

DID MONETARY FORCES TURN THE TIDE IN IRAQ?

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Abstract:

Between 2004 and 2009, Iraq's currency experienced a massive real appreciation, driven by both nominal exchange rate appreciation and high inflation. The forces driving this appreciation include the end of economic sanctions, the rally in oil prices, and the influx of US aid. During the same period, a number of insurgent groups confronted the Iraqi government. While once posing a formidable threat to Allied forces, the insurgents now seem to be in a terminal decline.

In this essay, we argue that the real appreciation of Iraq's currency may have played an important role in weakening the various insurgent movements. Many of these organizations were heavily dependent on foreign funding, and the appreciation eroded the purchasing power of their foreign funds. This may have forced insurgents to turn to forms of domestic financing that are inherently inferior for two reasons. The first is that the collection of local "taxes" by insurgents would reduce their popularity. The second is that local collection of revenue increases the autonomy of local insurgent commanders at the expense of central command authorities.

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I. Introduction

Back in 2006 and 2007, the conventional wisdom was that America and its allies faced imminent defeat in Iraq. Remarkably, that isn't the way things have turned out. By every available metric, the Iraqi government and the Allies have decisively defeated the various insurgent groups and militias that were arrayed against them. For example, the total annual number of fatalities sustained by American troops in Iraq ran between 822 and 904 for the period between 2004 and 2007, but declined to 314 in 2008. As for Iraqi losses, 186 soldiers and civilians were killed in January, 2009. That compares favorably to the casualty rates of 2006 and 2007, where monthly losses sometimes exceeded 3000.¹

What accounts for the Allies' radical "reversal of fortune?" In this essay, we offer a new partial explanation for the evolution of the conflict in Iraq and its apparently satisfactory conclusion: We argue that the extra-ordinary appreciation in the real value of the Iraqi Dinar over the past five years contributed greatly to Allied success.

Our argument is closely related to ideas articulated in Berman, Shapiro, and Felter (2008). Basing itself on Akerlof and Yellin's 1994 analysis of street gangs' efforts to secure popular support in the neighborhoods in which they operate, and Mason's 1996 paper on insurgencies and rational peasant behavior, the authors argue that insurgents cannot function without popular support, and that such support can often be obtained if insurgents provide the populace with vital social services. Equally important in their

analysis, counterinsurgent forces can defeat insurgents by improving their own provision of public or quasi-public goods.

Central to our argument is the observation that what should motivate a population to remain loyal to insurgent groups in the sense that Berman, Shapiro and Felter are using the term are not the *gross* benefits accruing to them from insurgent provision of social services, but rather the *net* benefits of such activities. The implication of this is that if insurgents finance such activities with funds obtained from foreign sources, they will enjoy greater popularity – and hence be more formidable on the battlefield – than if they finance themselves by raising funds from the local population.

It follows from this that macroeconomic developments that erode the purchasing power of foreign funds will force insurgents to turn to domestic forms of revenue generation, something that will undermine the popularity of insurgent forces. It will have another effect as well. A shift from foreign to domestic financing will weaken the organizational ties within insurgent organizations. If local level insurgent cells are financing themselves autonomously through “taxation,” they are less dependent on centralized command authorities. This is likely to lead to an erosion of the internal discipline and cohesion of insurgent forces.

This paper is divided into five sections. In Section Two, we discuss the financial needs and vulnerabilities of insurgent groups, with a focus on the role that real currency appreciation could play in weakening them. In Section Three, we review the evolution of the real value of the Iraqi Dinar and discuss the reasons for its revaluation. In Section Four, we try to evaluate whether the revaluation outlined in Section Three impacted Iraqi insurgent movements in the manner predicted in Section Two. In Section Five, we conclude the paper by considering the options facing Iraq today.

II: Real Exchange Rates and Insurgency

All wars cost money, and unconventional wars are no exception to the rule. Insurgents need funds for a variety of reasons. After all, weapons need to be procured and combatants need to be fed and housed. One potentially large additional expense, particularly in Iraq, is the purchase of outsourced combat services from mercenaries:

“Some of the insurgents appear motivated at least as much by pay as by ideology. With most Iraqis unemployed, the prospect of a significant payment for an assassination is appealing even to those not deeply sympathetic to the Ba’athists.”²

How much cash is enough to hire an Iraqi mercenary? Early in the conflict, reports suggested that Iraqi and foreign mercenaries were accepting something between \$150 and \$1000 per attack.³ By early 2004, the numbers appeared to be far larger: “We now believe its somewhere between \$1000 and \$2000 to conduct an attack, and \$3000 to \$5000 if you’re successful.”⁴ Of course, that was five years ago, when the Iraqi economy

was much weaker and the purchasing power of USD much higher than it is today. Labor market equilibria being what they are, the cost of purchasing the services of mercenaries in Iraq must have gone up substantially since then. With as many as 80% of insurgents captured in Iraq proving to be mercenaries, serious sums must have been required to finance insurgent operations in that country.⁵

Successful insurgencies, however, need much more money than the sums required for the financing of actual operations. They cannot succeed without popular support, and to a great extent, that support has to be bought.

The need for popular support is at the heart of Berman, Shapiro, and Felter (2008). The authors' argument is that "the population, or at least portions of it, knows what the insurgents are doing." Given that this is the case, "the silence of the population, or at least a substantial portion thereof, is necessary (but not sufficient) for insurgent success. Conversely, the willingness of the population to share information with counterinsurgents is sufficient (though not necessary) for insurgents to fail."⁶ The authors then go on to say that "if we acknowledge that counterinsurgency is fundamentally about information, then we are still left with a critical unanswered question: what makes information more or less forthcoming at the margins?"⁷

There are a number of ways for insurgents to instill loyalty amongst those with sensitive information regarding their operations. Obviously, it helps if the insurgent's cause is popular, but this is rarely sufficient on its own to earn the loyalty of the local population.⁸

Alternatively, insurgents could impose draconian punishments on those suspected of being informants. This tactic, oddly enough, doesn't appear to work that well. It is extremely difficult to identify traitors, and execution of innocents can engender greater rather than less public willingness to cooperate with counterinsurgent forces.⁹

Another, more compelling, tactic could be to offer social services that would assure that the insurgents' continued survival is indispensable to the local population. Particularly in regions where the government provision of public goods has broken down, the returns accruing to the local population from insurgent provision of such services can be extremely high. To be sure, it is unlikely that the private returns to individuals from such public good provision would exceed the payoff from selling information to government forces, but people who live in areas with strong family and clan ties may very well feel that the benefits of insurgent activities for their community (i.e. those they care about) as a whole far outweigh the individual incentives being offered by the government.

What about the options facing counterinsurgent forces? They are more or less identical to those of the insurgents. Counterinsurgents can enhance the willingness of the local population to share information on insurgent operations if they represent a cause that the locals support. Various forms of coercion can be tried as well. Alternatively, counterinsurgents can increase the provision of social services in insurgent infested regions. This can reduce the relevance of insurgent social welfare activities, hence undermining the loyalty of the local population and making information on insurgent

operations more forthcoming. The empirical analysis conducted in Berman, Shapiro, and Felter (2008) offers considerable evidence that social service provision is an effective tool of counterinsurgency.

Now, however, let us consider another option that only counterinsurgents can exploit. Insurgents and counterinsurgents may be locked in combat, but they usually share a single monetary policy regime, and control of that regime is exclusively enjoyed by the government.¹⁰ Could the government exploit its control of economic policy in order to weaken the popularity of its enemy?

The answer is yes. To see why, consider the options available to insurgents seeking to mobilize the funds required to finance their operations as well as provide social services sufficient to command the loyalty of the population.

There are really only two options. The first is “taxation” of the local population. Such taxation can be formal, but may also include tactics such as extortion, conscription, and robbery.¹¹ The second is funding from generally, but not exclusively, foreign donors and state sponsors.

The two funding sources differ *significantly* in terms of their desirability. The most desirable method of financing is reliance on foreign donations or sponsorship. Foreign funds have two beneficial effects. The first is a “purse string” effect. Such funds can be gathered by a unified command that distributes money to local cells and units based on

their loyalty, effectiveness, and discipline. This allows the insurgent organization to enforce the degree of cohesion needed to pursue a coherent strategic agenda. The second is that the use of foreign funds assures that the insurgents can offer local populations large *net* benefits in the form of social services. As far as locals are concerned, foreign funded insurgents offer benefits that literally fall out of the sky like manna.

In the absence of foreign funding, however, insurgents must resort to taxation of the local population. This is an inherently inferior form of funding. First, the “purse string” effect is lost. Funds are raised and then used by local cells themselves. This gives them the ability to conduct operations autonomously, reducing the coherence of the insurgent military effort. Local commanders are also unlikely to share their financial resources with each other (hoarding of resources is an instinct for most commanders). Therefore the insurgency’s aggregate resources will not be allocated in an efficient manner.

Perhaps more important, reliance on local funding reduces the *net* benefits that accrue to populations under the insurgents’ sway, since the benefits stemming from the insurgents’ social welfare spending are at least partially offset by the cost of insurgent tax collection. Indeed, given that at least some of these funds must be diverted to the insurgents’ operational needs, and the likelihood that the tax policies available to insurgents are likely to involve relatively high dead weight welfare losses, it is entirely possible that the presence of an insurgent cell may actually result in net costs for the local population if it is funded through local sources.. This would make it extremely attractive for locals to betray the insurgents to the government’s security services.

So what type of policy would counterinsurgents pursue if their goal was to force foreign financed insurgents to shift to domestic sources of funds? Basically, the answer is that the counterinsurgent government would attempt to increase the real value of its currency. This would erode the buying power of the foreign funds held by the insurgents.

One way to think about this is to view the violence conducted by foreign funded insurgent groups as an export product. Foreigners are “buying” violence being sold by the insurgents. By driving up the real exchange rate, the government can make exports unattractive (including the export of violence directed at the government).

Now, a country whose real exchange rate has appreciated so much that its exports have become uncompetitive suffers from what is known as “Dutch Disease.” Normally, Dutch Disease is considered a bad thing because it causes employment dislocations in export industries. If the export is violence, however, Dutch Disease may be exactly what the doctor ordered.

Dutch Disease has two possible causes. Sometimes it is caused by exogenous developments. In that case, it is a sustainable phenomenon. That is what happened in the Netherlands, where the development of major offshore natural gas resources led to a sharp appreciation of the Guilder. This damaged the exports of other goods and

engendered unemployment in export (and import substitution) oriented industries.

Similar events have taken place in many countries.

Alternatively, Dutch Disease can be engendered by the pursuit of monetary policies that are, in the long run, unsustainable. Maintaining a chronically overvalued currency induces a decline in foreign reserves. Eventually those reserves must run out. Indeed, if the desired level of over-valuation is considerable, most countries' foreign currency reserves can be exhausted in a matter of months or even weeks. Of course, this constraint may not be binding if the counterinsurgent government has access to foreign assistance from a friendly and powerful foreign ally. Such assistance can allow a country's balance of payments to "defy gravity," at least temporarily. That may be enough. During a war, maintenance of a significant overvaluation for a year or two may be sufficient to permanently alter the tide of battle. Once the war is over, there is always time to restore realistic currency valuations and pay off foreign debts.

III: Iraq's Real Currency Appreciation

Now, let us review the evolution of the new Iraqi Dinar's real purchasing power since its introduction in January 2004. As can be seen in Table One, the Dinar has been appreciating in real terms when compared to USD continuously for the past five years.

The magnitude of this revaluation is quite large. Since 2004, the real value of a Dinar in terms of USD has quadrupled. Note also that this appreciated has been achieved through a combination of nominal appreciation combined with high inflation, and that the largest

annual change in the value of the Dinar was in 2006. Note also that the Saudi currency, the Riyal, is pegged to USD, so that funds raised in Saudi Arabia today buy only a quarter of the local goods and services in Iraq as they did in at the end of 2003.

Table 1. Real Depreciation of the Dollar.

	<i>US Inflation</i>	<i>Iraq Inflation</i>	<i>Dinar/USD</i>	<i>Real Depreciation of USD</i>
2003			1690	
2004	2.5	25.4	1461	30%
2005	3.2	33	1469	22%
2006	2.5	64.8	1324	44%
2007	2.7	4.7	1213	10%
2008	3.5	5.8	1171	5%

Note: The aggregate real depreciation rate is 74%.

Source: CIA World Fact Book.

There is no reason to believe that the appreciation of the Iraqi Dinar is economically unsustainable. As evidence, consider that Iraq recorded a current account surplus of roughly \$8 billion in 2008. Foreign currency reserves held at the Central Bank of Iraq (CBI) have grown from \$10.7 billion at the end of 2004 to \$38.1 billion in October 2008. In December 2004, foreign assets held by Iraqis exceeded liabilities by \$3.7 billion. In June 2008, that number had ballooned to \$48.1 billion. Clearly, from a balance of payments perspective, the numbers suggest that revaluation of the Dinar was both desirable and also inevitable.¹²

Comparisons based on purchasing power parity yield similar results. Iraq's nominal GDP stood at \$84 billion in 2008. The CIA estimates that, adjusted for PPP, Iraq's GDP

should be \$114 billion. This suggests that as of January 2009, the Iraqi Dinar is *still* 26% undervalued relative to the US Dollar.¹³

Of course, many countries with strong balance of payments positions purposely seek to maintain a “competitive” currency in order to promote job creation. China, for example, comes to mind. There is, however, no reason to believe that the appreciation of the Dinar exacerbated Iraq’s unemployment problems. Back in 2002, Iraqi exports – excluding oil – totaled .37% of GDP. Imports were larger, at 5.3% of GDP, but Iraq produces few goods that compete with imported products.¹⁴ Hence, the employment implications of the exchange rate appreciation of the past five years have been negligible.

Now, let us ask why the appreciation of the Dinar took place? The mere fact that, based on PPP, Iraq’s currency was grossly undervalued back in 2004 is insufficient to explain what has taken place. After all, most third world currencies are chronically undervalued when evaluated by this metric.

As far as we can tell, the appreciation of the Iraqi Dinar seems to be entirely the result of exogenous conditions and normal market forces. In particular, three developments probably contributed more to the appreciation than any others. The first was the end of the sanctions regime that had been imposed on Iraq following the Gulf War. The Allied invasion had rendered sanctions superfluous, and their removal would have immediately (and substantially) improved Iraq’s terms of trade, since the premium charged for the smuggling of goods in and out of the country would have disappeared.

Second, the role of the recent rally in oil prices in driving the appreciation cannot be under-estimated. According to the U.S. Energy Information Administration, Iraqi “Kirkuk” oil was trading for \$26.67 per barrel in January 2004. In January 2009, Kirkuk oil is going for \$35.6, but as recently as July 2008, the price was \$134. Given that Iraq’s oil industry dwarfs the rest of its economy, the importance of this additional improvement in Iraq’s terms of trade cannot be underestimated.

Third, the Allies have poured vast sums into Iraq. For the US Armed Forces alone, “the total reaches \$19 billion in cash introduced by the Army into the Iraqi economy. This sum represents approximately 20% of official Iraqi GDP from 2003 to 2007.”¹⁵ Note that this particular figure represents only the *physical cash payments* made by the US military to Iraqis in return for local goods and services. Add to that the sums spent by other countries as well as the portion of Allied reconstruction aid devoted to the purchase of local labor and raw materials, and you reach sums that must be large enough to significantly alter the real value of the Dinar. As far as we know, the presence of foreign invaders intent on spending vast sums of their own money on domestic goods and services has never been a contributing factor to Dutch Disease in any other country.

IV. Did the Dinar's Appreciation Turn the Tide in Iraq?

To the best of our knowledge, no country has sought to exploit macroeconomic policies such as real currency appreciation with the strategic objective of weakening an internal insurgency. Iraq is no exception.

Nevertheless, a significant real revaluation of Iraq's currency has taken place over the past five years. Did that appreciation have an impact on Iraqi insurgents consistent with the ideas articulated in Section Two?

Of course, little is known with certainty regarding the various Iraqi insurgent organizations and their funding arrangements, and much of what is known is classified. The analysis below is based heavily on a single public source - a secret NSC report leaked to the NY Times back in November 2006:

“The document says that the pattern of insurgent financing changed in the first 18 months of the war, from the Hussein loyalists who financed it in 2003 to “foreign fighters and couriers” smuggling cash in bulk across Iraq's porous borders in 2004, to the present reliance on a complex array of indigenous sources.”¹⁶

The NSC report goes on to suggest that “in fact, if recent revenue and expense estimates are correct, terrorist and insurgent groups in Iraq may have surplus funds with which to support other terrorist organizations outside of Iraq.”¹⁷

If the report is accurate, the funding arrangements for the Iraqi insurgency went through three stages. During the early days of the conflict, the dominant sources of funding for the insurgents were agents of the former Ba'ath regime. That was followed by a period during which foreign funding became very important. That, in turn, was followed by a shift to domestic financing that continued at least through the end of 2006 and, we suspect, continues for the remnants of insurgent groups still operating today.

First, let us consider the earliest period. Why did the Ba'ath cease to be the dominant supplier of funds to the insurgency? A number of factors seem to account for the decline of this source of funding. Obviously, the capture and execution of Saddam Hussein did not help. Once Ba'ath leaders began to internalize that they would not be able to reverse the outcome of the Allied invasion, many lost their enthusiasm for continued resistance: "Mr. Hussein's erstwhile loyalists, realizing that it is increasingly obvious that a B'athist regime will not regain power in Iraq, have turned increasingly to spending the money of their own living expenses."¹⁸

Perhaps more significant, however, was the introduction of the new Iraqi Dinar on January 15th, 2004. Prior to that time, Iraq was still using "Saddam Dinars" issued by the Ba'ath regime. Apparently, Ba'ath leaders possessed vast quantities of Saddam Dinars, and were easily able to counterfeit even more. As Dillon and Parham (2004) explain, replacement of the Saddam Dinar should have dealt a devastating blow to Ba'ath finances:

“In order to avoid demonetization of their hidden wealth, remaining elements of the regime will have to exchange their Saddam dinars for the new dinars at Coalition-controlled banks. Needless to say, it would be very awkward for any of the remaining Ba’ath party loyalists to show up at a bank to exchange millions of dollars worth of Saddam dinars. Even bank managers sympathetic to the insurgency would be compelled to report such transactions.”¹⁹

To be sure, the Ba’ath had access to large sums of foreign currency as well. Allied efforts, however, identified and froze access to over \$3.6 billion in assets held by former Ba’ath leaders. As for the roughly \$1 billion stolen from the CBI by Saddam Hussein and his sons prior to the arrival of Allied forces in Baghdad, most of those funds were later recovered. It appears that eventually the Ba’ath simply used up their finite financial resources.

At some point in 2004, foreign funding began to constitute the lion’s share of funds supporting the insurgency, and the insurgency appears to have really taken off during that year. By 2006, however, foreign funds apparently proved insufficient to finance insurgent operations, and soon insurgents were engaged in an array of domestic funding initiatives.

Perhaps the most interesting case is that of Al Qaeda in Iraq (AQI). Supposedly an organization well connected with foreign funding sources, AQI soon turned to local fundraising of the crudest form. For example, other insurgent groups have complained in April 2007 that AQI “was demanding money in return for protection, killing member of wealthy families when not paid.”²⁰

The limited evidence cited above is clearly consistent with the hypothesis that the real value of foreign funds used to finance the Iraqi insurgency declined to such a degree that insurgents were forced to shift to domestic efforts to raise revenue. Given what happened to the insurgency in 2007 and 2008, it is also consistent with the hypothesis that dependence on domestic funding will erode the popularity of an insurgency, while also leading to a decline in organizational cohesion and discipline. After all, many erstwhile insurgents defected – often en masse - to the Allied cause in late 2006 and during 2007.

To be sure, there are other explanations available that could do at least as well in explaining the observed shift to domestic financing. For example, perhaps insurgents’ rising operational needs rendered the foreign sums reaching the insurgency insufficient and necessitated a supplementary effort to raise funds domestically.

This is certainly possible, but another piece of evidence makes this an unlikely alternative explanation. As mentioned above, the 2006 NSC report mentioned the possibility that Iraqi groups, now dependent on domestic sources of finance, may have *surplus* funds that

could find their way to the finance of terror operations outside Iraq. This claim was met with considerable derision amongst independent observers and experts, but at least in the case of AQI, this is *exactly* what appears to have happened.

There is evidence that as early as April 2004, AQI was planning and mounting attacks outside of Iraq. In 2005, AQI claimed credit for three attacks outside Iraq, including a bloody bombing in Amman, Jordan and an elaborate rocket attack on American naval vessels in Aqaba, Jordan. In 2006 and 2007, AQI leaders were apparently comfortable enough regarding their finances that they diverted considerable funds towards the sponsorship of the “Fatah al-Islam” organization (FAI), a group that fought a three month battle with Lebanese Army forces prior to its defeat. How closely related were these organizations? FAI was commanded by a “former” AQI combatant, and many FAI combatants were also veterans of the AQI campaign in Iraq.²¹

AQI sponsorship of foreign operations would make little sense if the organization was facing increased financial needs in Iraq. Rather, it makes a lot of sense – given AQI’s global agenda - if the cost of producing violence in Iraq had become relatively high when compared to the cost of generating violence elsewhere.

Recall the analogy made in Section Three between violence and exports. Applying it to the case of AQI, it appears that gradually over 2005 and 2006, AQI shifted from exporting violence by using foreign funds to finance domestic attacks to *importing* violence by using Iraqi funds to finance foreign attacks. This shift from exports to imports sounds a lot like what happens in countries as real exchange rates appreciate.

V. Conclusion

As we have seen, a clear case can be made that the real appreciation of the Iraqi Dinar between January 2004 and January 2009 contributed to what appears to be the defeat of the various Iraqi insurgent movements. The appreciation eroded the real value of foreign funds used by the insurgents to finance their operations. This, in turn, forced insurgent organizations to turn to domestic fund raising, something that reduced their popularity and damaged their organizational cohesion and discipline.

Going forward, it is not likely that the Iraqi Dinar will continue to appreciate in real terms. Recent declines in the price of oil have eliminated one of the pillars upon which the appreciation was based, while the expected drawdown over the next two years of Allied forces deployed in Iraq eliminates another – the major purchases of Iraqi goods and services by Allied military organizations.

From the viewpoint of Iraqi and Allied national security, this is unfortunate. While the Iraqi insurgency appears to have been defeated, it is a certainty that totalitarian countries and political movements in the region will continue their efforts to destabilize the first pluralistic democracy in the Arab World.

Obviously, the United States could assure the continued strength of the Dinar by flooding Iraq with credit and aid. As mentioned above, however, that could only be a temporary measure at best. There are also serious costs associated with such a policy. An effort to maintain an over-valued Dinar would stunt Iraq's industrial development. It would also act as an obstacle for the many refugees who may be contemplating a return to Iraq. Needless to say, the U.S. would incur financial (and domestic political) costs as well.

An interesting alternative may be to implement what Acting Assistant Secretary of Army Peter Kunkel recently characterized as "a cashless battlefield."²² The idea is to transition Iraq's economy from its heavy emphasis on cash transactions (and even cash savings) to a system based on electronic bank transfers.

There are a number of reasons why a transition to a system of electronic payments would be desirable from a security perspective. First, it increases the transaction costs imposed on insurgents attempting to smuggle in foreign cash, since anyone trying to deposit foreign currency into electronic accounts would draw undesired attention. Second, it raises insurgent transaction costs by making it more difficult to extort funds from the local population. Finally, reliance on electronic payments generates vast amounts of data

that can be used to identify who is buying what where and when. By exploiting data mining software, such data can be a source of invaluable intelligence for counterinsurgents.

There are a number of alternative technologies available to implement a cashless economy in Iraq. Kunkel highlights Vodafone's M-Paisa system, which was recently introduced in Afghanistan through a joint venture with Roshan (Afghanistan's leading cellular phone network). This is a "mobile banking" system that requires cellular phone coverage in order to work and relies on voice recognition for security.

The M-Paisa solution strikes us as being far from ideal. According to a recent Reuters's article, Roshan's network is regularly targeted by Taliban insurgents.²³ We believe that the UEPS system offered by the South African firm known as Net One is a superior solution. UEPS is designed to operate offline without any network or even electric power (the POS devices work on batteries). Security is provided by providing the system's smart cards with biometric features. While this technology was clearly designed to deal with Africa's infrastructure deficiencies, it is also inherently less vulnerable to physical attack than a solution like M-Paisa.

For Iraq, adoption of UEPS as a tool to eliminate the use of cash for transactions offers another advantage. As of August 2008, the UEPS system was already being used in Iraq as a means of efficiently distributing government wages and social welfare payments. Given the major returns to scale involved with all electronic payments systems, scaling

UEPS up sufficiently to allow for the elimination of most cash transactions in Iraq seems an entirely viable proposition. Such an effort could provide a valuable bulwark protecting Iraq from any future efforts to revitalize the insurgency.²⁴

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Endnotes

¹ Data: Icasualties.org

² Metz (2003), p. 29

³ Dillon and Parham (2004)

⁴ Statement by Maj. General Raymond Odierno, cited in Hoffman (2004), pg. 12

⁵ Ibid., p. 12

⁶ Berman, Shapiro, and Felter (2008), p.10

⁷ Berman et. al. (2008), p. 11

⁸ See, for example, Thomson (1966)

⁹ Palestinian groups such as Hamas, for example, regularly execute suspected collaborators, but suffer from chronic and severe deficiencies in operational security.

¹⁰ Iraq's Kurdish region (prior to 2003) and the Southern Sudan (prior to 2007) are obvious exceptions.

¹¹ The Vietcong and the Tamil Tigers, for example, levied formal taxes on the population under their control.

¹² Source: Central Bank of Iraq

¹³ Source: *CIA World Factbook*

¹⁴ Source: Central Bank of Iraq

¹⁵ Kunkel (2008), p.90

¹⁶ Burns and Semple, "US Finds Iraq Insurgency Has Funds to Sustain Itself.". *New York Times*, 11.26.06

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Dillon and Parham (2004)

²⁰ "On Whose Side is Al Qaeda?" Lamis Andoni *Al-Ahram Weekly* April 26, 2007

²¹ Source: Wikipedia entry on AQI

²² Kunkel (2008), p. 88

²³ Reuters, 24 Sep 2008

²⁴ Reuters Market Wire, August 4th, 2008