

Trade and investment impacts of submarine cable disruption

Starting to build the evidence base

Presentation to PECC Seminar
Auckland, Wednesday 5 December 2012



The problem: insure or take a punt?

- ▶ Politicians and policymakers are having to make decisions under considerable uncertainty
- ▶ And under severe fiscal constraint
- ▶ They lack concrete evidence of the economic impacts of cable disruption
- ▶ Difficult to know how many resources should be applied to prevention (some \$\$ 'wasted') and/or recovery (100% effective, but potentially costly)

Trade-offs abound: may be tempting for governments to 'wait and see' instead of investing now

Not an easy task

- ▶ What's the probability of a disruptive event?
- ▶ How severe is it?
- ▶ How long will it last?
- ▶ How much data can be re-routed?
- ▶ Which sectors are most at risk?
- ▶ Permanent loss of output or just timing?
- ▶ Is it 'just' a transaction cost increase?

But the analysis has to start somewhere!

Trade-exposed goods sectors less at direct risk

Sector	Comms/finance as % of input costs	% of output exported
Superannuation fund operation	63.3%	0.0%
Life and health insurance	44.6%	1.8%
General insurance	38.9%	1.9%
Communication services	23.1%	3.8%
Services to finance and insurance	20.9%	6.0%
Finance	12.5%	1.3%
Computer services	11.3%	7.0%
Motor vehicle retailing and services	9.2%	3.3%
Central government administration and defence	8.1%	0.1%
Other personal and household good retailing	7.6%	1.4%
Average across economy	5.8%	12.2%

Source: Statistics New Zealand input-output tables

Sectors that are most dependant on
communications/finance are domestic-focused

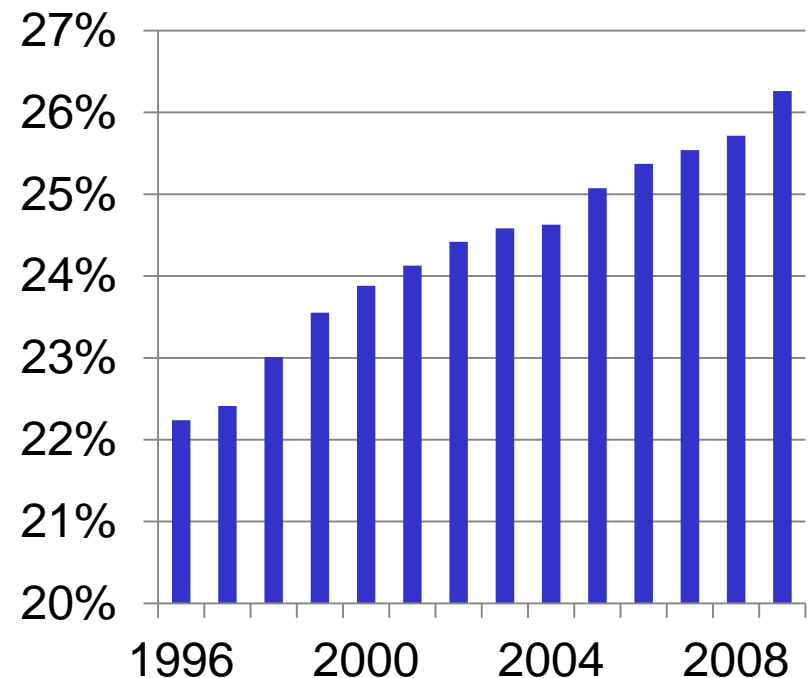
Trade in services is the major concern

Potential losses are substantial

- ▶ ~US\$875 billion of services trade relies directly on information flows (2009)
 - Communications services
 - Insurance services
 - Financial services
 - Computer and IT services
 - Other business services
- ▶ US\$2.4 billion per day
- ▶ US\$100 million per hour

And it's a growing problem

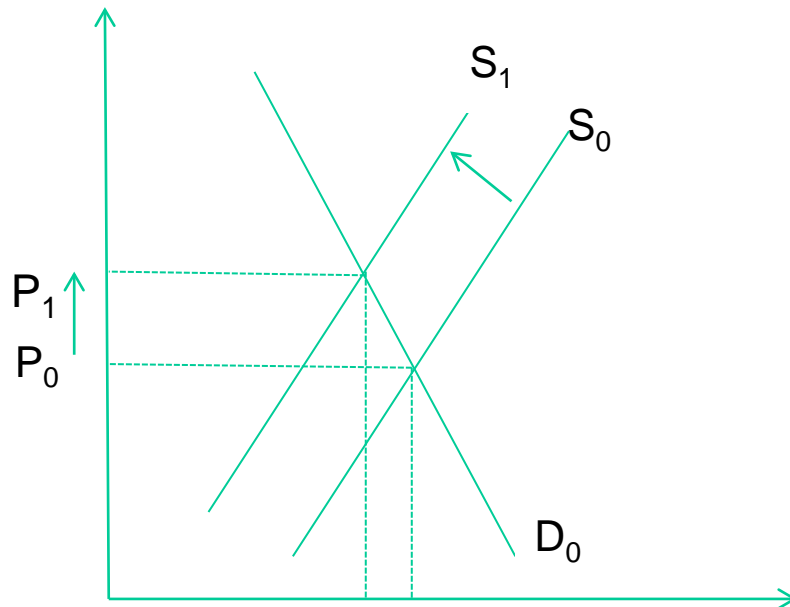
Financial services as % of GDP - simple OECD average



But actual loss depends on length of outage and % re-routed

Supply disruption pushes up transaction costs

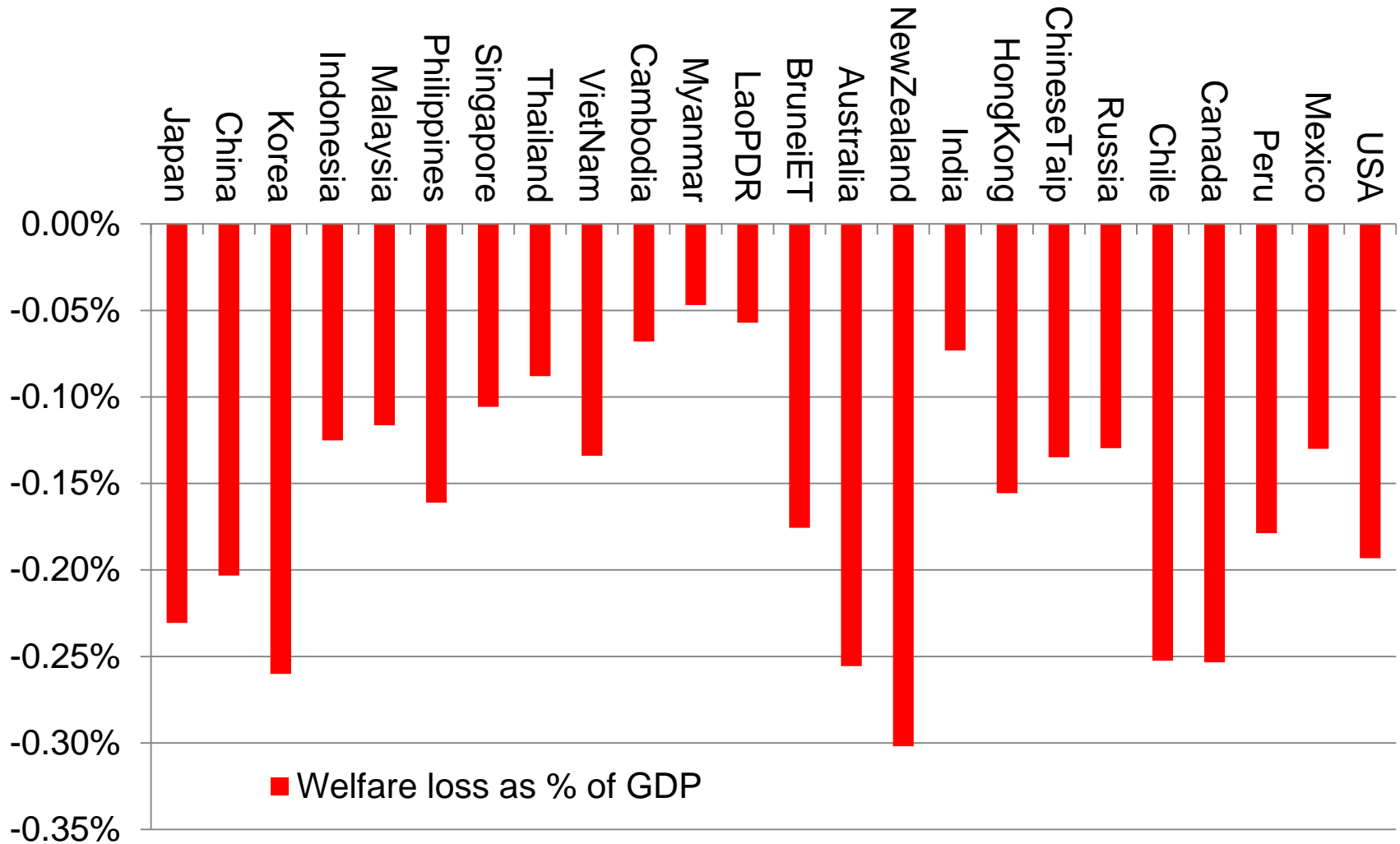
Market for communications services



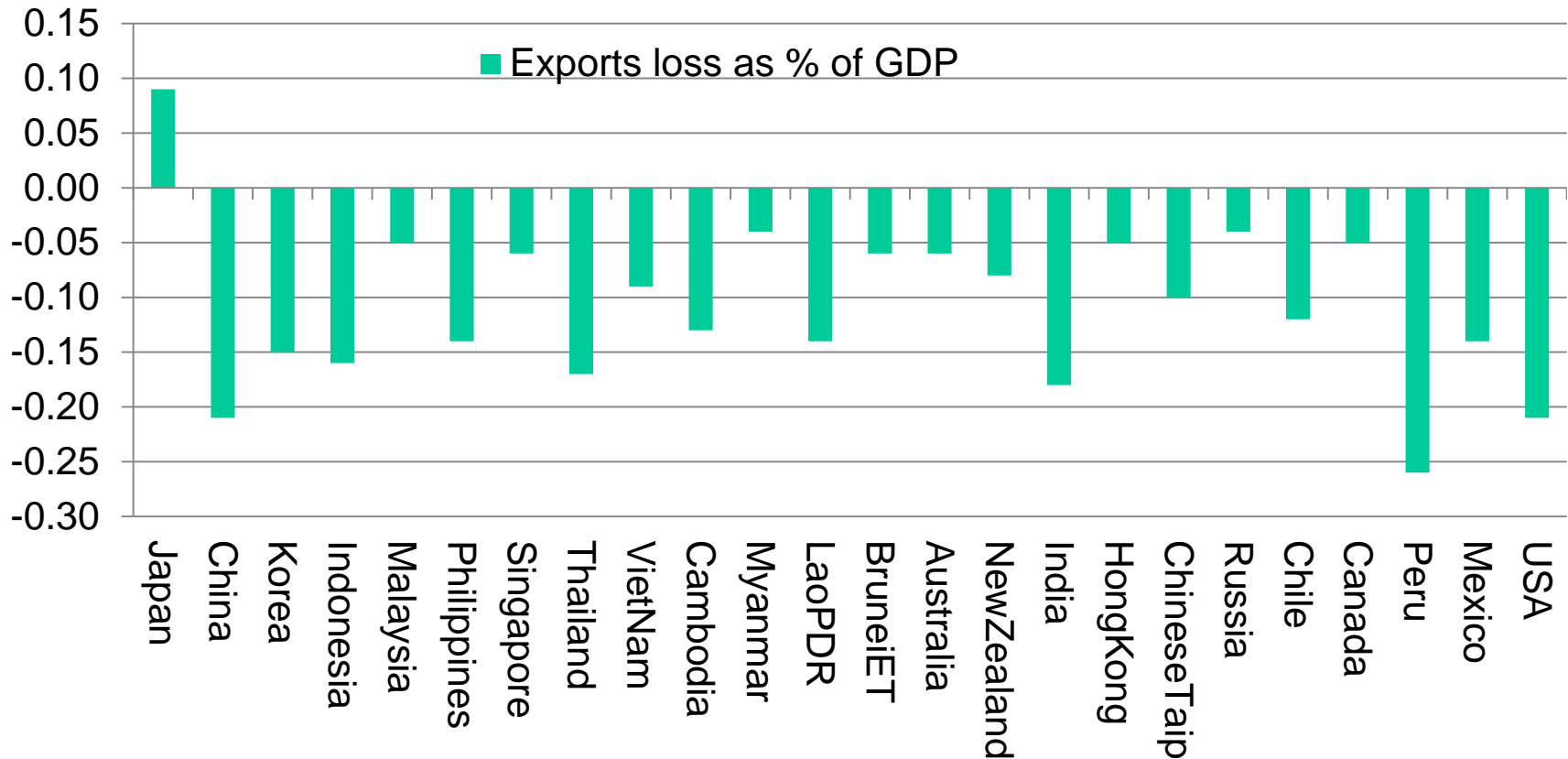
We can model this impact

- ▶ Global Trade Analysis Project (GTAP) model of global economy
- ▶ 57 sectors, 113 economies
- ▶ All APEC economies included apart from PNG
- ▶ Benchmarked to 2004
- ▶ Impose a 5% (arbitrary) communications services price increase on all countries (medium term scenario)

Supply disruption makes all APEC countries worse off



With the volume of exports falling



By a total of ~US\$5.5 billion across APEC economies

Wrap-up and where next?

- ▶ Services trade more likely to be impacted than agriculture or manufacturing trade
- ▶ Illustrative examples can provide useful insights into the magnitude of losses across APEC
- ▶ Industry is well-placed to develop scenarios of potential disruption costs
- ▶ Which can then be run through models of the global economy
- ▶ Improved analysis will help decision-making