Comments on Bernd Berber and Christopher Blattman's
"The Industrial Organization of Rebellion: The Logic of Forced Labor & Child Soldiering"

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Child Soldiering

Theory: The Rebel Leader's Problem

❑ The Principal: Rebel leader maximizes "output" less "wages"

- ▸ Output: A function of unobservable effort by agent
- ▸ Wages: A share of output (reward), or costly punishment

❑ Rebel leader chooses:

- ▸ Whether to recruit children or adults (θ: productivity-type)
- ▸ The extent of punishment or reward (ρ: "Pay-for-performance")

Subject to:

- ▸ Incentive compatibility constraint: "wage contract" elicits effort
  - ▪ Reflects agent's labor supply preferences
- ▸ Participation constraint: The recruit won't abscond
  - ▪ New ingredient: Differs for adults and children
  - ▪ Particularly important constraint on adults

Theory: Some observations

❑ <u>Key result</u>:
"It is never optimal to coerce high-ability individuals [adults] since their incentives to escape punishment are too great."

▸ Why? *"Otherwise high productivity agents [adults]—who have a higher expectation of evading capture—will run away when threatened."*

▸ Participation constraint (whether to abscond) will bind for adults

❑ <u>This is an unusual result</u>:
Optimal pay-for-performance link depends on productivity

▸ Usual principal-agent logic:
▪ Use pay-for-performance to ensure incentive compatibility constraint is met
▪ Use base pay to ensure participation constraint is met

▸ Blattman's model: Critical role played by the participation constraint
▪ High types (adults) more likely to successfully abscond

▸ Peculiarities of Blattman's model:
▪ Allows pay-for-performance, but no base pay

▸ Not a general result. Race between productivity and reservation wage
▪ Both higher for adults. But which is higher, by more?

What do we learn from the formal model?

❑ Child soldiering and threats of punishment may occur if:

‣ Punishment is cheap, relative to rewards (k)

‣ Adult soldiers are particularly likely to abscond ($p(\theta)$)

‣ Children believe lies they don't have better options ($m(\theta)$)

‣ You can indoctrinate children to enjoy killing ($n(\theta)$)

‣ Other economic opportunities arise for adults ($v(\theta)$)

‣ Others:

- Resource constraints may lead to substituting punishment for rewards

- If many troops are needed, children may help you get to "critical mass"

- Public support may be undermined by child soldering

❑ **Authors view:**
"Agency and contract theory will remain a powerful tool of rebel analysis"

❑ **Alternative view:**
Do we need an imperfect info model to generate these insights?

Linking Theory and Empirics—Across Rebel Groups

❑ Authors suggest:

▶ *"We should not observe groups that recruit large numbers of young adolescents via rewards, nor should we observe armed groups that recruit large numbers of adults via coercion."*

  ▪ A statement about equilibrium

▶ *"In particular, there should be a negative correlation between age of recruitment and use of coercion"*

  ▪ A statement about labor demand: the rebel leaders' incentives

  ▪ If supply conditions vary...

❑ Empirical approach: Compare rebel groups in different conflicts

▶ Recruitment patterns are an equilibrium

  ▪ Reflecting both demand and supply conditions

▶ If differences across conflicts reflect differences in demand conditions

  ▪ Data will trace out the labor supply curve

  ▪ (Wrongly) "Falsifying" the prediction about the demand curve

Linking Theory and Empirics—Within a Country

❑ *"the 'ideal' experiment would be one where different recruitment arrangements (or contracts) were offered to random samples of civilians, with responses observed for all recruits by age"*

▸ Authors compare responses of different age groups to the same "contract". (A "natural experiment")

❑ Variation in recruitment arrangements is informative:

▸ Will trace out labor supply, revealing utility function of potential soldiers

▸ But says nothing about:

- Objectives of rebel leaders;
- Degree of imperfect information
- Production function

❑ Reminder: Key model results are equilibrium predictions about optimal contracts

▸ Given labor supply, rebel leader's objectives, production function, information imperfections

▸ Ideal experiment allows these factors to vary, and observes contracts offered

Why Coerce Child Soldiers?

1. Milgrom: Cheaper to provide incentives for (unobservable) effort
2. Milgram: Obedience to authority figures
3. Spence: Signaling commitment of rebel leaders
4. Becker: The price of child labor is lower
5. Fama-French: Age is a proxy for risk

Final (Popperian) comment: The empirical findings
❑ Fail to falsify the Milgrom view
❑ Fail to falsify these competing explanations