

IMPACT OF POPULATION PRESSURE ON ARMED CONFLICTS IN DEVELOPING COUNTRIES

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OBJECTIVES

- A review of Malthusian theories on the impact of population increase on the environment and health leads to the following conclusion:
 - More attention should be paid to the concept of population pressure
 - More attention to the role of (an increase in) tensions, conflicts and violence.
- Consequently, in our project we will focus on definitions and operational measures of population pressure and armed conflicts.
- We determine if and to what extent there is an impact of pop. pressure on incidence of armed conflicts.

DEFINITION AND MEASURES OF POPULATION PRESSURE

- Population pressure: the extent to which a population living in an area is able to meet the basic necessities of life (food, water, air, housing, etc) through use of natural and other resources.
- High population pressure: a large number of persons in an area is dependent on scarce natural and other resources.
- We use a combination of two measures and FAO data:
 - The weighted population/land-in-use ratio,
 - The adjusted food supply expressed per calories per capita per day.

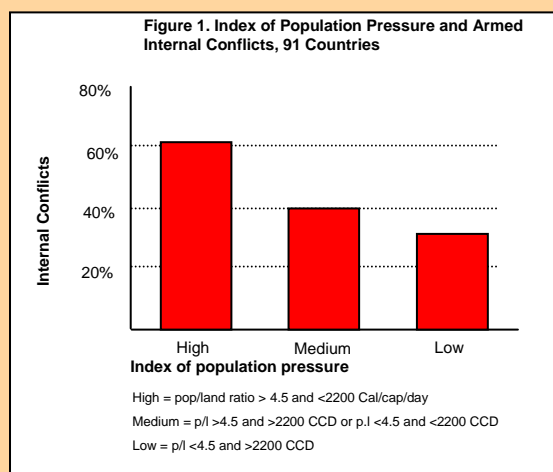
Food Supply (Cal/Cap/Day) and Population/Land Ratio in 91 Countries				
Population/land ratio	Food Supply (Calories/Capita/Day)			
	<2,200	2,200-2,400	>2,400	
>6.5	Kenya Rwanda Somalia Yemen Bangladesh Haiti Vietnam			Mauritius Egypt Jordan Lebanon Saudi Arabia Korea Rep Jamaica Trinidad and Tobago
Nr of countries	7	0		8
4.5-6.5	Burundi Congo Ethiopia Lesotho India Korea DPR	Laos Philippines El Salvador Honduras Peru	Indonesia Sri Lanka Colombia Dominican Republic Guatemala Panama	Liberia Libya Costa Rica Venezuela
Nr of countries	11	6		4
<4.5	Angola Benin Botswana Burkina Faso Cen. Af. Rep. Chad Gambia Ghana Guinea Mali Mozambique	Niger Nigeria Sierra Leone Sudan Tanzania Togo Zambia Afghanistan Cambodia Nepal Bolivia	Cameroon Congo/Zaire Madagascar Malawi Mauritania Senegal Uganda Zimbabwe	Myanmar Thailand Pakistan Ecuador Nicaragua Suriname Cote D'Ivoire Gabon Swaziland Algeria Iran Morocco Syria Tunisia Turkey Malaysia
Nr of countries	22		14	19

DEFINITION AND MEASURES OF ARMED CONFLICTS

- The terminology and definitions will be followed as used by the Armed Conflict 1946-2002 Project carried out by the International Peace Research Institute, Oslo and Dept. of Peace and Conflict Research, Uppsala Univ.
- Especially relevant are definitions of armed conflicts and their intensity.
- We only considered internal conflicts (conflicts between two groups within a country).
- Those conflicts were included that led to more than 25 deaths (intensity score 2 and 3).

RESULTS

- Table A: 7 of the 91 countries have high population pressure and 11 countries fairly high pressure (in 1970-1990). Table A allows classification of the countries in 3 groups according to an index of population pressure.
- Figure 1: There is a positive relationship between the index of pop. pressure and internal conflicts (in 1990-2002) and this relationship is statistically significant.
- Table B: There is a negative relationship of gross national income with conflicts. Relationship of pop. pressure with conflicts becomes smaller after controlling for national income and statistically insignificant.



Independent variables		Gross effect	Nett effect
<i>Analysis 1:</i>			
Population pressure	Low	1.000	1.000
	Middle	2.402 (^)	1.537 (n.s.)
	High	4.643 (**)	2.574 (n.s.)
<i>Analysis 2:</i>			
Gross National Income	Low	1.000	1.000
	Middle	.867 (n.s.)	1.040 (n.s.)
	High	.217 (*)	.320 (^)
<i>Analysis 1:</i>			
-2 Log likelihood		114.684	102.113
Nagelkerke R ²		.095	.146
N		91	84
<i>Analysis 2:</i>			
-2 Log likelihood		103.766	102.133
Nagelkerke R ²		.122	.146
N		84	84

Note: ^, *, ** = significant at 10%, 5% and 1% level.

CONCLUSIONS

- Operational definitions were provided of population pressure and incidence of armed conflicts.
- Using FAO and PRIO data we were able to determine the extent of population pressure in 1970-1990 and the level and intensity of armed conflicts in 1990-2002 in 91 countries.
- We found an impact of population pressure on incidence of armed conflicts, but relationship became statistically insignificant after controlling for national income.
- These are preliminary findings; there is certainly scope for useful further research on relationship of population pressure with incidence of conflicts and violence.