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An Urbanization Bomb? Population Growth and Social Disorder in Cities

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Motivation

- Strong urban population growth 2010-2050
- Claims about ‘urban hotspots’ created by rural resource scarcity
- Attempts to discourage urbanization
- Relates to debate about security implications of climate change
- Previous analyses: country-level focusing on civil conflict:
 - *Current approach: analysis of major cities in Asia and SSA*

Urbanization and Violence

Rural population pressure, resource depletion, distribution



Rural resource scarcity



Rural-urban migration



Aggrieved migrants, Interethnic tension



Disturbance, Interethnic violence

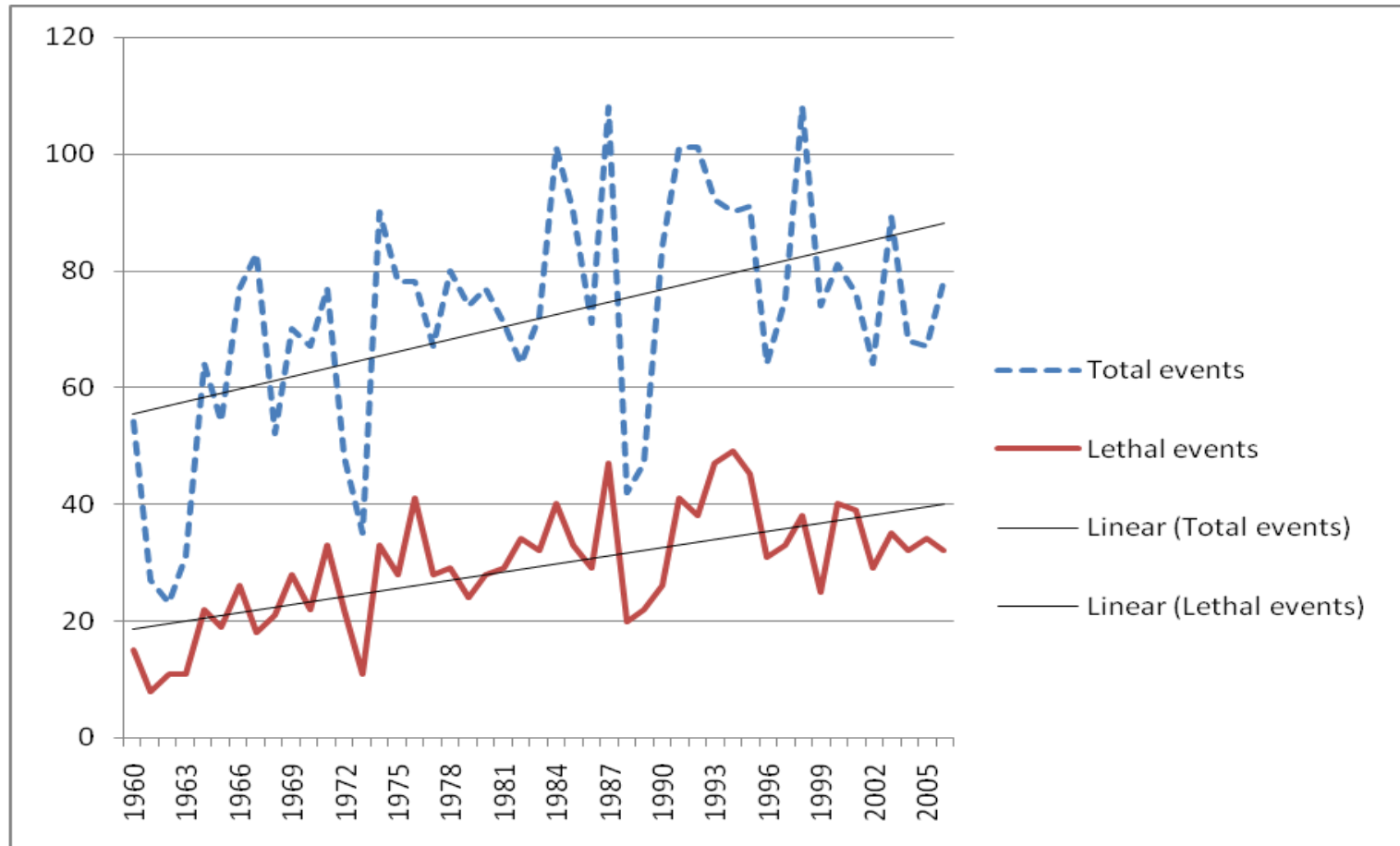
Expectations

- Naive assumption:
 - High urbanization rates associated with increasing violence
- Interaction effects
 - Economic shocks
 - State capacity
 - Regime characteristics

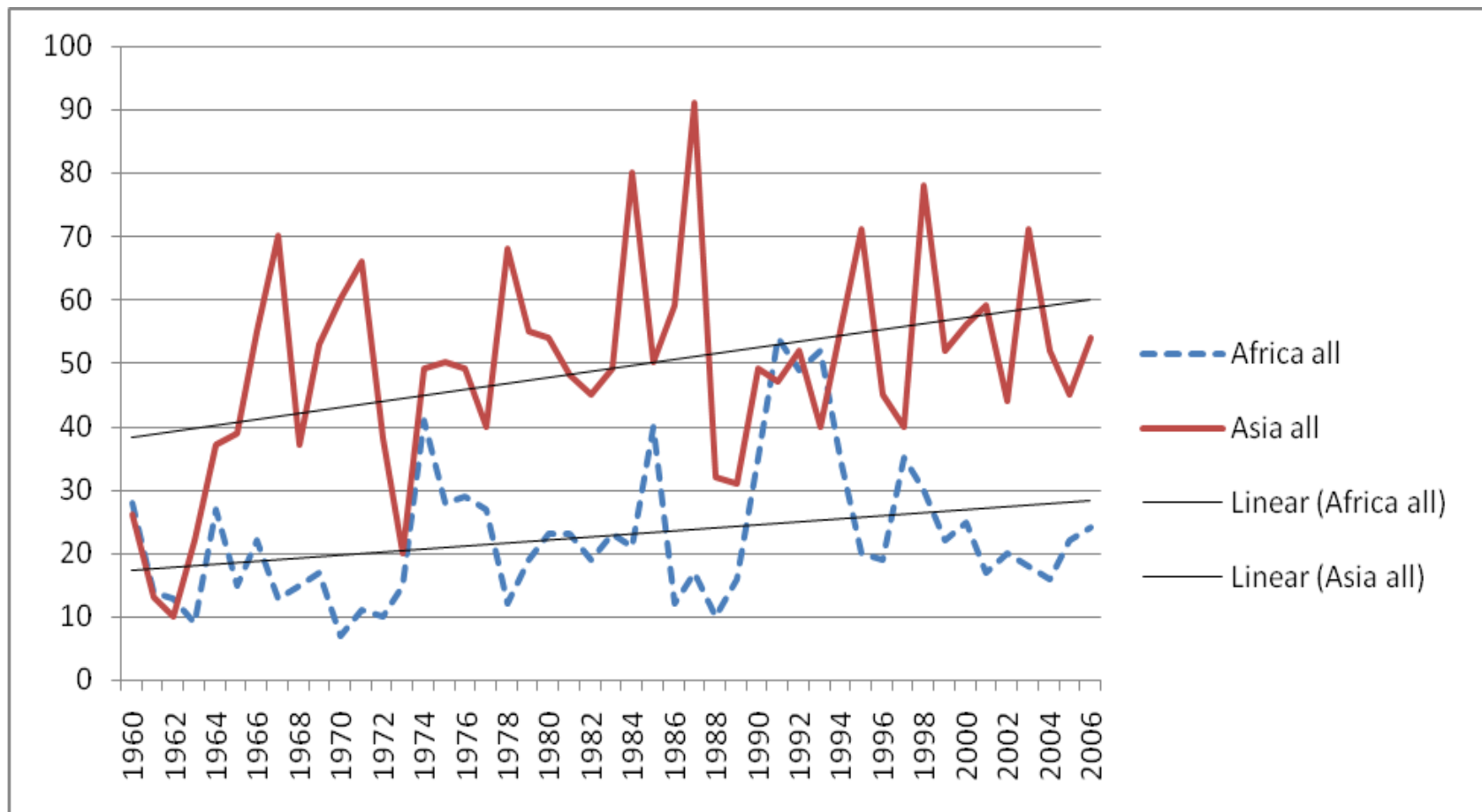
New Urban Social Disorder (USD) Data

- Based on coding of news reports (Keesings RWE)
- Event data (count measure)
- 55 major cities in 49 countries (SSA, Asia): 3,375 events
- Violent (warfare, armed clashes, terrorism, rioting) and nonviolent (demonstration, strikes)
- Reporting bias
 - *Regime, western media bias, time trend*
- Available at: www.prio.no/data/

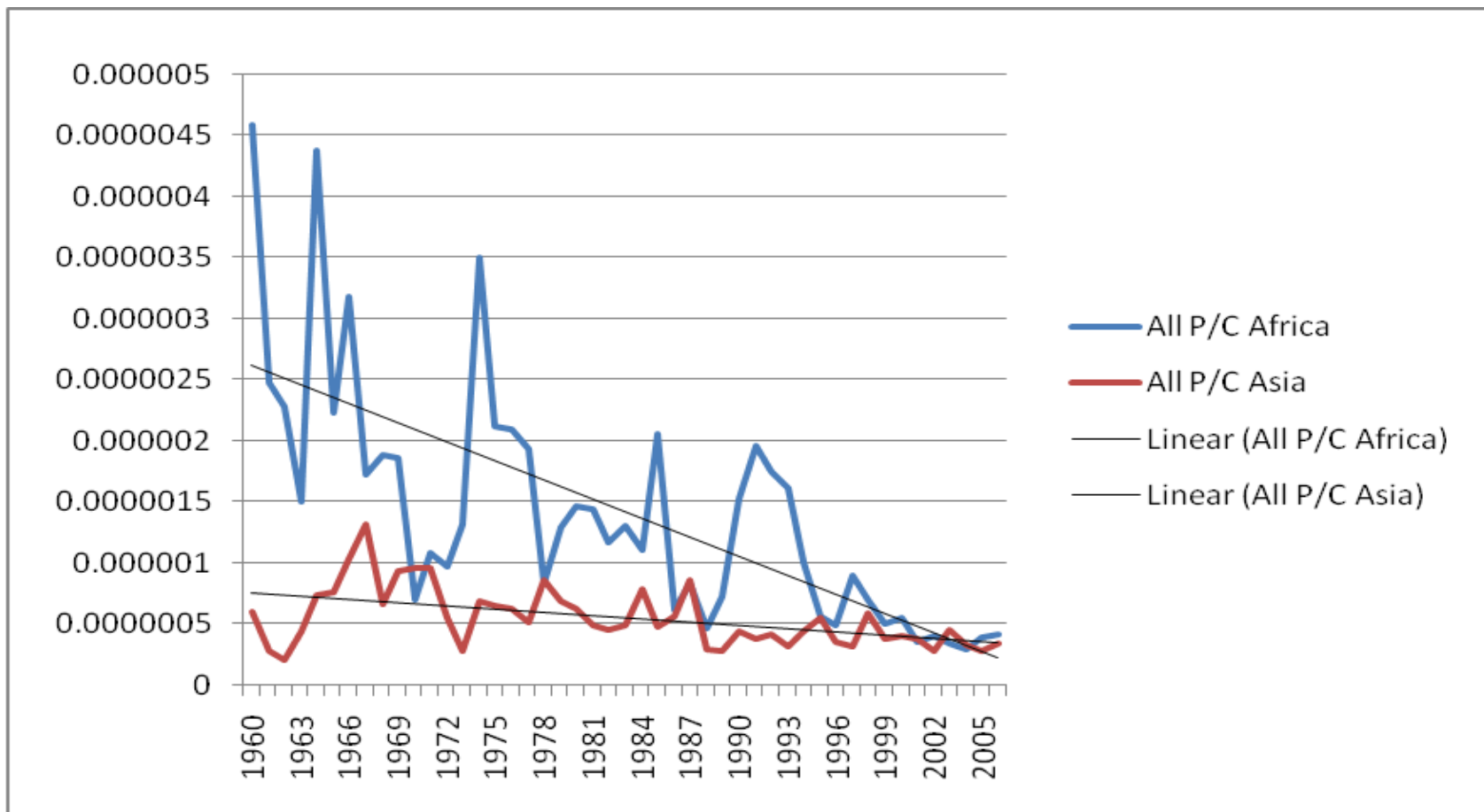
Trends in All and Lethal Events, 1960–2006



Trends in Events by Region, 1960–2006



Trends in Events per Capita, 1960–2006



Model

- Annual urban growth: five-year moving average
 - *City-specific population data, annualized by linear interpolation*
 - *GIS-generated population data for 1x1 degree cells around city*
 - *Country-level urbanization rates*
- Interactions
 - *Economic shocks*
 - *GDP per capita*
 - *Democracy*
- Controls: city size, regime, income, economic shocks, ongoing conflict, LDV
- Negative binomial regression; logit (fixed effects)
- Caveats: no distinction between sources of urban population growth; very little reliable comparable data on city-level

Table 1: Base Model

	1a Lethal	1b Non-lethal	2a Lethal	2b Non-lethal
Urbanization	-0.000 (0.02)	-0.014 (1.19)	-0.004 (0.19)	-0.029 (1.67)*
City population	0.137 (1.96)*	0.146 (2.47)**	0.382 (3.12)***	0.201 (1.82)*
Democracy	-0.436 (2.89)***	-0.044 (0.34)	-0.513 (2.15)**	-0.273 (1.23)
Autocracy	-0.415 (3.98)***	-0.212 (2.26)**	-0.501 (3.14)***	-0.240 (1.63)
GDP capita	-0.074 (0.70)	0.099 (1.23)	-0.167 (0.92)	0.176 (1.13)
Economic shock	0.217 (2.42)**	0.280 (3.51)***	0.473 (3.59)***	0.344 (2.79)***
Ongoing conflict	0.541 (4.93)***	0.186 (1.91)*	0.807 (4.94)***	0.284 (1.80)*
LDV	0.109 (6.92)***	0.093 (9.77)***	0.510 (4.01)***	0.707 (6.33)***
Constant	-0.864 (0.99)	-2.228 (3.39)***		
χ^2	162.82	173.00	113.68	80.00
Observations	1,954	2,001	1,954	2,001
Number of cities	52	54	52	54

Table 2: Interaction Effects

	3a	3b	4a	4b	5a	5b
	Lethal	Non-lethal	Lethal	Non-lethal	Lethal	Non-lethal
Urbanization	−0.008 (0.59)	−0.012 (0.92)	−0.116 (0.74)	0.235 (1.73)*	0.013 (1.02)	−0.007 (0.55)
Urbanization × democracy	0.047 (1.64)	−0.014 (0.47)				
Urbanization × inverse GDP pc			0.015 (0.74)	−0.033 (1.83)*		
Urbanization × economic shock					−0.045 (1.95)*	−0.020 (0.95)
City population	0.142 (2.02)**	0.146 (2.48)**	0.131 (1.85)*	0.161 (2.70)***	0.134 (1.92)*	0.143 (2.42)**
χ^2	165.01	173.15	163.45	173.47	167.63	175.11
Observations	1,954	2,001	1,954	2,001	1,954	2,001
Number of cities	52	54	52	54	52	54

Control variables estimated but not shown

Table 3: Alternative Urbanization Measures

	6a	6b	7a	7b
	Lethal	Non-lethal	Lethal	Non-lethal
Urbanization	0.143 ^a (1.04)	0.134 ^a (0.87)	−0.074 ^b (3.59)***	−0.118 ^b (5.90)***
City population	0.077 ^a (0.29)	−0.118 ^a (0.73)		
χ^2	12.78	7.07	178.36	191.18
Observations	367	396	1,932	1,979
Number of cities	40	42	51	53

^a GIS-generated estimates, 1995–2005 only

^b Country-level estimates

Control variables estimated but not shown

Conclusions

- No evidence that high urban population growth in developing countries increase risk or frequency of social disorder
 - *Calls for moderation when discussing security implications of urbanization*
- Poor data prevent identifying cases with significant environmental problems and/or high rural-urban migration rates
- Proposition: rural to urban migration could be seen as a societal safety valve rather than a security threat
- Future priorities:
 - *Expand USD data to Latin America and the Middle East*
 - *Look at other forms of social unrest (crime, homicides)*
 - *Study security consequences of high rural out-migration*