The economic costs of terrorist acts

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• Terrorism raises transactions costs in the economy and shifts resources toward security activities

• Estimated to be significant but not very large relative to GDP
• Security-related outlays aim at reducing the risk of incident and consequences should it occur

• The costs of anti-terror measures may be viewed as an investment

• Need to balance both benefits and costs
Some statistics

- The total number of international terrorist attacks is falling from the peak of more than 650 in 1988 to over 200 in 2004
- Suicide attacks proliferating, three incidents in 1980; in the 1990’s on average 10 per year; since 2000 - 25 attacks per year
- Suicide terrorism is three per cent of all acts, but it accounts for one-half of deaths
Short-term, direct costs

**Loss of human and non-human capital**

- The loss of life and loss of productive capacity of those killed
- The destruction of capital (buildings, equipment, infrastructure)
- Rescue, clean up/repair costs
Short-term, direct costs

September 11, 2001

- Direct costs estimated at $20 – $60 billion or 0.2 – 0.6 per cent GDP
- Rescue and clean up costs about $11 billion
Increased uncertainty

- Re-pricing of risk: lenders demand more compensation
- Negative impacts on consumption and investment
- Stock market decline reduces consumption (through the wealth effect) and investment (a higher cost of capital)
September 11, 2001

- Stock market loss of 17 per cent of GDP (temporary due to rapid and offsetting policy responses)
Additional costs incurred by certain industries/locations

- Some locations/industries suffer disproportionate economic and job losses
September 11, 2001

- The insurance industry lost roughly $50 billion
Long-term costs

- Terrorist acts are intended to produce effects beyond the immediate physical damage

- Aim at inflicting long-term psychological consequences
Higher transaction costs

- Travel delays, higher construction and insurance costs, additional informational requirements, more regulation, higher levels of inventories, tighter immigration restrictions
Long-term costs

Stress, anxiety, restrictions on individual freedoms

- Individuals willing to pay 50 and 70 per cent more for an airplane ticket if the risk of a terrorist attack reduced by 25 and 100 per cent (Viscusi and Zeckhauser, 2003)

- A resident of Northern Ireland would pay about 40 per cent of his income for a reduction in terrorist activities to the level of Ireland/Great Britain (Frey 2004)
Long-term costs

Higher government security spending
- The costs of diverting resources to security/military related activities
- A “negative” peace dividend that crowds out more productive activities
- Adverse effects on the private capital stock – lower productivity and reduced long run potential growth rate
Estimates: US

- Becker and Murphy (2001): reduced GDP by 0.2 per cent because of lower investment (due to lower than otherwise return on capital)
- The Council of Economic Advisers (2002): the level of output reduced by 0.6 per cent after five years
- IMF (2001): the loss of output up to 0.75 per cent of GDP
- The Congressional Budget Office (2002): 0.3 per cent of GDP
• The Basque region's GDP per capita lower by 10 per cent (Abadie and Gardeazabal, 2001)

• The conflict in the Middle East costs Israel 4 per cent GDP (WB, 2002)
• A doubling of incidents (1968-79) decreases bilateral trade between targeted economies by 6 per cent (Nitsch and Schumacher, 2002)

• A month long disruption of U.S. Pacific coast ports, reduces Asian economies GDP by 0.4 per cent (Saywell, 2002)
In Spain, annual FDI flow reduced by 14 per cent in 1975-91

In Greece, by 12 per cent annually in 1976-91 (Enders and Sandler, 1996)
In Israel, if there was no violent conflict, investment in machinery and equipment would be 15 per cent higher (Fielding, 2003)
• In Spain (1970-1988), each incident discouraged on average 140,000 tourists (Enders and Sandler 1991). In 1988, 5.4 million tourists in Spain.

• Between 1974-88, continental Europe lost $16 billion due to terrorism. In 1988, total tourism revenues were $74 billion (Enders, 1992).
• **Spillover effects**: the aggregate loss for the continent as a whole greater than the sum of individual countries

• **Temporal effects**: takes up to 24 months before tourism appears unaffected by a terrorist accident
Estimates

- Wide ranging, not comparable
- Measurement problems - counterfactuals
- Academic research
- Not the UN terminology
Some policy considerations: international co-operation

- All economies benefit from a more secure environment (international public good)

- If a country fails to take action – global/regional impact
Some policy considerations: international co-operation

- **Challenge:** How to establish an effective framework for regional cooperation
- **Joint action is more effective and cheaper overall:** assist?
- **Exclude from international transactions:** penalize?
Some policy considerations: national

• Governments responsible for preventing terrorist attacks

• Private sector has the duty to take reasonable precautions
Some policy considerations: national

- **Challenge:** How to establish a co-op link between the public and private sectors

- **Definition of “reasonable” standards, how to measure compliance, how to encourage information sharing (confidentiality), how to encourage private sector’s participation, how to introduce market mechanisms to reward good behaviour**