

CONTRACTING UNDER FIRE

LESSONS LEARNED IN WARTIME CONTRACTING AND EXPEDITIONARY ECONOMICS

> TODD HARRISON JOHN SPEED MEYERS

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BY TODD HARRISON AND JOHN SPEED MEYERS

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EXECUTIVE SUMMARY

Despite billions of dollars in reconstruction spending and the hard work of the U.S. military, State Department, and other agencies over the past decade, only a meager body of research exists on how U.S. resources in the form of wartime contracts can be used most effectively to rebuild a war-torn economy. Consequently, if the United States embarks on another attempt at nation building, it may again be found ill prepared without a more concerted research effort into the economic reconstruction aspects of warfare, often referred to as expeditionary economics. Despite the U.S. military's long history of engaging in reconstruction, expeditionary economics remains relatively less understood than other aspects of war. The purpose of this report is to distill some of lessons learned over the past decade of wartime contracting and economic reconstruction in Iraq and Afghanistan by articulating the limitations of contracting in a war-torn economy, presenting case studies of both successes and failures, and highlighting the need for a more evidence-based approach.

Much of the research to date in expeditionary economics is based on evidence near the bottom of the hierarchy of evidence, a ranking of different types of evidence according to the strength of the underlying data. Such a hierarchy is used in the medical profession, for example, to help practitioners understand how to make decisions based on the best available evidence. In expeditionary economics, evidence can range from expert opinions near the bottom of the scale to randomized controlled trials near the top. While few opportunities exist to conduct randomized controlled trials in a wartime environment, researchers must strive for higher levels of evidence to better equip the practitioners of expeditionary economics to make informed decisions.

Some of the key limits on the ability of the United States to use wartime contracting as a tool for economic reconstruction are the lack of physical security in a war zone, the inability of indigenous firms to perform contracted work, and the debilitating effects of corruption. Four case studies from Iraq and Afghanistan illustrate how these constraints affect the implementation and outcomes of reconstruction programs. The case studies draw on a range of sources in the hierarchy of evidence and demonstrate both the need and the value of higher level evidence.

- 1. IRAQ'S STATE-OWNED ENTERPRISES: In the immediate aftermath of the invasion of Iraq, the Coalition Provisional Authority (CPA) decided not to support the Iraqi State-Owned Enterprises (SOEs). These factories and agencies employed roughly an eighth of the nation's workforce and constituted 90 percent of Iraq's industrial capacity. This sudden loss of Iraq's industrial core and many essential public utilities caused unemployment to spike and effectively crippled the private sector. The limited evidence available, mainly expert opinions and observational studies, suggests that propping up the SOEs may have prevented the security environment from spiraling out of control and made other economic reconstruction programs more effective. A greater understanding of the relationship between U.S. support of the SOEs, job losses, and the level of violence, would have been possible had a randomized controlled trial been conducted to gather more evidence before a final decision was made on the disposition of Iraqi SOEs.
- 2. LOCAL-FIRST PROGRAMS: The Iraqi First and the Afghan First programs gave priority to contracting with local Afghan and Iraqi businesses to inject money into the local economy and help reduce one of the underlying causes of the insurgencies—unemployment. While some evidence suggests these local-first programs eased the process of learning how to contract with the U.S. government and helped support local businesses, they accounted for less than 4 percent of total wartime contracting. The programs were ultimately limited in scale due to the fledgling nature of the host-nation private sector, security concerns with using locals for on-base jobs, and quality issues in the work performed.
- 3. NATIONAL SOLIDARITY PROGRAM: The Afghan National Solidarity Program empowered local Afghan communities to manage their own development projects. Local Community Development Councils selected projects and distributed funds for economic improvement within their own villages. An independent evaluation of the program conducted a randomized controlled trial among 500 villages in which half were randomly selected to participate in the program and half were not. The study concluded that the program was effective in the minds of villagers and, importantly, its effectiveness was limited to areas that were already relatively secure. This study demonstrates how higher levels of evidence can provide commanders with actionable information to make better resource allocation decisions.

4. COMMANDER'S EMERGENCY RESPONSE PROGRAM: The Commander's Emergency Response Program (CERP) received over \$4 billion in appropriations and became the "weapon system" of choice in U.S. counterinsurgency strategy. CERP enabled commanders to fund urgently needed reconstruction and humanitarian projects at the local level with the aim of reducing violence by reducing unemployment. The evidence from observational studies suggests a correlation between CERP spending on labor-intensive projects and the level of violence. One study found that a 10 percent increase in CERP spending on labor-intensive projects corresponded with roughly a 10 percent decline in violence. A separate study found that small CERP projects were five times as effective at reducing violence as large projects.

The case studies presented, while by no means an exhaustive accounting, offer valuable insights into the role of wartime contracting in expeditionary economics. One of the overarching observations from the U.S. experience in both Iraq and Afghanistan is that a lack of physical security impedes virtually all economic reconstruction activities. The security dilemma is further complicated by the fact that a weak economy contributes to the deterioration of the security environment, creating a vicious, destructive, and self-reinforcing cycle that is difficult to break.

The example of Iraqi SOEs suggests that when making an important decision where little evidence is available, the first step should be to collect more evidence before a final decision is made. Another tactical lesson is that local firms are likely to be relatively immature in terms of their capabilities and capacity and could benefit from partnering with larger, more established international firms or with mentors to teach best practices from abroad. Small reconstruction projects funded at the local level appear to have been more effective in Iraq and Afghanistan, but a key question is whether this conclusion can be applied more generally to other situations.

An overriding lesson from the past decade is that the field of expeditionary economics must continue to shift its research approach to focus on higher levels in the hierarchy of evidence, such as the randomized controlled trials used in the National Solidarity Program. More field experiments like this are needed to produce hard data and establish causal relationships. Moreover, if the U.S. military is to use money as a weapon system, it must develop a robust method of "battle damage assessment" for that weapon system. It needs the capability to evaluate reconstruction programs in near-real-time to improve the aim and impact of reconstruction efforts. Expeditionary economics must also find an institutional home within the military before field experiments and other empirical methods can become the norm for determining what types of wartime contracting and reconstruction efforts are most effective. While the thought of another large-scale, protracted ground operation like Iraq or Afghanistan seems unlikely if not unthinkable, recent history suggests that the United States may one day find itself in a similar situation. If, or rather when, the United States contemplates another such operation, it should be armed with more than a "Beginner's Guide to Nation Building." Practitioners of expeditionary economics must begin with a clear appraisal of the hurdles to wartime reconstruction: the lack of security, rampant corruption, a weak host-nation private sector, and competing counterinsurgency objectives. The discipline of expeditionary economics can provide an analytic basis for evaluating possible courses of action so that nation-builders can begin with a more informed reconstruction plan. In so doing the United States can not only win the "clear" and "hold" phases of stability operations, but the "build" phase as well.

CHAPTER 1 > INTRODUCTION

The U.S. Government needs a coherent doctrine for the use of wartime contracting for economic reconstruction in a post-conflict / counter-insurgency environment. Despite billions of dollars in reconstruction spending and the hard work of the U.S. military, State Department, and other agencies over the past decade, only a meager body of research exists on how U.S. resources in the form of wartime contracts can be used most effectively to rebuild a war-torn economy.¹ Even well-intentioned efforts, such as RAND's "The Beginner's Guide to Nation-Building," have provided few concrete ways to improve contracting and reconstruction efforts.² Consequently, if the United States embarks on another attempt at nation building, it may again be found ill prepared. But this is not inevitable. The purpose of this report is to distill some of lessons learned over the past decade in Iraq and Afghanistan by presenting multiple case studies, incorporating available quantitative evidence where possible, and highlighting some of the key limits and opportunities for improvement in the use of wartime contracting for economic reconstruction.

Expeditionary economics refers to the many economic reconstruction aspects of warfare. The counterinsurgency maxim of "clear-hold-build" refers to the need to create a secure physical environment, establish control of the area through effective governance, and begin the process of reconstruction to gain the support of the people.³ Expeditionary economics focuses on the "build" component of this approach. While many of the reconstruction projects in Iraq and Afghanistan fit

¹ Office of the Special Inspector General for Iraq Reconstruction, *Quarterly Report and Semi-Annual Report to the United States Congress* (Washington, DC: U.S. Government Printing Office, 2010), p. 49.

² James Dobbins, Seth G. Jones, Keith Crane and Beth Cole DeGrasse, *The Beginner's Guide to Nation-Building* (Santa Monica, CA: Rand Corporation, 2007), p. ix.

³ Department of the Army, "Counterinsurgency" *Army Field Manual No. 3-24* (Washington, DC: Department of Defense, 15 December 2006), p. 5-18.

under the rubric of expeditionary economics, the concept is not unique to the conflicts of the past decade. The Marshall Plan after the Second World War and the Civil Operations and Revolutionary Development Support (CORDS) groups who operated in the villages of Vietnam are examples of expeditionary economics.

Wartime contracts refer to the military's use of funding for goods and services, such as food and water for U.S. troops, massive construction and maintenance contracts for military facilities, and development projects, such as building bridges, dams, and irrigation systems. The Commission on Wartime Contracting identified nearly \$206 billion in wartime contract spending between 2001 and 2011, out of a total of \$1.2 trillion appropriated for operations in Iraq and Afghanistan over the same period.4 While the overall objectives of wartime contracting are broader than economic reconstruction (e.g., keeping U.S. forces supplied), the funding used for these broader purposes can produce a second-order effect of promoting economic reconstruction. For example, contracting with local businesses rather than international firms to provide basic goods and services for U.S. forces can potentially promote economic growth by keeping more of the contracting dollars in the host-nation. Thus in assessing the role of wartime contracting in expeditionary economics the key questions are: What are the most effective ways to use wartime contracting in expeditionary economics? And what are the limits to this approach?

Despite the U.S. military's long history of engaging in economic reconstruction, expeditionary economics remains relatively ignored compared to other aspects of war. According to some leading experts in the field, such as Carl Scrhamm and Colonel Robert Ulin, expeditionary economics remains more a "field of inquiry," than a "coherent guiding doctrine."⁵ They argue that little evidence and research is available to guide future economic reconstruction efforts in the aftermath of conflict. Two other leading researchers in the field, Rebecca Patterson and Dane Stangler, assert that the United States has "a discouraging record in promoting economic growth" in war-torn economies.⁶ One reason for the relatively slow progress in this field is the type of research conducted, which centers on studies that rely on evidence near the bottom of the so-called hierarchy of evidence.

⁴ Commission on Wartime Contracting in Iraq and Afghanistan, *Transforming Wartime Contracting: Controlling Costs, Reducing Risks* (Washington, DC: U.S. Government Printing Office), p. 22.

⁵ Carl J. Scrhamm and Col. Robert Ulin, "Towards a Post-Conflict Economic Development Doctrine," in *Proceedings from the Summit on Entrepreneurship and Expeditionary Economics: Toward a New Approach to Economic Growth Following Conflict or Disaster* (Kansas City, MO: Kauffman Foundation, 2010), p. 7.; Carl J. Schramm, "Expeditionary Economics: Spurring Growth After Conflicts and Disasters," *Foreign Affairs*, 89, No. 3, May/June 2010.

⁶ Rebecca Patterson and Dane Stangler, *Building Expeditionary Economics: Understanding the Field and Setting Forth a Research Agenda*, (Kansas City, MO: Kauffman Foundation, February 2011), p. 3.

FIGURE 1: EXAMPLE HIERARCHY OF EVIDENCE⁷



The hierarchy of evidence is a ranking of different types of evidence according to the strength of the underlying data. A hierarchy helps practitioners differentiate between types of evidence and understand how to make decisions based on the best available evidence. In the medical profession, for example, the hierarchy of evidence helps doctors and nurses understand what treatment options are best suited for a particular patient.⁸ In the legal profession, the hierarchy is embodied in the rules of evidence, which explicitly limit the use of lower levels of evidence, such as hearsay.⁹

In expeditionary economics, evidence can come in many forms, ranging from expert opinions to the systematic review of multiple, randomized controlled trials. As shown in Figure 1, evidence near the top of the hierarchy is based on data that are more rigorous and therefore more likely to be valid. In a randomized controlled trial, for example, differences between the control and test groups (selection bias) are minimized due to random selection. Changes in the macro

⁷ The example hierarchy shown here is adapted from Bernadette Melnyk and Ellen Fineout-Overholt, "Evidence-based practice in nursing & healthcare: a guide to best practice" (Philadelphia, PA: Lippincott Williams and Wilkins: 2005), p. 10.

⁸ See David Evans, "Hierarchy of evidence: a framework for ranking evidence evaluating healthcare interventions," *Journal of Clinical Nursing* (January 2003), pp. 77-84.

⁹ See John Langbein, "The Historical Foundations of the Law of Evidence: A View from the Ryder Sources" (1996). *Faculty Scholarship Series*. Paper 551.

environment, such as an external event or variable not being tested as part of the trial, are accounted for by comparing the test group to the control group both before and after the test. This allows researchers to attribute any changes in the test group to the new policy being tested. While few opportunities exist to conduct randomized controlled trials in a wartime environment, researchers must strive for higher levels in the hierarchy to better enable the practitioners of expeditionary economics to make informed decisions.

This report first examines some of the key barriers to the effective application of expeditionary economics, specifically: the security environment; the capabilities and capacity of the host-nation private sector; and corruption in the hostnation. These impediments are then illustrated in a series of case studies, which explore the extent to which actual wartime contracts and reconstruction projects have (or potentially could) overcome these barriers. The case studies presented draw on a range of sources in the hierarchy of evidence and serve to illustrate both the need and the value of evidence at higher levels in the hierarchy. The final chapter summarizes some of the lessons learned in expeditionary economics and wartime contracting from the past decade. While specific lessons from Iraq and Afghanistan cannot necessarily be generalized and applied successfully in other parts of the world, lessons learned in how to evaluate and refine reconstruction programs and the way they are funded can have broader implications. Importantly, this report does not advocate that the United States take on the role of nation-builder. Rather, it recognizes that the United States may find itself in such a position again and should at least be prepared to conduct nation-building operations more effectively than it has in the past.

CHAPTER 2 > CONSTRAINTS ON WARTIME CONTRACTING AND RECONSTRUCTION

Practitioners of expeditionary economics—often warfighters on the front lines face real constraints in their ability to use wartime contracting effectively for economic reconstruction. Three key barriers that limited the effectiveness of reconstruction efforts in Iraq and Afghanistan are the subject of this chapter: the lack of physical security, the ability of indigenous firms to perform contracted work, and the debilitating effects of corruption in the host-nation.

Security Environment

Physical security in a war zone has proven to be a fundamental obstacle to the use of U.S. contract dollars and the development of a stronger local private sector in both Afghanistan and Iraq. The terms "expeditionary" and "economics" do not easily merge into a coherent concept because physical danger often complicates the effective use of contracting dollars to promote economic reconstruction. As noted by Carl Schramm, "Entrepreneurial capitalism is messy."¹⁰ Moreover, entrepreneurial capitalism, one messy enterprise, mixed with a warzone, another messy enterprise, can lead to unpredictable and unintended results. Put another way, it does not necessarily lead to economic growth and reconstruction.

Security and economic growth are fundamentally interdependent. The economy cannot properly function without a threshold level of security and governance. At the same time, the level of violence and insecurity can be driven in part by poor economic conditions. This interdependence can enable the creation of a virtuous cycle where security gains lead to economic improvements, and the resulting economic gains lead to further security improvements. But in a war-torn nation, too

^o Carl J. Schramm, "Expeditionary Economics: Spurring Growth After Conflicts and Disasters," *Foreign Affairs*, 89, No. 3, May/June 2010.

often the opposite occurs: poor economic conditions contribute to violence and a decline in security which, in turn, hampers any prospects for economic growth.¹¹

The lack of security in Afghanistan and Iraq impeded the efficient use of contracting dollars for economic reconstruction because many government agencies were not able to conduct even basic monitoring of contracts. A Government Accountability Office (GAO) report on the U.S. Agency for International Development's (USAID) mission in Afghanistan paints a picture of stark limits when it comes to project oversight: USAID documented site visits for only two of eight projects that GAO examined in one audit.12 GAO wrote that, "USAID has specifically cited the security environment in Afghanistan as a severe impediment to its ability to directly monitor projects, noting that USAID officials are generally required to travel with armed vehicles and armed escorts to visit projects in much of the country."¹³ USAID is not alone in trying to administer aid projects under the constant threat of violence. An independent evaluation of the National Solidarity Program (NSP)—a program designed to be rigorously monitored—had to restrict its evaluation of Afghan villages to those in relatively secure areas. The more dangerous areas of Afghanistan's south, a region that probably merited extra scrutiny, were excluded from the independent evaluation because of safety concerns.¹⁴

The lack of physical security affects not only the oversight of projects but also the projects themselves and the wider business environment. One example is the Strategic Roads project in Afghanistan. The Commission on Wartime Contracting observed that, "three years and \$270 million later, the program is being closed down, having completed only a third of the planned 1,500 kilometers of roads, due mostly to the challenges of a steadily deteriorating security environment."¹⁵ The Afghanistan Vouchers for Increased Production of Agriculture (AVIPA) is another example where implementation was limited by security constraints. The unstable Afghan south was deemed too dangerous for this agricultural project, denying residents of the more violence-prone south access to funding and economic opportunity.¹⁶

¹¹ See Department of the Army, "Counterinsurgency" *Army Field Manual No. 3-24* (Washington, DC: Department of Defense, 15 December 2006), pp. 5-18 to 5-23.

¹² Charles Michael Johnson Jr., Director International Affairs and Trade, testimony before the Subcommittee on State, Foreign Operations and Related Programs, Committee on Appropriations, Hearing on Afghanistan Development: USAID Continues to Face Challenges in Managing and Overseeing U.S. Development Assistance Programs, July 15, 2010.

¹³ Ibid.

¹⁴ Andrew Beath, Fotini Christia and Ruben Enikolopov, "Winning Hearts and Minds? Evidence from a Field Experiment in Afghanistan," Working Paper No. 2011-14, *Massachusetts Institute of Technology Political Science Department*, September 2011, p. 8; See Senate Committee on Foreign Relations, *Evaluating U.S. Foreign Assistance to Afghanistan*, 112th Cong., 1st sess., 2011, S. Prt. 112-21, p. 2. for discussion of the allocation of U.S. (in this case USAID) funds in Afghanistan.

¹⁵ Commission on Wartime Contracting in Iraq and Afghanistan, *Transforming Wartime Contracting:* Controlling Costs, Reducing Risks (Washington, DC: U.S. Government Printing Office), p. 135.

¹⁶ Office of Inspector General, Audit of USAID/Afghanistan's Afghanistan Vouchers for Increased Productive Agriculture (AVIPA) Program, Audit Report No. 5-306-10-008-P (Manila, Philippines: Officer of Inspector General, April 20, 2010).

FIGURE 2: COALITION CASUALTIES BY PROVINCE THROUGH 2011



Capabilities of Local Firms

A second key barrier to the effective use of wartime contracting in expeditionary economics involves the capability (or lack thereof) of local firms, and the ability of U.S. contracting officers to direct funding to these firms. One report lamented, "International partners spend billions on construction contracts in Afghanistan. However, little of this money gets to Afghan construction firms, with the majority *siphoned off* [emphasis added] through contracts with foreign companies."¹⁷ Local-first programs, such as Afghan First and Iraqi First, aim to stimulate local business activity by increasing the opportunities for local firms to compete directly for wartime contracts. The Task Force on Business and Stability Operations (TFBSO), a Department of Defense organization created to promote economic development in Iraq and Afghanistan, was also charged with directing more contract dollars to local firms. The lack of familiarity between U.S. contracting

¹⁷ Nathaniel Fick and Clare Lockhart, *The Economic Imperative: Stabilizing Afghanistan Through Economic Growth* (Washington, DC: Center for a New American Security, April 2010), p. 4.

agencies and local businesses was initially a key barrier preventing these local firms from winning U.S. contracts, but the local-first programs proved effective at overcoming this barrier. The Iraqi First program, for example, awarded more than \$6 billion in contracts to more than 4,400 different Iraqi companies.¹⁸

While this success in contracting with local firms is laudable, there remain fundamental limits to the use of host-nation firms. Even if contracting agencies are knowledgeable about the capabilities, capacity, and loyalty of local firms, these companies may not be able to fulfill many of the contracts needed to support a large-scale stabilization force. The Afghan Director of the National Electrical Authority, speaking about the weakness of the Afghan private industry, declared, "We [Afghans] are not Germany after WWII – with an educated class who is ready when the capital comes."¹⁹ A relatively weak and underdeveloped indigenous private sector limits both the amount and types of wartime contracts that can be awarded to local firms.

Jake Cusack and Erik Malmstrom, two former military officers, conducted a thorough assessment of the Afghan private sector. While their report showcases the potential of several Afghan industries, it also casts doubt on the ability of indigenous firms to execute large wartime contracts.²⁰ They note that only 26 percent of the Afghan population is literate, and they list the occupations that Afghan businessmen find to be in short supply: architects, engineers, managers, plumbers, and electricians.²¹ Afghan businessmen, these former officers write, view these shortages in skilled labor as a major constraint.²² One Afghanistan-based research organization, the Afghanistan Research and Evaluation Unit, cites "lack of technical skill and expertise" as a reason that some medium-sized Afghan companies are excluded from contracts.²³ Similarly, a report on the AVIPA project to increase agricultural output identified finding "qualified" local staff, especially engineers, as a significant problem.²⁴

²⁰ Ibid.

²¹ Ibid.

- ²² Jake Cusack and Erik Malmstrom, *Bactrian Gold: Challenges and Hope for Private-Sector Development in Afghanistan* (Kansas City, MO: Kauffman Foundation, February 2011), p. 12.
- ²³ Sarah Lister and Adam Pain, *Trading in Power: The Politics of "Free" Markets in Afghanistan* (Shahr-e-Naw, Kabul, Afghanistan: Afghanistan Research and Evaluation Unit, June 2004).
- ²⁴ Office of Inspector General, Audit of USAID/Afghanistan's Afghanistan Vouchers for Increased Productive Agriculture (AVIPA) Program, Audit Report No. 5-306-10-008-P (Manila, Philippines: Officer of Inspector General, April 20, 2010).

¹⁸ "Task Force For Business and Stability Operations: History and Impact in Iraq," PowerPoint Presentation, Task Force For Business and Stability Operations, available at http://tfbso.defense. gov/www/attachments/TFBSO_Iraq_History_ and_Impact_Brief.pdf, accessed on June 7, 2012.

¹⁹ Jake Cusack and Erik Malmstrom, *Afghanistan's Willing Entrepreneurs: Supporting Private-Sector Growth in the Afghan Economy* (Washington, DC: Center for a New American Security, November 2010).

While in principle it makes sense to nurture local industry through wartime contracts, in a nation ravaged by war and poor governance for years, if not decades, both the capability and capacity of industry are likely to be limiting factors. A 2010 report by the Center for New American Security notes that, "Firms often import laborers from other countries, even for jobs requiring only basic skills such as demolition and bricklaying." The report goes on to assert that, "simple changes to the procurement process for construction contracts could set the conditions to nurture the Afghan construction industry."²⁵ Unfortunately, the report presents no data showing how many construction contracts could feasibly be directed to local firms and staffed by indigenous personnel.

Under wartime conditions, international companies such as Kellogg, Brown, and Root and Agility have performed immense feats in wartime zones. Projects such as building hardened structures, transporting extremely heavy equipment, or creating large distribution centers require a level of expertise, equipment (capital), and management skills that is often lacking in underdeveloped countries like Afghanistan and Iraq where nation building is most likely to be required.²⁶

Security services are an area where local firms might be able to substitute, at least partially, for international firms. Security services are not capital intensive and personnel can be trained relatively quickly relative to other professions, such as electricians or plumbers. But the majority (66%) of those providing contracted security services in Iraq circa 2009 were third country nationals, that is, persons from countries other than Iraq and the United States. Only 28 percent of contracted security services were provided by Iraqis.²⁷ Similarly, Iraqis performed only 14 percent of what the U.S. military terms "base life support" activities, such as food service and laundry. While local firms may have the capability and capacity to provide a greater share of security and life support services, physical security once again becomes a limiting factor. Increasing the use of local firms for on-base services must be balanced with the security concerns associated with using host-nation personnel in positions with easy access to U.S. personnel.

²⁵ Nathaniel Fick and Clare Lockhart, *The Economic Imperative: Stabilizing Afghanistan Through Economic Growth* (Washington, DC: Center for a New American Security, April 2010), p. 4.

²⁶ See "Hardened Structures (Tier 3 Tranche 1 and 2)," available at http://www.kbr.com/Projects/ Hardened-Structures-Tier-3-Tranche-1-and-2/Hardened-Structures-Tier-3-Tranche-1-and-2.pdf, accessed on June 7, 2012 for hardened structures; "Heavy Equipment Transporter," available at http:// www.kbr.com/Projects/Heavy-Equipment-Transporter/Heavy-Equipment-Transporter.pdf, accessed on June 7, 2012 for heavy equipment transfer; and "Warehousing Distribution," available at http:// www.agilitylogistics.com/EN/DGS/Pages/Agility_DGSProducts_WarehousingandDistribution. aspx, accessed on June 7, 2012 for distribution center.

²⁷ Commission on Wartime Contracting in Iraq and Afghanistan, *Transforming Wartime Contracting: Controlling Costs, Reducing Risks* (Washington, DC: U.S. Government Printing Office), p. 204. Base life support includes engineering and sustainment services, equipment maintenance, facility operations, food service, cleaning, laundry, water production, sewage and trash services.

Corruption and Absorptive Capacity

A final key factor limiting the effectiveness of wartime contracts for reconstruction is corruption and absorptive capacity. According to Transparency International's Corruption Perception Index, over the past decade the United States has attempted to rebuild a private sector economy in two countries that rank among the most corrupt in the world: Afghanistan ranks 176th out of 180 surveyed countries while Iraq is tied for 178th.²⁸ Corruption in Iraq and Afghanistan has dramatically shaped U.S. wartime contracts over the past decade and prevented the effective employment of U.S. contracting dollars. The Commission on Wartime Contracting estimated that some \$30-\$60 billion dollars, roughly 15 to 30 percent, has been lost to waste and fraud in Iraq and Afghanistan over the last ten years.²⁹

Corruption impedes the smooth functioning of the private sector and individual reconstruction programs. While reliable empirical data on the effects of corruption on the local Iraqi and Afghan economies is hard to find, two statistics from a Congressional Research Service report illustrate the depth of the problem. According to one USAID official, up to 30 percent of the cost on some Afghan projects can be attributed to corruption.³⁰ Additionally, the report notes that:

According to one joint Afghan government-ISAF estimate, the amount of goods flowing into Afghanistan should generate approximately \$2 billion of customs revenue annually; instead, approximately \$1 billion flows to the government and \$1 billion is being diverted by local officials at the border.³¹

Simply stated, corruption is a major obstacle to the effective employment of expeditionary economics.³²

Perhaps less insidious, though no less important, is the inability of less-developed countries beset by conflict, to absorb large amounts of money as quickly as required. AVIPA is a stark reminder of this fact. According to the Commission on Wartime Contracting,

²⁸ Transparency International, *Global Corruption Report 2009: Corruption and the Private Sector* (New York, NY: Cambridge University Press, 2009).

²⁹ Commission on Wartime Contracting in Iraq and Afghanistan, *Transforming Wartime Contracting: Controlling Costs, Reducing Risks* (Washington, DC: U.S. Government Printing Office).

³⁰ Moshe Schwartz, Wartime Contracting in Afghanistan: Analysis and Issues for Congress CRS Report R42084 (Congressional Research Service, November 14, 2011), p. 6.

³¹ Ibid., p. 7.

³² Colonel Jeffrey D. Peterson, "Towards a Post-Conflict Economic Development Doctrine," in Proceedings from the Summit on Entrepreneurship and Expeditionary Economics: Toward a New Approach to Economic Growth Following Conflict or Disaster (Kansas City, MO: Kauffman Foundation, 2010), pp. 227-228.

The Afghan Vouchers for Increased Production in Agriculture began as a modest \$60 million dollar initiative in 2009, distributing vouchers for wheat-seed and fertilizer to counteract drought-related food shortages in Afghanistan's north. Under pressure to inject \$1 million each day into a dozen or so key terrain districts for seeds, fertilizers, tools, cash-for-work, USAID within a few weeks turned the initiative into a massive \$360 million stabilization program in the south and the east. The pressure to quickly spend the millions of dollars created an environment in which waste was rampant. Paying villagers for what they used to do voluntarily destroyed local initiatives and diverted project goods into Pakistan for resale.³³

The Performance-Based Governors Fund encountered a similar problem. This fund, an attempt to promote good governance by providing funds to successful Afghan governors, might have been too ambitious. One congressional report found, "In some provinces, the governors have the capacity to allocate a \$1.2 million annual budget. However, in less developed provinces, the amount represents a tidal wave of funding that could hamper the ability of local officials to spend the money wisely."³⁴ A rapid influx of funding can itself lead to corruption.

Security: The Underlying Imperative

Despite these limits on wartime contracting as an economic reconstruction tool, there is empirical evidence that the careful use of U.S. aid and contracts can promote economic growth and reconstruction. One rigorous study, a closely-monitored field experiment, showed that U.S. aid programs, when carefully executed, led Afghan villagers to view their economic future as increasingly bright, which resulted in these same persons developing increased trust in the local and national Afghan government.³⁵ This success has led some to argue that there is an "economic imperative" for the United States to prioritize economic growth and even entrepreneurship when engaged in stability operations.³⁶ While this is undoubtedly a worthwhile objective, it must compete with other priorities, such as creating jobs, reducing violence, and promoting stability and good governance.

³³ Commission on Wartime Contracting in Iraq and Afghanistan, Transforming Wartime Contracting: Controlling Costs, Reducing Risks (Washington, DC: U.S. Government Printing Office), p. 135.

³⁴ Senate Committee on Foreign Relations, Evaluating U.S. Foreign Assistance to Afghanistan, 112th Cong., 1st sess., 2011, S. Prt. 112-21.

³⁵ See Andrew Beath, Fotini Christia and Ruben Enikolopov, "Winning Hearts and Minds? Evidence from a Field Experiment in Afghanistan," Working Paper No. 2011-14, Massachusetts Institute of Technology Political Science Department, September 2011.

³⁶ Nathaniel Fick and Clare Lockhart, *The Economic Imperative: Stabilizing Afghanistan Through Economic Growth* (Washington, DC: Center for a New American Security, April 2010).

"Money can create as many problems as it solves," at least when wartime contracts are involved.³⁷ The Host Nation Trucking (HNT) contract—later renamed the National Afghan Trucking contract—is a cautionary example of how increasing the use of local contractors to promote economic growth can have unintended consequences. The HNT used private contractors, many of them local firms, to transport supplies from one U.S. military base to another in Afghanistan. Through the HNT, local firms became a critical element of the U.S. supply chain in Afghanistan. At one time the HNT provided over "70 percent of the total goods and materiel distributed to U.S. troops in the field, roughly 6,000 to 8,000 truck missions per month."³⁸ Because many of these trucking companies and their employees were Afghan, this money was a boon to the local Afghan transportation industry. One trucking company owner involved in the HNT contract reported that his company employed or otherwise supported 20,000 people.³⁹

The HNT contract simultaneously promoted local Afghan businesses and allowed the United States and coalition partners to avoid the manpower-intensive task of transporting basic supplies and the danger associated with these missions. But this contract also fueled what a special congressional report termed "a vast protection racket run by a shadowy network of warlords, strongmen, commanders, corrupt Afghan officials, and perhaps others."40 The investigators found that "the largest security provider for HNT trucks complained that it had to pay \$1,000 to \$10,000 in monthly bribes to nearly every Afghan governor, police chief, and local military unit whose territory the company passed."41 After conducting its own year-long investigation, the military found "documented, credible evidence...of involvement in a criminal enterprise or support for the enemy."42 The investigation turned up a convoluted chain of transactions that linked millions of dollars from the U.S. Treasury to insurgents by way of one subcontractor who made deposits into an Afghan National Police Commander's banking account. In turn the commander then transferred that money to the insurgents "in the form of weapons, explosives, and cash."43

³⁷ Rebecca Patterson and Dane Stangler, Building Expeditionary Economics: Understanding the Field and Setting Forth a Research Agenda, (Kansas City, MO: Kauffman Foundation, February 2011), p. 12.

³⁸ House Committee on Oversight and Government Reform, Subcommittee on National Security and Foreign Affairs, *Warlord, Inc. Extortion and Corruption Along the U.S. Supply Chain in Afghanistan*, report prepared by the Majority Staff and John F. Tierney, 111th Cong., 2d sess., 2010, p. 1.

³⁹ Ibid., p. 9.

⁴⁰ Ibid., Introductory Letter in the Report.

⁴¹ Ibid., p. 3.

⁴² Karen DeYoung, "U.S. Trucking Funds Reach Taliban, Military-led Investigation Concludes," *The Washington Post*, available at http://www.washingtonpost.com/world/national-security/ us-trucking-funds-reach-taliban-military-led-investigation-concludes/2011/07/22/gIQAm-MDUXI_story.html, accessed on June 7, 2012.

In this case, the United States paid a high price for promoting local Afghan industry and avoiding the burden of using its own troops for transporting supplies. While the economic benefits of a \$2 billion dollar contract largely distributed to local trucking companies was substantial, the corruption and potential damage to the U.S. war effort that this contract spawned by indirectly financing enemy operations leaves room to question the wisdom of this approach.

To sum up, the constraints under which expeditionary economics must labor are many, including the lack of physical security, host-nation corruption, and a weak private sector. Although these limitations may undermine the value of expeditionary economics, the case studies presented in the next chapter demonstrate that the U.S. has enjoyed some successes in overcoming these obstacles.

CHAPTER 3 > CASE STUDIES

The following case studies assess four programs from the last decade of wartime contracting, with a particular emphasis on how and to what extent the constraints on wartime contracting discussed in the previous chapter affected the implementation and outcomes of these programs. The case studies cover both Iraq and Afghanistan, contracts with small firms and large firms, and contracts directly disbursed to local companies and indirectly administered by local authorities. The evidence presented for the successes and shortcomings of these programs draws on a variety of sources at different levels in the hierarchy of evidence. Each case study begins with an overview of the program and then delves into the wider implications for expeditionary economics. These case studies suggest that despite many limits, tensions, and obstacles, wartime contracts can be a valuable and effective tool in expeditionary economics.

Case Study 1: Iraqi State-Owned Enterprises

In the immediate aftermath of the invasion of Iraq—a time of looting and confusion—the Coalition Provisional Authority (CPA) confronted an especially daunting challenge determining the future of Iraq's nearly 200 state-owned enterprises (SOEs). The SOEs constituted 90 percent of Iraq's industrial capacity and employed some 500,000 people, about an eighth of Iraq's workforce.⁴⁴ In addition to their major role as employers, the SOEs were "the sole providers of essential public utilities and the leading providers of a large number of public goods and services as well as of consumer and industrial products."⁴⁵ Unfortunately, Saddam Hussein's rule had left the SOEs "seriously de-capitalized, asset-starved,

⁴⁴ Office of the Special Inspector General for Iraq Reconstruction, *Hard Lessons: The Iraq Reconstruction Experience* (Washington, DC: U.S. Government Printing Office, 2009), p. 90.

obsolescent, inefficient, saddled with high production costs, over-staffed, and as a result of looting—in a state of physical degradation."⁴⁶

A serious debate erupted over the role that the United States should play in revitalizing the SOEs. Opponents of rehabilitating the SOEs expressed skepticism that these relics of Hussein's regime could become "viable companies." This argument ultimately prevailed, and the United States froze the SOEs' banks accounts. As a result, many of these workers lost their jobs and the factories sat idle for several years.⁴⁷

Reminiscent of Eastern Europe's "shock therapy" experience⁴⁸, the American approach to economic policy in post-war Iraq was based on the belief that "a free market of new, naturally competitive industries would thrive best in the absence of competition from existing subsidized public-sector operations."⁴⁹ To this end, the CPA explicitly prohibited military commanders and diplomats from contracting with Iraqi SOEs in the immediate aftermath of the invasion.⁵⁰ Unfortunately, the strangulation of Iraq's SOEs did not lead to a blossoming private sector. Instead, as Paul Brinkley, the head of the Task Force for Business and Stability Operations (TFBSO), later noted, "Shutting down state-run industries crippled the existing Iraqi private sector. While most future job growth will result from small private firms, the private sector cannot get off the ground as long as the core industrial base remains depressed."⁵¹ Iraq's combined underemployment/ unemployment rate of 60 percent in the years following the invasion suggests that the private sector was too weak to supply the job creation necessary to compensate for the loss of the SOEs and to keep disaffected Iraqis off the streets.⁵²

The weak showing of the Iraqi private sector highlights the fact that an occupying force often has competing and sometimes conflicting economic goals. As Christopher Coyne has noted, "Occupiers need to develop policies that simultaneously meet short-run needs while also providing the foundations for a market system over the long run...[T]his can be a difficult balance to achieve."⁵³ While the CPA might have erred in shutting down the SOEs, it was attempting to balance the competing goals of creating a sustainable free-market system in the long-term and lowering unemployment in the short-term. An alternative approach would have been to place greater weight on the short-term need to keep

⁴⁶ Office of the Special Inspector General for Iraq Reconstruction, Hard Lessons: *The Iraq Reconstruction Experience* (Washington, DC: U.S. Government Printing Office, 2009), p. 90.

⁴⁷ Ibid., p. 91.

⁴⁸ Shock therapy refers to the sudden privatization and deregulation of large parts of the economy, as occurred in Poland after the Communist Party left power.

⁴⁹ Paul Brinkley, "A Cause For Hope: Economic Revitalization in Iraq," *Military Review*, July/August 2007, p. 4.

⁵⁰ Ibid.

⁵¹ Ibid., p. 8.

⁵² Office of the Special Inspector General for Iraq Reconstruction, Full Impact of Department of Defense Program to Restart State-owned Enterprises Difficult to Estimate (Washington, DC: U.S. Government Printing Office, January 30, 2009), p. i.

⁵³ Christopher Coyne, "The Economic Reconstruction of Iraq," *West Virginia University Department* of *Economics*, February 10, 2010, p. 12.

unemployed citizens off the streets and disinclined to join the insurgency by maintaining some or all of the SOEs. But at the time the decision had to be made, little evidence beyond expert opinion existed to support either approach.

Peter McPherson, the director of Economic Policy at CPA, worried that supporting the SOEs could be seen as wasting resources on uncompetitive businesses. He supported funding only those SOEs that "could make practical use of the CPA money."⁵⁴ Even Paul Brinkley, an opponent of this laissez-faire approach, conceded, "Most factories were overstaffed with workers, and payrolls served in many cases as reward funds for political patronage or corruption."⁵⁵ Brinkley termed the SOEs "welfare-state employment programs."⁵⁶ McPherson and others wanted to create an economy free of the distortions that Saddam Hussein's rule had imposed upon Iraq. Yet Iraq—and the American occupation force—was not ready for the volatility of economic reform on top of the already chaotic situation left in the wake of Hussein's overthrow. While few people wanted to add several hundred thousand unemployed workers to the mix of an already tense situation, the CPA was intent on ending an economy based on patronage and state-directed factories. This long-term economic goal fundamentally conflicted with the shortterm goal of minimizing unemployment to stop the spread of an insurgency.

In 2006, convinced that sky-high unemployment was fueling the insurgency, the Department of Defense (DoD) reversed course and established the TFBSO with the goal of restarting the SOEs.⁵⁷ While it expected that the SOEs would not be self-sufficient, the Task Force encountered another challenge: the much deteriorated security environment. The security situation constrained not only the Task Force's initial assessment of SOE factories but also the monitoring and evaluation of U.S. subsidies. An investigation by the Special Inspector General of Iraq Reconstruction concluded, "Security considerations limited the time available [to the TFBSO] to tour factories and identify potential projects that could improve operations."⁵⁸ The investigators noted, "for security reasons the teams that conducted factory assessments had only one hour to tour each of the factories and identify potential projects that could improve operations."⁵⁹

⁵⁴ Office of the Special Inspector General for Iraq Reconstruction, Hard Lessons: The Iraq Reconstruction Experience (Washington, DC: U.S. Government Printing Office, 2009), p. 91.

⁵⁵ Paul Brinkley, "A Cause For Hope: Economic Revitalization in Iraq," *Military Review*, July/August 2007, p. 4.

⁵⁶ Office of the Special Inspector General for Iraq Reconstruction, Full Impact of Department of Defense Program to Restart State-owned Enterprises Difficult to Estimate (Washington, DC: U.S. Government Printing Office, January 30, 2009), p. 21.

⁵⁷ See David J. Berteau et al., *Final Report on Lessons Learned: Department of Defense Task Force for Business and Stability Operations*, (Washington, DC: Center for Strategic and International Studies, June 2010), especially the Industrial Capacity Restoration section, p. 34; and Office of the Special Inspector General for Iraq Reconstruction, *Full Impact of Department of Defense Program to Restart State-owned Enterprises Difficult to Estimate* (Washington, DC: U.S. Government Printing Office, January 30, 2009), p. i for evidence that this initiative was motivated by rising violence.

⁵⁸ Ibid., p. 1.

⁵⁹ Ibid., p. 4.



FIGURE 3: AN ASPHAULT FACTORY IN RAMADI, IRAQ.

The lack of physical security across Iraq also hampered the evaluation of the SOE restart program by forcing the Task Force to rely on "testimonial evidence on the status of production and number of employees working."⁶⁰ As noted by another independent source, "outcome metrics [used by TFBSO] on the number of Iraqi personnel employed or reemployed were suspect" because of the inability to adequately monitor and evaluate the SOE revitalization program.⁶¹ Yet, as the director of TFBSO pointed out, any criticism of these assessments

⁶⁰ Office of the Special Inspector General for Iraq Reconstruction, *Full Impact of Department of Defense Program to Restart State-owned Enterprises Difficult to Estimate* (Washington, DC: U.S. Government Printing Office, January 30, 2009), p. 1.

⁶¹ David J. Berteau et al., *Final Report on Lessons Learned: Department of Defense Task Force for Business and Stability Operations*, (Washington, DC: Center for Strategic and International Studies, June 2010), p. 35.

must acknowledge, "the environment that existed at the time the program was started."⁶² As Paul Brinkley argues, "Our ability to spend time and money doing detailed 'baselining' during the worst period of insurgent violence was very limited."⁶³ Sound management practices require careful monitoring and evaluation of projects, and prudent business investors would spend more than a single hour investigating a potential factory before making an investment decision. But sound management and prudent business practices will almost inevitably be the exception in a war zone.

This case study suggests that what may appear to be an inefficient use of resources—in this case, providing support to poorly functioning state-owned enterprises—could be necessary in the short run to prevent the security environment from spiraling out of control and rendering attempts at long-term economic reconstruction less effective. The evidence supporting this finding, however, is based on sources at the lower end of the hierarchy of evidence—mainly expert opinions and observational studies. For example, the United States eventually reversed course and restarted the SOEs, restoring 100,000 jobs out of an estimated 500,000 that existed before the invasion.⁶⁴ However, these jobs might have been lost anyway had the factories remained open after the invasion.

To establish a more firm understanding of the relationship between U.S. support of the SOEs, job losses, and the level of violence, a higher level of evidence, such as a randomized controlled trial, would be needed. For example, instead of shutting down all of the factories or keeping all of them open, the CPA could have randomly divided them into a test groups that received various degrees of support and a control group that received no support. By measuring and comparing the employment levels of the factories in these different groups and the level of violence in the areas around them, researchers could establish a causal relationship between the level of U.S. support for the SOEs and the effects on unemployment and violence. This would produce the evidence needed to inform a broader policy on the proper allocation of resources and disposition of Iraqi SOEs.

Case Study 2: Iraqi First and Afghan First Programs

In addition to closing and then restarting Iraqi SOEs, TFBSO also sought to use U.S. military contracts to promote local business in both Iraq and Afghanistan. These initiatives, known as the Iraqi First and the Afghan First programs, directed the U.S. government to prioritize local businesses when awarding construction,

⁶³ Ibid., p. 21.

⁶² Office of the Special Inspector General for Iraq Reconstruction, *Full Impact of Department of Defense Program to Restart State-owned Enterprises Difficult to Estimate* (Washington, DC: U.S. Government Printing Office, January 30, 2009), p. 23.

⁶⁴ Task Force for Business and Stability Operations, *Enabling Security through Economic Opportunity: Iraq Final Impact Summary* (Washington, DC: Department of Defense, 2011), p.1.

transportation, and other contracts. As stated in one military memo, the localfirst programs were intended to help, "eliminate one of the root causes of the insurgency in Iraq—poverty and a lack of economic opportunity."⁶⁵

These initiatives quickly demonstrated that the complexity and inaccessibility of the bidding process for local firms could be overcome. Building Markets, a non-governmental organization that promotes entrepreneurship, conducted a survey of local Afghan businesses and international contractors. It found that the bidding process can be "overly complex and difficult" and that "vendors and service providers alike viewed the international bidding process as inaccessible, confusing, and mysterious."⁶⁶ The Iraqi First and Afghan First programs addressed these issues by giving local firms priority access to U.S. contracts and easing the process of learning how to contract with the U.S. government.

Once given the chance to compete, local firms proved successful in winning contracts. Before Iraqi First, the United States allotted a mere \$74 million to Iraqi firms.⁶⁷ Over 3,900 Iraqi businesses initially registered for the Iraqi First program and the dollar amount of contracts awarded to local businesses grew twenty-five fold in the first year of the program, resulting in \$1.88 billion in contracts awarded to Iraqi firms with continued growth the following year.⁶⁸ Building Market's studies in Afghanistan show that Afghan firms, with some help, have been similarly successful.⁶⁹ Ultimately, the Iraqi First program awarded some \$6 billion in contracts to Iraqi firms.⁷⁰ In Afghanistan, the U.S. awarded some \$4 billion in contracts (\$0.7 billion through the Afghan First program) to local companies out of a total of \$17.3 billion in total contracting for FY 2011.⁷¹

Despite this dramatic growth in local contracting, the fledgling nature of the local private sector eventually caught up with the Iraqi First and Afghan First programs. While local contractors received billions of dollars from U.S. contracting annually, this total is still a small fraction of total wartime contracting. Out of the more than \$200 billion dollars the United States has spent on wartime

⁷⁰ Task Force for Business and Stability Operations, *Enabling Security through Economic Opportunity: Iraq Final Impact Summary* (Washington, DC: Department of Defense, 2011), p.2.

⁶⁵ Raymond Odierno, "Iraqi First Program," *Multi-National Forces Iraq*, availale at http://publicintelligence.net/mnf-i-iraqi-first-program-memo/, accessed on September 28, 2008.

⁶⁶ Peace Dividend Trust, *\$pending the Development Dollar Twice: The Local Economic Impact of Procurement in Afghanistan* (New York, NY: Peace Dividend Trust, July 2009), p. 24.

⁶⁷ "Joint Contracting Command Iraq-Afghanistan Will Participate at Iraq Gathering, May 6th, Amman," available at http://www.i-acci.org/story_detail.php?id=1251, accessed on June 8, 2012.

⁶⁸ Ibid.; Paul Brinkley, "Restoring Hope: Economic Revitalization in Iraq Moves Forward," *Military Review*, March/April 2008, p. 11.

⁶⁹ See Peace Dividend Trust, *\$pending the Development Dollar Twice: The Local Economic Impact of Procurement in Afghanistan* (New York, NY: Peace Dividend Trust, July 2009).

⁷¹ Office of the Special Inspector General for Afghanistan Reconstruction, Afghan First Initiative Has Placed Work with Afghan Companies, but Is Affected by Inconsistent Contract Solicitation and Vetting, and Employment Data Is Limited (Washington, DC: Department of Defense, January 31, 2012), p. 3.

contracts, much of that after the introduction of Iraqi First and Afghan First, less than 4 percent has been funneled through the local-first programs. This suggests that the local private sector, even when given priority and special assistance, only carried a limited portion of the total contracting load.⁷²

These programs also faced difficulties providing reliable, high-quality results. Because local-first programs require the United States to waive full and open competition, it can increase the risk of low quality work.⁷³ While statistical evidence is in short supply, even advocates of this local-first policy have acknowledged that "in some cases project outputs and outcomes may not be as effectively or efficiently delivered if international contractors are not used."⁷⁴ According to Building Markets, international partners have found quality issues when working with local Afghan firms.⁷⁵ Even a memo from General Odierno encouraging commanders to use the Iraqi First program notes that there will be situations where "quality concerns" prevent awarding a contract to a local Iraqi business.⁷⁶

Recognizing that quality concerns were a significant obstacle to a local-first approach, DoD sought to address this issue through partnership and training. In his guidance, General Odierno tasked commanders and contracting agencies to "partner with Iraqi vendors to help them develop effective production and distribution systems." He also encouraged commanders to use CERP "to provide vocational, trade skills, and business management training to the vendors" to remedy quality concerns.⁷⁷ These somewhat extraordinary measures to enable contracting with local firms were appropriate because the goal of a local-first program is not merely to obtain quality goods and services at the lowest cost—something that could be done easily with well-established U.S. and international firms. Rather, the larger goal is to build up local firms and the local workforce in order to promote indigenous economic growth and, through it, long-term stability.

In Iraq and Afghanistan, the local-first programs appear to have been a step in the right direction. Again, the evidence to support this finding is based on expert opinion, qualitative studies, and observational studies—lower levels in the hierarchy of evidence. Ideally, these programs would have included a randomized

⁷² Defense Contract Management Agency, "Joint Contracting Command – Iraq/Afghanistan: Providing Responsive, Full-spectrum Contracting Support to U.S. Military Forces," DCMA Communicator, Summer 2006; and Commission on Wartime Contracting in Iraq and Afghanistan, Transforming Wartime Contracting: Controlling Costs, Reducing Risks (Washington, DC: U.S. Government Printing Office).

⁷³ Bradley A. Cleveland, "The Last Shall Be First: The Use of Localized Socio-Economic Policies in Contingency Contracting Operations," *Military Law Review*, 197, 2008.

⁷⁴ Peace Dividend Trust, *\$pending the Development Dollar Twice: The Local Economic Impact of Procurement in Afghanistan* (New York, NY: Peace Dividend Trust, July 2009), p. 30.

⁷⁵ Ibid., p. 25.

⁷⁶ Raymond Odierno, "Iraqi First Program," *Multi-National Forces Iraq*, availale at http://publicintelligence.net/mnf-i-iraqi-first-program-memo/, accessed on September 28, 2008.

⁷⁷ Ibid.

controlled trial where businesses were selected at random to be in a test group that received local-first assistance or a control that received no assistance. Such an experiment would begin to quantify the effect of local-first programs and help determine if the benefits are worth the costs.

Case Study 3: National Solidarity Program

If local-first programs are the direct approach to wartime contracting, then the National Solidarity Program (NSP) represents the indirect approach. The NSP was created in 2003 by the Afghan government to empower local Afghan communities to manage their own development projects. Under NSP, communities form their own Community Development Council (a group of village leaders) through secret ballot, universal-suffrage elections. The Afghan Ministry of Rural Rehabilitation and Development then distributes block grants of up to \$60,000 to these councils.⁷⁸ With the input of local villagers and the advice of development experts, these councils create a prioritized list of economic projects and issue contracts accordingly. Local villagers provide the labor that converts the contract dollars into economic improvement.

Widely hailed and even deemed a "pathway to success," the NSP spread to 29,474 villages in nearly all of Afghanistan's districts and distributed \$973 million in block grants, much of it funded by the United States.⁷⁹ The program is credited with building schools, labor-saving water pumps, and yield-enabling irrigation networks.⁸⁰ An independent evaluation published by the Political Science Department at the Massachusetts Institute of Technology (MIT) confirmed that these projects produced more than tactical (or local) successes. The MIT study conducted a large-scale, randomized controlled trial across 500 villages in which half were randomly selected to participate in NSP and half were not.

⁸ Andrew Beath, Fotini Christia and Ruben Enikolopov, "Winning Hearts and Minds? Evidence from a Field Experiment in Afghanistan," Working Paper No. 2011-14, Massachusetts Institute of Technology Political Science Department, September 2011, p. 9.

⁷⁹ John A. Nagl, Andrew M. Exum and Ahmed A. Humayun, A Pathway to Success in Afghanistan: The National Solidarity Program (Washington, DC: Center for a New American Security, March 2009), p. 2; and Andrew Beath, Fotini Christia and Ruben Enikolopov, "Winning Hearts and Minds? Evidence from a Field Experiment in Afghanistan," Working Paper No. 2011-14, Massachusetts Institute of Technology Political Science Department, September 2011, p. 9.

¹⁰ John A. Nagl, Andrew M. Exum and Ahmed A. Humayun, A Pathway to Success in Afghanistan: The National Solidarity Program (Washington, DC: Center for a New American Security, March 2009), p. 2.

FIGURE 4: U.S. ARMY LT. COL. BURTON SHIELDS WITH VILLAGE ELDERS IN KAREZGAY, AFGHANISTAN.



The study found that the NSP positively affected villagers' perception of economic well-being and attitudes towards the government.⁸¹ Villagers' perception of their household situation and expectations for the future economic welfare of their village improved by a statistically significant margin among both men and women in villages that were part of the NSP trial, as shown in Figure 5. Actual unemployment, however, did not improve by a statistically significant margin. As shown in Figure 6, NSP also improved attitudes toward elected officials from the local to national level as well as toward NGO personnel and ISAF soldiers by statistically significant margins.

⁸¹ Andrew Beath, Fotini Christia and Ruben Enikolopov, "Winning Hearts and Minds? Evidence from a Field Experiment in Afghanistan," Working Paper No. 2011-14, Massachusetts Institute of Technology Political Science Department, September 2011, p. 4.



FIGURE 5: ECONOMIC CONDITIONS AND PERCEPTIONS AS **MEASURED IN THE MIT STUDY**

Economic Conditions

FIGURE 6: ATTITUDES TOWARD THE GOVERNMENT AS **MEASURED IN THE MIT STUDY**



Attitudes Toward the Government

The study also found that the NSP improved villagers' perception of local security and was correlated with an actual reduction in violence (as measured by ISAF reported incidents). Reducing violence through economic reconstruction is a central component of the "clear-hold-build" approach to counterinsurgency. As shown in Figure 7, men's perception of the security environment improved by statistically significant margins in the NSP group, and women's perception of safety for female workers and teenage girls also improved.

FIGURE 7: PERCEPTION OF SECURITY ENVIRONMENT AS MEASURED IN THE MIT STUDY



Some researchers have recommended that the United States "help Afghanistan expand the NSP as quickly as possible."⁸² These advocates write, "Expansion over the next two years can begin by targeting the approximately 130,000 villages that currently lack coverage, including insecure areas in southern and eastern Afghanistan."⁸³ But despite the empirical evidence of success cataloged in the MIT study, there are still limits to the program's value—limits that the study's authors note.

The study warns that, "the empirical evidence suggests that strategies for winning 'hearts and minds' through the provision of development projects are

⁸² John A. Nagl, Andrew M. Exum and Ahmed A. Humayun, A Pathway to Success in Afghanistan: The National Solidarity Program (Washington, DC: Center for a New American Security, March 2009), p. 3.

⁸³ Ibid.
working, *but only in relatively secure regions.*⁷⁸⁴ [emphasis added] The researchers note that when viewed by province, the results paint a slightly different picture.⁸⁵ The data from the two most violent provinces included in the study—both in Afghanistan's east—show that violence persisted despite the introduction of the NSP.⁸⁶ The program did not have the same effect on economic perceptions, attitudes toward the government, and the security environment in places where the level of violence was already high. Plans to expand NSP to insecure areas are therefore suspect. The data suggest a threshold level of security may be required for the program to be successful.

The randomized controlled trial used to evaluate NSP ranks among the highest levels in the hierarchy of evidence. The data obtained from this experiment establish a causal relationship between the implementation of NSP and the resulting improvement in economic perceptions, attitudes toward the government, and violence. While the data does have its limitations, such as the survey used to measure the perceptions of villagers and the lack of data from Afghanistan's most violent southern provinces, it demonstrates the potential for empirical methods to enhance the understanding and application of expeditionary economics. For example, this study provided commanders with two important pieces of actionable information while the program was still in progress—it established that the program was effective in the minds of villagers and that its effectiveness was limited to areas that were already relatively secure. Armed with better evidence, commanders can make better-informed decisions about how best to allocate resources.

Case Study 4: Commander's Emergency Response Program (CERP)

In the early days of the Iraq war, U.S. forces needed an immediate way to fund emergency projects to aid the early reconstruction effort. Using \$900 million seized from the former Iraqi regime, the Coalition Provisional Authority authorized the Commander's Emergency Response Program (CERP) in June 2003. This provided U.S. commanders with funds for urgent humanitarian relief and reconstruction needs. CERP later evolved beyond its initial funding source of appropriated Baathist cash, receiving funding from the U.S. Congress in supplemental appropriations bills for the war effort. From 2004 to 2012, CERP received

⁸⁴ Ruben Enikolopov, *Development Programs and Security in Afghanistan* (Forum for Research on Eastern Europe and Emerging Economies, November 2011), p. 2.

⁸⁵ Andrew Beath, Fotini Christia and Ruben Enikolopov, "Winning Hearts and Minds? Evidence from a Field Experiment in Afghanistan," Working Paper No. 2011-14, Massachusetts Institute of Technology Political Science Department, September 2011, p. 1.

⁸⁶ See Andrew Beath, Fotini Christia and Ruben Enikolopov, "Winning Hearts and Minds? Evidence from a Field Experiment in Afghanistan," Working Paper No. 2011-14, Massachusetts Institute of Technology Political Science Department, September 2011.

over \$4 billion in appropriations, and in the process became an essential—if controversial—element of U.S. counterinsurgency strategy.⁸⁷

CERP funding can be used for a variety of projects, ranging from building roads and schools to repairing battle damage and improving core infrastructure, such as electricity, water, and sanitation.⁸⁸ The ultimate goal of CERP, however, is not economic reconstruction but rather violence reduction. As one Army manual, "Money as a Weapon System," describes it, CERP is the "weapon system" of choice on the counterinsurgency battlefield.⁸⁹ It is a key component of the "clear-hold-build" approach to counterinsurgency.

FIGURE 8: GROUND BREAKING CEREMONY FOR THE KHARABRUD ELEMENTARY SCHOOL WITH LOCAL IRAQI LEADERS.



Capt. Whitney Campbell (center) participates in a ground breaking ceremony for the Kharabrud Elementary School with local Iraqi leaders. Funds from CERP paid for renovations to the school.

⁸⁷ Office of the Special Inspector General for Iraq Reconstruction, Iraq Reconstruction Special Report: Reconstruction Leaders' Perception of the Commander's Emergency Response Program in Iraq (Washington, DC: U.S. Government Printing Office, April 2012), p. 1.

⁸⁸ Office of the Special Inspector General for Iraq Reconstruction, *Iraq Reconstruction Special Report: Reconstruction Leaders' Perception of the Commander's Emergency Response Program in Iraq* (Washington, DC: U.S. Government Printing Office, April 2012), p. 4.

⁸⁹ See Center for Army Lessons Learned, *Commander's Guide to Money as a Weapons System* (Fort Leavenworth, KS: Center for Army Lessons Learned, April 2009), especially the foreword, for a helpful overview.

The theory behind the violence-reducing potential of CERP is that the reconstruction projects it funds create jobs in the local community. According to this theory, putting more people to work in the legal labor market reduces the availability of people to support the insurgency or other activities in the illegal labor market. A 2011 study published by the National Bureau of Economic Research (NBER) examined data from the CERP program and found that while the amount of CERP spending did not appear to reduce violence there was a correlation between spending on labor-intensive projects and the level of violence. While the data is not sufficient to establish a causal relationship, the NBER study found that a 10 percent increase in CERP spending on employment corresponded with roughly a 10 percent decline in violence.

A separate NBER study also found evidence of a connection between spending on small reconstruction projects and reductions in violence. This study merged geospatial data on attacks against U.S. and Iraqi forces with data on CERP projects and community characteristics. The researchers found mixed results: from 2004 to 2006 there was no statistically significant correlation between CERP spending and the level of violence observed, but after the 2007 surge it found that CERP spending was associated with reduced levels of violence.⁹⁰ The researchers theorize that the operational changes that accompanied the surge gave commanders better insight into the needs of local communities, improving their ability to distribute CERP funding effectively. Moreover, it found that small CERP projects were five times as effective at reducing violence as larger projects.⁹¹

The data supporting the effectiveness of CERP, mainly observational studies, are near the middle of the hierarchy of evidence. While not sufficient to establish a causal relationship, the data show a correlation between the use of CERP for labor-intensive projects—particularly small projects—and a reduction in violence. While it is possible that some other variable is behind the apparent reduction in violence, the correlation these studies establish deserves greater weight in a commander's decision than qualitative studies or expert opinions.

CERP's apparent success has led some to advance CERP as a critical tool in expeditionary economics, specifically through the creation or support of local businesses.⁹² Focusing CERP funds on electricity production, for example, is touted as a way to enable small businesses by providing an essential public good necessary for economic growth.⁹³ But the data only supports the finding that CERP is

⁹⁰ Eli Berman, Jacob N. Shapiro and Joseph H. Felter, "Can Hearts and Minds Be Bought? The Economics of Counterinsurgency in Iraq," Working Paper No. 14606, *National Bureau of Economic Research*, December 2009, p. 34.

⁹¹ Ibid., p. 43.

⁹² Rebecca Patterson and Jonathan Robinson, "The Commander as Investor: Changing CERP Practices," Prism, 2, No. 2, March 2011, p. 116.

⁹³ Rebecca Patterson and Jonathan Robinson, "The Commander as Investor: Changing CERP Practices," *Prism*, 2, No. 2, March 2011, p. 124.

a tool for affecting the labor market and, by extension, the level of violence. The projects implemented with CERP funds have not focused on firm creation or entrepreneurship, so the data does not support the role of CERP as way to promote economic growth.⁹⁴ While CERP might indeed prove successful if used for this purpose, the CERP experience to date and the analysis of its effectiveness shed little light on this potential role. Further research on CERP might benefit from a close, empirical examination of the extent to which CERP can create firms and meaningfully contribute to the expeditionary economics goal of creating sustainable long-term economic growth in conflict zones.

⁹⁴ Office of the Special Inspector General for Iraq Reconstruction, Iraq Reconstruction Special Report: Reconstruction Leaders' Perception of the Commander's Emergency Response Program in Iraq (Washington, DC: U.S. Government Printing Office, April 2012).

CHAPTER 4 > LESSONS LEARNED

The case studies presented, while by no means an exhaustive accounting of the many programs and reconstruction activities employed over the past decade, offer valuable insights into the role of wartime contracting in expeditionary economics. This chapter summarizes some of the lessons learned from these case studies and offers recommendations for how to create a more robust theory of expeditionary economics.

Tactical Lessons

One of the overarching observations from the U.S. experience in both Iraq and Afghanistan is that a lack of physical security impedes virtually all economic reconstruction activities. While the National Solidarity Program, for example, proved to be effective, it was only effective in areas where the security environment was already relatively benign. The security dilemma is further complicated by the fact that the lack of economic reconstruction contributes to the deterioration of the security environment, creating a vicious, destructive, and self-reinforcing cycle that is difficult to break. The key is to avoid becoming entangled in this cycle from the beginning.

In hindsight, the Iraqi State-Owned Enterprises may have provided such an opportunity. Keeping existing firms operating and their workers employed following a shock to the economy, such as regime change, should be a priority, even if these firms may be inefficient in the short term. State-owned enterprises and the employment they provide could serve as the economic base necessary to maintain stability or arrest the deterioration of the security environment, both of which are critical for enabling other reconstruction efforts. One cannot know what would have occurred had a more gradual transition been used to wean the Iraqi economy from the SOEs. Perhaps the lesson to be learned is that when making such an important decision with little available evidence, the first step should be to collect more evidence before committing fully to one approach over another.

A related lesson is that some assistance will likely be needed to help local firms compete for U.S. wartime contracts. The Iraqi First and Afghan First programs demonstrate that when given help understanding the U.S. contracting process, local firms can compete effectively. But these firms are also likely to be relatively immature in terms of their capabilities and capacity. One approach to help overcome this obstacle is to partner local firms with larger, more established international firms. The United States can also place mentors within local firms to teach best practices from abroad and develop internal processes and skills within these firms. The evidence from these approaches is promising, but further study is warranted.

Another critical lesson learned is the importance of small reconstruction projects funded at the local level. Both CERP and NSP provide empirical evidence that small projects are more effective at improving the security environment in areas that are already relatively secure. The evidence collected from the NSP controlled trial also confirms that these locally directed projects improved perceptions of the economy and the government at all levels. Smaller projects in particular have proven effective at halting the spread of violence and creating the conditions necessary for economic growth to emerge. The evidence suggests that larger scale development projects are less effective or not effective at all in reducing violence and improving economic conditions.

Of course, a key question for future operations is whether the results from Iraq and Afghanistan are applicable to other regions and nations. Answering this question definitively will require a major investment in time and other resources. Consequently, and unfortunately, this places it well beyond the scope of this paper.

An Empirical Approach to Expeditionary Economics

An overriding lesson from the past decade is that the field of expeditionary economics must continue to shift its research approach to focus on higher levels in the hierarchy of evidence. Just as researchers in development economics have adopted the instruments of empiricism, namely randomized controlled trials, researchers in expeditionary economics should strive to identify opportunities for field experiments.⁹⁵ The National Solidarity Program's independent

⁹⁵ See "Jameel Poverty Action Lab", available at http://www.povertyactionlab.org/, accessed on June 14, 2012; "Ideas 42", available at http://ideas42.iq.harvard.edu/, accessed on June 14, 2012; and "Innovations in Poverty Action", available at http://www.poverty-action.org/, accessed on June 14, 2012 for the recent empirical bent in development economics.

evaluation is an example of the kind of field experiment needed to establish causal relationships that can enable better decision-making by practitioners of expeditionary economics.

Moreover, if the U.S. military is to use money as a "weapon system," as current doctrine suggests, it must develop a robust method of "battle damage assessment" for that weapon system. When employing a kinetic weapon, for example, one would naturally try to assess whether or not the weapon hit the intended target before continuing to fire the same weapon in at the target, or to employ it against similar targets. Likewise, the military should evaluate the impact of using wartime contracts to promote stability and economic reconstruction as these contracts are being used. Otherwise, commanders may simply continue throwing money at the problem in the hope that something eventually works-much like continuing to fire in a given direction hoping that you will eventually hit a target. To be sure, each situation is different, and what worked in one situation may not work in another. But it may be possible to identify some general principles of expeditionary economics through rigorous evaluations. More specific lessons may be culled form assessments of situations that, while not identical, are highly similar. Moreover, field experiments, widely used in other areas of economics, make it possible to measure the impact of reconstruction efforts as they are proceeding to enable near-real-time adjustments to improve their effectiveness.

The relative lack of controlled experiments in recent conflicts is understandable. In Iraq, for example, post-invasion planning focused on preparing for a humanitarian crisis (rather than a counterinsurgency) and foresaw little need for economic reconstruction.⁹⁶ Even if the insurgencies in Iraq and Afghanistan had been anticipated, the demands of a warzone would still restrict the use of field experiments. Field experiments require time, expertise, and some level of security, which have been in short supply in both countries.⁹⁷ Moreover, ethical concerns can limit the willingness of leaders to conduct field experiments. If one truly believes that programs such as CERP will likely reduce violence and enable the conditions necessary for economic growth and reconstruction, then using a controlled experiment to test this hypothesis would block some commanders from using CERP funds and could potentially result in the loss of life.

A similar ethical debate exists in the medical field, where randomized controlled trials are used to prove the efficacy of new medicines and procedures. The purpose of randomized controlled trials is to reveal facts in an objective way that

⁹⁶ Office of the Special Inspector General for Iraq Reconstruction, Hard Lessons: The Iraq Reconstruction Experience (Washington, DC: U.S. Government Printing Office, 2009), p. 36. The very name of the transitional government structure in Iraq – the Office of Reconstruction and Humanitarian Assistance – suggests the emphasis on humanitarian affairs, rather than counterinsurgency.

⁹⁷ See "Jameel Poverty Action Lab," available at http://www.povertyactionlab.org/methodology/ when/when-randomization-not-appropriate, accessed on June 14, 2012, for situations in which randomized controlled trials are inappropriate

limits the encroachment of bias and opinion. In contrast, evidence at the bottom of the hierarchy, such as expert opinion, is often based on anecdotes from one's own experiences or the conventional wisdom of colleagues. Moreover, expert opinion is of limited relevance to new medicines or procedures for which there are few if any true experts. Controlled trials, however, can harm individuals by restricting the use of potentially lifesaving treatments. A controlled trial of an ineffective treatment can harm both the individuals who receive it and those in the control group by causing them to forego other treatment options. But even a controlled trial of an ineffective or harmful treatment can provide valuable information to researchers about what does and does not work. One must therefore weigh the costs of controlled trials with the value of the new information produced. The medical field has struggled with this ethical dilemma for decades and has adopted a nuanced approach where controlled trials are monitored closely and researchers intervene to stop or alter the trial when necessary to limit the harm it may cause.⁹⁸

Despite these valid concerns, the exemplary efforts of efforts such as the National Solidarity Program and its careful collection of baseline data, randomized selection, and use of a control group for comparison demonstrate that field experiments are not only possible but also can provide valuable insights even in a wartime environment. Those interested in expeditionary economics should therefore strive to reach higher rungs in the hierarchy of evidence wherever possible to determine the most effective forms of wartime contracting and economic reconstruction.

The Next Steps for Expeditionary Economics

Before field experiments in conflict zones can become the norm for determining what types of wartime contracting and reconstruction efforts are most effective, expeditionary economics must find an institutional home within the military. In the development community, the emphasis on field experiments has taken root in several research institutes, such as the Jameel Poverty Action Lab (known as J-PAL), Ideas42, and the Center for Evaluation of Global Action, and within evaluation offices of development organizations like the World Bank. The military has not seen a corresponding growth in institutions centered on wartime contracting and post-conflict reconstruction. If the military continues to plan for the conduct of stability operations it should either establish its own institution to develop expertise in expeditionary economics and/or form relationships with development organizations that do. Research into expeditionary economics could find a home in an existing organization, such as the Peacekeeping and Stability

⁹⁸ See Duncan Vere, "Controlled clinical trials: the current ethical debate," *Journal of the Royal Society of Medicine*, 74, February, 1981, pp. 85-88.

Operations Institute, or as part of a new research organization focused on nation building. During World War II, for example, the United States created the School of Military Government to train military leaders for the difficult work of governing and reconstructing occupied territories.⁹⁹ Regardless of how the organization is created or where it finds a home, the Department of Defense should work closely with development networks like J-PAL that can help evaluate the military's reconstruction projects and assist in designing and running field experiments.

Field experiments are only one weapon in the military's expeditionary economics arsenal. Not all reconstruction projects and wartime contracts are compatible with field experiments. Other forms of data are available from recent projects that can help advance our understanding of how best to use the resources available for reconstruction. Specifically, there are the myriad databases associated with economic reconstruction and wartime contracting in Iraq and Afghanistan. Databases like the Significant Acts database should, to the greatest possible extent, be made available to qualified researchers. Classified reports on wartime contracts and reconstruction spending, such as the report on the corruption-riddled Host Nation Trucking contract, should also be made available once operational risks are no longer an issue.¹⁰⁰

In addition to mining and analyzing relevant reconstruction data, researchers should also focus attention on unexplored avenues of wartime contracting and reconstruction. Three lines of research stand out for additional inquiry: the role that creating businesses plays; the appropriate sequence of economic reconstruction activities; and the relationship of central planning to entrepreneurial growth.

While writers on expeditionary economics often emphasize "the dynamism of new firms" as central to economic growth in war-torn countries, the cases studies in this report show that the goal of firm creation will at times compete with the goals of reducing violence and limiting unemployment.¹⁰¹ Dismantling Iraqi SOEs, for example, did not appear to create new firms or promote entrepreneurialism. Likewise, the National Solidarity Program did not necessarily create new firms or lower unemployment, though it did create a new governing structure and prove successful in reducing violence. The case study of CERP highlights that the sheer number of jobs—what the researchers label as "labor-intensity"—appears

⁹⁹ Rebecca Patterson, "Revisiting a School of Military Government: How Reanimating a World War II-Era Institution Could Professionalize Military Nation Building," June 2011, Ewing Marion Kauffman Foundation.

¹⁰⁰ Karen DeYoung, "U.S. Trucking Funds Reach Taliban, Military-led Investigation Concludes," *The Washington Post*, available at http://www.washingtonpost.com/world/national-security/ us-trucking-funds-reach-taliban-military-led-investigation-concludes/2011/07/22/gIQAm-MDUXI_story.html, accessed on June 7, 2012.

¹⁰¹ Carl J. Schramm, "Expeditionary Economics: Spurring Growth After Conflicts and Disasters," *Foreign Affairs*, 89, No. 3, May/June 2010, p. 1.

to be the driving factor in what enables CERP to reduce violence.¹⁰² Future studies of expeditionary economics should carefully examine the role of firm creation as opposed to job creation to see if firm-led growth is an important factor.

The sequence of economic reconstruction activities and wartime contracts also merits extensive study. Drawing only on the case studies in this report, several tentative conclusions about the proper sequence of economic reconstruction begin to emerge. One is that CERP should be deployed early, but focused on small projects and only by commanders close to the action.¹⁰³ Jumpstarting industries, including the maintenance of State-Owned enterprises, might also be necessary in the early stages of a conflict. Some programs, however, must wait for a more stable situation to be effective. The National Solidarity Program should, according to the data, be reserved for relatively secure areas and consequently might be inappropriate where violence is widespread.¹⁰⁴ The Iraqi and Afghan First programs show that distributing contracts to local firms can be done throughout a conflict, but they also demonstrate the importance of developing capable indigenous firms in the process, which can take time.

The third topic worthy of further research is the relationship of central planning to entrepreneurial activity in a warzone. Some writing on expeditionary economics proposes a distinction between large-scale, centrally planned infrastructure projects and a more organic, firm-driven approach to economic growth fueled by free-market enterprises.¹⁰⁵ The hard evidence available on the success of large-scale infrastructure projects in Iraq is discouraging, but there are several reasons why further research might challenge the current evidence on central planning.¹⁰⁶ One pair of researchers who examined entrepreneurship in Afghanistan found that infrastructure was a problem often cited by local entrepreneurs as inhibiting their business. These researchers found that a "poor road network and power supply" impeded the development of the Afghan mining industry. They also found that lacking road, rail, and air networks stifled the growth of the Afghan import-export industry, and that "poor road networks and

¹⁰² Matthew Hanson, Radha Iyengar and Jonathan Monten, "Building Peace: The Impact of Reconstruction Spending on the Labor Market For Insurgents," *National Bureau of Economic Research*, 2011.

¹⁰³ Eli Berman, Jacob N. Shapiro and Joseph H. Felter, "Can Hearts and Minds Be Bought? The Economics of Counterinsurgency in Iraq," April 2011, p. 36.

¹⁰⁴ Andrew Beath, Fotini Christia and Ruben Enikolopov, "Winning Hearts and Minds? Evidence from a Field Experiment in Afghanistan," Working Paper No. 2011-14, Massachusetts Institute of Technology Political Science Department, September 2011.

¹⁰⁵ See Carl J. Schramm, "Building Entrepreneurial Economies," *Foreign Affairs*, 83, No. 4, July/ August 2004; and Carl J. Schramm, "Expeditionary Economics: Spurring Growth After Conflicts and Disasters," *Foreign Affairs*, 89, No. 3, May/June 2010.

¹⁰⁶ Office of the Special Inspector General for Iraq Reconstruction, "Review of Major U.S. Government Infrastructure Projects in Iraq: Nassiriya and Ifraz Water Treatment Plants," October 2010.

unreliable electricity" were also issues for Afghan farmers.¹⁰⁷ The task of building out a country's national infrastructure typically benefits from planning by the central government. This qualitative data suggests a threshold level of investment in critical infrastructure, such as transportation and electricity, may be necessary to unleash the full potential of local business enterprises. Further research is needed to support or refute this hypothesis using evidence from higher levels in the hierarchy.

Conclusion

Wartime economic reconstruction, with all its chaos and complexity, has occupied a central role in U.S. military operations in Iraq and Afghanistan over the past decade. While the thought of another large-scale, protracted ground operation, like Iraq or Afghanistan, seems unlikely if not unthinkable in the near future, recent history suggests that the United States may again find itself in a similar situation within the Pentagon's ten to twenty year planning horizon. If, or rather when, the United States contemplates another such operation, it should be armed with more than a "Beginner's Guide to Nation Building."¹⁰⁸ The military must continue the arduous process of self-reflection and begin to institutionalize and truly learn the lessons of the past decade regarding expeditionary economics.

Practitioners of expeditionary economics must begin with a clear appraisal of the hurdles they are likely to face when undertaking a nation building campaign: a lack of security, rampant corruption, a weak host-nation private sector, and competing counterinsurgency objectives. These hurdles constrain the range of reconstruction and contracting options available, and a frank recognition of these limits can help inform the crafting of a reconstruction strategy. The discipline of expeditionary economics can make a major contribution to this effort by providing a more empirical, evidence-based analysis of possible courses of action so that planners can develop a more informed and effective wartime reconstruction strategy. Once a strategy is in place, field trials should play an important role in expeditionary economics to provide near-real time feedback on what works and what does not. These lessons learned can enable the strategy to be adapted quickly to enhance the reconstruction effort's effectiveness. In so doing the United States can not only win the "clear" and "hold" phases of stability operations, but the "build" phase as well.

¹⁰⁷ Jake Cusack and Erik Malmstrom, Bactrian Gold: Challenges and Hope for Private-Sector Development in Afghanistan (Kansas City, MO: Kauffman Foundation, February 2011), pp. 21-24.

¹⁰⁸ James Dobbins, Seth G. Jones, Keith Crane and Beth Cole DeGrasse, *The Beginner's Guide to Nation-Building* (Santa Monica, CA: Rand Corporation, 2007).



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