How Production Firms Adapt to War
Topher L. McDougal

From its inception, development economics has revered the industrialization process. Economists from Smith to Rostow to Gershenkron to Lewis have emphasized the importance of industrial factories as crucibles in which the division of labor is refined, a labor force is developed, and technical knowledge is generated and shared. And though the poorest countries with weak industrial sectors are also the ones that tend to fall prey to the so-called “conflict trap,” very little research on economies in conflict has explored how production firms operate. They focus instead on those types of “contested sectors” like the extractive industries that can drive and prolong violent conflict – examples include Fearon (2005), Humphreys (2005) and Le Billon (2001). Furthermore, research on the private sector in conflict has emphasized the vulnerability of capital concentrations and the trade routes that link them. Collier (1999), for instance, asserts that capital- and trade-intensive sectors (notably including industrial production and manufacturing) are “war-vulnerable,” while sectors like agriculture are not. A growing body of conflict research seems ready to strike from the agenda study of firm-level economic actors typically characterized by concentrated capital, labor and trade requirements; rather, it seeks to understand the role of “entrepreneurs” in conflict. “Entrepreneurs” is used alternately to mean those who innovate in the private sector and those who simply start small, replicative businesses, but regardless connotes economic activity carried out by atomistic individuals, and not by larger coordinated firms.

Many production firms survive and even thrive in the face of violent conflict. The fact that the survivors are, for the most part, producers of inelastic or inferior goods that are expensive to import is not surprising. But the fact that they continue to operate at all may be, given their high capital- and labor-intensive-ness. I contend that production firms that survive or thrive in violent conflict do so by performing a delicate balancing act between concentrating capital and labor to produce efficiently in the pockets of relative calm, and dispersing them spatially and temporally when the combat frontier approaches one of the production chain components. Such adaptability relies upon rapidly gathering information (via production networks) and processing it (at the place of production).

This essay is in three parts. First, I argue the adaptations of production firms in violent conflict are important to understand because the stronger the industrial manufacturing sector is, the less intense a violent conflict is likely to be. Second, I describe how firms balance their production networks via the strategic dispersal of production chain components (supply, production, and distribution). These descriptions represent summarized results of a series of semi-structured interviews with production firm managers working in Monrovia, Liberia during that country’s civil war. Firm selection was based upon maximizing variation in location (and thus exposure to violence), ownership (local versus foreign), and supply chain structure (diffuse versus concentrated). Third, I argue, using coded data from those same interviews, that these dispersal strategies have the effect of mimicking import substitution industrialization (ISI) policies employed by many developing countries following World War II to build domestic industrial knowledge bases.
Entrepreneurship in Conflict: The Tenacity of the Niger Delta Women in Nigeria

Edlyne Anugwom

Introduction

It is well known that in recent years, Nigeria’s Niger Delta region has been the site of unending conflict between youth militants and forces of Nigeria’s federal government. The fight is over perceived marginalization and exclusion of the region from mainstream socio-economic and political spheres in Nigeria despite the fact that the region is home to the oil on which over 70% of Nigeria’s external earnings depend. The conflict, which started initially from the sabotage of oil facilities in the region, is now all-encompassing and involves kidnapping for ransom, murder, and outright destruction of oil facilities. Hence, the Niger Delta region is a very volatile region marked in large part by insecurity, gangster-ism and lawlessness.

The actions of the militants are justified in certain quarters on the basis of long years of neglect by Trans National Oil Companies (TNOCs) and the Nigerian government, and by the severe environmental degradation in the region which has largely destroyed the ecosystem and severed the people’s dependence on the region’s flora and fauna for livelihood (see Anugwom, 2007a). Crucial in the Niger Delta discourse is the role of women in confronting the challenges of environmental degradation from oil exploitation and hardship in the farming and fishing communities and urban centers of the Niger Delta.

The imagery of Niger Delta women as vulnerable and largely helpless victims of conflict hardly holds sway in most instances; the conflict and the general fear shrouding the environment has indirectly provided opportunity for some of the region’s women to express an aggressive entrepreneurial spirit. Women in this region are traditionally at the forefront of staving off starvation from their families (see Anugwom, 2007b), and they have responded in innovative ways to the socio-economic challenge of supporting their families in a conflict zone marked by environmental degradation, insecurity and rule of the jungle.

This study depended essentially on in-depth interviews conducted among informal sector women entrepreneurs in two key states of the Niger Delta (Rivers and Bayelsa) in 2008.

Overview of the Niger Delta Region

In the extant Nigerian political parlance, the Niger Delta region refers to nine states in the Nigerian federation viz. Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo, and the oil-rich rivers which run through these states. The Niger Delta is the backbone of Nigeria’s mono-economy; over 70% of national revenue is derived from the oil in the region. However, over four decades of oil exploitation has not meant a marked or commensurate improvement in the socio-economic life of the region. The region is seen by the UNDP (2006) as socially underdeveloped, backward, and plagued by pervasive poverty. The poverty and social neglect which characterize a large portion of the area have been partially produced and reinforced by severe environmental degradation and pollution from local oil activities.

For Ghazivinian (2007:1), the disconnect between resource endowment and development stems from the fact that while “successive military regimes have used oil proceeds to buy mansions in Mayfair or build castles in the far away capital of Abuja, many in the Delta live as their ancestors would have done hundreds, even thousands of years ago in hand-built huts of mud and straw. And though the Delta produces 100 percent of the nation’s oil and gas, its people survive with no electricity or clean running water. Seeing a doctor can mean traveling for hours by boat through the creeks.”

A core assumption of the Niger Delta indigenes is that they have been largely excluded in the resource allocation process in Nigeria because of their own minority status and the control of state power by majority ethnic groups.

Women Entrepreneurs in the Informal Economy of the Niger Delta

The response of the Niger Delta women to their challenging social and physical environments is impressive. Massive environmental degradation resulting from oil exploitation has severely hindered the ability of the women, who traditionally depended on the environment for food, to meet their family and economic needs. These women have resorted to activities that, while providing the needs of the family, are not dependent on the degraded physical environment. It is this breakdown of the traditional economy that creates a niche for the involvement of the women in diverse socio-economic activities (Anugwom, 2007b).

As the extant literature shows, women have been organizing and reacting in various ways to the situation of the Niger Delta region (see Ikelegbe, 2005; TWN, 2002 etc). Beyond the protest and the active support shown by women for the efforts seeking redress of the Niger Delta situation, they have had to contend with the everyday challenge of...
Letter from the Director

In March of this year, I had the great fortune to participate in a conference on Entrepreneurship and Conflict organized by UNU-WIDER (World Institute for Development Economics Research), the Households in Conflict Network, and INCORE (International Conflict Research Institute). It was a fascinating meeting. The conference took place at the University of Ulster in Derry, Northern Ireland, where such issues are very much at the fore.

The first day began with two addresses. Philip Verwimp (chair of EPS-Belgium/Netherlands) spoke about his specialty - studying conflict at the household level. He was followed by Zoltan Acs, a leading advocate of the importance of entrepreneurship for economic development. His definition of entrepreneurship did not include small business owners or the self-employed, per se, but rather those whose ideas are innovative enough to significantly change society - future Bill Gates and Steve Jobs. Throughout the meeting there was discussion of which definition one might choose to employ.

There were five sessions: Entrepreneurship and Conflict: Theory; Entrepreneurship and Post-conflict Reconstruction; Entrepreneurial Motivations Behind Conflict; The Impact of Conflict on Entrepreneurship; and Entrepreneurial Coping Under Conflict. In this issue of the EPS Quarterly are summaries of three of the papers presented. I think they represent the range of geographic and theoretical approaches that were present. A full program of the conference is available at http://www.hicn.org/entrepreneurship_programme.pdf.

Traditional research on the private sector in conflict has emphasized the vulnerability of small businesses. However (and this was one of the most surprising revelations of the conference for me), many production firms survive and even thrive in the face of violent conflict. Topher McDougal, in How Production Firms Adapt to War, examines the strategic dispersal of production chain components (supply, production, and distribution) during the civil war in Liberia.

Edlyne Anugwom describes how, during violence in the Niger Delta that ruled out conventional methods of providing for families (such as farming), women stepped up and started small enterprises to provide additional income. Because of traditional societal respect for women as providers, these entrepreneurs are able to succeed by crossing ideological boundaries and serving rebels, militia and neutral townspeople.

Conflict and Entrepreneurial Activity in Afghan Provinces studies the conditions under which entrepreneurial activity evolves, this time in Afghanistan, and their impact on households’ wellbeing. The authors employ data to demonstrate that further-reaching positive results may be obtained when policies support adaptive and resilient entrepreneurial activity.

The highlight of the conference was the launch of the book Making Peace Work: the Challenges of Social and Economic Reconstruction, followed by a special session on Entrepreneurship and Conflict in Northern Ireland. The book, edited by Tony Addison and Tilman Bruck, is part of the Studies in Development Economics and Policy series, published by Palgrave Macmillan. Reconstruction from conflict is a complex and demanding task. Countries face multiple priorities – rebuilding infrastructure, assisting war-damaged communities, and re-creating weakened institutions. Without proper reconstruction countries may easily regress to war. This book provides an insight into some of the principal issues that arise in post-conflict economic and social reconstruction, of interest to anyone working on or interested in peace and development.

Following the book’s launch, the conference was addressed by Pat Colgan, CEO of the Special EU Programmes Body. Mr. Cogan described some of the cross-border programs administered by the SEUPB which have contributed to rebuilding economic activity as well as community security in the Republic of Ireland’s border counties and Northern Ireland. The evening’s climax was an address by Nobel Peace Prize Laureate John Hume, one of the architects of the Northern Ireland peace process.

I left inspired by the innovative spirit of people the world over, and by the depth and breadth of work being done in this area by economists and other social scientists to understand and encourage this spirit.
Conflict and Entrepreneurial Activity in Afghan Provinces: A Preliminary Analysis

Tommaso Ciarli, Saeed Parto, and Maria Savona

Introduction
Prior to the fall of the Taliban in late 2001, much of Afghanistan’s infrastructure and state institutions had been destroyed by intent or neglect of the warring factions in the preceding three or so decades of conflict. Afghanistan remains one of the poorest countries in the world with an estimated per capita income of $300, average life span of 47 years, and high rates of infant mortality. Many of its provinces are devoid of anything approximating even the barest minimum formal and informal structures necessary for a developing, post-conflict economy.

By all accounts, progress to date for moving Afghanistan out of poverty and onto a path of economic and socio-political recovery has been arduous and slow. Based largely on anecdotal data, lack of security and poor infrastructure continue to be considered the main factors that undermine entrepreneurial activity and economic recovery. Also based on anecdotal information, entrepreneurial activity abounds and there are numerous examples of innovation, particularly among the small-scale producers across the country.

Ongoing government and donor supported programs and policies are likely to have more significant and longer-lasting impact if they support adaptive and resilient entrepreneurial activity. To this end, this paper examines available data on the conditions under which entrepreneurial activity is more likely to exist throughout the country, despite the burden of ongoing conflict. A key contribution of this paper is to clarify the impact of security, inadequate infrastructure and institutional background on entrepreneurial performance and identify entry points for intervention through policy to ease the emergence of entrepreneurial activity.

The analysis reported here is part of a more extensive study on entrepreneurial activity in Afghanistan, the conditions under which it evolves, and its impact on households’ wellbeing. Here we focus on the data from the 2005 “National Risk and Vulnerability Assessment” (NRVA). The data were collected through a nationwide survey of households in the 34 provinces of Afghanistan.1

To contextualize what we know about Afghanistan in broader terms, we drew on the literature on entrepreneurial activity and institutional design. Based on this literature, the following section provides a description of what constitutes entrepreneurial activity in Afghanistan. The next section reports the core findings from our analysis, substantiating the ways in which conflict is affecting entrepreneurial activity in Afghanistan. The final section concludes this paper with identifying further research needs.

The institutional design of entrepreneurial activity
Afghanistan is best described as a nation of nations, its population being made up of many ethnic groupings and sub-groupings. The periods of full nationhood have been few and far between, with parts of the country having never been fully “governed” in the modern sense except through localized traditional arrangements. The country is severely underdeveloped and suffers from a general lack of adequate amenities such as roads and electricity. The population is estimated at between 26 to 30 million. Legitimate economic activity is largely agriculture-based, with some imitation-based industrial activity, minerals extraction, and a tradition of crafts-making such as woodcarving, iron mongering, and carpet weaving. Illicit economic activity includes opium production and minerals extraction, with corruption and extortion (as sources of income) present at many different levels.

Understanding the nature of entrepreneurial activity in Afghanistan requires an appreciation of the institutional context which, according to Baumol (1990, 1993) and North (1990, 1994), determines the extent to which entrepreneurial activity is conducive to economic growth and societal wellbeing. Institutions, broadly defined, are the formal and informal rules, artifacts, behavioral traits, and belief systems that collectively structure interactions among individuals and groups of individuals within and between organizations. As one type of interaction, transactions among individuals and groups of economic agents are also structured by institutions.2

The relationship between institutions and individuals is best understood as an autocatalytic process (Parto, Ciarli, and Arora, 2005). Institutions emerge and evolve as a result of learning by individuals and organizations. It is instructive to view institutions as structures that communities of actors devise for themselves, consciously or unconsciously, to increase stability and predictability in their daily and longer-term interactions. However, once established, institutions have a significant bearing on the learning process and the resultant new or newly modified institutions. In other words, there is a significant degree of path-dependency in processes of institutional change.

Consistent with North’s (1990) conception of institutions, Baumol (1990, 1993) focuses on entrepreneurial activity to make the now classic observation that while entrepreneurial activity may be innovative all the time, it is not always productive insofar as contributing to societal wellbeing. Also, Baumol asserts, the supply of entrepreneurial talent can by and large be assumed as comparable among different societies. Thus what differentiates between societies regarding entrepreneurial activity is the “set of rules,” or the system of incentives and disincentives, that collectively structures the outcome of entrepreneurial activity as productive, unproductive, or destructive to societal wellbeing. Nowhere is this distinction between the different classes of outcomes more important than in in- and post-conflict societies, such as Afghanistan.

Conflict in Afghanistan since the early 1980s has been chronic, changing only in intensity from time to time. The institutional landscape in the last 30 or so years can best be described as being in
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Our analysis is based on one of Baumol’s (1990) and North’s (1990) key hypotheses: changes in the rules and other attendant circumstances can modify the composition of the class of entrepreneurs and thus the nature of their contributions to society. We discuss the main findings of this analysis in the next section.

The institutionalization of conflict and its impact on entrepreneurship

The National Risk and Vulnerability Survey (NRVA) is a bi-annual survey that contains sampled data at three different levels: province, village (shura) and household. We use income generation information at the household level to qualify entrepreneurial households as those that hold a business activity (irrespective of sector and size).

The graphs below depict the relation between the ratio of entrepreneurial households against two different measures of conflict: the ratio of households having experienced an insecurity shock in the previous year, per district, and the number of incidents occurred in 2007, per province.

The two figures indicate a subjective perception of the intensity of conflict, Continued on page 8.

Top figure: relation between percentage of households in a district against percentage of entrepreneurial households. Bottom figure: relation between number of incidents per province in 2007 and percentage of entrepreneurial households.
providing for their families. But this basic function has become very tasking in the face of gross environmental degradation and conflict which makes movement into the hinterlands and creeks very unsafe.

In confronting this situation, women have become more enterprising and innovative, though their engagement as petty traders or commercial middlemen in the bid to complement family incomes is neither new nor peculiar to the Niger Delta. Several factors have pushed these women to become more daring and geographically expansive in terms of their business involvements: in addition to severe environmental degradation, the men in the area are living a precarious existence as a result of the conflict, and it is increasingly futile to rely on the environment and traditional economic pursuits. The informal businesswomen are in reality the bridge between the residents of urban and rural areas, and thus are the channel for moving food and other locally produced goods to the urban areas. While a few of the women we interviewed are also producers of the goods they market, quite a good number are middlemen who are itinerant and ready to source for supplies from any location.

An increasingly popular venture greatly favored by women entrepreneurs in the informal Niger Delta economy is the ICT (information and communication technologies)-powered “call centers.” These call centers or phone booths are really makeshift outlets where mainly mobile telephones are used to offer call services at a relatively cheap rate. Perhaps the attraction of this business, which has grown rapidly in the last three years in this region, is the fact that it requires little capital, land or shop space, and can be easily moved from one place to another. Typically a call center of this type is simply a plastic table, two plastic chairs and an umbrella shed, in addition to the possession of one or two mobile phones which are recharged with cheap or discount credit from the mobile phone service providers.

Call centers, apart from providing access to communication for a large majority of the urban and rural population, also provide a ready source of steady income to local women. As a result, one agrees with the observation by Norrish (2000), that ICTs possess the potential to broaden and improve access to information and resources for communication in rural areas and poor communities, while strengthening the democratic process and helping to reduce poverty. In other words, ICTs, like the call centers, are seen as having significant and over-reaching influence on empowerment of groups (see van Ark et al, 2002; World Bank, 2002).

Narratives of Understanding: Women Entrepreneurs and Militants in the Niger Delta

Generally, women entrepreneurs are considered somewhat safe by the militants who live a life of constant relocation between camps and bases of operation, and are wary of betrayal. Women new to the business, whose itinerary takes them to the interiors, are usually accompanied by the older traders who act as sort of security and assurance to the militants that the new women can be trusted. Usually, the commercial lives of the militants are largely unpredictable and their dependence on women often is seen as a security measure borne out of a long and seldom broken understanding. In fact, an itinerant old woman trader who we spoke to in Yenogoa opined that women as mothers cannot give away their children (militants). Even where such children are not doing the...
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right thing, mothers would rather talk to them than to the security people who would, in most cases, inflict injury or death on them.3

But more revealing is the contention by another woman trader in Choba when asked if the itinerant women traders are not afraid of being harmed by the militants. According to her, the militants have mothers and would show respect to mothers. Therefore, the women see the militants as still their children.4 Further, the woman argued that the relationship between the women and the youth in general is that of mother and son.

In spite of these observations most of our respondents pointed out that it is culturally tabooed for these young people to raise their hands against women, especially when such women are going about their business without interfering in whatever the youth see as their problem with the government. This strong cultural barrier against knowingly inflicting harm on women is apparently reinforced by the fact that these women do not “rat on” the militants. Thus, the militants are hardly afraid that these women would report them to the government joint military task force or perceived enemies. In fact, previous experience and the dominant mood of the people suggest that the militants have the tacit support of the general population. In some cases, these militant youths actually are perceived as cult heroes, enjoying widespread support amongst the civil population in the Niger Delta. These points may explain why it has been difficult for the large government task force there to effectively contain the militants.

Concluding Remarks

The Niger Delta environment in view of the conflict has thrust more women into the forefront of informal commerce. These women entrepreneurs, who often engage in itinerant business pursuits which may require travel periodically to the various creeks and hinterlands, are well aware of the danger but they are determined to continue with their business in order to deflect privation. In this milieu, where oil exploitation has done great damage to the physical environment, the women have been left with little option than to get involved in different informal economic activities ranging from petty trading and hawking to running make-shift call centers.

Despite the women’s undaunted spirit of enterprise and the determination to survive, it is important to realize that they had probably been boxed into a social context where the need for survival overrides the risks. Apart from the resilience of the female gender showed by these Niger Delta women, the above spirit of enterprise and survival also point to the need for women to be integrated into the mainstream of socio-economic revival and peace building efforts in the region.

Endnotes

1 Nigeria has a total of 36 states and the areas referred constitutionally as the Niger Delta region are compromised of two state (Abia and Imo) in the Southeast zone; one state (Ondo) in the Southwest zone; and six states (Akwa Ibom, Bayelsa, Cross River, Delta, Edo and Rivers) in the Southsouth zone. Nigeria is politically divided into six geo-political zones.

2 In fact the position of Jonathan Goodluck from the Niger Delta region as the Vice President of Nigeria in the current political dispensation is often seen as a token in the popular discourse in the region.

3 Personal interview September 17, 2008.

4 Personal interview October 9, 2008.

Sources available online @ www.epsusa.org.

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In Memory

Sir Clive William John Granger (September 4, 1934 - May 27, 2009) was a British economist, and Professor Emeritus at the University of California, San Diego. In 2003, Granger was awarded the Nobel Memorial Prize in Economic Sciences. In bestowing this honor, the Royal Swedish Academy of Sciences committee recognized that Granger (and co-winner, long-time UC San Diego colleague, Robert F. Engle) had made fundamental discoveries in the analysis of time series data and that this work was widely known to fundamentally change the way economists analyze financial and macroeconomic data. He was a Trustee of EPS.

Robert Strange McNamara (June 9, 1916 - July 6, 2009), also an EPS Trustee, was an American business executive and the eighth Secretary of Defense. McNamara served as Defense Secretary for Presidents John F. Kennedy and Lyndon B. Johnson from 1961 to 1968. Following that he served as President of the World Bank from 1968 until 1981. McNamara was responsible for the institution of systems analysis in public policy, which developed into the discipline known today as policy analysis. In his latter years, Secretary McNamara worked tirelessly for nuclear disarmament. His 2005 Foreign Policy article, Apocalypye Soon, detailed his belief that US nuclear weapons policy is “immoral, illegal, militarily unnecessary, and dreadfully dangerous.”
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and an objective identification of the intensity of conflict. Despite the limitations in comparing that different information, the graphs clearly show that there is no apparent relation between the conflict intensity and the level of entrepreneurial activity. This apparently surprising result raises a number of possible questions: have households adapted to a condition of perennial conflict? Has conflict become an institution in which households find their way to improve their livelihoods? Is it just the quality of entrepreneurial activity, and not its pervasiveness, that is affected by extremely unfavorable institutional environment, as Baumol would imply? Some of these questions implicitly underline the following interpretation of the analysis.

We qualify the impact of the lack of security due to ongoing conflict on entrepreneurial activity, as opposed to household features, inadequate infrastructure, and institutional background, to underline priority areas to be targeted by reconstruction programs. The prior is that while conflict activities in the short term do not have a large impact on households’ economic decisions, it is their long term effect on the development of infrastructures, institutions, an incentives which determines the extent of the burden.

We thus carry out an analysis to determine the likelihood of entrepreneurial activity as a function of conflict, with household features accounted for in the standard literature on entrepreneurship, access to resources, infrastructures, and institutional background. In so doing, we provide a way to analyze the adaptive capacity of Afghan entrepreneurs who face a particularly unpredictable and uncertain operating environment.

As it was already clear from the graphs, we find that conflict does not play a role in entrepreneurial activity of a household. And this result holds under any specification and condition. If anything, we find a higher probability of holding a small business in those communities (villages or city quarters) in which the local Shura (traditional governing body) indicate disarmament among the policy priorities.

The households reporting running a business tend to be more literate, involve only males in income generation activities, and are less likely to rely on social contributions such as pensions and aid schemes. We find no evidence of the relevance of standard variables such as age, marital status and initial assets of the household. However, particularly relevant in the Afghan case are the difference between rural and urban settings, and the number of income-generating activities in which the household is involved. The first result clearly shows the difference in education, assets, access to infrastructure and markets, and the exposure to risks. The second result particularly shows the need to share the risk of entrepreneurial activities with more than one source of income, as a consequence of an adaptation to a very unstable environment characterized by an institutional flux.

Of high relevance in terms of policy objectives is the access to credit markets, resources, and human capital. Once again Afghanistan shows a quite peculiar case with respect to standard studies on entrepreneurial activity: entrepreneurs make use of the credit market much less than other households, which likewise is explained by this unique institutional setting. First, most households loans are used for consumption, given the precarious conditions in which the average household lives, and the precarious access to cultivated land for non-traded crops.

Has conflict become an institution in which households find their way to improve their livelihoods?

Second, the channels through which entrepreneurs access credit sources are mainly traditional and informal, such as family members and friends, demonstrating the relevance of a social network for financing an entrepreneurial activity. Note that the same result does not hold when we look at diverse indicators of social capital such as mutual communal help: this does not seem to be at the base of entrepreneurial activity as the access to credit. This also indicates that most of the entrepreneurial activity in Afghanistan is based on family structures, rather than more unreliable capital ventures.4

Despite the local informal credit source, contrary to more standard results in the literature, entrepreneurial households rely less on remittances. The other side of this coin is that they suffer less “brain drain” in the form of family emigration within Afghanistan or to foreign countries.

Back to the social capital indicators, there appears to be a positive correlation between entrepreneurial activity and community participation. For example, Community Development Council positions are sought after by entrepreneurs, presumably because of the networking potential offered by these posts. They also rely much more on informal and traditional local source of information, and business peers, rather than more formal, governmental, or media sources. In other words, while entrepreneurs seem detached from their community in terms of “collective action” and mutual help, they seem to rely substantially on local social resources, which is another aspect that now seems institutionalized in Afghanistan.

In fact, entrepreneurial activity is more diffused in communities with fewer formal government structures. Another indicator of the social power structure, and the possible rent seeking aspects of entrepreneurial activity, is that in those communities with large entrepreneurial activity, the local Shura do not feel any need to improve the way in which disputes (over property rights) are
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sorted out. Again in line with this evidence, it seems, is the evidence that entrepreneurial households seem to be adversely affected by returnees rejoining their communities.

Finally, apart from the social and institutional design, long-term conflict has a strong bearing on poor infrastructural conditions. While we find no evidence that entrepreneurs live in localities with faster and cheaper access to markets, not surprisingly, there is a higher degree of entrepreneurial activity among households in closer proximity to basic infrastructure such as roads and utilities such as electricity. Access to electricity is a major discriminatory factor of owning a business, even if entrepreneurs rely much more on public provision than on private or communal investment.

Conclusions and requisite future research and policy

Because of the chronic nature of the conflict, there is a significant element of criminality and lawlessness throughout Afghanistan. Vast sections of the population have little choice as far as working toward a career and are willing to undertake any activity that offers a potential for generating an income. “Entrepreneurial” activity in Afghanistan is thus more a means to survival than a choice between a career in, say, the civil service and owning a business. Our preliminary analysis suggests that, broadly speaking, conflict does not have a significant impact on entrepreneurial activity. This finding leads us to ask the question of whether or not analyzing entrepreneurs and entrepreneurialism in a context such as Afghanistan makes useful sense.

The short answer to this question is a qualified “yes.” However, there are a number of challenges associated with conducting quantitative analysis of the available data. Secondly, there is the issue of suitability of the available datasets. The NRVA surveys use households as the unit of analysis, with NRVA offering only proxy references to entrepreneurial activity. Establishing the extent to which entrepreneurs contribute to or undermine societal wellbeing requires longitudinal data collection from the population(s) of entrepreneurs, designed specifically to provide in-depth insights into the extent and nature of entrepreneurship in Afghanistan. Thirdly, because there is a general absence of regularly collected and suitable data, socio-economic and political analyses of entrepreneurial activity need to draw significantly on narratives and case-study materials for in-depth insights.

As Baumol (1990) has pointed out, the issue is not whether there are entrepreneurs but to establish the type of entrepreneurial activity on the productive-destructive spectrum. Inadequate infrastructure, a severe shortage of reliable (and sustainable) energy sources, absence of the rule of law, and the presence of a whole host of informal, and often illegitimate, “rules of the game” that govern economic activity in Afghanistan suggest that there are numerous incentives for entrepreneurs to engage in illegitimate (and unproductive or destructive) economic activity.

However, there is clearly room for significant measures to promote legitimate entrepreneurial activity and support small businesses. The most obvious measures with potential to bring tangible and widely distributed benefits are improvements in infrastructure, specifically roads, and the availability of basic services such as electricity, storage facilities, and credit. To the extent possible, programs and projects to revive or expand entrepreneurial activity and the private sector need to be carried out through interventions that take account of local production factors and aim to promote products and services for which there is market demand. Support and representation for existing businesses are also important in raising the profile of productive entrepreneurs.

In studies of entrepreneurialism in Afghanistan’s reconstruction, we need to establish what is productive, in which sector, and with what level of potential to be receptive to interventions for rebuilding the private sector. One way to establish productive entrepreneurial activity is to identify self-organizing clusters of economic activity in urban and rural areas. Many of the existing clusters are generations-old socio-economic networks with proven resilience and adaptability to survive chronic conflict. A close examination of these clusters would reveal what “works” in an unpredictable and uncertain operating environment, and whether pre-existing forms of entrepreneurial activity could serve as a model or basis for policy intervention. A focus on economic clusters can manageably include regular surveys to address data needs for quantitative analysis.

Endnotes

1 The authors are grateful to the Central Statistical Office (CSO), Kabul, Afghanistan for providing access to the NRVA 2005 data. In particular, Amanullah Assil at CSO, Andrew Pinney (CSO consultant), and Royce Wiles at the Afghanistan Research and Evaluation Unit (AREU) assisted in various phases of data preparation. The authors are also grateful to Wim Naude and the organizers of the UNU-WIDER Research Workshop on Entrepreneurship and Conflict, held at the University of Ulster, Derry, Northern Ireland, March 20-21, 2009.
2 See Parto (2005, 2008) for a detailed discussion on types, levels, and scales of institutions.
3 The latter figures are made available by the Afghan Conflict Monitor online (http://www.afghanconflictmonitor.org/incidentsbyprov07.jpg).
4 This has numerous consequences on the quality of business activity, which are not discussed in this short paper.

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The 13th Annual International Conference on Economics and Security, organized by EPS-UK and EPS-Greece, was held on the 24th-26th of June at CITY College, Thessaloniki, Greece. The conference was co-sponsored by the Business Administration and Economics Department, CITY College, an affiliated institution of the University of Sheffield; the University of the West of England; and SEERC (South East European Research Centre).

The conference featured some of the best and most distinguished researchers in the subject. This year’s keynote speakers included two of the world top names in the field, Ron Smith, Professor of Applied Economics, Birkbeck College, University of London, UK and Todd Sandler, Professor of Economics and Political Economy, University of Texas at Dallas, USA.

In total, 60 academics (professors and PhD students) from 23 different countries (USA, UK, Australia, Mexico, China, South Africa, Switzerland, Egypt, Belgium, France, Italy, Bulgaria, Greece, Germany, Sweden, The Netherlands, Greece, Czech Republic, Israel, Spain, Portugal, Turkey and Colombia) attended the Conference. The 44 papers that were presented covered a wide range of economics and political economy topics, including peace and security studies. A selection of papers will be published in a special issue of the “Defense and Peace Economics” journal.

Conference-goers and their guests also had the opportunity to participate in extra-curricular activities. The day before the conference was a tour organized offered to the Vergina Archaeological Museum. This site includes several underground tombs including that of Philip II, Alexander the Great’s father, and artifacts including 2500 year old gold leaf crowns and a young boy’s set of armor believed to have belonged to Alexander’s son. After the conference was an optional trip to the Chalkidiki beach resort of Porto Carras. It was the perfect end to a busy few days, and included dinner in a taverna with a special rare fish caught just for conference attendees.
How Production Firms Adapt to War

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The Importance of Production Firms

There are good theoretical reasons to seek to understand the adaptations of production firms in the world’s poorest and most conflict-wracked countries. Caruso’s (2008) model of a two-sector economy at war suggests that investment in an “uncontested sector” (i.e., one whose value added is not wholly up for grabs in the struggle) can increase total welfare. Industrial manufacturing is a good candidate for a real world uncontested sector because its value-adding mechanisms are sophisticated and primarily knowledge-based (as opposed to the resource extraction industries, for instance, whose value is largely not added, but found). This distinction means that the firm’s entire coordinated production chain must be operational in order to generate profit for would-be usurpers. That condition in turn places serious limitations on the levels of destructiveness of any profit-maximizing rebel group. This reasoning implies the hypothesis that the more an economy’s value is added through industrial manufacturing, the less destructive conflict should be.

In fact, a preliminary ordered logistic regression analysis using cross-country panel data for 185 countries from the years 1960 to 2006 finds that, controlling for sectoral composition, year, standard macroeconomic indicators, and trade flows, every percentage point rise in the value of manufactured goods as a fraction of total merchandise exports is associated with a significant 1.3% decrease in conflict-related deaths. Similarly, a twofold increase in the absolute value of manufactured goods produced is significantly associated with a decline in conflict-related deaths of roughly 35%. Contrariwise, a twofold increase in absolute value of agricultural goods and general services is significantly associated with an increase in conflict-related deaths of about 44% and 373% respectively.

Dispersal Strategies in Production Networks

Types of Dispersal. Predation encourages the strategic dispersal of economic activity to reduce the risk of having the good in question appropriated; the alternatives are spending more on security measures to protect it, or buying more of it to offset the losses. Dispersal can take the form of portfolio diversification (inter-firm dispersal of resources) or, more germane to the topic of this paper, spatial and temporal dispersal at the firm level. While the strategy of spatial dispersal in Liberia lent itself to modification of Monrovia firms’ supply and distribution chains, that of temporal dispersal was employed more often at the production hubs where fixed capital made spatial dispersal unfeasible. Any type of dispersal, however, decreases economies of scale and raises sourcing, production and distribution costs – whether by raising transportation costs for supply and distribution networks or decreasing factory productivity with intermittent stopping and starting.

Liberian firms that suffered from rebel predation of their supply and distribution networks largely dispersed this activity by replacing the model of in-house or contracted truckers with a “deverticalized” model (i.e., an out-sourced model in which transport functions that used to be internal to the production chain are now external). Distribution and supply routes that crossed the combat frontier were particularly vulnerable to looters, so many firms sourcing from or distributing through the free port did not radically alter that portion of their production chain until the port itself was captured by rebels. Those that sourced or distributed locally, and so increasingly found their sources and client behind the combat frontier, reported gradually deverticalizing those components of the production chains as the combat frontier approached Monrovia. They then tended to splinter into reticulated webs in which poaching and “taxation” could be minimized through networks of trust. This increasing spatial dispersal required an army of traders with intimate knowledge of geography and the local inhabitants. This army in turn required factories to coordinate their delivery rooms better, and so many companies hired more staff in their supply and warehouse departments. Finally, as will be explained in the third part, the extent of dispersal in supply chains did not depend so much on the physical location of the firm, but rather on the elasticity of substitution between imported and local inputs, since locally obtainable inputs could be more easily sourced with these highly dispersed networks. A prime example was one alcoholic spirits manufacturer that decided, after the port was taken by rebels, to switch its flavors from imported European esters to a natural cola flavor extracted from locally-grown cola beans.

Balancing Act. Successful firms were able to balance the three components of the supply chain—supply, production, and distribution—in response to the shifting combat frontier (and thus to degrees of predation). In the long run, no firm can produce more than the amount for which it has the required inputs (raw and intermediate materials), nor distribute more product than it has produced (although in the short-run, the warehousing of both raw materials and finished goods can allow for more flexibility). Keeping the components in equilibrium requires incurring costs through (a) investments (in capital or labor), and/or (b) diseconomies of scale and scope associated with the temporal or spatial dispersal of economic activity. This balancing act can be modeled using a simple Lagrangian constrained maximization function to balance production chain components (such that Supply + Production + Distribution) and assuming that dispersal strategies reduce the risk of goods appropriation by rebels with a simple contest success function. In fact, it can be shown that compensatory capital and labor...
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Investments in predated production chain components rise only linearly with the risk of predation, while compensatory investments in dispersal rise with the square of such predation risks. The extreme knowledge-intensiveness of dispersal coordination means it naturally occurs at nodes where human capital concentrates, notably production hubs where managers would assess news of the latest developments in the war and calibrate their operations on the fly.

Import Substitution Industrialization

Heightened predation around trade nodes in Liberia, and the resulting supply chain dispersal, had the effect of mimicking certain aspects of import ISI policies. Looting mimicked import tariffs by “taxing” inputs shipped into the country. Violence drove out many expatriates, thereby localizing the staffs of many companies and de facto promoting Liberian employees to management positions they may not otherwise have occupied. Production chain dispersal raised local content in products. The combination of these forces even spurred on technical learning and knowledge accumulation in medium-sized firms (even as it ravaged knowledge in society at large). Diffusing supply chains and substituting local inputs required learning more about how to process raw materials and develop in-house engineering expertise. Furthermore, in going further afield to source inputs that had previously come directly from the port, businesses often learned of new techniques and products that they could then put to use at home.

Of the three independent variables I attempted to maximize in the firm sample, the most important in spurring ISI-like outcomes was supply chain structure (i.e., whether supplies were mainly imported or locally sourced) and local ownership, in descending order of importance. The location of the business (proxying exposure to violence at production sites) did not play a large role, suggesting that production chain dynamics are more critical to firm adaptation than simple exposure to violence. A pairwise correlation matrix of these traits and their relationship to ISI-type adaptations is presented in the table below.

Locally-sourcing firms were significantly less likely to report heightened prices in inputs mimicking tariffs. The interviews suggest that this is due to the fact that foreign goods came through easily-targetable point-sources (e.g., the port), were generally high-value, and were subject to war insurance. Locally-sourcing firms were also significantly more likely to use recourse to import substitution when the effective prices of foreign goods rose. And while they were no more or less likely to localize staff (perhaps because they tend to employ mostly Liberians already), they were significantly less likely to have developed significant in-house technical capacity than foreign-owned firms. This may or may not be related to the ability of foreign owners to pull knowledge-intensive parts of their supply chain which usually reside in their home country into Liberia. This, then, would constitute a curious case of reverse “brain drain.”

The effects of local ownership parallel those of local sourcing, with two intuitively understandable exceptions. First, local ownership is not significantly associated with felt “import tariffs.” In fact, nothing in the interviews would suggest that it would be. Second, locally-owned businesses were significantly more likely to localize staff during the war. Again, this may (or may not) be due to the fact that local owners are more embedded in the social web. It may also be due to possibility that foreign-owned firms could more easily afford capital-intensive security measures, such as radio communications, while locally-owned firms relied more heavily on local staff networks for updates on the war. Certainly, many local managers noted the importance of local staff in understanding emerging threats and adapting readily and spontaneously.

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<table>
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<tr>
<th>Pair-Wise Correlations of Firm and ISI Characteristics</th>
<th>Location</th>
<th>Local Inputs</th>
<th>Local Ownership</th>
<th>Import Tariffs</th>
<th>Import Substitution</th>
<th>Staff Localization</th>
<th>Knowledge Accumulation</th>
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<tr>
<td>Location</td>
<td>1.000</td>
<td>0.200 (0.533)</td>
<td>0.527 (0.078)</td>
<td>0.313 (0.349)</td>
<td>0.428 (0.190)</td>
<td>-0.200 (0.606)</td>
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<td>Local Inputs</td>
<td>1.000</td>
<td>0.683 (0.014)</td>
<td>-0.671 (0.024)</td>
<td>0.624 (0.040)</td>
<td>-1.000 (0.000)</td>
<td>-0.810 (0.003)</td>
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<tr>
<td>Local Ownership</td>
<td>1.000</td>
<td>-0.418 (0.200)</td>
<td>0.607 (0.048)</td>
<td>-0.791 (0.011)</td>
<td>-0.449 (0.166)</td>
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Cell entries are Pearson’s correlation coefficients (r) and (statistical significance) (p).
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Conclusions & Speculations
Weinstein (2005) and others have noted that wars ending “naturally” typically do not relapse as readily as those ended “artificially” from external forces. This phenomenon may be due to a number of factors not considered here. But one piece of the puzzle may be that risk-minimizing strategies of production firms in war naturally tend to make the sector more “uncontested” and its value less vulnerable to looting. If rebel groups are viewed as operating on a continuum running from all-out parasitism on, to symbiosis with, productive economic units, the promotion of manufacturing may incentivize a shift toward the latter end of the range. Such speculation requires further research, but may eventually point to industrial policies that can be enacted to lower the intensity of prospective or ongoing violent conflicts.

Works Cited


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PRESS CONFERENCE BY JOSEPH STIGLITZ, CHAIRMAN, EXPERTS COMMISSION ON INTERNATIONAL MONETARY AND FINANCIAL SYSTEM REFORMS

At a press conference held at United Nations Headquarters June 25 on the margins of the Conference on the World Financial and Economic Crisis and Its Impact on Development, a high-level panel of economic experts again stressed the need for long-term structural reforms of an international financial system that had helped contribute to the current economic crisis.

As 192 Member States met for the second day in an attempt to hammer out a consensus document that would help avert another global meltdown, Nobel Prize Laureate Joseph Stiglitz, Chairman of the Commission of Experts of the President of the General Assembly on Reforms of the International Monetary and Financial System, said that the existing institutions had imposed counter-productive ideas, such as bank deregulation and market deregulation, which should be re-examined.

Saying that those ideas had contributed to the crisis and the speed at which it had spread, Mr. Stiglitz, who is also a professor at Columbia University, suggested that a diversity of institutions was very important, and a “Bank of the South” could be a very important part of the architecture. There, he was referring to calls by some developing nations for an alternative to existing global institutions, such as the World Bank and International Monetary Fund.

Yaga Venugopal Reddy, a former Governor of the Reserve Bank of India and Commission member, said regional initiatives could induce change in the existing systems and did not have to be viewed as competitive.

Referring to the report issued this year by the Commission, Mr. Stiglitz said, “The report is clear that there should be multiplicity. Everybody doing the same thing has the risk of instability.”

He said the convening of the conference reflected the fact that developing countries had been badly hurt by the crisis and were among its innocent victims.

Mr. Stiglitz said the Commission believed in the need for a global reserve system, and the fact that it had become part of the discussion was a major step forward. “Ideas like this aren’t feasible if they are not talked about. We’re creating space for discussion,” he said.

He and other members of the Commission called for a more inclusive approach to a new global architecture, a need that was reflected in the outcome document being debated by the Assembly this week during its three-day summit.

In response to a question about the need for regulation of financial products, Mr. Stiglitz said the bad lending practices seen by Americans in recent years highlighted the exploitive and predatory lending practices that people in developing nations had endured for many years.

To a question about bank secrecy, Mr. Stiglitz said that had been an important issue for the developed countries, as it was used as a vehicle for tax evasion. Developing countries were concerned because corrupt officials in their countries placed stolen money in a secret bank account and then used it for retirement after they were deposed.

Also participating in the press conference was Andrei Bougrov, Managing Director and member of the Board of Directors of the Interros Company, former Principal Resident Representative of Russia, Executive Director and member of the Board of Directors, International Bank for Reconstruction and Development.

The crisis was a unique opportunity to carry out the reform of the international monetary system.

Upcoming Events


August 7 - 10, 2009. 7th General Conference of Mayors for Peace in Nagasaki, Japan. For registration and travel information, visit https://apollo.nta.co.jp/peace07e/.


October 19, 2009. The Network for the Economic Analysis of Terrorism (NEAT) 4th workshop in Brussels, Belgium. Papers that evaluate policies, contribute to the measurement of terrorism, and address aspects of the economics of security will be presented. Call for papers at http://www.economics-of-security.eu/sites/default/files/NEAT_WS4_Call_for_Papers_0.pdf.


November 19 - 20, 2009. Climate Change, Social Stress and Violent Conflict State of the Art and Research Needs International Conference, in Hamburg, Germany. For more information please contact Prof. Dr. Jürgen Scheffran, Research Group Climate Change and Security, at juergen.scheffran@zmaw.de.

January 8 - 9, 2010. Eurasian Peace Science Conference at Koc University, Istanbul, Turkey. The Conference's goal is to broaden cooperation among Eurasian and Middle Eastern peace science scholars, bringing together research on conflict and peace-related topics from throughout the world. For more information, please email Eurasips@ku.edu.tr.

January 8 - 10, 2010. An international Meeting on Conflict Management, Peace Economics and Peace Science at Indira Gandhi National Open University, New Delhi, India. If interested please contact Manas Chatterji, mchatter@binghamton.edu, as soon as possible.