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Disrupting Syrian Economic Networks

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations course.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College, the Department of the Navy or the United States Department of Defense.

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Abstract

The ability of the U.S. to use diplomacy or military action to affect the Syrian situation has largely passed. This paper explores the economic causes leading to the Syrian Civil War, as well as the entrenched economic systems that help it continue. These include Privileged Networks, which support regime survival, and the War Economy, which sustains both sides of the Civil War as well as the Islamic State of Iraq and the Levant (ISIL).

Methods of attacking these networks utilizing concepts from the information economy such as Disruptive Innovation, Network Effect, and Minimum Viable Product, are explored via a mobile banking construct. Implementation of such an approach would utilize the overwhelming Economic and Informational power of the U.S., which could isolate and potentially defeat parts of these systems, helping stabilize both the Syrian and regional economies.

Introduction

The Syrian economy, like all economies, is a network of structured nodes based on geography, politics, culture, the environment, and numerous other factors. Yet, economic systems are adaptive to changing situations by means of the transactions between these nodes. In the case of Syria, underlying economic conditions were a primary initiator of the Civil War. Now, the privileged networks supporting the Assad regime and the War Economy due to the Civil War and ISIL have entrenched systematic instability in the economy.

With the United States' Diplomatic and Military levers of national power appearing to have failed, a new and perhaps long-term approach is needed. Supporting an intentional Disruptive Innovation approach, the U.S. can leverage its largest sources of national power, Economics and Information, in order to disrupt the current dominate economic systems in Syria. By doing so, the U.S. could isolate and potentially defeat parts of these systems, providing a more stable economic situation for the Syrian people, and their regional neighbors.

Understanding the Syrian Economy

Agriculture plays a key role in the Syrian economy, representing almost one-fifth of all economic activity.¹ Half of the Syrian population lives in rural areas, “of whom 80 per cent derived their main income from agriculture.”² Syria produces permanent crops and high value export commodities such as olives, grapes, and other fruits within the Alawite Latakia region. The remaining majority of arable land, including the Khabur and Euphrates river valleys, is dedicated to grain production (wheat and barley), as well as small-scale farms producing vegetables, and are primarily settled by Sunni Arabs and Kurds.³ Prior to the civil

war, the Syrian economy benefited from tourism⁴, as well as a growing consumer economy driven by a large influx of Iraqi refugees.⁵ Industries, along with largely Sunni Arab merchant and middle class, are found within Syria's main cities such as Damascus, Homs, and Aleppo.

Prior to the civil war and economic sanctions imposed by the west, exports were a significant part of the Syrian economy. Of the \$12.3 billion (USD) in exports in 2010, 37.4% went to the EU, 31.8% went to Syria's neighbors, with the remaining worldwide trade representing 30.8%. Significantly, of all exports, the largest, representing 18.6% of all trade (\$2.3 billion USD), was with Iraq, and only \$15 million was with Iran (less than 1%).⁶ Unsurprisingly, given the importance of agriculture to its economy, trade of foodstuffs with its Muslim neighbors (Egypt, Iraq, Jordan, Lebanon, Turkey) provide not only a needed income for rural Syrians, but helped contribute to the food security of populations throughout the region.⁷

Political Economy

Equally important as understanding the economic outputs of Syria is the consideration of the economic system by which Syria operated under prior to 2000, during the presidency of Hafez Assad. While the Syrian Baathist party was socialist in construct, in practicality, and especially after the "Corrective Movement" that brought Hafez Assad into total power in 1970⁸, the pattern of the Syrian regime's economic policies followed:

"A state-led economic development model that is anchored in a strong interventionist-redistributive mentality, which includes heavy reliance on state planning, import-substitution policies, the nationalization of private and foreign assets, and a social contract whereby the state provides education, housing, health care, and food subsidies."⁹

However, this is not to say that Syrian Baathist economic philosophy was immune to internal pressures of commerce and ethnicity. These two factors played a historical role in Syrian stability, and instability. Indeed, under the period when Syria was in union with Egypt (the United Arab Republic), Nassar's unilateral nationalization of the cotton trade, banks, insurance companies, and heavy industry led to so much unrest with the Syrian farmers and most importantly, the Syrian trader middle class, that a group of Syrian Ba'athist officers (to include a then Captain Hafiz Assad), revolted and ended the union.¹⁰

Well over a decade later, and even after the Assad regime re-secured domestic stability by crushing the nascent Sunni insurgency led by the Moslem Brotherhood in 1982¹¹, continued internal and external economic factors led the government to implement several liberalization efforts in agriculture and toward the privatization of state monopolies.¹² This economic liberalization contributed to considerable economic growth (as did increased oil revenues due to the discovery of new deposits).¹³ Even with a growing population, the employment to population ratio increased from 1991 to 2001¹⁴, and the GDP growth rate, while erratic, was on a positive trend.¹⁵ By the late 1990s however, the pace of both growth and economic liberalization had slowed, as reforms were hindered by a powerful business elite tied to the regime.¹⁶

Following the death of Hafaz Assad, his son Bashar, "inherited an economy that had been facing grave economic challenges."¹⁷ However, Bashar also inherited a situation where, "cautious economic liberalization was under way."¹⁸ Reforms included, "rethinking of the regulatory environment in the financial sector,"¹⁹ joint ventures with regional banks and mobile phone providers, and various fiscal and monetary policy reforms, to including cutting key subsidies on economic inputs such as gasoline and cement.²⁰ As a result, Syrian

exports between 2000 and 2008 increased from under \$3 million (USD) a year to over \$14 million (USD), and imports increased from \$3 million (USD) a year to over \$18 million (USD).²¹ Overall, the economy achieved an impressive overall growth rate during this period that averaged almost 5% annually.²²

This largely private sector expansion also resulted in a new business class in Syria, although one largely “based on extended family ties, and typically had links to the large Syrian diaspora.”²³ Nevertheless, structural issues within the Syrian economy remained unresolved. Key ventures, such as mobile telephone providers, were owned by relatives of the regime.²⁴ Critical inputs required to sustain key economic production processes, such as cement and fertilizers, remained public sector monopolies, and the business environment was plagued by bureaucratic red tape, weak governance, and a lack of corporate transparency.²⁵

Economy Stalls Out

While many observers will cite 2011 and the Arab Spring as the beginning of the decline of the Syrian economy, 2008-9 was in fact the critical timeframe. Against the background of Bashar Assad’s reforms grinding to a halt (due in part to the unresolved structural issues listed above), Syria also had to face multiple economic crises. The effects of the western financial crisis precipitated a full global economic crisis by 2009, which not only affected Syria, but, “exposed the structural deficiencies in the Arab countries’ governance structure and the fragilities of their development model.”²⁶ Additionally, during this time rising domestic food prices due to global and regional factors were exacerbated by a severe drought starting in 2008, followed by poor rainfall in the following two years.²⁷ This led to a large migration from the rural (and largely Sunni and Kurdish) areas in the north and east into the cities. This in turn spiked unemployment²⁸ in an economy that was already having

difficulties absorbing a rapid increase in young males 15-25 years of age (172% increase since 1990).²⁹

As a result, immediately prior to the “Arab Spring” in 2011, an impoverished (and formerly rural) population developed around the major cities. There they encountered a wealthy business urban elite³⁰ who largely owed their prosperity to family connections with Assad. Moreover, they faced the regime’s corrupt bureaucracy, which had crowded out all other state institutions.³¹ These forces combined to set the stage for the start of the civil war.

Economy Today

The current state of the Syrian economy can best be described as “collapsed.” Syrian industry has largely ceased to exist, especially in the commercial capital of Aleppo, where 75% of the production facilities are estimated to be destroyed or out of production due to the fighting of the various factions of the civil war.³² Syria had been a modest oil producer by regional standards, with oil revenue contributing approximately 20% of the annual government revenues 2005-2010³³. But, “[s]ince the onset of the Syrian war in 2011, government oil production has nearly stopped, with current production estimated at less than three percent of pre-war levels.”³⁴ “Syria, once nearly oil independent...is now almost entirely dependent on imported fuel.”³⁵

In the important agricultural sector, which accounted for one fifth of Syrian GDP in 2011³⁶, price increases due to rampant inflation and reduced government subsidies have increased the cost key agricultural inputs such as diesel fuel, agricultural equipment, fertilizers, and seeds by over 100%.³⁷ In particular, diesel fuel is a decisive farm input as it is required for operating tractors and other farm machinery, powering pumping systems for irrigation, and for the transport of goods to market.³⁸

The disruption of the Syrian agriculture sector has had a destabilizing effect regionally on food security. Syria served not only as a major trading partner in the agricultural sector, particularly for Gulf States, but also as a major agricultural transit route between mid-eastern countries.³⁹ The current insecurity of trade routes through Syria have had multiple second and third order effects, raising costs in a regions already politically sensitive to higher food prices.⁴⁰ Added to this situation is a refugee crisis putting food pressure on host communities, which at the same time, drives down local wages due to refugees seeking work. The result is a net drop in income to go along with higher prices.⁴¹

Syrian Economic Networks

Even with the destruction of much of the Syrian economy, two primary political economic systems remain.⁴² The first of which, is the Assad regime's state patronage system, best defined as a Privileged Economic Network. The second is the War Economy Network, which manifests itself as the Combat Economy, the Shadow Economy, and Coping Economy.⁴³

Privileged Economic Networks exist in most countries, but are especially prevalent in those countries moving from a command driven economy to a more western/liberal economic model. In essence, a Privileged Economic Network, (or Privileged Network for short), is a "Network of business and state actors who collaborate to manage access to economic benefits – disregarding their formal juridical separation into private and public actors....,"⁴⁴ with a primary activity of these business actors being the pursuit of "politically mediated economic gains,"⁴⁵ which is commonly known as rent seeking.

Within the Middle East, these Privileged Networks have proved surprisingly resilient against liberalization efforts as compared to other regions and countries.⁴⁶ In the 1980s and

1990s, economic policies pushed by international institutions such as the World Bank represented a modernization theory centric view. Modernization theory says in essence that, economic liberalization (represented largely by the privatization of state owned industries and financial institutions) would lead to the “logic of economics” and cause political reform through a shift away from “cronyism, patronage, and rent seeking to transparency, accountability, and well-defined property rights.”⁴⁷ However, this theory ran into the cold hard reality of Privileged Networks that realized that such reforms would in fact, result in a loss of privilege. Instead, they captured such liberalization initiatives for their own benefit, which usually resulted in linking the control of economic wealth to political power.

Syria was no exception. Economic rewards were used to strengthen regime survival mechanisms. “[T]he Syrian regime strove to find ways to make business relevant without allowing it to convert its material wealth into political power.”⁴⁸ As the urban and majority Sunni represented a Syrian bourgeois in contrast to a rural Alawite proletariat, economic liberalization was a zero sum game for the regime. As a result, a top down promotion of economic winners through the enforcement (or lack of enforcement) of state regulations by an intransigent bureaucracy (which had economic interests of its own) caused economic stagnation.

At the same time, the Syrian Privileged Networks benefited disproportionately from economic liberalization. Even in its earliest incarnations in the 1970’s, privatization of state services such as postal operations ended up in the hands of Ba’athist, “public officials and their offspring.”⁴⁹ During the following decades of economic liberalization waves, the most lucrative opportunities continued to be diverted to “individuals with high proximity to the family of the president.”⁵⁰ By the mid-2000’s the most lucrative rent seeking opportunities

revolved directly around the extended Assad family. Bashar Assad's cousin, Rami Makhoul operated export-import businesses, investment funds, and other lucrative businesses. Most often, if businesses could not be controlled through economic and regulator manipulation, then outright coercion was often used. As an example, one of Syria's most successful businessmen not tied to the regime is Ghassan Aboud. Yet in 2009, officials loyal to Makhoul,

“...demanded that one of his ventures in Damascus hand over a 92.5% stake in the company. When Aboud refused, the Damascus Office was shut down. Orient's 165 employees in Syria were asked to sign commitment letters saying they would never work for the company again, under threat of harm to themselves and their families.”⁵¹

Thus, the current Syrian business network that exists is not only a source of resentment feeding the current revolt, but is also a barrier to solving it.

Beyond the Privileged Network, the second primary economic network operative in Syria is the War Economy. At its basic level, a War Economy is a result of, “the destruction or circumvention of the formal economy and the growth of informal and black markets, effectively blurring the lines between the formal, informal, and criminal sectors and activities.”⁵² A War Economy relies on the continuation of the conflict in order to benefit the economic interest of individuals or groups. Indeed, during civil war in a commodities based economy such as Syria, socio-economic motivations (“loot-seeking”) may be just as or more important than political grievances (“justice-seeking”).⁵³

War Economies consist of three sub-economies, the first is the Combat Economy.⁵⁴ Composed of combatants (both rebel groups and government/government sponsored) and conflict entrepreneurs (domestic and foreign), their key economic activities include funding the war effort through: One, taxation of licit and illicit economic activities; Two, movement

(for a fee) of money, arms, equipment, and mercenaries from external state and non-state supporters; Three, control key border crossings to support items one and two; Four, asset stripping and looting; and Five, aid manipulation.⁵⁵

Inevitably, a second economic sub-network develops, usually called a black market, but more inclusively termed the, “Shadow Economy”.⁵⁶ This is run by war profiteers, smugglers, criminal gangs, and often encompasses displaced economic activities such as transportation syndicates. Sometimes this is a result of organized criminal elements making a profit from those economic needs required by the population to survive, such as purchases of basic commodities and farm inputs. Sometimes there are parties not in the conflict zone who are profiting from movement of money and goods that go into the war zone. More often than not, it is simply the population trying to survive economically (or through being coerced), such as the farmer now growing poppies instead of wheat. In any case, the Shadow Economy denies the ability to conduct the legitimate taxation necessary to provide for governmental functions such as infrastructure, education, and security; while at the same time, providing the illicit funding needed for the Combat Economy.

The final sub-economy within the War Economy framework is the Coping Economy. This, “comprises those numerous economic interactions during armed conflict that provide benefits to the civilian population, particularly the poor and most vulnerable.”⁵⁷ Often faced with sheer survival (safety, shelter, food), they do what they can. However, in this, they are often caught up in the other War sub-economies such as working in illicit activities in support of a combatant (if not forced to become a combatant themselves), or inadvertently funding the Shadow Economy by virtue of their basic economic needs and activities.

Once a War Economy is established, it is hard to displace. Evidence of this in Syria abounds. Both the Islamic State of Iraq and the Levant (ISIL) and Jabhat al-Nusra (JAN) are benefiting from the war economy through the “collapse of state control, the formal economy and the governance of borders...providing ISIL and JAN with opportunities to fund themselves.”⁵⁸ Even the Syrian government participates in the war economy. For example, the Syrian government is paying ISIL, through a middle-man, for oil that it needs in order to refine it for its economic uses.⁵⁹

Attacking the Network

If the current economic systems in Syria (Privileged Networks and War Economy), are destabilizing to both Syria and the region at large, then how does one attack them without introducing even more instability? To begin, it is important to further delineate the nature of the current economic networks operating in Syria. Both Privileged Networks and the War Economy are complex adaptive systems. In other words, they are more than the sum of their parts, and while affecting a node (or several nodes) within will affect connectivity of the system, the system can adapt to overcome the attack.⁶⁰ An example of this is the previously discussed Privileged Networks coopting economic liberalization efforts.

Disruptive Innovation

In the business world, especially in what many consider the “information age”, many business models have been disrupted and replaced through Disruptive Innovation that creates a new market or lower transaction “costs” within an existing value network. This is most often done by being “cheaper, simpler, smaller, and, frequently, more convenient to use.”⁶¹ The classic example is the mainframe computer, which was replaced by the minicomputer, then the PC, then by the mobile device. When more than one “product” (i.e. Economic

Network) can exist with a “market space” to compete with the existing product, the “customer” can have a choice in which product they use. And this, “basis of choice often evolves from functionality, to reliability, then to convenience, and ultimately, to price.”⁶²

One candidate for Disruptive Innovation in order to affect Syria’s two current dominant economic networks is Mobile Banking or m-banking. Simply put, m-banking, “is the delivery of financial services outside conventional bank branches using mobile phones and nonbank retail agents.”⁶³ The classic example of successful m-banking is M-PESA in Kenya (M for mobile, pesa is money in Swahili). Originally conceived as a repayment process for micro-finance initiatives, M-PESA serves, “two-thirds of the adult population; around 25% of the country’s gross national product flows through it.”⁶⁴ The success of M-PESA as an m-banking network can be traced to the low infrastructure cost of setting up cell phone networks in undeveloped areas as compared to the land line infrastructure found in first world countries. Also, cash transfers are not constrained by time, distance, or location (a significant issue in rural and/or war torn areas). As an example, during Kenya’s post-election violence in early 2008, “M-PESA was used to transfer money to people trapped in Nairobi’s slums at the time.”⁶⁵ Finally, M-PESA was seen as a more trustworthy financial alternative as, “some Kenyans regarded M-PESA as a safer place to store their money than the banks, which were entangled in ethnic disputes.”⁶⁶

M-banking also benefits from the Network Effect, which posits that the more nodes on the network, the more valuable the network becomes, often exponentially so. The classic example is the fax machine. The first machine is not valuable. The second fax machine can transmit to the first. After that, every new machine adds exponentially to the value of the

network until the technology is adopted not only to transmit a page, but in order to avoid being left out of the network.⁶⁷

An m-banking solution could provide a method to disrupt the Syrian Privilege Networks and War Economy sub-networks. By being a finance network, m-banking can co-opt some of the transactions of the existing network, including patronage systems controlled by Privileged Networks. The UN and NGO backed Micro-Financing Initiatives were doing this to some extent prior to 2011, but have been disrupted by the war.⁶⁸ M-banking could even provide direct subsidies as a substitute for traditional humanitarian aid processes, thereby removing adverse actor's abilities to manipulate access to aid, as well as simplifying the velocity and logistical requirements normally associated with delivery assistance.⁶⁹

M-banking could also be part of the mechanism to stabilize the Syrian economy at an individual level. Within the important agricultural sector, m-banking could provide a way to finance and purchase key agricultural inputs such as diesel fuel, seed, and fertilizer. Since the base technology, the cell phone, allows communication without regard to borders, in conjunction with m-banking's ability to send and receive payments, it is conceivable that trade networks, both consumer and export/import, could be re-established in some fashion outside of the control of either the Privileged Networks or the War Economy sub-networks.

Perhaps the most important sector that m-banking can affect is remittances, the money sent from the diaspora to relatives inside of Syria. A huge factor in the Syrian economy, remittances represented 2.4% of the Syrian GDP in 2010 (\$1.6 billion USD), which was double the dollar value of remittances in 2006.⁷⁰ Although current figures are not available, it is expected that with the collapse of the Syrian economy, remittances represent an increasing percentage of Syrian GDP.

Currently, most remittances flow through Hawala brokers. Viewed as trustworthy (often more so than government owned banks), the Hawala system provides customers with speedy transfer of funds at a reasonable cost⁷¹ (usually 5% of the transaction, which compares favorably to other available transfer mechanisms).⁷² However, as the security situation breaks down, even the Hawala system suffers when serving the most vulnerable of Syria's population, including women, the elderly, and people with disabilities. This is largely due to safety of travel issues (bombings and checkpoints⁷³) when going to collect money from the hawaladars. Also, while cultural honor systems tend to ensure the reliability of Hawala money transfers, "anyone who is particularly low status may be at increased risk of having their payment withheld, as their loss may not imply loss of trust in hawaladars by their peers."⁷⁴ Likewise, the Hawala system can inadvertently (or purposely) be a key source of support to the Combat and Shadow sub-economies as money transfers occur largely outside of regulated international institutions.⁷⁵

The movement of remittances to an m-banking network could provide the same speed, reliability, and trust, as the Hawala system, while at the same time providing greater security, flexibility, and perhaps lower costs. An additional benefit would be that an m-banking solution would also add transparency and accountability to the money transfers. This is an important aspect because, as opposed to money laundering (i.e., making criminal proceeds lawful, or "clean"), bad actors use the Hawala network to take clean money and make it "dirty".⁷⁶

Building a Better Network

The requirements for building a successful m-banking system in order to challenge the current economic network in Syria will require more than a mobile application hacked

together by a well-meaning NGO. To be built right, a Syrian m-banking solution has to negotiate many marketing, technological, regulatory, and political hurdles.

The concept creation and marketing of the m-banking solution will be key to its success. Indeed, like many technology ventures, the risk of getting the focus of the product wrong can be a barrier that even the most elegant technology can overcome. Within the context of Syria, a startup business concept such as a Minimal Viable Product (create the lowest level of product with the highest return versus risk, time, and investment)⁷⁷, may be the best approach. This might take the form of re-starting previous micro-financing initiatives, or outright subsidies to farmers in order to purchase agricultural inputs. The Minimal Viable Product approach would allow for mistakes and learning, as opposed to trying to achieve success in a major financial transfer market such as remittances, which would require the capital and infrastructure to handle hundreds of millions in transactions almost immediately. Options are boundless. But specificity of desired outcomes is required before developing the technology approach.

Within this approach, the hardware and software back ends must be developed. This is both expensive and time consuming. In fact, without being layered onto and integrated with an existing electronic banking structure, it may prove prohibitive to develop. For example, XacBank, a microfinance bank in Mongolia, had to invest over \$100,000 USD in its existing back end banking systems in order to roll out an m-banking solution.⁷⁸

A secure technological interface with the mobile provider is required to maintain customer trust and integrity in the system. In the case of Syria, this is a concern when one or both of the predominant mobile phone providers are controlled by members of the Syrian

Privileged Networks. This could possibly limit a product launch to border areas that have alternate mobile network coverage.

Another factor to consider is the agent network. While it would be desirable to create a digital credit environment along the lines of a Syrian PayPal, even if the network effect took hold and cashless transactions became the norm, there would remain a requirement for an agent network to distribute cash. Before the network effect takes hold, an agent network is an absolute necessity.

Developing an agent network may be a larger challenge than the technological back-end, with the hawaladars being the biggest impediment, as this is a direct threat to their business model. However, certain hawala systems could conceivably be commandeered as agent “ATMs” for a fee, although a regulatory and re-imbusement regime would have to be carefully worked out. Alternately, m-bank credits could be delivered directly to the consumer and be redeemed with a pre-selected group of vendors for delivery of products, thus allowing payments directly to the vender from a NGO or other group.

As mentioned in passing above, a regulatory regime will be required to monitor the system, as an unregulated m-banking financing system would be subject to the same predation by the same bad actors that m-banking was designed to exclude. Also, the regulatory body would have to be of such stature that they would engender trust from the customer. This leads to political hurdles. While some IGOs, such as The Office of the United Nations High Commissioner for Refugees (UNHCR), maintain a positive and mostly neutral posture as viewed by most nations, few IGOs (or NGOs) have the financial and technical capability or capacity to launch and maintain such an enterprise. Thus, it may be

up to governments, in conjunction with private enterprises, to develop, launch, grow, and maintain an m-banking solution.

Counter-Arguments

In addition to the above mentioned technological and deployment hurdles, there are several counter arguments to using m-banking as an effort to undermine existing Syrian economic systems. The first of which would be the contention that the Syrian economy is too far destroyed for “First World” technologies to have an effect and as disruptive technology innovations such as m-banking rely on infrastructure that is either non-existent or government controlled.

Because of the destruction of Syrian infrastructure and economy due to the war, an m-banking solution is even more appropriate than conventional alternatives. The cost to establish or re-establish a cellular infrastructure is an order of magnitude less expensive than that of a traditional landline infrastructure. Also, Syria is surrounded by mobile providers with 2 to 5 operating in each neighboring country.⁷⁹ In addition, cell phones are not new to the Syrian market, with 15.6 million subscribers at a rate of 87 subscriptions out of every 100 residents.⁸⁰

A second counter-argument against the utility of using a disruptive innovation such as m-banking is that there is no evidence that an m-banking project will do anything to affect Syrian Privileged Networks or War Economy sub-networks. This criticism could be based on the lack of transformative results micro-finance initiatives (MFIs), which are often identified with m-banking in less developed nations.

It is correct that MFI's have been shown to do little in affecting the situation of poverty. In a randomized study of six MFI's, researchers found that none of the “initiatives

created a statistically significant increase in total household income”.⁸¹ However, the study’s results did support the suggestion that “although microcredit may not be transformative in the sense of lifting people or communities out of poverty, it does afford people more freedom in their choices (e.g., of occupation) and the possibility of being more self-reliant.”⁸² The indication then is that there is a potential for alternate finance methodologies in distressed areas to provide choices from established economic orders. This hypothesis is further supported by the data from the Mongolian case study within the aforementioned report. It found that MFIs had crowded out other formal credit by “perhaps 20–25 percent.”⁸³ Interestingly, a large purveyor of MFIs in Mongolia is XacBank, which offers a commercial bank back end with an m-banking solution. While this is not clear cause and effect, it is highly suggestive that the elements of disruptive innovation, “cheaper, simpler, smaller, and, frequently, more convenient to use”, may have played a part in a higher market penetration rate in Mongolia.

Third, is the most credible concern regarding m-banking as a means of disrupting existing Syrian economic networks may be the ability of the territory holder, to control access to cell phones (in the case of the ISIL) or the cellular network (in the case of the Syrian Regime). However, when one views the cell phone and cellular network as information transmittal devices, then the nature of controlling that device shares certain analogies with the nature of controlling information. Information, “is cheap...has unlimited range...is easily accessible, and permeates all state borders without restrictions.”⁸⁴ Even the most closed societies have trouble controlling cell phones. North Korea, being a prime example, has invested in significant personnel and technology to eliminate non-government registered cell phones.⁸⁵ Yet, cell phone use, while impacted in North Korea, has not been

stopped, particularly in the border region with China. Likewise, even when cell phone and other data networks are severely degraded by the government, as in the case of the Libyan Civil War, information was transmitted via alternate means, such as flash drives.⁸⁶

Finally, the most obvious argument is that m-banking as a disruptive innovation will not have a direct effect on the existing Syrian economic networks. This argument is granted. The intent of m-banking is to reach directly to the Syrian people and erode the current networks. It is by nature, an indirect approach utilizing a cumulative campaign, with the goal of reaching a tipping point. In the words of the strategist, Rear Admiral J. C. Wylie:

“But here is another way to prosecute a war. There is a type of warfare in which the entire pattern is made up of a collection of lesser actions, but these lesser or individual actions are not sequentially interdependent. Each individual one is no more than a single statistic, an isolated plus or minus, in arriving at the final result.”⁸⁷

Additional Research

The concept of using disruptive innovations such as m-banking in the existing Syrian economic framework has follow-on implications. For example, within refugee camps along the Syrian border, how can m-banking be used to meet current needs while leveraging its use to repatriate and re-integrate displaced persons back into Syrian communities? Even in terms of remittances, where m-banking could evolve to have a large market share, nothing would stop money transfers from going both ways. In effect, the diaspora could fund Syria, and in the future, a more stable Syria (or any other country) could fund the diaspora with little friction. Additionally, if an effective m-banking network was set up by a government opposition group, and taxes were collected on money transfers, then that opposition group could afford to establish and fund parallel institutions back within Syria (or any other nation). Ultimately, this in the future could render the nation state as an institution, moot.

Conclusion

Continued developments in Syria have rendered new diplomatic or military actions in Syria largely ineffective. As the roots of the current Syrian situation have a large economic component, such approaches may have never been appropriate in the first place. Without the will or ability to take direct action to stabilize the Syrian economy (and thereby the regional economy), an indirect approach should be used. A Disruptive Innovation concept, utilizing the overwhelming Economic and Informational power of the U.S. could begin this effort quickly, and with little immediate risk, or effective opposition.

Through the use of a technology approach such as m-banking, the U.S. could more efficiently and effectively begin to alleviate the symptoms of the crisis (e.g., refugees, food insecurity, capital for economic inputs, etc.). This, in conjunction with taking advantage of the Network Effect, would degrade the destabilizing Privileged Networks and the War Economy. With time and coordination, this can provide a more stable economic situation for the Syrian people, and their regional neighbors.

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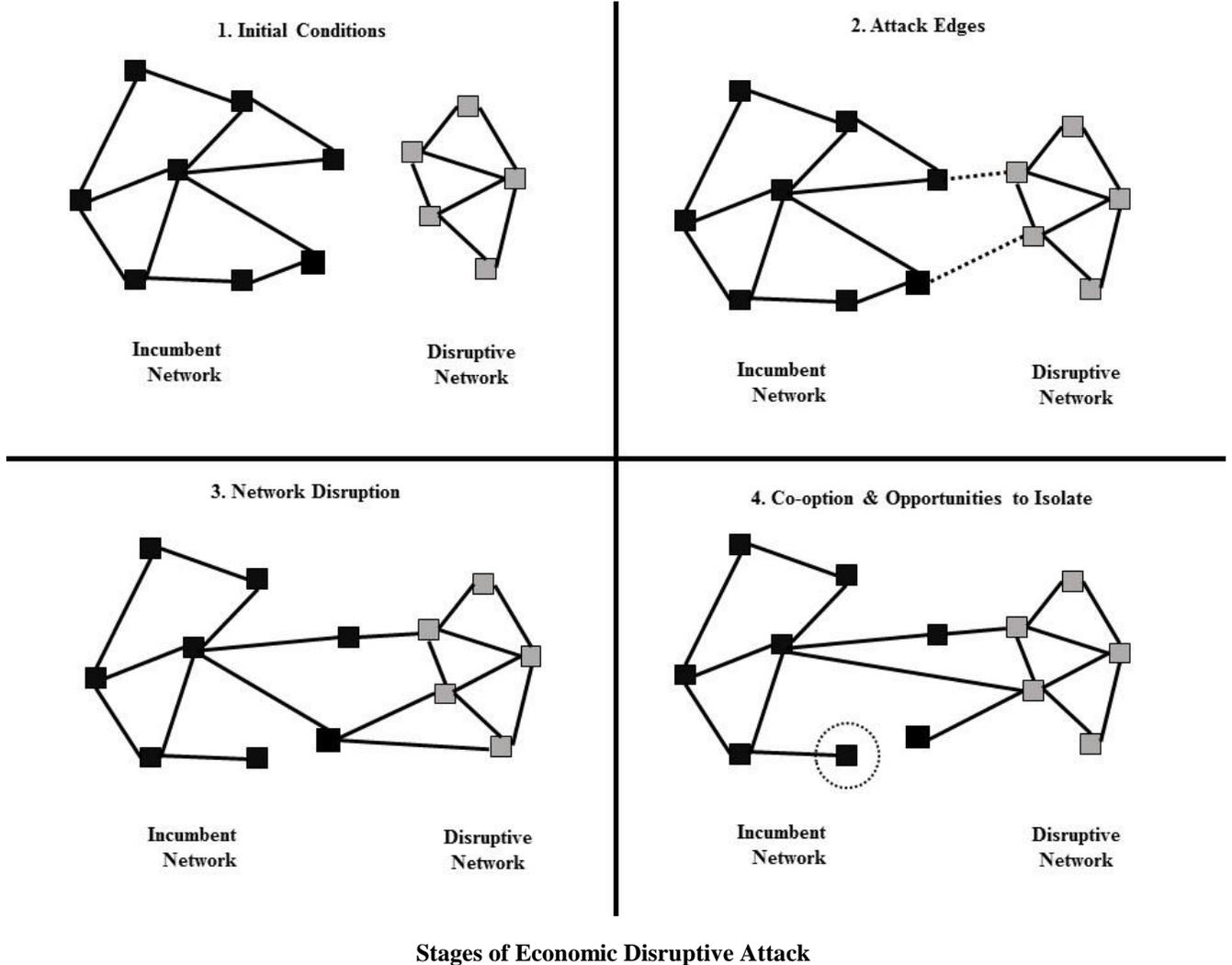
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Annex 1



Stage 1. Initial Conditions: Disruptive economic network is introduced to the incumbent network along narrow front in order to attract transactions between incumbent and disruptive nodes.

Stage 2. Attack Edges: Disruptive network begins initial transactions with incumbent nodes along network periphery.

Stage 3. Network Disruption: Transaction flow between disruptive and incumbent networks firmly established. Incumbent network flow disrupted as transaction paths to disruptive network becomes more advantageous by being, "cheaper, simpler, and more convenient."

Stage 4. Co-option & Opportunities to Isolate: Nodes of incumbent network firmly captured, disruptive transaction pathways penetrate deeper into the incumbent network, and some incumbent nodes are isolated leaving the vulnerable for other defeat mechanisms.