

VARIATION IN ECONOMIC GROWTH FROM CIVIL CONFLICT

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April 17, 2015

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Motivating Question

High variation in economic performance between countries in the midst of internal armed conflict

Mexico

India

Nicaragua

Melding of Literatures

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Krugman 1991; Henderson 2000; Hanson 2005 - Cities are important drivers of economic growth

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Heterogeneity in effect of conflict on growth is due to spatial proximity of conflict relative to major urban centers

Civil War → Economic Performance

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Disaggregating Civil Wars

Pierskalla & Hollenbach (2013) - cell phone coverage → rebel mobilization

Cities → Growth

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Cities, Conflict, & Growth

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Cities & Conflict → Growth

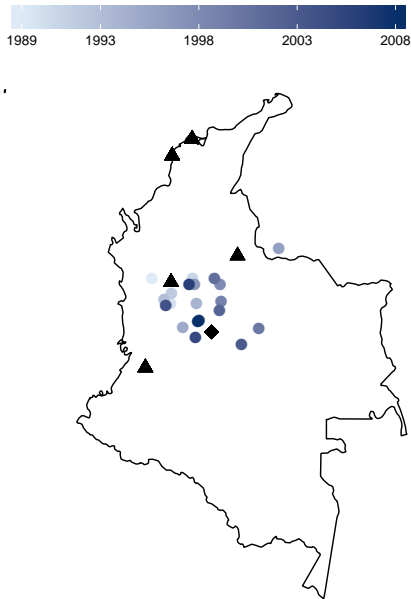
Conflicts have heterogeneous effects on economic growth

Effects determined by spatial proximity to economically relevant centers such as cities

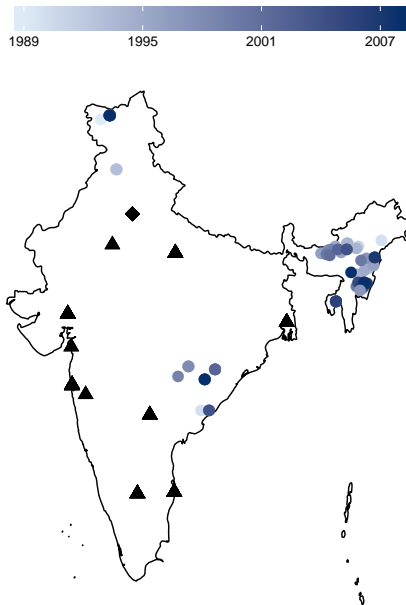
FARC guerillas & the Colombian government

FARC's strategy and [beliefs have] always been to make economic pressure on both, multinational companies and the Colombian government. This has been done by attacking oil and natural gas infrastructure affecting companies such as Pacific Rubiales Energy, Oxy and Ecopetrol. For non-fuel related international companies with subsidiaries in Colombia, such as Goodyear, Nestle, Microsoft, Toyota, among others, FARC's modus operandi was mainly racketeering, kidnappings and extortion. (Flannery 2012)

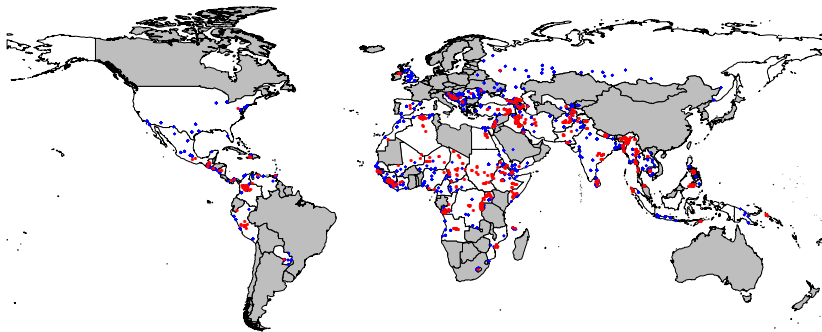
Spread of Conflict: Colombia



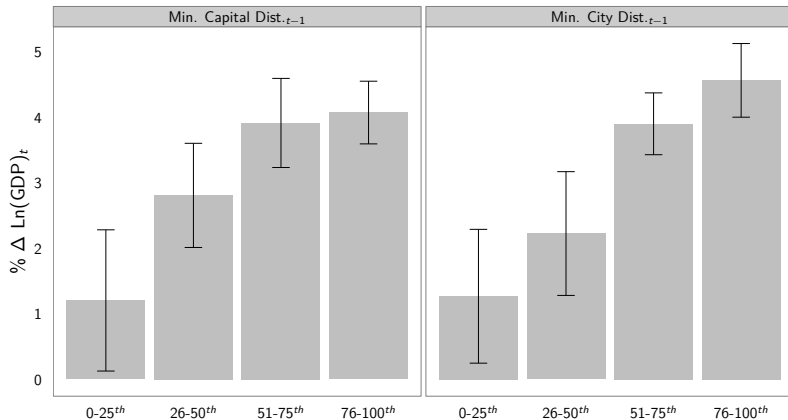
Spread of Conflict: India



Conflict & City Data

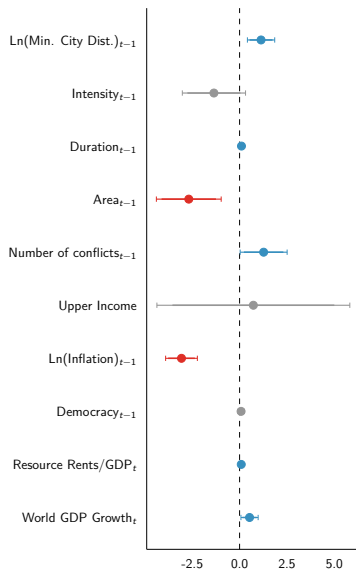
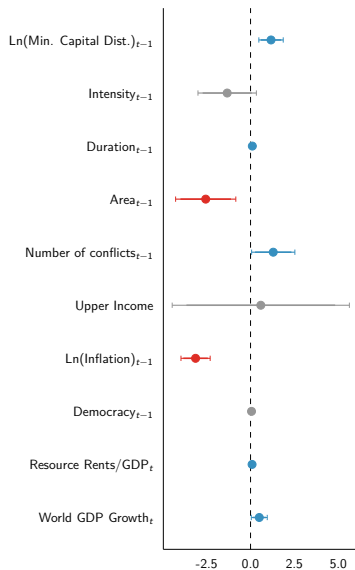


Bivariate Relationship?

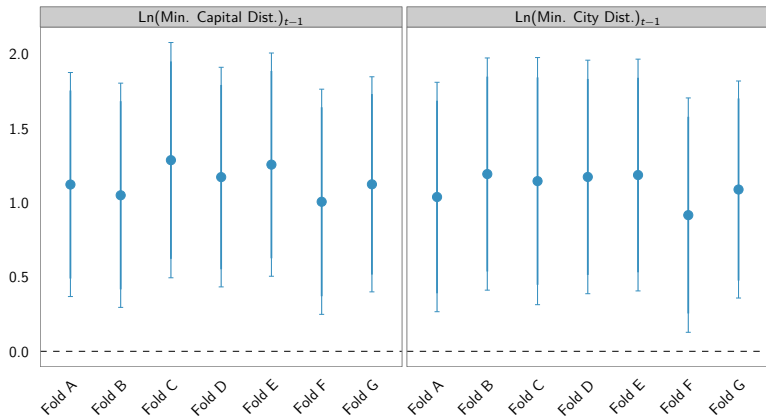


$$\begin{aligned}\% \Delta \ln(GDP)_{i,t} = & \beta_1(\ln(\text{Min. Conflict Dist.})_{i,t-1}) \\ & + \beta_2(\text{Conflict Intensity}_{i,t-1}) \\ & + \beta_3(\text{Conflict Duration}_{i,t-1}) \\ & + \beta_4(\text{Conflict Area}_{i,t-1} / \text{Land Area}_{i,t-1} > 50\%) \\ & + \beta_5(\text{Number of Conflicts}_{i,t-1}) \\ & + \beta_6(\text{Upper Income}_{i,t}) \\ & + \beta_7(\text{Inflation}_{i,t-1}) + \beta_8(\text{Democracy}_{i,t-1}) \\ & + \beta_9(\text{Resource Rents/GDP}_{t-1}) \\ & + \beta_{10}(\text{World GDP Growth}_t) + \mu_{i,t} + \epsilon_{i,t}\end{aligned}$$

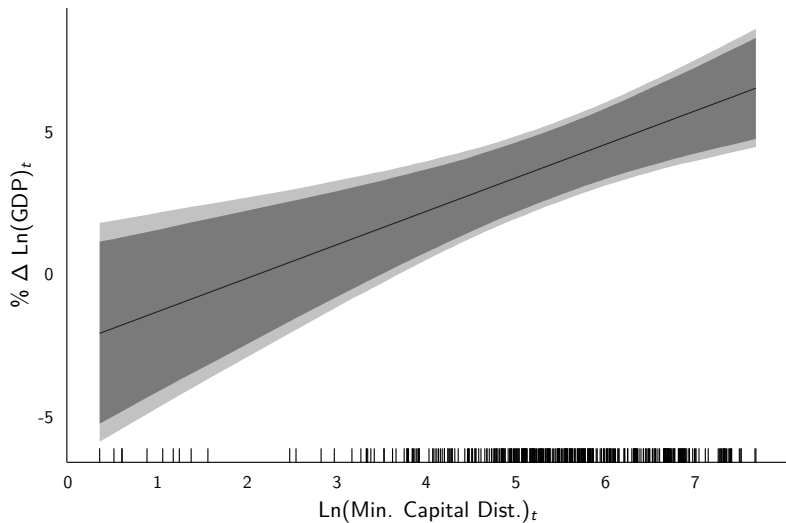
Findings



Cross-Validation of Parameter Estimates



Substantive Effects: Capital Distance



Conclusions & Next Steps

Account for other economically important locations (e.g., oil fields, highways connecting cities)

More refined analysis within a country using subnational economic data

THANKS