

The Effect of War-Time Violence on Ex-Combatant Economic Reintegration

Work in Progress

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1. Introduction

“After 6 years [as a guerilla], I came back to my land here and harvested what I could, sold it, and used those proceeds to start planting things that I could harvest quickly. Do you really think I’d wait around for aid?”
-Former GAM fighter, Darussalam, Bireuen District

Despite numerous post-conflict interventions by the international community to disarm, demobilize, and reintegrate former combatants, little is known about the determinants of successful reintegration. Even if we confine our attention to the economic aspect of reintegration, we know little about how ex-combatants engage in peace-time economic activities, despite the importance policymakers and analysts place on ensuring that former combatants have an incentive not to take up arms again. This project is an attempt to build on our understanding of why some former combatants succeed in reintegrating into civilian economic life while others fail.

In a study on post-conflict Sierra Leone, Humphreys and Weinstein (2007) suggest that participation in formal DDR programs may do little to improve reintegration outcomes along social, political, and economic measures. It may therefore be fruitful to focus our attention on markets and social networks rather than formal DDR programs. They also point to the importance of war-time experience on social and political reintegration outcomes. In particular, they note that abusiveness of ex-combatants factions correlates negatively with gaining community acceptance. Various aspects of ex-combatants’ individual war-time experiences may affect their initial endowment of assets with which to restart economic activities. At the same time, the war-time experiences of receiving communities may affect the ability or willingness to assist former combatants in restarting their economic activities. Thus, this paper focuses on the following central question:

How does variation in the war-time experience of both ex-combatants and receiving communities affect the post-war economic outcomes of insurgent ex-combatants?

Based on 8 months of qualitative fieldwork in Aceh, Indonesia, this paper is intended to build theory to move toward addressing this question. This is part of a larger

project, including a representative survey of 1,000 ex-combatants, and 3,500 civilians, which will test hypotheses that have arisen from the qualitative portion of the project. As the survey is still currently being implemented, I will use this paper as a work in progress to 1) develop theory on ex-combatant economic outcomes 2) present some of the preliminary qualitative results from the fieldwork.

2. Theoretical Framework

In understanding economic reintegration outcomes, can we simply superimpose our understanding of the microeconomics of development onto post-conflict contexts or is there something particular about the combatant experience that systematically changes their economic outcomes? Blattman and Annan (2007) show that war has a negative impact on the skills and productivity of former child soldiers in Uganda and Angrist (1990) has shown a large loss of earnings to American Vietnam War veterans due to a loss of working experience. This suggests the need to examine the specific effects of the combatant experience on economic outcomes.

In the economic development literature, rural households' economic decisions have been examined largely as a function of wealth (including land) and risk. Variation in wealth and risk is seen to be instrumental in understanding household economic decisions. Thus, toward addressing the central question on the impact of war-experience on post-conflict economic outcomes, I ask three focused questions:

- 1) How do we explain variation in ex-combatants' initial post-conflict endowment of wealth?
- 2) How do we explain variation in ex-combatants' access to capital?
- 3) Controlling for access to capital, how do we explain variation in ex-combatants' livelihood strategies?

The first question is largely empirical while the second and third are more theoretically interesting.

A. Initial Post-Conflict Endowment of Wealth

There are many war-time factors that may lead to variation among insurgent ex-combatants in the initial post-conflict endowment of wealth. To the degree that there is significant variation in the type of counterinsurgency activities, there may be great variation in the initial endowment of wealth among ex-combatant households. In a targeted counterinsurgency campaign in which incumbent militaries are able to identify rebel fighters, combatant households may lose capital due to looting/razing from counterinsurgency campaigns or they may be expropriated from their land. In contrast, difficulties in identifying combatant households may allow combatant households to retain more of their wealth, unless all members of a community suffer violence. Further variation in household wealth may result from differences in the length of time spent fighting as opposed to working in productive activities. Other non-war-related factors such as pre-war wealth levels, types of economic activities, number of productive

members of household, age, gender, etc also affect variation in wealth endowments. Ultimately, explaining the degree to which each of these factors explains variation in initial wealth is an empirical question.

B. Access to Capital

Once combatants have returned from war, there may be a variety of factors that affects the amount of capital they may be able to access through loans or transfers. Given a lack of credit history and often a lack of collateral, former insurgent combatants may find it difficult to access formal lending institutions. Instead, former combatants are more likely to rely on reintegration programs or more commonly informal networks to access credit. The form and targeting of reintegration programs are likely to vary idiosyncratically, so examining the factors that lead receiving communities to provide or lend capital to returning combatants may be more generalizable than examining specific reintegration programs.

Variation in access to capital is likely to be related to the war-time experience of receiving communities. In particular, different forms of counterinsurgency activities experienced are likely to create systematic differences in the ability of receiving communities to provide capital to former combatants. The following hypothesis follows:

Hypothesis 1: Receiving communities in places where counterinsurgency targeting of combatants was selective are more likely to be able to provide informal loans or grants to returning combatants. In contrast, receiving communities in places where counterinsurgency targeting of combatants was more indiscriminate may be less able to provide combatants with access to capital.

Whether receiving communities are *willing* to provide assistance is an empirical question.

The intuition for this rests on the insights from development economics literature on household risk mitigation. Rosenzweig (1988) and Rosenzweig and Stark (1989) recognized the different effects of covariant and idiosyncratic risk on household consumption. Idiosyncratic risk, such as an isolated crop failure of a single household or injury to an economically productive household member, can be insured *ex post* through informal mechanisms. Rosenzweig (1988) found that poor Indian farmers who suffered idiosyncratic shocks were able to rely on their communities to smooth out their consumption needs until the next harvest. This helps to explain the prevalence of communal institutions in rural contexts.¹ In contrast, they found that covariant risks (those that affect entire communities) such as droughts are much more difficult to insure against *ex post*. This is because the communal sources of *ex post* risk mitigation are unavailable when entire communities are affected.

Based on the recent literature on micro-variation of violence in civil war, we can make predictions of where we should find communities that can fill the role of *ex post* insurers for ex-combatants. Kalyvas (2006) argues that areas where incumbents exercise

¹ In Indonesia and in Aceh in particular, communities have a communal norm called *gotong royong* in which community members contribute their labor for a day to help individual households with labor-intensive tasks such as clearing plots of land.

less control are more likely to experience greater indiscriminate violence by incumbent militaries.² These areas of greater insurgent control are likely to have heightened covariant risks from war. Thus,

Hypothesis 2: Receiving communities in areas of greater insurgent control are less likely to be able to provide capital to ex-combatants after war. Receiving communities in areas of less insurgent control are more likely to be able to provide informal access to capital to ex-combatants.

There may be other war-related reasons for variation in access to capital. In particular, the popularity of insurgent organizations among local populations is likely to affect communities' willingness to assist returning combatants. This may be a function of the organization's abusiveness,³ the balance of military control or the clientelistic relationships vis-à-vis different sides.

There may be other non-war related factors that affect the willingness or ability of communities to assist ex-combatants. These may include communities' pre-war level of wealth or norms of reciprocity⁴ or ex-combatants' ties to the community or existing capital endowments.

C. Allocation of Capital

Much of the literature on microeconomic development has sought to identify the determinants of average economic productivity and incomes. Two of the main factors examined in the literature are constraints on capital and risk. That is, household capital allocation decisions can be modeled as a function of access to capital and risk. In turn, the variation in the allocation of capital leads to variation in future income and wealth.

How then does war affect former combatants' post-war allocation of capital? We have already identified how war may affect individual combatants' post-conflict wealth endowments as well as communities' willingness to provide access to capital to relax the capital constraints of ex-combatants. In locations where counterinsurgency activities were selective, communities are more able to provide assistance in capital to returning combatants than in locations where counterinsurgency activities were indiscriminate. Thus, in areas of indiscriminate counterinsurgent activities, ex-combatants are likely to be more constrained by capital than in areas of selective counterinsurgency. Capital-constrained households are less able to invest in more productive activities.⁵ Thus the following hypothesis quickly follows:

Hypothesis 3: Ex-combatants in areas of indiscriminate counterinsurgent activities will choose less productive economic activities due to greater capital constraints.

² Kalyvas (2006, p. 204)

³ As in Humphreys and Weinstein (2007)

⁴ Petersen (2001, p.11)

⁵ Rosenzweig and Binswanger (1993)

War may change the way that ex-combatants allocate their capital through effect it has on their capital constraints.

Another way in which war can affect the allocation of capital is through its impact on combatants' perceptions of risk and the availability of mechanisms that mitigate such risks. Rosenzweig and Binswanger (1993) show that co-variant risk is not insurable *ex post* and therefore households in areas subject to co-variant risk such as droughts are likely to mitigate risk *ex ante* by choosing to allocate capital in less risky portfolios.⁶ As we saw in the previous section, differences in whether local communities experience violence selectively or indiscriminately can affect the ability of ex-combatants to deal with risk *ex post*. In the case that war restarts, it is likely that incumbents and insurgents are likely to control the same communities that they did previously. As such, ex-combatants may reasonably assume that the selectivity of violence may be similar over time and therefore the *ex post* sources of risk mitigation will continue. Thus, we have the following hypothesis:

Hypothesis 4: In areas of greater insurgent control, ex-combatants may choose less risky economic activities to mitigate risk *ex ante* since they expect not to be able to insure against war risks *ex post*.

3. Qualitative Work in Aceh

In this section, I present some preliminary qualitative results that emerged from 8 months of fieldwork in Aceh Province, Indonesia. I use a comparative framework to identify district-, village- and individual- level variables and characterize the processes that may be important in explaining part of the variation in initial capital endowments, access to capital, and allocation of capital. This comparative framework is based on purposive case selection that intends to exploit relatively large differences in independent variables of interest to identify potential hypotheses and theories. These hypotheses will be tested later on the representative sample of ex-combatants surveyed. I stress that the results of the comparative analysis are more appropriate for theory development than theory testing here. In particular, the results will help to flesh out some of the potential hypotheses that emerged from the above theoretical framework as well as to identify hypotheses that emerged inductively from the data.

A. Background

Aceh has a long history of resisting external rule. Formerly a powerful independent Islamic sultanate that dominated the Malacca strait, Aceh was the last region of present-day Indonesia to be conquered by the Dutch. Although most of the fighting between the Dutch and Acehnese ended by 1910, some areas of Aceh never fell under Dutch or subsequent Japanese control. After Indonesia gained independence in 1945, a rebellion was soon launched in 1953 joining the Darul Islam rebellion in West Java and South Sulawesi against the unitary Indonesian state. This rebellion lasted until 1963 when special autonomy was granted for the province. Conflict was reignited after large

⁶ Rosenzweig and Binswanger (1993, p. 57)

oil and gas concessions to American oil companies were seen by many Acehnese to be unfairly claimed by Jakarta rather than shared by the Acehnese population. In 1976, Hasan di Tiro, a former Darul Islam leader and descendent of the Acehnese sultanate, declared independence for Aceh.⁷ Initially, the Free Aceh Movement (GAM—Gerakan Aceh Merdeka) were a marginal group until repressive measures by the Indonesian military encouraged the growth of sympathizers and recruits. With the fall of President Suharto in 1998, GAM revamped its recruitment efforts. Failed peace talks led to the declaration of martial law and a military offensive in May 2003. On December 26, 2004 a massive tsunami killed over 167,000 people in Aceh. This disaster soon triggered a peace process that eventually brought an end to the 29 year separatist war between the Free Aceh Movement and the Republic of Indonesia.

B. Methods

The qualitative research, which was performed by a team of five researchers (including myself), included 11 village case studies in Bireuen (20-28 November 2006), Bener Meriah (1-8 December 2006), and Aceh Selatan (9-17 January 2007) Districts. The emphasis of this research was to understand the processes by which individuals made decisions relating to their livelihoods. These processes are influenced by individual variables (e.g. combatant status, age, gender, education, etc.) as well as village (e.g. counter-insurgency tactics, village economic characteristics, etc.) and district variables (e.g. ethnic interactions, war histories, geography, etc.).

To understand the individual-level factors and processes, careful comparisons between individuals of different types and personal histories of individuals' decision-making processes were carried out in each village. Comparisons across villages and districts were used to identify village- and district- level variables, respectively, that could affect individual-level outcomes.

Because the main sources of variation that appeared to impact livelihood outcomes were at the district-, village-, and individual levels⁸, a careful selection of cases at each level of analysis was necessary to ensure useful results. Since we had some hypotheses prior to the collection of field data for which factors were likely to be important, we selected cases to ensure that there was sufficient variation in the explanatory variables that would help us to test these hypotheses.

a. District Selection

Specifically, we expected district level variables such as conflict histories and geography to be important in the opportunities and constraints available to ex-combatants and non-combatants. Typically, Aceh is divided into three regions when it is discussed in the context of the war: the east coast, west coast and central highlands. The three regions

⁷ See Ricklefs (1981) for a historical overview of Acehnese resistance movements

⁸ Sub-district-level variation appeared to have a negligible impact on livelihood activities

thus could be categorized as strongly pro-GAM, mixed support for GAM and GoI across villages, and mixed support for GAM and GoI within villages, respectively. The east coast, which stretches from Banda Aceh to Aceh Tamiang, has been seen as the hard-core of support for GAM and a longer history of guerilla activity where an overwhelming majority of the population is ethnic Acehnese. The central highlands, which include Aceh Tengah, Bener Meriah and Gayo Lues, are home to a mix of Gayo, Acehnese and Javanese. The central regions had a mix of GAM and anti-GAM militias, experiencing both vertical (i.e. GAM-GoI) and horizontal (GAM-Militia) conflicts which pitted villages against villages. Along the west coast, there is a mix of Acehnese and Aneuk Jame ethnic groups. Although there were no organized militias in the west coast, there was significant tension within villages between GAM supporters and civil servants, who were often kidnapped by GAM in exchange for ransom and generally supported the government.

To select districts from within these three regions, we looked for high variation in violence and large numbers of GAM. We thus selected Bireuen, Bener Meriah, and Aceh Selatan.

b. Village Selection

Because we were looking at the impact of each district's war experience on post-conflict livelihood outcomes, we had to select village cases based on these comparisons. The strategy was to select cases based on variation in the war experience of villages while controlling for as many other variables as possible. Making comparisons within districts was helpful in keeping district-level unobserved variables fixed (although full controls are impossible in this kind of research design). The following three matrices show which comparisons we made:

Through comparative case studies, we intend to identify decision processes and plausible causal linkages, rather than rigorous testing of hypotheses (which we will do later through large-n statistical work). The main hypothesis for which we tested plausibility was that the intensity of violence experienced in receiving communities should have an impact on post-conflict livelihood outcomes. In each district, we selected cases based on variation in the intensity of violence across villages as measured by deaths, refugees or house burnings. .

C. Preliminary Results

In evaluating how households can recover economically and restart economic activities, it is useful to distinguish between two types of capital: 1) liquid capital and 2) fixed physical capital. Liquid capital is useful for current consumption as well as the ability to flexibly investment in different economic activities. Fixed physical capital, however, may represent business or farm assets that take time to accumulate, but may be immediately productive (assuming property rights are upheld). These assets, however, are not convertible into other types of capital, barring sales.

Thus, we can build a typology of starting conditions immediately after conflicts from variation in the level of liquid capital and level of residual physical economic assets:

	Liquid Capital	Lack of Liquid Capital
Residual Productive Physical Assets	Case A	Case B
No Residual Productive Physical Assets	Case C	Case D

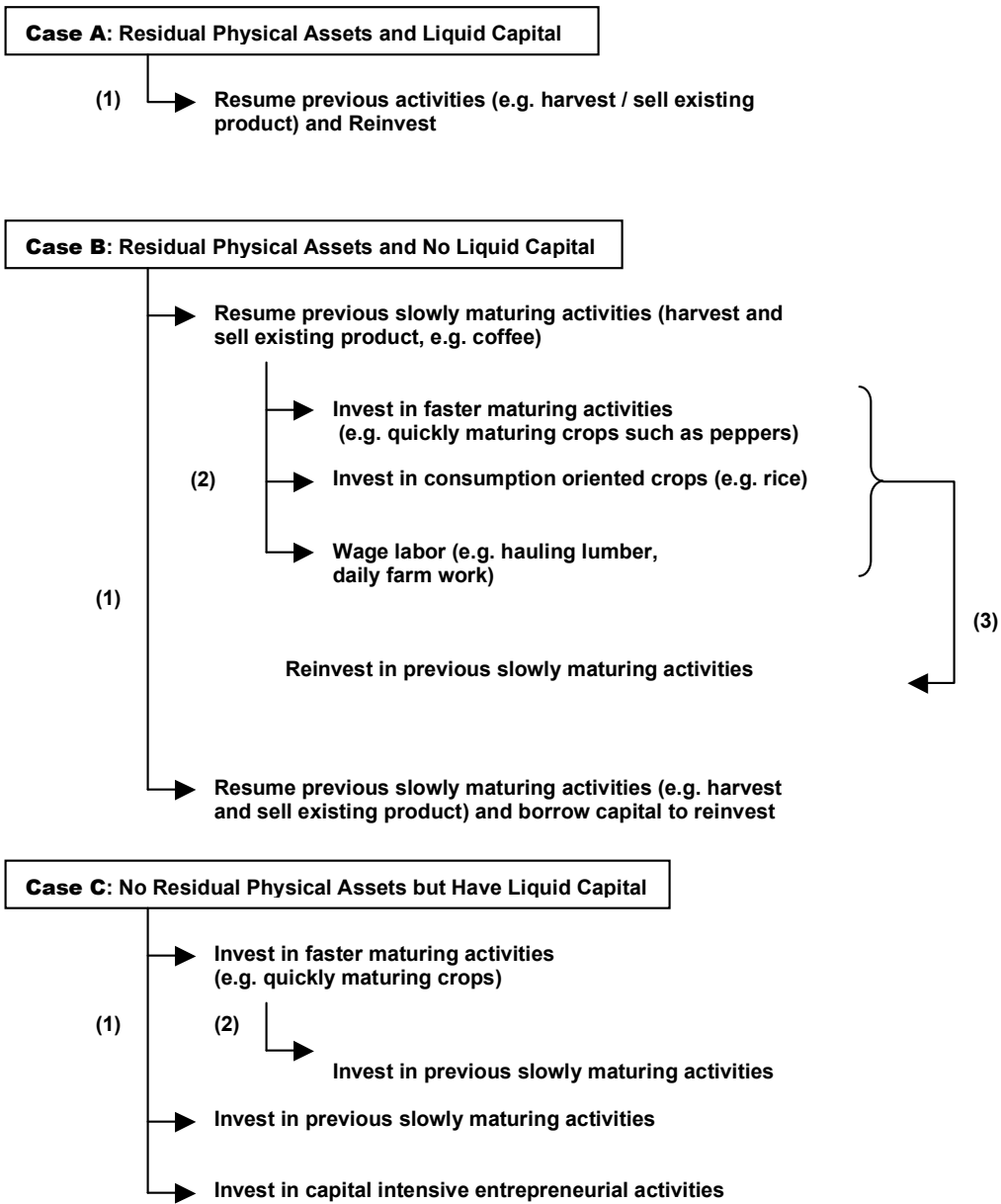
By a ‘Lack of Liquid Capital’ we mean there is not enough liquid capital to purchase sufficient inventories of inputs for the resumption of staple economic activities. By ‘Residual Productive Physical Assets’ we mean that sufficient productive assets can be used to generate cash without additional investment. Productive physical assets can include residual slowly maturing plants (greater than 1 year for the first harvest) the product of which can be harvested and sold to generate further capital. Examples of slowly maturing crops in Aceh include cacao (3 years), coffee (3 years), betel nut (*pinang*; 5 years), and nutmeg (*pala*; 6 years). Other residual productive physical assets may include kiosks and stores.

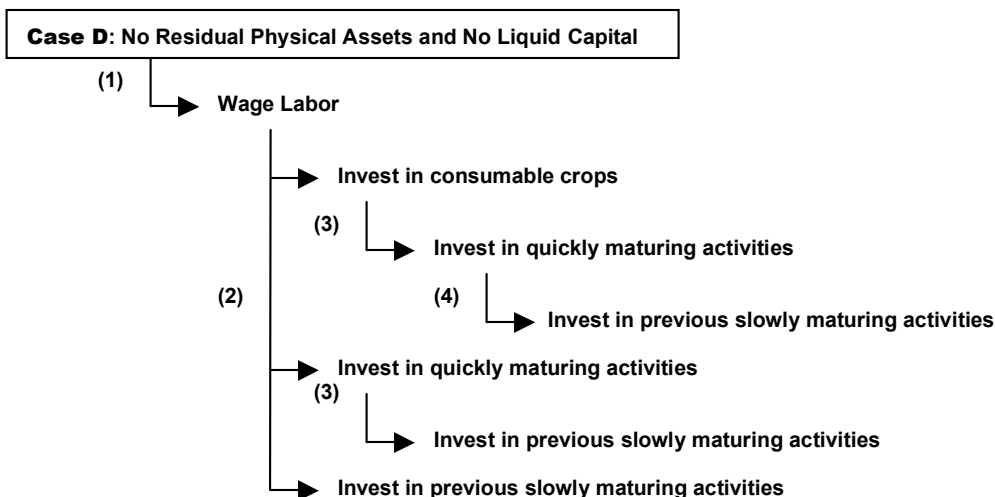
a. Livelihood Pathways

Through 44 in-depth interviews tracing the processes of employment for ex-combatants and non-combatants as well as 55 focus group discussions, we have identified some patterns in the livelihood strategies of individuals following the signing of the peace accord. In the context of conflict-induced economic hardship, individuals attempt to fulfill their basic, immediate economic needs first. Once immediate needs are fulfilled, they then form medium and longer-term strategies that reduce the risk of future economic deprivation while increasing potential future economic returns. Variation in medium- and long-term strategies is thus determined by individuals’ current assets available for investment and risk-preferences.

Given different initial economic conditions, various patterns appear in the choices of strategies of individuals as they progress toward the cultivation of more lucrative, slower maturing activities. The four cases in the above typology yield different livelihood pathways as shown in the flowcharts below:

Individual Post-Conflict Livelihood Strategies





Case A: Residual Productive Physical Assets and Liquid Capital

Those with residual productive assets and liquid capital have been able to restart the activities they had prior to the period of intense conflict in Aceh, although they may have lost some potential earnings or savings. Such productive assets may include plants that were still productive after the conflict that were planted before or during the conflict. Case A individuals typically were able to tend to their crops and maintain enough cash inflows to not deplete their capital stores during the war.

Case B: Residual Productive Physical Assets, but No Liquid Capital

Those with some residual physical assets but little liquid capital immediately after the war appeared to have a variety of livelihood strategies. However, those with some residual assets were generally able to generate some returns initially, which they can sell to accumulate capital. For example, coffee trees that were left untended for three years were often still productive and yielded coffee beans that could be sold (albeit with smaller yields than if they were well-tended).

Because slowly maturing economic activities generally provide the greatest potential for economic returns, they tend to be the ultimate destination for economic activities. However, for individuals with some residual assets but no liquid capital, the immediate concerns of meeting daily needs and reducing the risk of not being able to meet future needs were more important than maximizing future economic returns. Thus, Case B individuals tended to use the product of the residual assets for investing in quickly maturing activities (such as peppers) or investing in crops that were oriented toward own-consumption (such as rice) in order to ensure that immediate and short-run economic needs were taken care of. In addition, some individuals fulfilled their basic needs or supplement their other activities with wage labor. Eventually, after enough of a savings or food store was built up, such individuals tended to reinvest in and return fully to their previous, slowly maturing activities.

Some were able to return directly to their previous activities by borrowing capital (typically from family or friends) that they could use to fulfill basic immediate needs and reinvest in slow-maturing activities.

Case C: Liquid Capital, but No Residual Productive Physical Assets

Individuals that did not have residual physical assets, but had liquid capital tended to choose one of three paths, depending on the amount of capital available. Smaller amounts of capital led individuals to invest in faster maturing activities that could improve their liquidity. Once they accumulated some liquid capital sufficient to ensure that they could provide for their basic needs in the short-run, they began to invest in slowly maturing activities.

Those individuals with slightly more cash on hand chose to reinvest in their previous, slowly maturing activities. In the meantime, they continued to use their cash to meet their short-term needs.

Some individuals may have had large stores of capital from before the conflict. These individuals were able to invest in capital intensive entrepreneurial activities, such as cash-crop traders, store-owners, or illegal logging.

Case D: Neither Residual Productive Physical Assets, Nor Liquid Capital

Typically, where individuals had neither residual productive assets nor liquid capital, such individuals were unable to tend to their usual economic activities for a sufficiently long time so that their fields or businesses were left untenable. Furthermore, many spent much of their liquid assets and liquidated other assets with value (e.g. motorcycles and dowries) in order to meet their daily needs during the war. Others may have had their assets plundered or destroyed by government or GAM forces, leaving them with little capital after the war. Because of the lack of capital (physical and liquid), such individuals tended to perform wage labor and/or borrow capital from others, where it was available. Once individuals accumulated some capital, they typically began to reinvest in quickly maturing activities or consumable crops, before they eventually planned to move to more lucrative investments in slowly maturing activities. A few invested directly in slowly maturing activities, while continuing as wage laborers.

b. Variation in Factors of Production

In post-conflict contexts there is often considerable variation in the stock of capital available to individuals. What then explains the variation in post-conflict capital endowments? Of course the pre-conflict conditions are a major determinant of post-conflict levels of liquid capital and residual physical assets. An individual's post-conflict level of liquid capital is likely correlated to his/her pre-conflict level of liquid capital. In addition, if an individual's primary source of income is able to last a long time (such as

slowly-maturing crops or other physical capital that does not deteriorate quickly), then he/she is more likely to have residual physical assets.

Additional variation results from war effects such as the length of conflict, the intensity of conflict, and the insurgency and counter-insurgency strategies employed. War depletes individuals' liquid and physical capital for a variety of reasons: a) insecurity from conflicts prevents people from working, b) productive assets may be destroyed or damaged so that savings can not be built up, c) liquid capital may be diverted from investment to consumption, or d) cash may be stolen or extorted by security forces. The longer conflicts persist, the less liquid capital will be available. Similarly, more intense violence is likely to result in the loss of more liquid capital.

The insurgency and counter-insurgency strategies employed create further variation in the amount of capital available post-conflict. In some communities, individuals were selectively identified as members of rebel forces. Accused rebels, their families and other associates are often harassed and their economic activities are disrupted. This type of counter-insurgency strategy resulted in differences in capital between ex-combatants and their associates with non-combatants unrelated to ex-combatants. However, in cases in which whole villages were either identified as rebel villages or identification of rebel associates was difficult, whole villages suffered from losses in economic activity and capital.

Variables that affect level of liquid capital

- 1) Pre-conflict level of liquid capital
- 2) War effects
 - a. Length of Conflict
 - b. Intensity of Conflict
 - c. Insurgency and Counter-Insurgency Strategy

Variables that affect level of residual physical economic assets

- 1) Pre-Conflict Economic Base (types of industries)
 - a. Long-term crops vs. young crops
- 2) War effects
 - a. Length of Conflict
 - b. Intensity of Conflict
 - c. Insurgency and Counter-Insurgency Strategy

c. Livelihood Strategies

The underlying structural basis of the local economy in combination with the war experience appears to have led to clear patterns in the distribution of individuals with physical and liquid capital in the immediate post-conflict environment. For most of Aceh, the length of intense conflict that prevented farmers from going to the fields and businesses from operating is roughly the same (from the military emergency in 2003 until the Memorandum of Understanding (MOU) was signed in August 2004). In some areas, conflict occurred for longer periods of time, starting in 1999, which lowered combatants'

immediate post-conflict endowments. Thus, by knowing the intensity of violence at the village level and characteristics of the local economy (previous income-levels and importance of long-term crops), it is possible to estimate the rough distribution of levels of physical and liquid capital immediately available. We can map the war experience of a village (proxied by the intensity of violence—e.g. deaths) and the dependence on slow-maturing vs. fast-maturing economic activities (proxied by percentage of slow-maturing crops) onto the post-conflict possession of capital of ex-combatants (and their associates) and non-combatants. The table below demonstrates this:

Post-Conflict Livelihood Strategy

	Fast Maturing Crops	Slow Maturing Crops
High Intensity Violence	<p>Non-Combatant: Case D</p> <p>Ex-Combatant: Case D</p>	<p>Non-Combatant: Case B</p> <p>Ex-Combatant: Cases B or D*</p>
Low Intensity Violence	<p>Non-Combatant: Case C</p> <p>Ex-Combatant: Case D</p>	<p>Non-Combatant: Case A</p> <p>Ex-Combatant: Case B or D*</p>

* Depending on the length of time ex-combatants were in the mountains (and the expiration time of certain crops), ex-combatants may have residual assets or not.

Based on this mapping, typical livelihood strategies in the immediate post-conflict period of ex-combatants and non-combatants can be summarized as follows:

Immediate Post-Conflict Livelihood Activities

	Fast Maturing Crop Base	Slow Maturing Crop Base
High Intensity Violence	Non-Combatant: Wage Labor Ex-Combatant: Wage Labor	Non-Combatant: Resume slowly maturing crops Ex-Combatant: Resume slowly maturing crops or Wage labor*
Low Intensity Violence	Non-Combatant: Quickly maturing crops Start slowly maturing crops Capital Intensive entrepreneurial activities** Ex-Combatant: Wage Labor	Non-Combatant: Resume slowly maturing crops Ex-Combatant: Resume slowly maturing crops or Wage labor*

* Depending on the length of time ex-combatants were in the mountains (and the expiration time of certain crops), ex-combatants may have residual assets or not.

** Depending on the amount of capital they have access to.

4. Discussion

The results of the fieldwork in Aceh suggest that the post-conflict strategies of ex-combatants deviate from those of non-combatants. Experience as a combatant appears to have important effects on the post-war distribution of capital. The fieldwork also reveals that capital in the form of fixed productive assets (such as slowly-maturing smallholder plantation agriculture) can help mitigate the depletion of capital stock due to war. On the other hand variation in counterinsurgency strategy, which was proxied by intensity of violence, led to differences in non-combatants' capital stocks. This would suggest that hypotheses 1 and 2 may be important explanations in explaining variation in capital assistance by receiving communities.

The effect of counterinsurgency experience on the decision-making processes of former combatants does not lend itself well to qualitative analysis. This is because of the difficulty in controlling for large numbers of variables that may have an impact on individuals' decision-making processes. Hypotheses 3 and 4 may yield similar predictions in cases where ex-combatants' available economic activities are both less risky and less productive at the same time.

In general, the large number of potentially important variables on ex-combatants' capital endowments, access to capital, and allocation of capital present a difficult problem for qualitative research: the number of observations is small relative to the number of variables. While the qualitative results presented above may help us understand the processes at work and be suggestive of certain hypotheses, a large-n statistical treatment

is more fruitful in empirical testing of these hypotheses. I attach an appendix summarizing the forthcoming survey that will test these hypotheses statistically.

Appendix: Large-n Survey Summary

To test the above hypotheses and weigh the relative importance of various factors in determining outcomes for former combatants, we will employ a large-n survey of ex-combatants, village heads, and other civilians. Approximately 1,000 former combatants, 710 village heads, and 2,710 civilians will be surveyed for this project. The survey is currently being field tested. I list some key variables below:

Economic Decisions:

- 1) Types of economic activities, contribution to income,
- 2) Amount invested in each activity since MoU

Household Wealth:

- 1) Assets (e.g. stove, parabola, motorcycle, goats, chickens, etc.)
- 2) Village incidence of poverty

Household Consumption

- 1) Food consumption
- 2) Large items

Access to capital:

- 1) Amount borrowed from villagers, other individuals, bank or credit association
- 2) Assistance from NGOs or government programs

Conflict-related:

- 1) House or workplace destroyed/damaged
- 2) Rank in GAM military wing (TNA)
- 3) Number of conflict-related deaths in village
- 4) Number of houses destroyed by conflict

Control:

- 1) Presence of military post/number of soldiers stationed at post
- 2) Curfew enforced?
- 3) Post attacked?
- 4) Presence of GAM base near village
- 5) GAM spend nights in village, meet in village, logistical support from a village, receive intel from village

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