

Economic Impact of Trade Facilitation: An Introduction

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Outline

- Definition and scope of trade facilitation
- Nature of trade transaction costs
- Assessment of economic impacts
 - Direct
 - Indirect
- ADB studies on impact of trade facilitation

A Narrow Definition

- **WTO:** *“the simplification and harmonization of international trade procedures”*
- Trade procedures are:
 - “activities, practices and formalities involved in collecting, presenting, communicating and processing data required for the movement of goods in international trade”*
- **Focus:** administrative processes at the border

A Broad Definition

- **ICC:** *“the adoption of a comprehensive and integrated approach to simplifying and reducing the cost of international trade transactions, and ensuring that the relevant activities take place in an efficient, transparent and predictable manner based on internationally accepted norms and standards and best practices”*
- **Focus:** the overall environment in which trade transaction takes place

Broad Trade Facilitation

- Go beyond “the border” issue to domestic policies and institutional and governance structures
- Includes a number of inter-related “behind the border” factors
 - Logistics of delivering goods to the market
 - Transparency of customs and regulatory environments
 - Harmonization of standards and conformity with international and regional regulations

Key Issues of Trade Facilitation

- Physical movement of consignment and border-crossing problems
- Import and export procedure, including customs
- Information and communication technology
- Payments, insurance and other financial services that affect cross-border movement of goods
- International trade standards

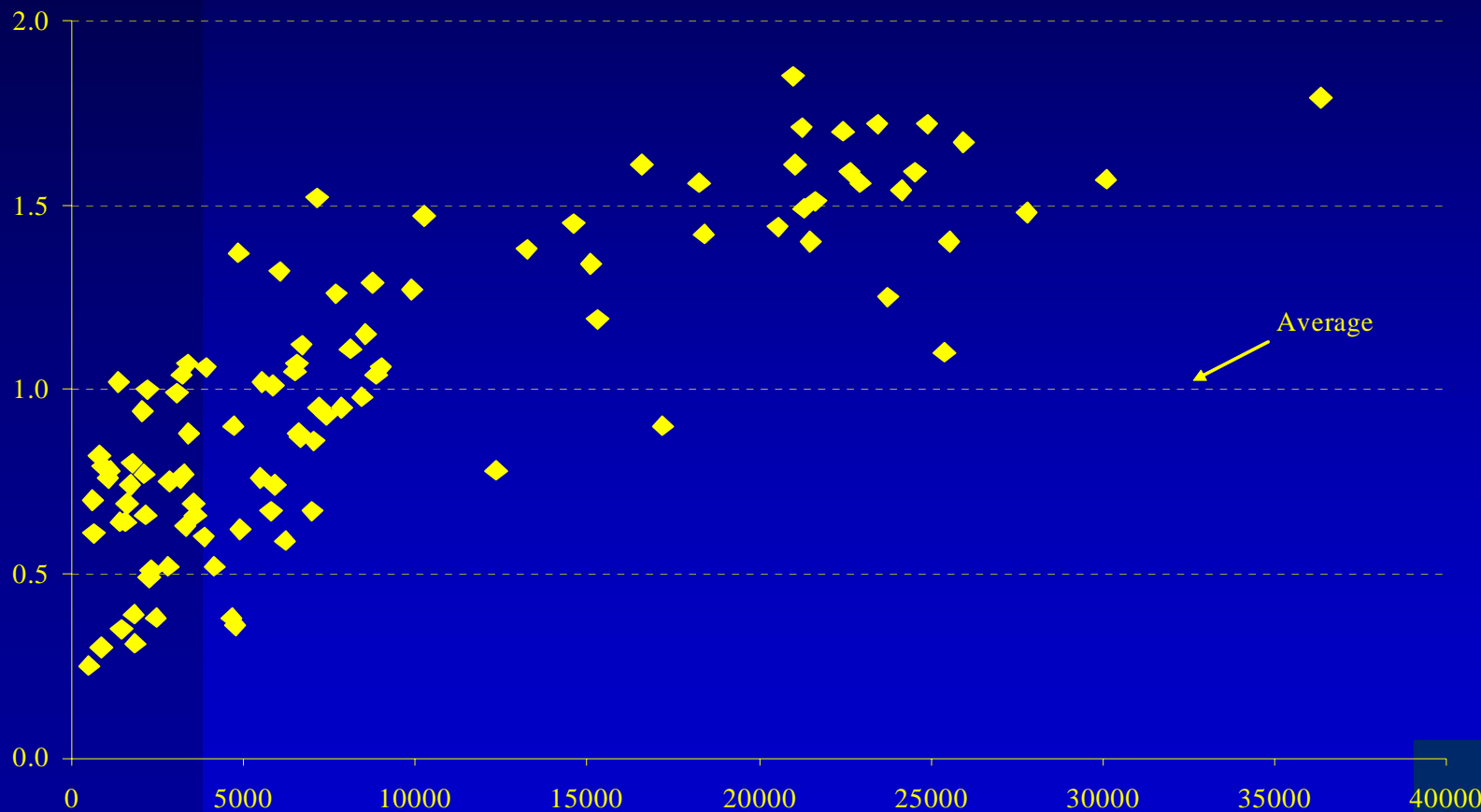
Aim of Trade Facilitation

“... reducing the cost of international trade transactions (TTC) ...”

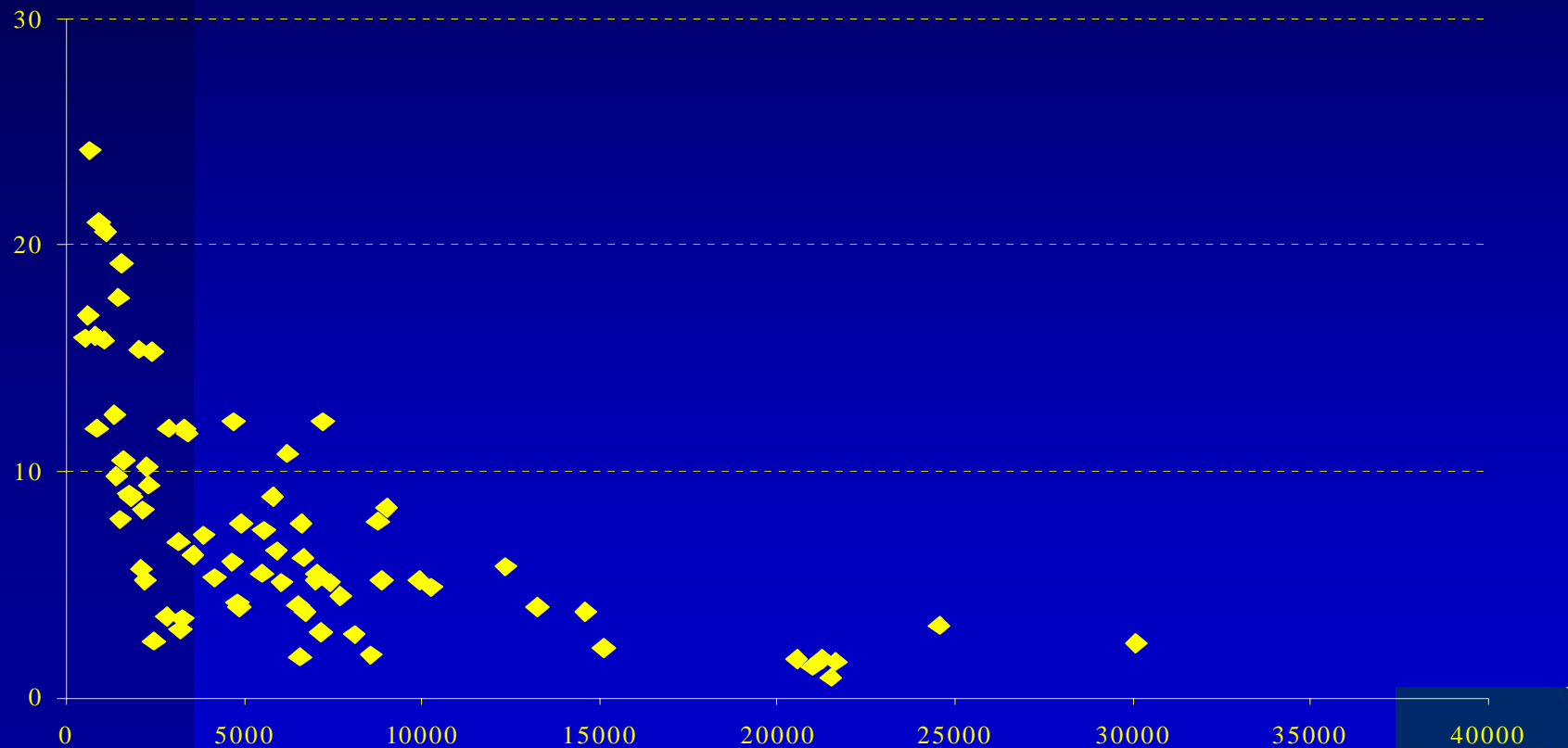
Trade Transaction Costs (TTC)

- could be very high
 - the tax equivalent of representative international TTC for industrialized countries is as high as 74%, including 21% transportation costs and 44% border-related barriers. (Anderson and van Wincoop, 2004)
- vary across countries, goods and trade-types, reflecting
 - country-specific differences
 - sector-specific diversity
 - trade-specific diversity

The border process quality-indicator and per-capita GDP



Number of days of clearance time and per-capita GDP



Agriculture and food products incur more border clearance costs

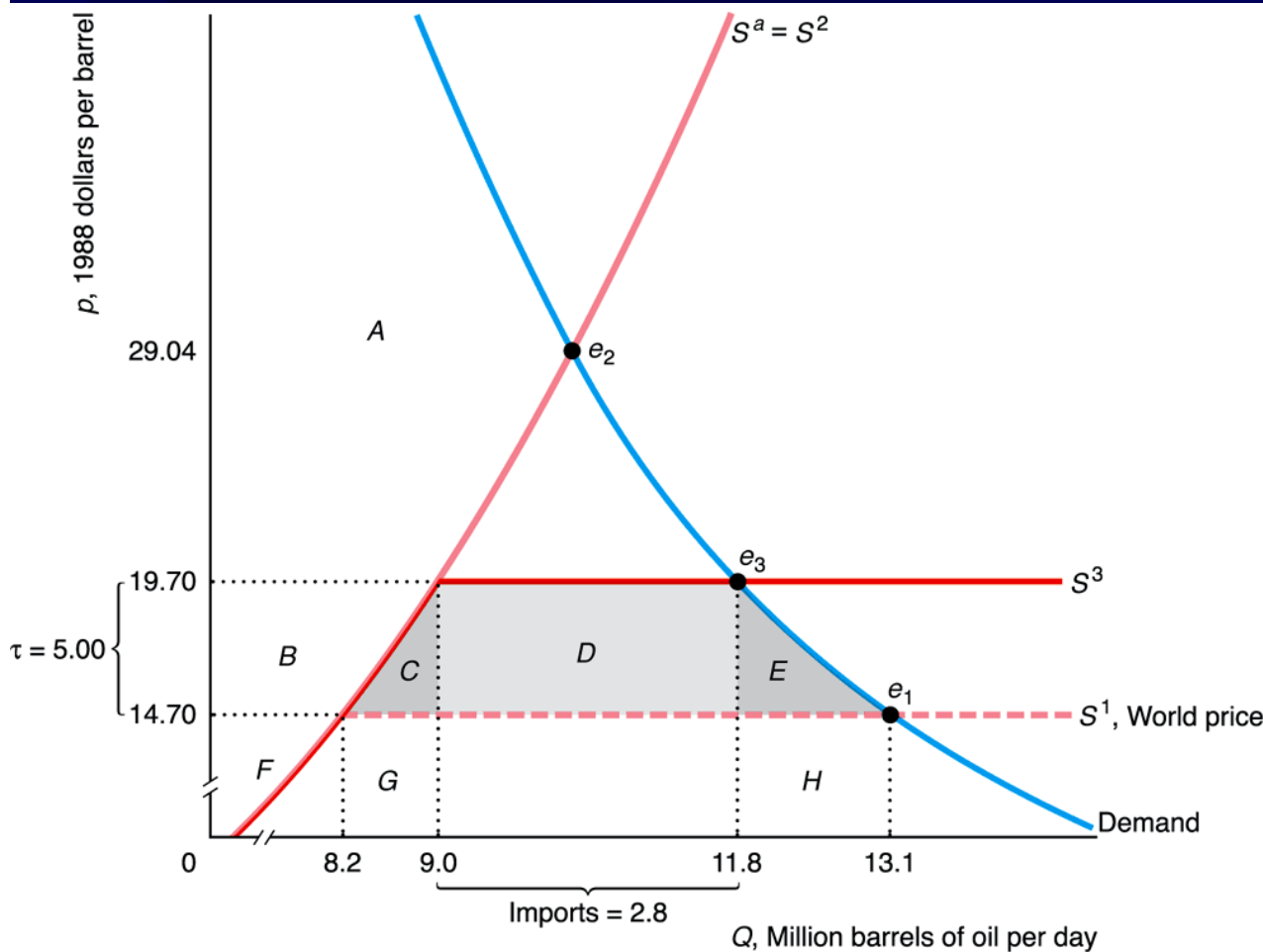
Cost and times for a container entering Japan

	Cost (JPY)		Time (hour)	
	Paper-based	EDI-based	Paper-based	EDI-based
Common procedure	16,706	10197	19.1	12.8
Special procedure for agro-food	9,864	7884	4.2	3.7

Trade Transaction Costs (con'd)

- Include both direct monetary outlays and indirect expense such as time and uncertainties.
- Some are rent-creating (like tariff), but most are cost-escalating
- Some are fixed costs
 - research about regulations, product adoption to meet foreign standards, ...

Welfare Triangle of Tariff



Free trade:

$$CS = A+B+C+D+E$$

$$PS = F$$

$$TR = 0$$

Tariff:

$$CS = A$$

$$PS = B+F$$

$$TR = D$$

Δ Welfare

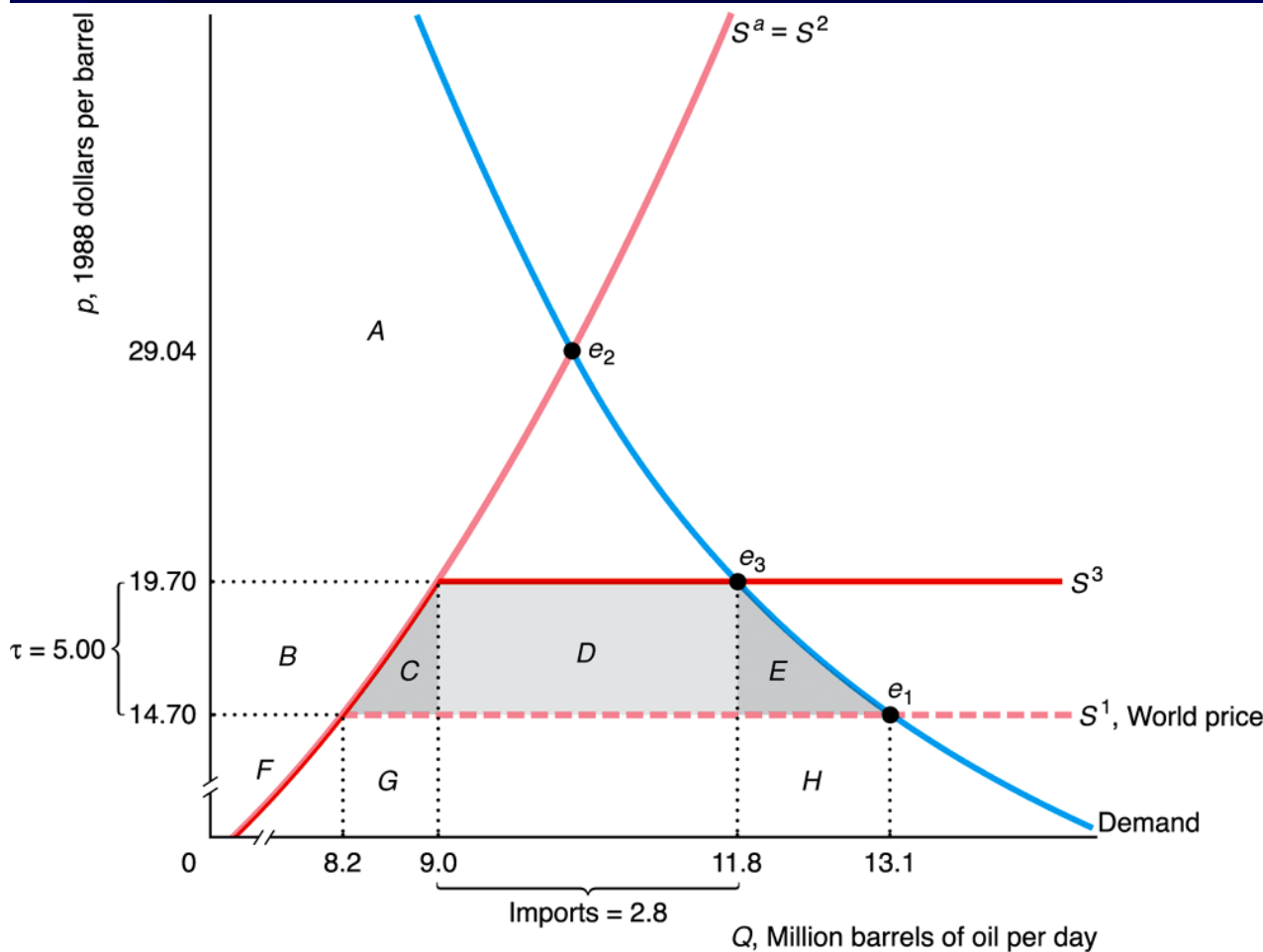
$$\Delta CS = -(B+C+D+E)$$

$$\Delta PS = B$$

$$\Delta TR = D$$

$$\Delta W = -(C+E)$$

Welfare Triangle



Free trade:

$$CS = A+B+C+D+E$$

$$PS = F$$

$$Rents = 0$$

Rent-creating TTC:

$$CS = A$$

$$PS = B+F$$

$$Rents = D$$

Δ Welfare

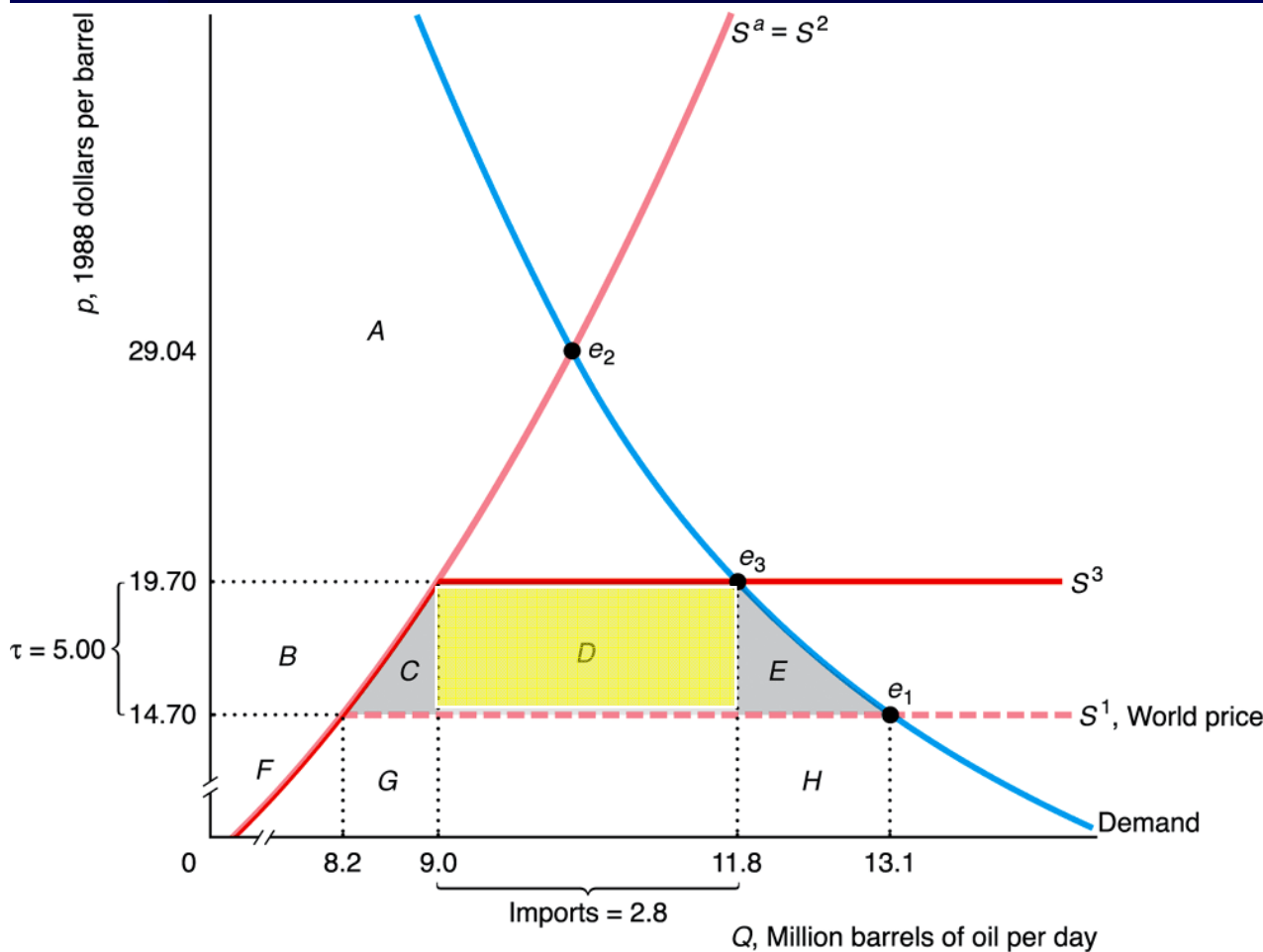
$$\Delta CS = -(B+C+D+E)$$

$$\Delta PS = B$$

$$\Delta Rents = D$$

$$\Delta W = -(C+E)$$

Welfare Trapezium



Free trade:

$$CS = A+B+C+D+E$$

$$PS = F$$

$$Rents = 0$$

Cost-escalating TTC:

$$CS = A$$

$$PS = B+F$$

$$Rents = 0$$

Δ Welfare

$$\Delta CS = -(B+C+D+E)$$

$$\Delta PS = B$$

$$\Delta Rents = 0$$

$$\Delta W = -(C+D+E)$$

Economic Impacts of TF

- Direct benefits to
 - Consumer
 - Producer
 - Government
- Indirect effects to the economy
 - Trade
 - Welfare
 - Poverty

Direct effects of TF

- Lower transaction costs
- Reduce delays in the clearance of goods
- Shrink the wedge between domestic and international prices
- Reduce the opportunities for administrative corruption and rent-seeking

Direct benefits

Consumers

- Lower consumer prices

Producers

- More predictable trading environment
- Simpler commercial framework for trade
- Enhanced competitiveness

Governments

- Increased effectiveness of control methods
- More efficient deployment of resources
- Improved trade compliance
- Higher revenue

Empirical Evidence

- Japan
 - TF measures cut average lead time from 53 hours in 1991 to 26 hours in 2001 for air cargo, and 168 hours to 74 hours for sea cargo over the same period.
- Singapore
 - TradeNet system has helped reduce the documentation cost borne by government and businesses by more than half.

Empirical Evidence (con'd)

- New Zealand
 - An electronic paperless clearance system has reduced custom processing times from 10 days to 12 minutes.
- Australia
 - TF measures including staff training and introduction of a code of conduct have resulted in a reduction of releasing time from 15-30 days to 2-48 hours.

Empirical Evidence (con'd)

- Chile
 - The introduction of customs EDI system led to saving of over \$1 million per month for a system cost of \$5 million.
- Peru
 - TF measures including staff training and introduction of a code of conduct have resulted in a reduction of releasing time from 15-30 days to 2-48 hours.
 - Despite a reduction in average tariff level, customs revenue increased by 105% between 1990-92 where as the value of imports increased by 37% over the same period.

Estimated reduction in TCs through custom-related trade facilitation (%)

	Min	Max	Mean
Industrialized APEC economies	2.9	7.4	5.2
Newly industrialized APEC economies	5.3	10.7	7.8
Industrializing APEC economies	6.6	14.8	10.7

Indirect Impact - Trade

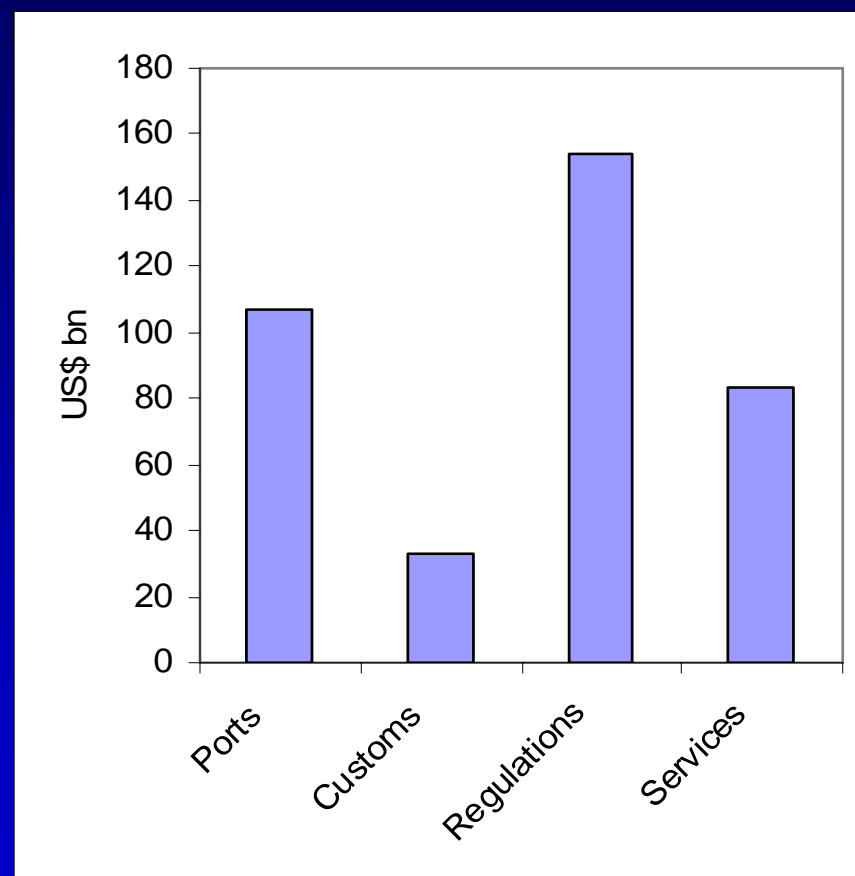
- Trade facilitation spurs trade
 - Import demand is boosted by lower import prices
 - Exporters are able to earn larger profits, inducing more exports of existing exporters and entry of new exporters
- Quantitative studies indicate that modest reduction in trade costs leads to significantly increased trade.

A study based on gravity model (Wilson, Mann and Otsuki 2005)

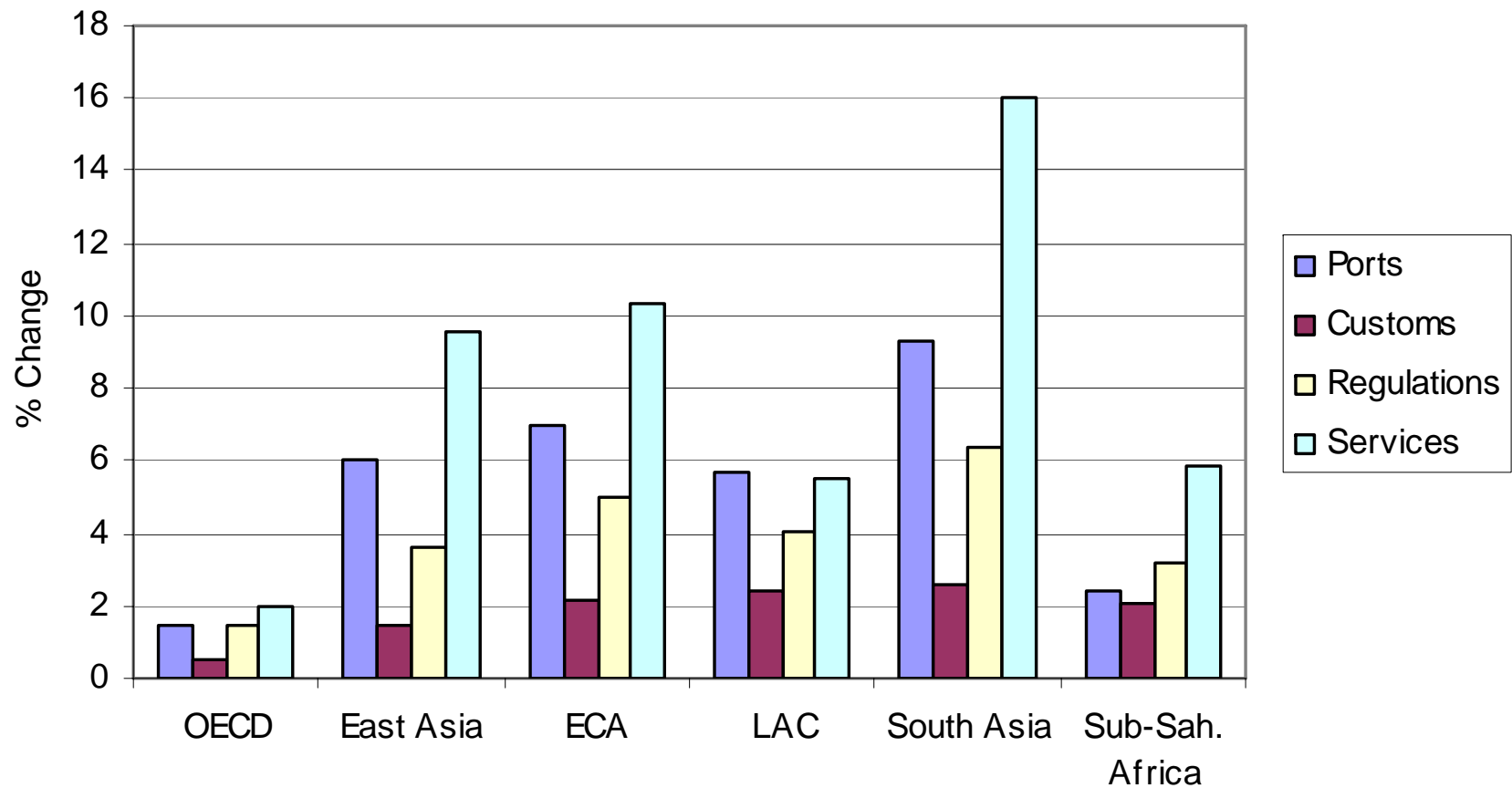
- Trade facilitation defined in four dimensions
 - Port efficiency
 - Customs environment
 - Regulatory environment
 - Service sector infrastructure (proxied by the Internet and E-commerce use by business)
- Assuming trade facilitation raise the below-average efficient countries half-way to the global average

Gains in trade

- Global trade expands by \$377 billion (9.6%)
- The potential gains from increasing port efficiency and regulation environment is considerably larger than for increasing customs procedures.



Decomposition by region



Welfare Impact

- Important indicator for policy makers
- The sources of welfare gains
 - Direct efficiency gains and cost saving (rectangle)
 - More efficient resource allocation (triangle)
 - Dynamic gains - trade-related externality
- Need an economy-wide model, typically CGE

Two examples of CGE study of TF

- Hertel, Walmsley and Itakura (2001) Dynamic Effects of the “New Age Free Trade Agreement between Japan and Singapore”, *Journal of Economic Integration*
- OECD (2003) “Quantitative Assessment of the Benefits of Trade Facilitation”

Hertel, Walmsley and Itakura (2001)

- Standards harmonization for e-business and automating customs procedures between Japan and Singapore increase trade flows between the two countries and trade with the rest of the world
- Global welfare gain is US\$9.4 bn per year over 2020.
- Every region benefits, although 70% of the gains is captured by Japan

OECD (2003): Welfare Effects

	Uniformity	Country, sector & trader diversity	OECD-only
World-wide income gains (mn US\$)	38454	43259	14053
- due to direct cost reduction	6041	8250	2650
- due to indirect cost reduction	32413	35009	11402
OECD	69%	35%	103%
OECD Asia-Pacific	8%	7%	22%
OECD Europe	43%	17%	45%
OECD North America	18%	11%	36%
Non-OECD	31%	65%	-3%
Former Soviet Union	2%	7%	-1%
Middle East & North Africa	5%	11%	0%
Latin America & Caribbean	5%	13%	-1%
Non-OECD Asia-Pacific	16%	24%	-1%
Sub-saharan Africa	2%	7%	0%

Source: OECD Secretariat.

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Poverty Impact

- Trade facilitation can significantly contribute to poverty alleviation
 - More low income countries specialize in agricultural exports, which incur higher trade costs
 - SMEs face higher trade costs than large firms
 - Fixed costs and scale effects
 - Fewer specialized personnel
 - Weaker capital reserve
 - More vulnerable to external uncertainties

ADB studies on Impact of TF

- Two recent quantitative studies using global CGE model
- Focus on developing Asia, for which trade facilitation has particularly important meaning.

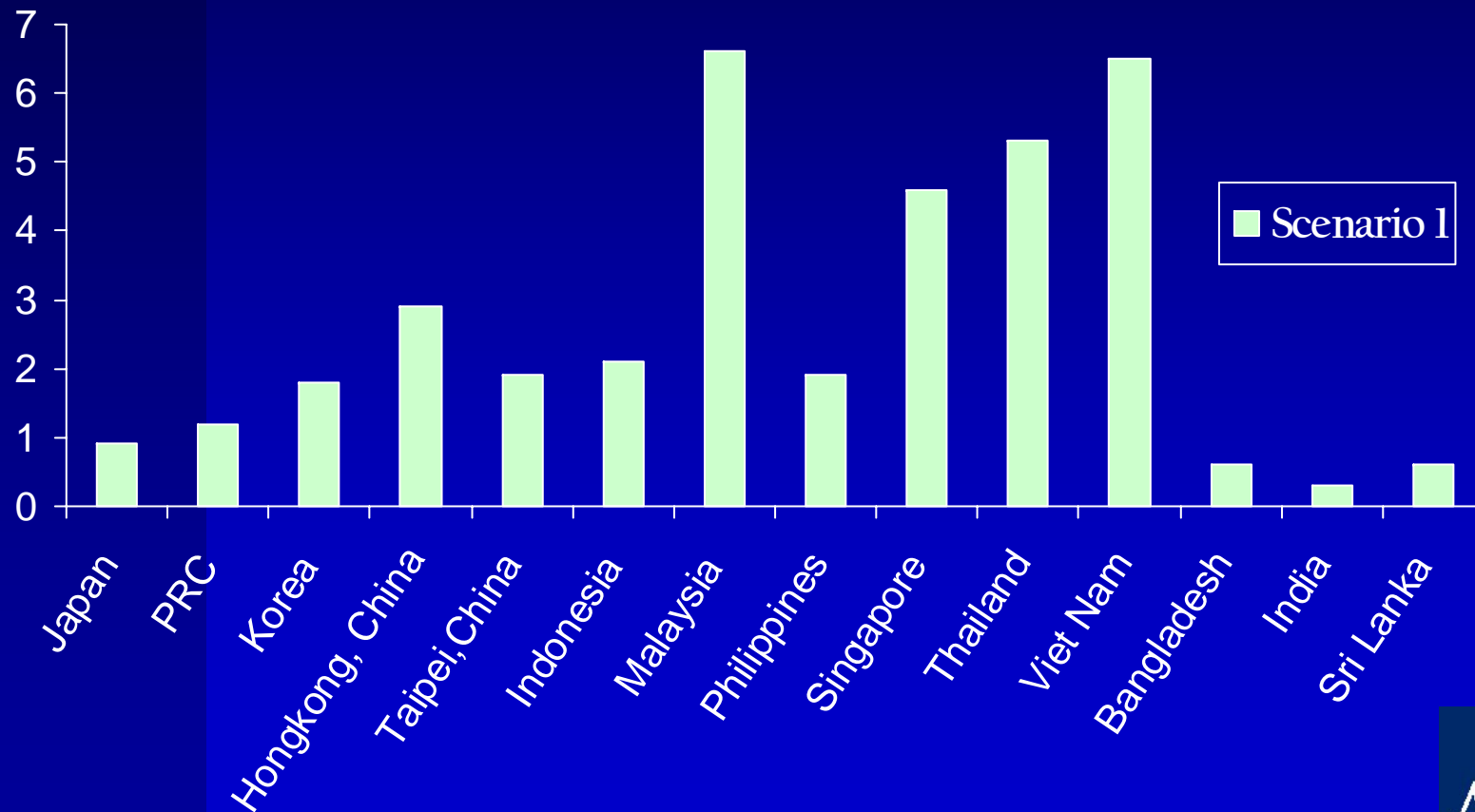
Why is TF important for Asia?

- Asia has increasingly linked through regional production networks.
- Their export sectors highly dependent on efficient and transparent border procedures
 - Just in time, lean production requires frequent cross-border delivery of intermediate products
- FDI flows are sensitive to border inefficiency
 - Countries that fail to modernize their border procedures and logistic services risk be left out of international production chains

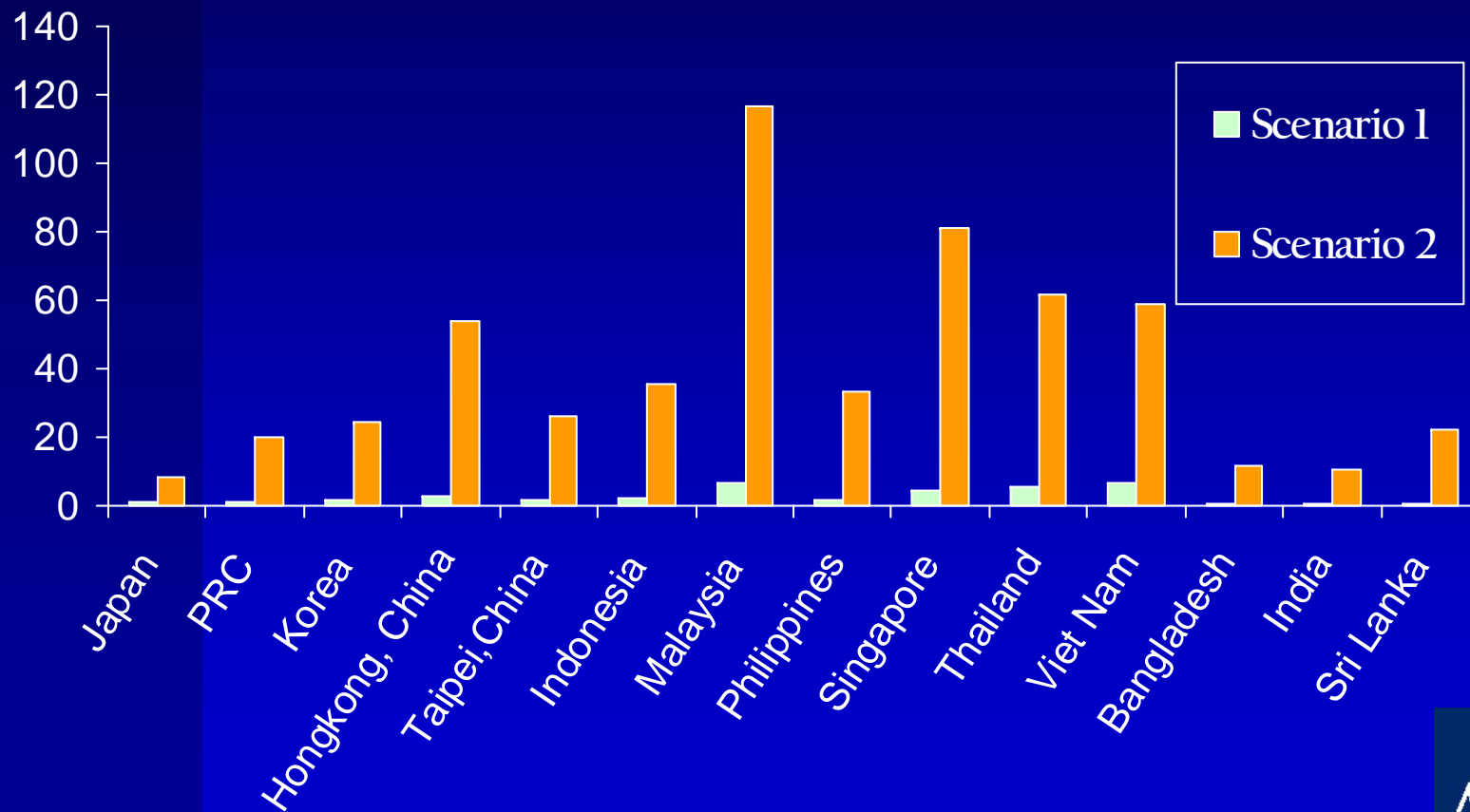
A long term perspective of Asia's growth and trade integration

- Long term projection to 2025
- Scenario 1
Regional trade liberalization
- Scenario 2
Regional trade liberalization + reduction in trade costs

Real income in 2025 (% change from the baseline)



Real income in 2025 (% change from the baseline)



Trade facilitation in Bangladesh

- Compare two scenarios
- Scenario 1 - unilateral trade liberalization
- Scenario 2 - trade Facilitation
 - Reduce the fixed export cost, variable trade costs for exports, and variable trade costs for imports by 30% in Bangladesh's manufacturing sectors

$$Z = \alpha P^{\alpha} R^{\beta} G^{\gamma}$$

Aggregate Impact

	UNI	TF
Welfare gain as % of GDP	1.7	12.9
Exports (% change)	69.7	121.3
Imports (% change)	44.0	93.8

Sectoral performance of exports

<u>Sector</u>	UNI	TF
Grain	22	19
Other crops	16	3
Other agriculture	4	-24
Food processing	28	242
Textile	62	122
Apparels	100	102
Chemical	19	23
Material	15	12
Electronics and electrical equipment	7	27
Vehicles	8	10
Machinery	8	23
Other manufacturing	19	14

Conclusions

- Existing empirical evidences and modeling analysis have suggested a large potential gain from trade facilitation, especially for developing countries,
- Trade facilitation is a new, complicated and evolving issue. To fully understand the its implication, more systematic analysis and serious data work are necessary.

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