Balancing Commerce & Security: Threat Identification Methods and Promising Security Initiatives

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Urban Commerce and Security Study

Fred Roberts, CCICADA

Problem

- How to identify the economic impacts of security
  - Microlevel & Macrolevel / Direct & Indirect
- beneficial for advanced strategic planning purposes for various stakeholders

Solution

- collaboration of 3 DHS COEs whose expertise collectively supports the development of a transferable methodology & a decision-support tool

- While there are a great deal of challenges with study's methods and data to address & overcome …
- The greatest strengths of U-CASS effort are:
  - the development of a methodology transferable to other major urban areas
  - PIE: Ultimately the creation PIE, a web-based decision-support tool, which incorporates risk & economic modeling, capable of being tailored to diverse users in both public and private sectors

Refining Terrorist Threat Analysis

Brian Jenkins, Mineta

- **Problem:**
  - What analytical methods are best to examine the current nature of terrorist threats to the U.S.?
  - What kinds of terrorist attacks are *most* likely to be delivered against major urban commercial centers?
- **Threat Analysis**
  - Threat is but one component of Risk
  - There are many sources of information from which to draw upon to examine & estimate potential terrorist threats
    - Individually, each source has strengths & weaknesses
  - Threat analysis can be used to answer a number of different questions

Portfolios of Counterterrorism Security Measures

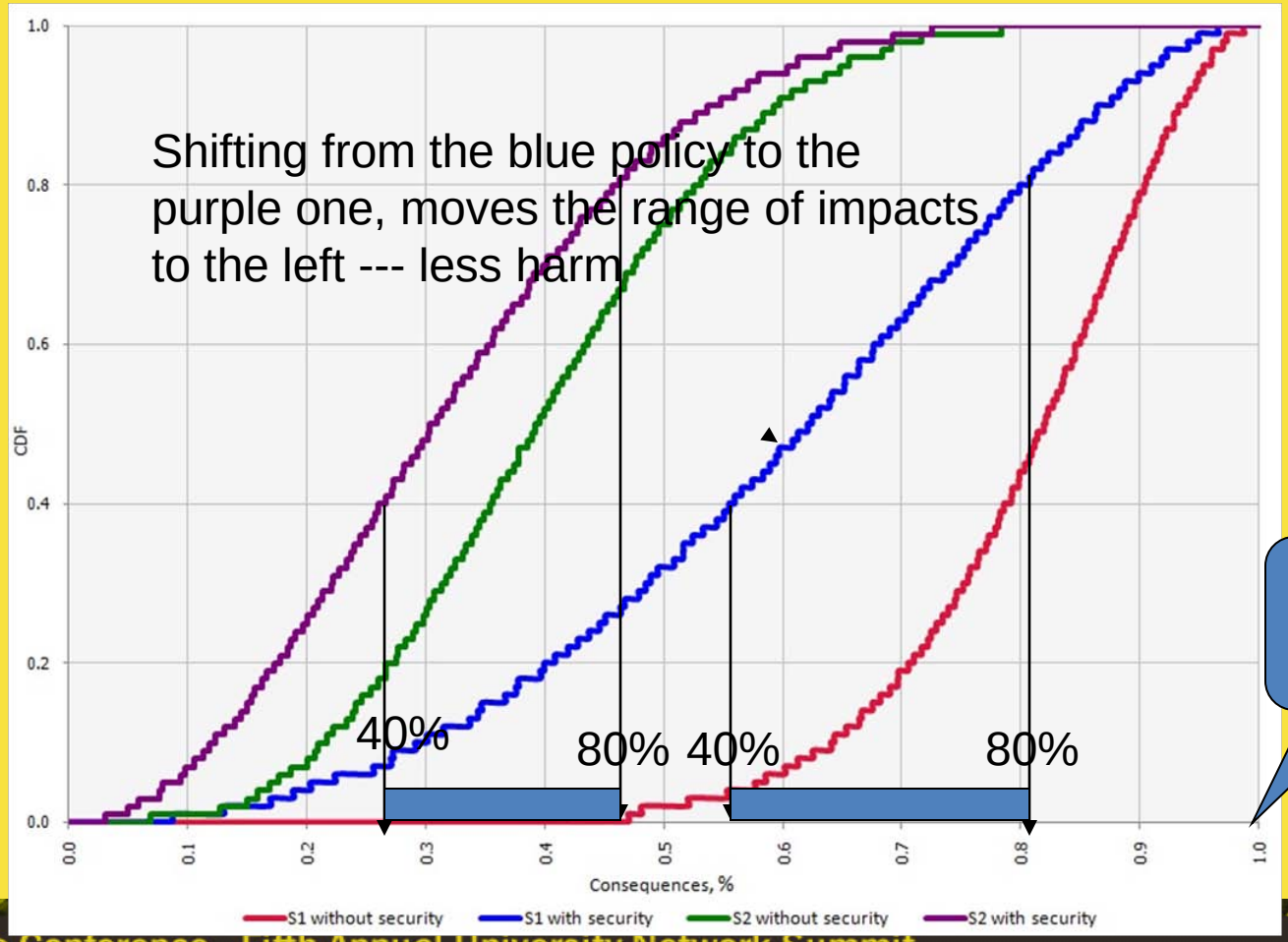
Steve Hora, CREATE

- Evaluating countermeasures as systems/portfolios
  - Accounts for redundancies & reinforcing synergies in individual measures, since risk reduction is not additive
- Goal: modeling risk reduction of security portfolios
  - risk reduction for the same level of economic productivity or
  - more economic productivity for the same level of risk reduction
  - Security at any cost is bad policy

The Ski Slopes

- We were using these 'ski slope' diagrams and noticed that a lot of folks were scratching their heads.
- these are necessary because consequences are not certain. And this can be shown by a plot of "the probability (y-axis) that the consequence is no worse than x".
- Counter measures make it less likely that the costs are high. Here, one curve shows a particular countermeasure. There is a 40% chance that the impact is no bigger than this. And there is an 80% chance that it is not bigger than this (larger) number.

How to read the graph



Why it matters

- By switching to the purple policy, we move the whole impact to the left (down). So that is a better policy -- and this turns out to be true no matter how you measure the impact -- risk of a huge loss; median loss; average loss, or whatever.

- That's the meaning of these 'mathematical ski slopes'. We expect that they will arise more and more as policy makers have to deal with uncertain realities of security and commerce.

Q & A Highlights

- Intelligent adversaries:
  - Yes, start simpler and build complexity
- The cost portion of security
  - Yes but some of costs are negative b/c there are benefits

Q & A continued

- Classified information:
  - Most facts about impact are public
  - Facts about countermeasures that were in place are not necessarily public
  - We are building a tool and operational groups set parameters based on individual countermeasures and their shared experience