

VARIATION IN ECONOMIC GROWTH FROM CIVIL CONFLICT

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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

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

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

Civil War → Economic Performance

Collier (1999) - destruction, disruption, diversion, dissaving, portfolio substitution

Imai & Weinstein (2005) - geographical spread of conflict

Economic Performance → Civil War

Collier et al. (2003) - the conflict trap

Fearon & Laitin (2003) - poor economic growth conducive for civil war

Disaggregating Civil Wars

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

Cities, Conflict, & Growth

Cities → Growth

Marshall (1920) - geographic clustering promotes valuable learning and exchange between actors

Lucas (1998) & Glaeser et al. (1992) - accumulation of human capital generates positive spillovers

Venables (2005) - economy consists of “lumps” of productivity and swaths of areas contributing little to growth

Cities & Conflict → Growth

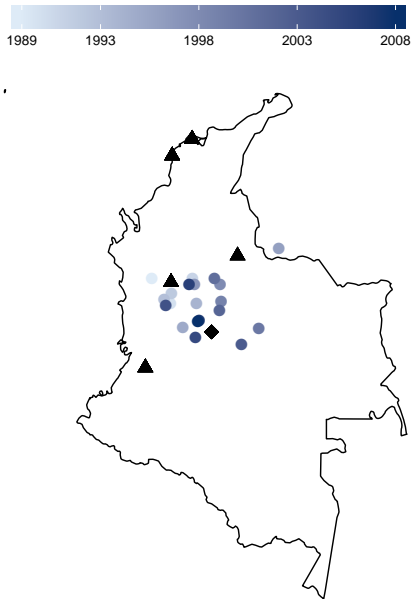
Conflicts have heterogeneous effects on economic growth

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

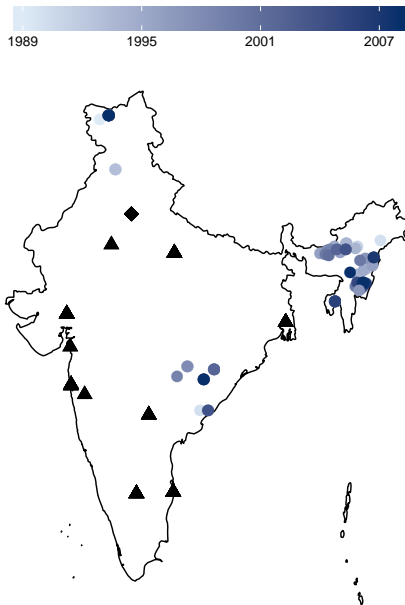
FARC guerillas & the Colombian government

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)

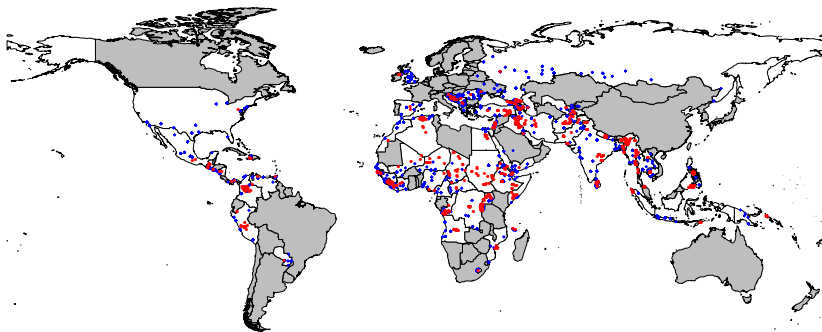
Spread of Conflict: Colombia



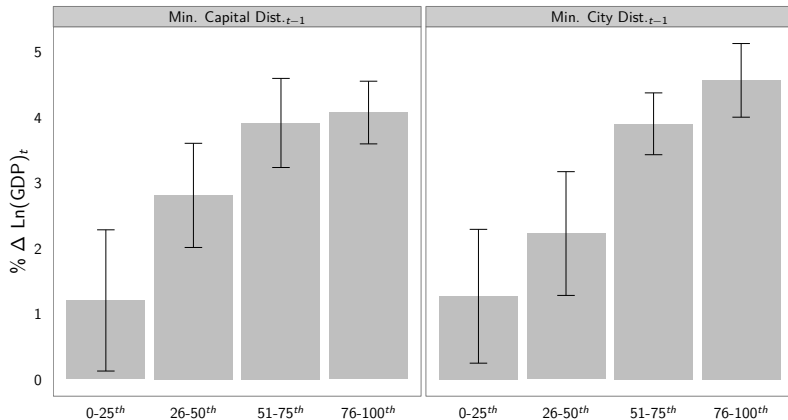
Spread of Conflict: India



Conflict & City Data

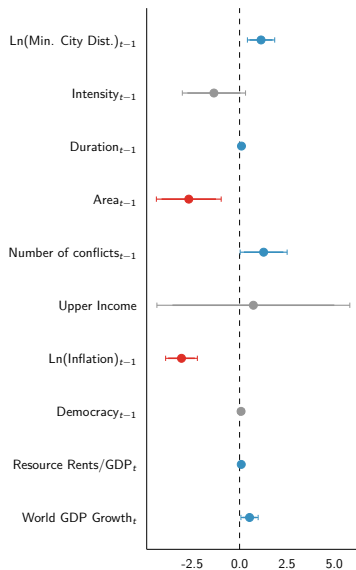
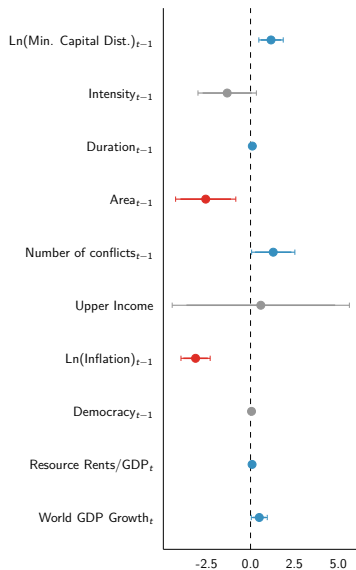


Bivariate Relationship?

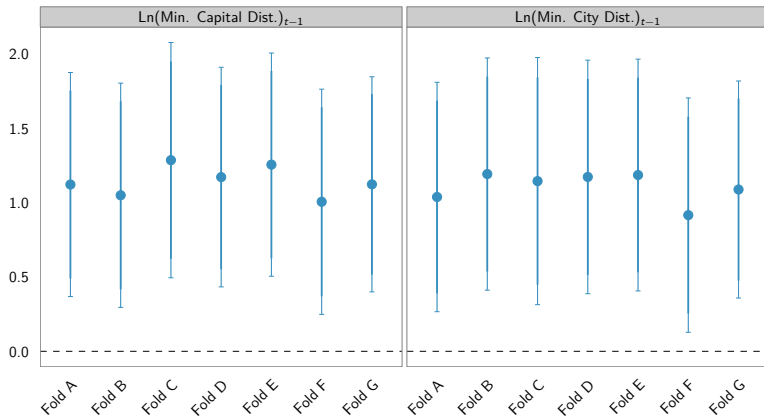


$$\begin{aligned}\% \Delta \ln(GDP)_{i,t} = & \beta_1(\ln(\text{Min. Conflict Dist.})_{i,t-1}) \\ & + \beta_2(\text{Conflict Intensity}_{i,t-1}) \\ & + \beta_3(\text{Conflict Duration}_{i,t-1}) \\ & + \beta_4(\text{Conflict Area}_{i,t-1} / \text{Land Area}_{i,t-1} > 50\%) \\ & + \beta_5(\text{Number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

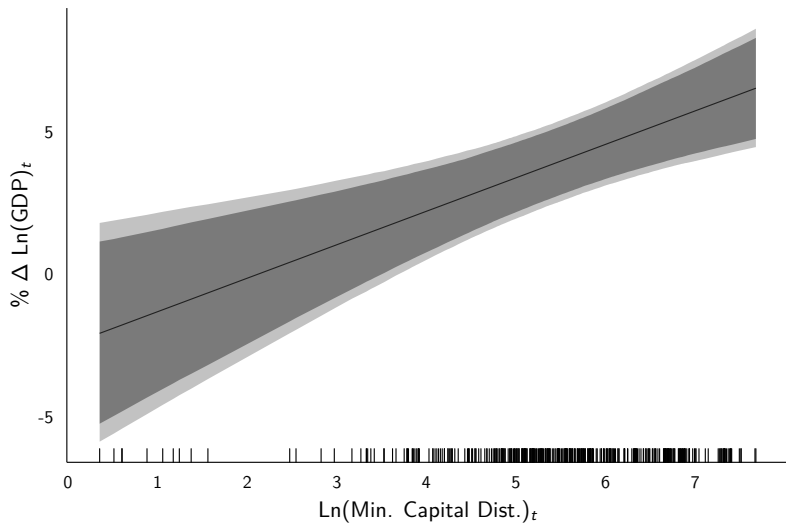
Findings



Cross-Validation of Parameter Estimates



Substantive Effects: Capital Distance



Conclusions & Next Steps

Conclusions

Novel approach in the study of civil conflict to distinguish between spatially dissimilar events

Proximity of conflict to major cities explains disparate economic outcomes

Next Steps

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

Alternative methods to address aggregation problem

More refined analysis within a country using subnational economic data

THANKS