities in the context of stability operations. These chapters acknowledge that there are many economic support tasks for both the military and outside agencies while painting a complex and thorough picture of how to look at a local economy in this operational context. The only overarching theme is that

⁵² Ibid., 3.

⁵³ Ibid., 3.

⁵⁴ Ibid., 3.

⁵⁵ Ibid., 4.

the military ideally is in a support role, as the title of the document dictates, and that sometimes complex economic operations must occur to ensure the viability of a recovery from conflict.

The final and most militarily focused chapter discusses the economic effects military forces may have on their host economy. In some cases, the relationship between local economy and hosted forces can be parasitic and is often damaging. The presence of the United States military and our inherent need for progress can lead to extreme localized inflation of goods or services required by military forces and disruption of pre-conflict economic advantages and powerbases by redirected money flows.⁵⁶ The chapter provides several mini-cases that demonstrate positive and negative practices with regard to stabilizing and encouraging growth in a local economy. However, this chapter like the others provides a long and thorough list of considerations, but relatively thin background on the economic or scientific reasoning for them.

The Department of Defense Instruction Number 3000.05, dated September 16, 2009, is where the department updates its policy for the development of military capabilities in supporting stability operations. The document re-issues the Department of Defense Directive 3000.05, originally dated November 28, 2005, as an instruction. This directive forms the basis for the document while the publication expands the original to meet new published policies.

The instruction establishes stability operations as a core United States military mission that units will conduct to the proficiency of combat operations.⁵⁷ Further, it directs military forces to conduct and support stability operations through all phases and ranges of military operations. The document provides

⁵⁶ Ibid., 119.

⁵⁷ U.S. Department of Defense, *Department of Defense Instruction (DoDI) 3000.05: Military Support for Stability, Security, Transition, and Reconstruction (SSTR) Operations* (Washington, D.C.: Secretary of Defense for Policy, 2009), 2.

the military the lead in the tasks to establish civil security and control, restore essential services, repair and protect critical infrastructure and deliver humanitarian assistance.⁵⁸

The instruction identifies the integration with civilian efforts as essential to the conduct of successful operations and guides the military to support and collaborate with stability operational planning of other United States government agencies, foreign governments and international and non-governmental organizations as appropriate.⁵⁹ Also, the military is to foster the growth of civil-military teams to incubate the success of stability operations.

Specifically addressing the economy, the document states that the military will support operations to foster economic stability and development.⁶⁰ Economic considerations are a characteristic of an area's intelligence assessment.⁶¹ According to the document, Joint Intelligence Operations Centers (JIOCs) will produce economic-centric intelligence products.⁶² Missing from the Department of Defense Instruction Number 3000.05 and present in Department of Defense Directive 3000.05 is the long term goal of building a market economy in indigenous society, and the task to help to encourage a citizen-driven, bottom-up economic activity and required infrastructure.⁶³ Bottom-up, entrepreneurial economic growth was a key concept in the initial document which would have great impact on economic stability operations at the tactical level, but the revised document again considers the military a support organization to host nation, other governmental agencies and non-governmental agencies with regard to economic stability operations.

⁵⁸ Ibid., 2

⁵⁹ Ibid., 2

⁶⁰ Ibid., 3.

⁶¹ Ibid., 9.

⁶² Ibid., 15

⁶³ Ibid., 2 and 3.

The considerations presented in these military and military contracted publications are important and do form a portion of the methodology recommended in this monograph, however they mostly cover the “what” of a local economy not the “how” or “why.” Tactical commanders especially must understand the how and why of the economy, and other systems, in their operating environment so they can influence or support the economic growth of this important sector. This monograph will take some of these considerations, apply a systems methodology to them and create a method for commanders to better perform their primary stability task of Provide Support to Economic and Infrastructure Development.

Case Studies in Post-Conflict Economic Incentive

The following case studies offer an illustration of the importance of tactical level understanding of the system of an economy and the potential for uninformed strategic initiatives to create undesired or unexpected effects in an area’s ground level trade. These vignettes show that the best intentions potentially have unintended side effects. Additionally, they demonstrate that leaders who build a greater understanding of their economic systems in the planning or early stages of a conflict and focus on the balance of “down the road” economic costs of quick win practices and influencing sustainable economic incentives will have better results. The conclusion will utilize these cases as evidence to show the validity of a systems-based modeling construct and the socio-cultural principles. These cases are from situations around the world with vastly differing causes, effects and context but each provides a valuable example of the importance of economic considerations in long-term success.

In War Comes to Long An: Revolutionary Conflict in a Vietnamese Province, Jeffrey Race examines the revolutionary and counter-revolutionary forces at work in a Vietnamese province in the years leading up to full American intervention. The situation in the rural area demonstrates how battling ideologies found root in the local economy and leveraged perceptions of future comfort as a core of their efforts.

The Long An Province, south-west of Saigon, has a name that translates as “prosperous and peaceful.”⁶⁴ The fertile land and its waters, in addition to providing river passage for international shipping, contribute greatly to the agricultural bounty of the country and is an exporter of rice, fish sauce and sugar cane. However, the province includes treacherous and nearly impassible terrain which provided refuge for anti-government forces and greatly complicated the politics of an otherwise agrarian culture. Revolutionaries operating in Long An surprisingly focused their messages on landowner rights and lower rents, issues that the authoritarian, yet United States supported, Diem government created during its corrupt reign.⁶⁵ Diem’s land policies angered both landowners and tenant farmers as rents owed to the government were similar to that previously owed to landlords. Revolutionaries further argued that the Vietnamese government’s reliance on imports from the United States demonstrated weakness and lack of sovereignty.

American operations in the area failed due to their inability to secure and incentivize their aid. While revolutionary programs required the population’s loyalty for participation, the American focus on the macro-economic development allowed for the residents of Long An to receive aid without providing anything in return.⁶⁶ In other words, there was nothing attached to the aid distributed by U.S. and South Vietnamese forces in the area that required loyalty or provided incentive to not support the insurgency. It seemed that that counter-revolutionaries were more concerned with Long An’s continued ability to produce foodstuffs rather than the region’s role as a contributor to the economy and security of Vietnam.

While economy of force requirements may initially overrule economic development considerations, tactical forces must understand the role they play in blindly supporting insurgent-held

⁶⁴ Jeffrey Race, *War Comes to Long An: Revolutionary Conflict in a Vietnamese Province* (Los Angeles: University of California Press, 1972), 1.

⁶⁵ *Ibid.*, 90.

⁶⁶ Joseph Gregoire et al., *Civil Power in Irregular Conflict* (Washington D.C.: Association of the U.S. Army, 2009), 131.

areas with “no strings attached” aid. In the Long An situation the United States was directly providing food and other supplies to individuals who were likely the enemy for a undefined expected return. The Americans understood that Long An was an important agricultural center, but not realizing its history as a revolutionary stronghold was seemingly a gross oversight. The Viet Minh utilized Long An for its agricultural bounty and harsh terrain as a haven against the French in the first Indochina War only a few years before American intervention.⁶⁷

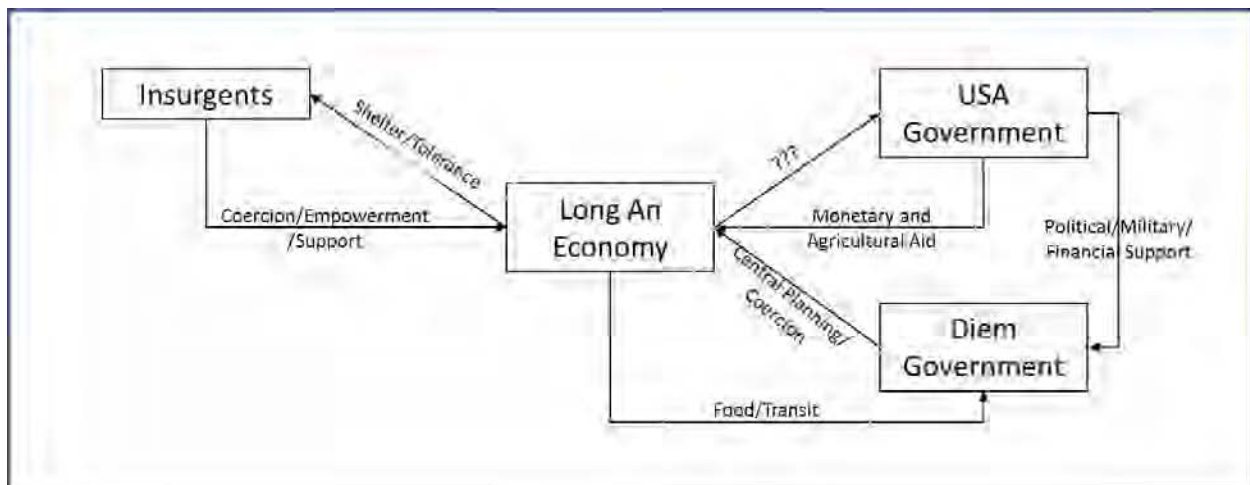


Figure 3 Systemic representation of major outside forces on the Long An Economy.

Figure 3 provides a systemic depiction of major outside influences on the Long An economy. The Insurgents provided ideological influence to the economic core while the Diem government changed landowner’s rights and the United States provided aid. In return the insurgents required shelter and food, the Diem government wanted continued food and waterway transit and the United States asked for nothing. The insurgent’s ability to ideologically match what the Long An economic players desired, a continued status-quo, was a small price to pay for the food, shelter and freedom of movement the local economy provided. The Diem government further strengthened the insurgent position by the decreasing or outright denial of landowner’s rights without physically enforcing changes. The United States

⁶⁷ Ibid., 1.

innocently provided aid to the region without any required payback which fueled a demonstration of the duality of the Long An system in that it did provide agricultural export to urban Vietnam but also provided a strong safe haven and supply center for insurgents. A tactical commander's study of previous conflict in the region, in this case with evidence only a decade old, could use this history to build on his understanding of the tendencies and capabilities of the region to both export rice and engage in above board economic activities while supporting revolutionaries or insurgents with food and shelter. This concept is further outlined in Chapter One of Field Manual 3-24.2 as a method of understanding an Operating Environment through study of existing entities and their historic tendencies.

Further providing evidence to the iterative understanding of an operating environment is the example of Bangui, the capital city of the Central African Republic, which lies on a major land trading corridor nestled in the center of the African continent. The Central African Republic was host to a successful United Nations Peacekeeping Mission from 1997 to 2000. While the mission kept the peace, activities after their departure demonstrated the many illegal and illicit, yet somewhat essential, layers of the Bangui markets.⁶⁸ Current information combined with a USAID sponsored research project called the Bangui Market Study exposes the complexity of these layers and provides a clear example to tactical leaders that understanding of forces at work in their operating environment can greatly assist in efforts to stabilize a region.

The Central African Republic's neighbors, Sudan, Chad and the now broken Congo, were responsible for some of the most heinous acts of human slaughter in recent times and set the stage for the unstable region. While the Central African Republic's internal strife may pale in comparison to Darfur, their north and south rift only complicates the problems posed by refugees and influences that flowed from conflict areas. Bangui's relatively stable economic and security situation provides a rich

⁶⁸ Arthur S. Westneat, "Capture of the Informal Sector: Evidence from Bangui," in *Civil Power in Irregular Conflict*, ed. Joseph Gregoire et al. (Washington D.C.: Association of the U.S. Army, 2009), 181.

environment for conflict influenced socio-cultural study and the potential application of tactical combat efforts for stability operations.

The USAID in cooperation with the Department of State and Africare conducted the Bangui Market Study in 1989 and 1990, before major conflict gripped the region. The effort also had the full support of the Bangui municipal government and included several short, quick turnaround studies covering a variety of topics such as local supply chains, urban transport, municipal services, taxation and market controls.⁶⁹ In this study, the term market represents an activity and location that the municipal government taxes, complicating this simple definition and the study's ability to capture the whole of Bangui's market activity were several spontaneous markets, door-to-door sellers, home-based businesses and sellers who roamed between markets.⁷⁰

Further complicating the market's definition was the existence of a broad informal marketplace that the authors defined as lacking a formal accounting system.⁷¹ The city hosted an informal marketplace for a myriad of goods and services dominated by retail offerings in foodstuffs and supported by food service and hospitality services. The vendors of these informal and formal offerings were a broad range of entities from large wholesalers to husband sponsored wife vendors who took their allowance and parlayed it by turning a profit on sales of produce.

The commercial credit market favored established businesses or those with high levels of collateral. The banking market was risk-adverse and bankers had little interest in lending to the market vendors.⁷² While loan sharks were present, their 50% monthly rates did not allow for small companies to grow. With a demonstrated lack of available growth funding, the study most directly linked the

⁶⁹ Westneat, 182.

⁷⁰ Ibid., 183.

⁷¹ Ibid., 184.

⁷² Ibid., 187.

government's payment of salaries and contracted labor to the health of the marketplace.⁷³ The revenue moving around the city seemed to flow out of the government spending which was likely due to Bangui's status as a trading town with a service-based economy and little manufacturing activity.

Given that there was little formal credit offered to support trading in the Bangui markets, the system relied on another method of credit. Moslem traders were the most prevalent and successful at utilizing "credit in kind" where a distributor lent produce or manufactured items to sellers for an agreed upon future payment. Similar to consignment, this practice supported trade in markets as vast as cattle to diamonds and gold. This credit in kind activity was difficult to capture in a study, but the practice did tie the members of the supply chain together and to the local area due to the vested financial interest of all parties in the success of the marketplace.⁷⁴

Key to this case is that the source of finances and market success was not necessarily due to a formal lending institution or operation, but rather heavily reliant on the timeliness of the municipality's payroll and contracting activities combined with intuitive lending practices of vendors and their suppliers. These practices allowed for the markets to function effectively by filling the consumer's needs while allowing merchants and suppliers to turn a profit. The local government in turn regulated and received taxes from these formal markets and while they may lose potential tax revenues to informal activities, the formal activities seemingly provided the government the funds necessary to deliver services to the population. In the case of the Central African States a conflict between the nation's Moslem and non-Moslem populations occurred shortly after the conclusion of the study and clearly demonstrated how the disruption of essential market drivers would damage the market as a whole. Due to the country turning against its Moslem population, they disrupted the flow of produce to the markets which was driven by the informal "credit in kind" practice. Further, the conflict disrupted municipal payments that took away the

⁷³ Ibid., 187.

⁷⁴ Ibid., 188.

market's main source of cash inflow.⁷⁵ These two factors caused the markets to shrink by over 40 percent and created hardship in the urban community.⁷⁶

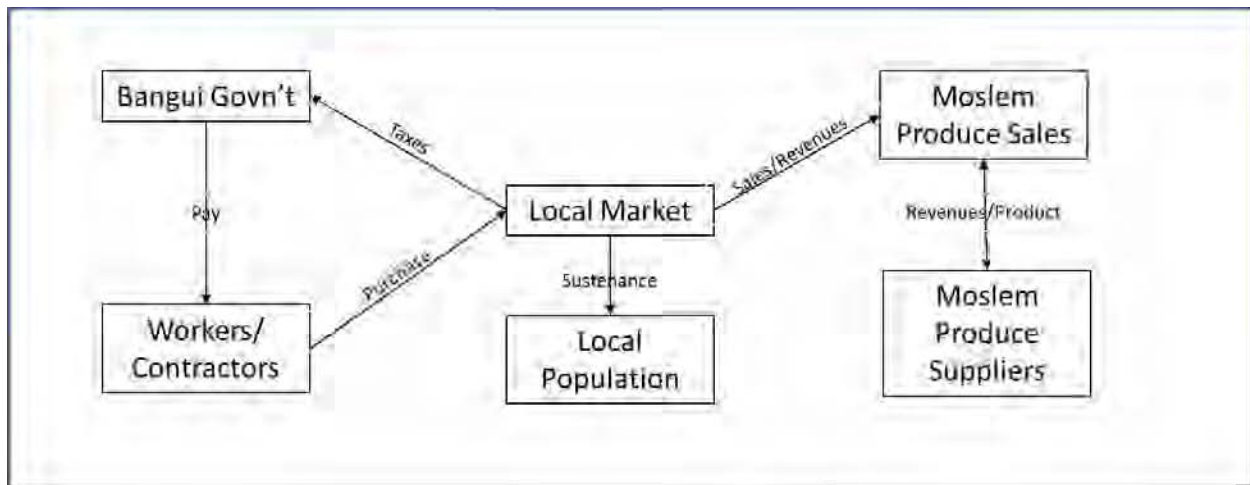


Figure 4 Systemic representation of the local Bangui market.

Figure 4 depicts the two main market-driving forces as identified by USAID studies of the Bangui marketplace. When religious and ethnic strife came to the area, this simple picture provides a strong message to potential forces at work on the ground. The removal of regular government pay, as is likely in an upheaval, and the disruption of the ethnic or religious group providing most of the goods to the market will create localized economic chaos. In response, focusing on the identified market drivers would lead forces and organizations to repair infrastructure necessary to support the government's payment capability and focus reconciliation efforts on market players to most quickly create a sustainable economic future for Bangui. A copy of the Bangui market study would advance the ground tactical commander's initial understanding of the situation on the ground in Bangui, allowing him to quickly identify and address potential issues that block the flow of goods and services in the city beyond immediate security concerns. A tactical commander could establish a relationship with those who were

⁷⁵ Ibid., 189.

⁷⁶ Ibid., 187.

the stalwarts of the markets before conflict and work to provide the necessary security to eventually return the businesses to normalcy. An iterative approach beginning from the findings of the Bangui market study would likely bear sustainable fruit more quickly than efforts that disregarded or were unaware of its existence.

The contracting effort and Sons of Iraq movement in the vicinity of Taji, Iraq during 2008 demonstrates the complexity and interrelatedness between security, governance and economic stability. Additionally, this case demonstrates the iterative effects of incentives provided for one purpose growing to disrupt regional economic and political systems. Army Major Anthony Barbina and the author of this monograph were stationed at Forward Operating Base Taji with the Second Stryker Brigade of the 25th Infantry Division from late 2007 to early 2009. Major Barbina was the engineer company commander and the brigade engineer while Major Shaffner worked as the unit's aviation officer and chief of operations. The following case is from their combined understanding of their brigade's battlespace and its personalities in relation to security, governance and economic development.

During 2008, the military contracted many local firms for infrastructure repair and improvement. However, for several years after the end of hostilities in 2003, similar contracts were not for construction, but for security. Enterprising individuals, who were often tribal leaders, were the best choice for the military to utilize in these early situations since the tribal structure was not significantly damaged by the US-led invasion against the government of Saddam Hussein. These tribal leaders had access to able-bodied individuals and influence over them while the occupying force provided funding and weapons to these ad-hoc security forces. The funds for security were generally paid directly to the tribal leaders, many of whom became Sons of Iraq contract holders which continued to receive funding from the US through 2008 until the Status of Forces Agreement established Iraqi governmental authority for security.

Several of the more influential, and thus higher paid, tribal leaders re-invested their security profits into construction equipment to meet the projected and realized need for infrastructure repair and expansion. These security contractors thus also became construction contractors. Given the uncertain security situation at different times in Iraq, the construction and security businesses seemed to be closely

related and a contractor's ability to both secure and construct a project was a reasonable and profitable integration of business.

However, as the security situation changed and improved, the emphasis in contracting shifted from security to construction. The freshly minted contractors, newly outfitted by profits from their security endeavors, came in direct competition with previously established construction companies led not by tribal leaders but by engineers and businessmen. The conflict was immediate; the situation was such that contracts required security for the site and often for the foremen and owners. The established contractors had to look toward the security contractors, who had a growing regional political influence and legitimacy, to assist in the contracts they won. The local security providers provided the security while continuing to grow their construction capabilities. In the end, the security companies expanded to the point where they could effectively bid a combined security and construction contract and undercut established, more skilled and larger construction companies.

In this case, the military supported those capable of providing required services at the time when certain services were needed. However, either due to necessity, savvy negotiations or ignorance, the military provided the capital for these security companies to displace or disrupt the established construction market through intimidation or expansion. The sustainability of the locality's construction market has yet to be seen, but the unintended change to the commercial environment financed by years of security contracting demonstrates the interdependence of the socio-cultural systems in the post-conflict

environment of 2008 Taji, Iraq.

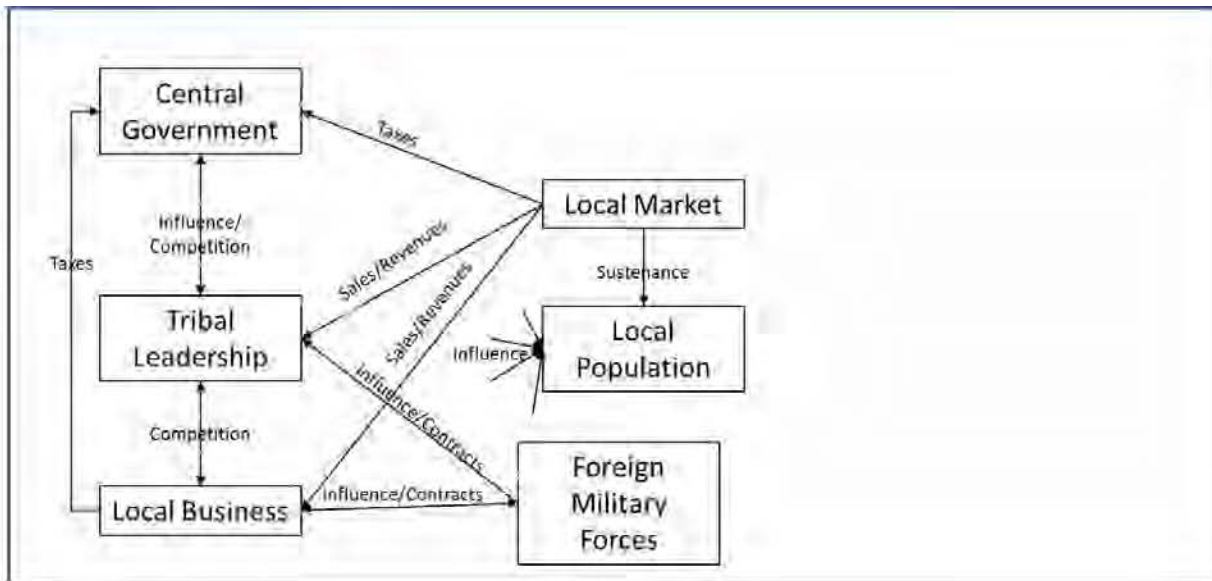


Figure 5 Simplified graphical representation of forces and players in the economy in vicinity of Taji, Iraq.

The exhibit above depicts the economy and forces that developed in post-conflict Iraq. When compared to the economy before the conflict the tribes had less involvement in the economy and likely less influence on the central government. Local businesses, specifically in construction did not have as much competition due to a more centrally controlled economy and lack of foreign force contracting dollars. The injection of foreign force influence and contracts allowed for tribal leaders to increase and expand their regional economic and political influence and resultantly their potential to exercise power at a national level. Local businesses not directly related with tribal structures gained a new competitor as tribes grew in power, influence and capability. The debate at both the local and national level should be, how businesses and tribes translate this new level of competition once the foreign force contracts cease. The potential outcomes are a more tribal controlled local economy, tribes retreating into their historic roles or conflict between the two requiring central government intervention. Investigating this phenomenon in an iterative manner, growing from use of tribal constructs to support security operations through their state in early 2009 as increasingly relevant players in both business dealings and regional politics strongly demonstrates the power of an iterative model and the emergent properties inherent in socio-cultural systems.

Synthesis of a “Tactical” Finance and Economic Incentive Method

Holistic and systems thinking is nothing new to the operational and strategic levels of war, but such considerations are important at the tactical level due to a tactical leaders’ more direct contact with and immediate influence on a population that reinforces or undermines higher level efforts. Often without full translation of operational and strategic initiatives, tactical commanders work where the rubber meets the road. Their greater numbers, more touches with the population and the lack of significant contact with other agencies makes them a powerful force in post-conflict reconstruction, stability and counterinsurgency operations. While focusing on the economy, the case studies presented here show that the economy is always tied to other aspects of a society and vice versa. A strengthening economic situation will build the livelihood of the population, the revenue for the government while providing a significant pillar on which to rest a reconstructed society.

The case studies in the previous section further demonstrate each of Gharajedaghi’s principles present in socio-cultural systems. The purpose of each economy, common across all cases, is to provide an environment for trade to take place.⁷⁷ The second of the principles, openness or the importance of context, is the key to the iterative understanding described in the methodology. In each of the cases social, governmental, cultural and economic considerations were drastically different. The common key in this understanding is that as a foreign entity becomes more involved with an existing system, they must attempt to build knowledge of the layers of the involved players’ interactions within an economy. The cases in Long An best demonstrates the principle of counterintuitiveness. The Long An province provided both sustenance for the greater Vietnamese population and a safe haven for insurgents. The principle of

⁷⁷ Economy is “the large set of inter-related economic production and consumption activities which aid in determining how scarce resources are allocated” [Internet online] available from <http://www.investopedia.com/terms/e/economy.asp> [31 December 2010].

emergence is very common in economics due to the complexity and interrelatedness of economies and the socio-cultural systems in which they exist. Inputs in the form of incentives, coercion or other forces can ripple across a system and without fail effect the short and long term flow of goods and services in some manner much as the case with Iraqi tribal leaders emerging as powerful businessmen and politicians. The case in Bangui shows how social unrest or an attack on a segment of society can disrupt local markets whose strength emerged from practices specific to certain elements of the local society.

Perhaps the most important principle for a tactical commander to understand with regard to the economy is multi-dimensionality.⁷⁸ Each of these cases demonstrates the virtual chaos when an outside entity disrupts a country's socio-cultural system or when the effects of forces inside one of the country's existing systems overflow to take the economy hostage. In each of the cases, the local economy existed in a relatively stable form until acted upon by outside forces. The outside forces then changed an existing power structure within the society under study by empowering entities beyond their previous state. The resultant disruption of the powerbase created a new system with drivers that tactical commanders can identify if they compare the economic system prior to the conflict to its manifestations after the conflict.

A commander's use of an iterative process to build an understanding of the system he is influencing will allow him to more productively act in this environment. A systems outlook does not predict what will happen in the future, but rather provides an opportunity to explore what would happen given a number of driving factors acting in different ways on a system.⁷⁹ Gharejedaghi's principles provide context to how a commander should look at and what he should expect from his system. The cultural considerations from Field Manual 3-24.2 provide a start point for investigation of the existing and developing systems. This manual's questions provide a depth of understanding that should foster an iterative investigation to the source of the answer to each question.

⁷⁸ Eric D. Beinhocker, *Origin of Wealth*, (Boston, MA: Harvard Business School Press, 2006), 54.

⁷⁹ Meadows, 46.

The real value of Gharajedaghi's systemic analysis is that it does not constrain the commander's actions, but only forces him to attempt to reach a deeper understanding of his environment before his presence changed it and ultimately determining how his actions will influence the system toward his desired outcomes. In the two historic cases, Long An and Bangui, tactical commanders had the potential benefit of previously compiled and researched data to rely on to build their operations. In the case of the Taji vicinity in Iraq, units on the ground, if they had used Gharajedaghi's construct, would have likely identified the potential friction points and economic redundancies developing between the private sector and tribal structures. In virtually any tactical situation, a commander using such a systemic concept will build an understanding of the system before his presence, what kind of influence he has on it and potential future outcomes given how he tailors his actions. The iterative process provides a method in which to test degrees, scope and scale of inputs into a system to determine how a tactical commander's initiatives will influence the environment. The economic portion of the socio cultural system is an ideal application of this process due to the economy's role in citizen's everyday lives and the natural metrics inherent in such a system.

Possibly the most important output of this iterative, knowledge building process is the written narrative and diagram of the system. Whether to pass on to a follow-on unit, build a case for non-governmental organization involvement or attempt to influence other agency assistance, the description of the current system and the outcome of proposed attempts to influence it are crucial to a tactical level force's ability to best utilize its influence in their operating environment. There are many programs available to map relationships whether they are geographic, physical, financial or personal but these instruments are often specific to targeted individuals, or enemy. Utilizing a method similar to current intelligence mapping and link diagrams to track each economic case will lead to a greater degree of understanding of the local economy and will also contribute to a greater understanding of the current and possible future regional power structure.

Armed with these considerations and the systemic approach to understanding an economy, tactical commanders can more effectively act in their local economies to create more lasting positive

effects while better positioning follow-on entities to build on their experiences. A tactical commander must consider the application of the economic element of national power at the tactical level in his operations because there is no one else to do so. Essential to this application is that a commander know when an economic force is at play in his environment and how it will effect short and longer term changes in his local markets. Armed with this iteratively created model, a tactical commander in a stability or counterinsurgency operation can work to better avoid potential regional or national economic problems at his level through operations built on and tested through an understanding of his local system.

Bibliography

- African Union. *Multidisciplinary Mission for Evaluation of Post-Conflict Reconstruction and Development Needs in DRC and Burundi*. Conference Report, Addis Ababa, Ethiopia: African Union, 2010.
- Anspacher, John M. "Anspacher to George A. Morgan, 17 June 1953, Document 38: Memorandum on East Berlin Riots." <http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB50/doc38.pdf> (accessed December 23, 2010).
- Antonelli, Cristiano. "Pecuniary Knowledge Externalities: The Convergence of Directed Technological Change and the Emergence of Innovation Systems." *Industrial and Corporate Change*, Volume 17, Number 5, 2001: 1049-1070.
- Bar-Yam, Yaneer. *Making Things Work*. Cambridge, MA: Knowledge Press, 2004.
- Beckstrom, Rod, and Ori Brafman. *The Starfish and the Spider*. New York, NY: Penguin Group, 2006.
- Beinhocker, Eric D. *The Origin of Wealth*. Boston: Harvard Business School Press, 2006.
- Bouma, George. *Strategic Environment Assessment (SEA) and Post-Conflict Development*. Advisory Note, Paris, France: Organization for Economic Co-Operation and Development, 2008.
- Dobbins, James. "America's Role in Nation-Building: From Germany to Iraq." *Strategic Insights*, Volume III, Issue 2, 2004: 71-85.
- Dobbins, James and others. *Europe's Role in Nation-Building from the Balkans to the Congo*. Santa Monica, CA: RAND Corporation, 2008.
- eds., Steven N. Darlauf and Larence E. Blume. *The New Palgrave Dictionary of Economics*. New York: MacMillan, 1987.
- Frequently asked questions from National Security Policy Document (NSPD) 44*. <http://www.crs.state.gov/index.cfm?fuseaction=public.display&shortcut=49QT> (accessed December 30, 2010).
- Gharagedaghi, Jamshid. "Systems Methodology, A Holistic Language of Iteration and Design, Seeing Through Chaos and Understanding Complexities." *University of Pennsylvania ACASA*. 2004. <http://www.acasa.upenn.edu> (accessed December 30, 2010).
- Gharajedaghi, Jamshid. *Systems Thinking: Managing Chaos and Complexity: A Platform for Designing Business Architecture*. Oxford, UK: Elsevier, 2006.
- Gharajedaghi, Russell L. Ackoff and Jamshid. *A Prologue to National Development Planning*. Westport, CT: Greenwood Press, 1986.
- Investopedia*. <http://www.investopedia.com> (accessed August 8, 2010).
- Joseph Gregoire and others, eds. *Civil Power in Irregular Conflict*. Washington DC: Association of the U.S. Army, 2009.
- Keen, David. "Approaches to the Political Economy of Civil Wars." In *Greed and Grievance*, 19-42. London, EN: Lynne Rienner, 2000.
- Marcio, James D. "Risking General War in Pursuit of Limited Objectives: U.S. Military Contingency Planning for Poland in the Wake of the 1956 Hungarian Uprising." *The Journal of Military History*, Vol. 66, No. 3, 2002: 782-813.
- Meadows, Donella H. *Thinking in Systems, A Primer*. White River Junction, VT: Chelsea Green Publishing, 2008.

Merriam Webster Online Dictionary.

others, Keith Crane and. *Guidebook for Supporting Economic Development in Stability Operations*. Santa Monica: Rand Corporation, 2009.

Porter, Michael E. *On competition*. Boston, MA: Harvard Business School Publishing, 2008.

Race, Jeffrey. *War Comes to Long An: Revolutionary Conflict in a Vietnamese Province*. Los Angeles: University of California Press, 1972.

Seuss, Dr. *The Lorax*. New York: Random House, 1971.

Special Inspector General for Iraq Reconstruction. *Hard Lessons*. Washington DC: Government Printing Office, 2009.

U.S. Department of Defense. *Joint Publication 3-24, Counterinsurgency Operations*. Washington DC : Government Printing Office, 2009.

U.S. Department of the Army. *U.S. Army Field Manual 3-0: Operations*. Washington D.C.: U.S. Government Printing Office, 2008.

—. *U.S. Army Field Manual 3-07, Stability Operations*. Washington, DC: Government Printing Office, 2008.

—. *U.S. Army Field Manual 3-07.31, Peace Operations*. Washington, DC: Government Printing Office, 2003.

—. *U.S. Army Field Manual 3-24, Counterinsurgency*. Washington DC: Government Printing Office, 2006.

—. *U.S. Army Field Manual 3-24.2, Tactics in Counterinsurgency*. Washington DC: Government Printing Office, 2009.

—. *U.S. Army Field Manual 5-0, The Operations Process*. Washington D.C.: U.S. Government Printing Office, March 2010.

United Nations High Commission for Refugees. *Finding Durable Solutions*. Information Paper, Geneva, SU: United Nations High Commission for Refugees, 2010.

United Nations High Commission for Refugees. *Finding Durable Solutions*. Information Paper, Geneva, SU: United Nations High Commission for Refugees, 2009.