

Economics of Conflict, War, and Peace

Prof. Dr. Jurgen Brauer; Summer 2009
Chulalongkorn University; Bangkok, Thailand

Session 4.3
Capital: Small arms and light weapons
(esp. firearms)

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Capital: small arms and light weapons

- A report released today (15 June 2009) by Nonviolence International Southeast Asia has called on the Royal Thai government to end the creation of civilian defence volunteer forces and stop the supply of firearms to civilians in Southern Thailand. The report, "Rule by the Gun: Armed Civilians and Action Against Gun Violence", says that the Thai government's policy of expanding civilian volunteer forces and deregulating firearm sales to address the violent conflict in Southern Thailand has been counter-productive, leading to greater insecurity and ethnic and religious polarisation. The report suggests that the government's policy has increased distrust between Malay Muslim and Thai Buddhist populations, while fueling a "security economy" in which arms proliferation becomes a source of income.
- *Source:* IANSA weekly newsbrief (15 June 2009)

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Capital: small arms and light weapons

- The market
 - [Brauer's SAS 2003 theory background paper]
- Demand
 - [Brauer/Muggah 2006 paper]
- Supply / industry-level and firm-level analyses
 - [Hall, Markowski, Brauer's *Asteriskos* 2008 paper]
 - [Markowski, Koorey, Hall, Brauer *EPSJ* 2008 paper]
 - [Markowski, Koorey, Hall, Brauer *DPE* 2009 paper]
 - [Kahraman, Brauer, Hall, Basciano, Markowski's 2008 working paper]
 - [Brauer, et al., forthcoming work]

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Capital: small arms and light weapons

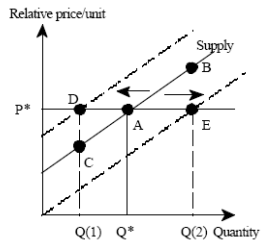


Figure 1: Supply of small arms

- Supply is a relation between quantities sellers are **willing and able** to provide at various possible prices.
- $A \Rightarrow B$: higher price; more willing/able suppliers
- $A \Rightarrow C$: lower price; fewer willing/able suppliers
- $A \Rightarrow D$: e.g., more regulation
- $A \Rightarrow E$: e.g., less regulation

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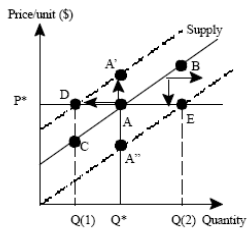


Figure 2: Supply of small arms

- "willing and able" can be monetized into a cost-equivalent (\$)
- $A \Rightarrow D = A \Rightarrow A'$
 - E.g., more regulation imposes higher cost; to sustain Q^* , it must be recovered with higher market price
- $A \Rightarrow E = A \Rightarrow A''$
 - E.g., less regulation lowers cost; if demand justifies the production of only Q^* , the market price must fall in line with lower cost

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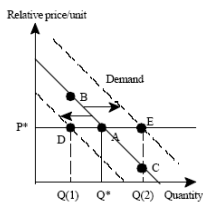


Figure 3: Demand for small arms
Note: The relative price includes monetary and non-monetary aspects (e.g., time and effort).

- Demand is a relation between quantities buyers are **willing and able** to acquire at various possible prices.
- $A \Rightarrow B$: higher price; fewer willing/able buyers
- $A \Rightarrow C$: lower price; more willing/able buyers
- $A \Rightarrow D$: e.g., fewer resources or reduced preferences
- $A \Rightarrow E$: e.g., more resources or increased preferences

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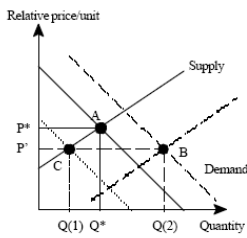


Figure 4: Small arms supply and demand

- Now: S/D interact
- A: equilibrium
- If S and D shift outward, then $Q^* \Rightarrow Q(2)$ with P'
- This is the current situation
- Only real solution is to reduce D to generate outcome C

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- Demand
 - [Brauer/Muggah 2006 paper]
- Three options: preferences, resources, relative prices
 - Resources are likely to increase over time
 - Relative prices are unlikely to go against firearms
 - Only work on preferences left
 - How does one get people to WANT fewer arms when police is distant, ineffective, corrupt?
- Prospects not good but that's the only realistic option left
 - More genuine law and order, governance, etc.

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- Back to supply (esp. firearms distribution/trade)
 - Supply-chain work | purpose: show supply can't be restricted => really do need to more on demand-side

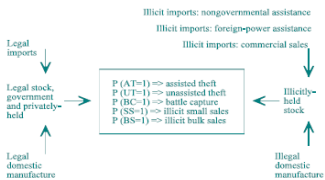


Figure 1: Small arms legal and illegal stocks and flows

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Supply-channel complexity

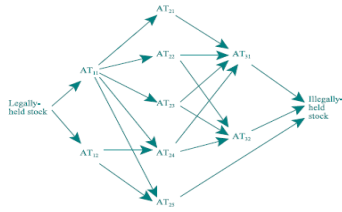


Figure 2: Supply-channel complexity

- Logistics mgt. literature
- Parallel vs series
- Tie/cut sets
- Capacity
- Redundancy
- Dependability
- Robustness
- Vulnerability

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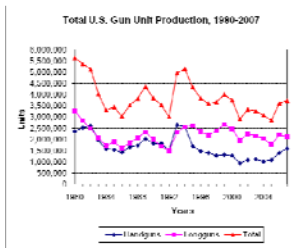
- Complexity of the supply-chain and asymmetric information disadvantage for law and order forces are the crux of the problem of interrupting an illicit supply-chain

To significantly restrict the flow of weapons to illicit arms holders requires, on the logic of this article, superior intelligence, massive resources, and incorruptible enforcement agencies, few of which are ordinarily available to governments of developing countries.

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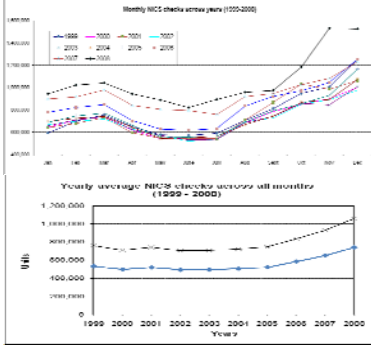
Supply

- From distribution to ...
- ... industry-level analysis



- U.S. data
- Civilian, LEA
- Not military
- Not imports
- Voluntary reporting
- Compliance high but imperfect

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- U.S. demand
- NICS data
 - 1999-2008
 - Annual: steady through 2005
 - Monthly: cyclical
 - 70% "rule"
- If "demand" is steady but production declines => more imports
- Import data
 - Civilian data reliable
 - Military data unreliable

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- U.S. nonmilitary gun imports (in '000s) [deemed reliable]

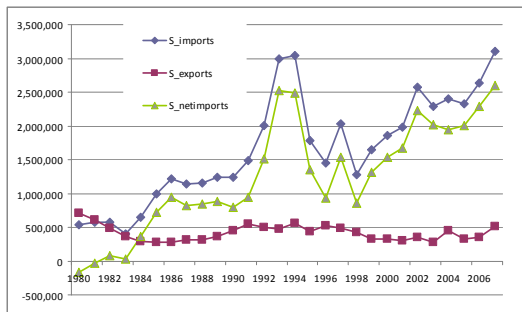
	Pistols/ Revolvers	Muzzle- loaders	Shot- guns	Rifles	
1998	591	187	166	229	- Demand steady
1999	656	156	333	315	- Domestic production down
2000	713	259	333	320	- Imports up
2001	711	346	428	322	=> Should put pressure on U.S. producers
2002	949	380	499	459	=> Concern about tech. transfer to other nations
2003	763	354	499	517	
2004	839	380	507	499	

Source: Gabelnick, Haug, Lumpe (2006) [from U.S. Customs Service]

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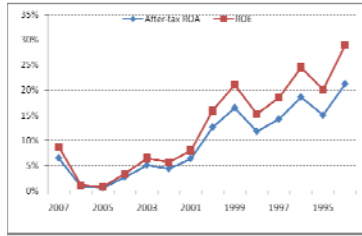
Title U.S. firearms total imports and exports, 1980 to 2007
Source computed from U.S. Census-supplied data files Note: data include military guns



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- Sturm Ruger
- Return on assets
- Return on equity
- Read graph right to left



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- In sum:
 - ~740,000/year die from firearms (directly or indirectly)
 - Supply: easy and cheap to produce, store, transport; lots of suppliers; ammo easy
 - Demand: insecurity, resources, relative prices
 - U.S. industry dying (?) =>
 - Production/technology transferred abroad
 - Supply-chain probably impossible to interrupt
- Consequently: continuous and rising problem

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