Barriers to Global Maritime Trade

Business Perspectives on Trade Barriers and Frictions in the Pacific Rim

University of Southern California
Marshall School of Business

Busan, Korea
November 15, 2005

Exponential growth initiates potential crisis

“With the relentless shift of global manufacturing to Asia, particularly China, container volumes will triple by 2020”
- Global Consulting Firm

“An 11 day shutdown of ports of Long Beach and Los Angeles in 2002 led to an estimated loss of US$15.6 Billion”
- Global Consulting Firm

“We had to wait 9 days for berths to open up at a West coast port. This delay and other lost voyages cost us US$ 27 million last year”
- Global Shipping Company

Trade volume increasing faster than system capacity
Extremely high transaction costs
Ripple effect through system
Exponential growth initiates potential crisis

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Extremely high transaction costs

Ripple effect through system

Project objectives

APEC establishes...
Bogor Goals

ABAC provides...
Business Perspective

USC researches...
Barriers to shipping and trade
Best practices to facilitate flow of goods
How new technology can be leveraged
How security concerns impact the flow of goods
Key messages for APEC

Conflict of interests and unique underlying factors within an economy cause barriers

Prevent companies from progress towards Bogor Goals

Presentation agenda

Objectives
Research Approach
What We Learned
Trade Barriers
Proposed Solutions
Illustrative Example
Summary
Questions
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Research scope & approach

78 interviews
CEOs
Managers
Academics
Attorneys
Consultants
Entrepreneurs

What We Learned
Qualitative Research
Findings

Capacity Constraints

Information Barriers

Free Open Trade

Security Barriers

Businesses had different concerns

IMPORTERS & EXPORTERS
• 24-hr rule causes issues in logistics
• Concern about sharing sensitive data

SHIPPING COMPANIES
• 24-hr rule helps Shippers plan
• Concern about smart containers

FREIGHT FORWARDERS
• Difficult to share information
• Few information standards

PORTS & CUSTOMS
• Capacity is a key issue
• Need education across economies
Businesses had different concerns

**IMPORTERS & EXPORTERS**
- 24-hr rule causes issues in logistics
- Concern about sharing sensitive data

**SHIPPING COMPANIES**
- 24-hr rule helps Shippers plan
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**PORTS & CUSTOMS**
- Capacity is a key issue
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Economies shared some concerns

“Our company contracts with about 10 different carriers in Singapore… lack of common software becomes problematic and increases costs.”

Supply Chain Manager
Multinational, Singapore

“Our company is trying to compete globally but ... There are no guiding standards and lots of differences in the existing systems”

Major Exporter, Mexico
Notable findings

- Destination is bottleneck
- Expansions are at origin and en route
- Technology advances facilitate information flow
- Lack of communication and standards; digital divide widens
- Security driven by USA; Supported by others
- New measures do not tackle theft/contraband

Trade Barriers
Analysis of Findings
Trade is complex on a global & local level

Multi-directional flow of goods and information between constituents creates a highly integrated system.

Power dynamics differ across economies

Conflicting Interests
Capacity restricted by more than lack of space

Capacity Constraints

- System-wide issue
- Conflicts among six forces
- Ex: USA Port of LB/LA environmental concern

Information Barrier

- Environmental concerns
- Opposition to expand truck routes
- Trucks waiting in queue
- More pollution

Security Barrier

Lack of sharing & standards creates info barriers

Information Barrier

- Conflicts between two forces
- Lack of information sharing
- Few technology resources
- Few standards

Trade Barriers

- Industry Importer
- Customs Importer
- Customs Exporter
- Industry Exporter
Customs initiatives can decrease efficiency

**Customs main concerns:**
- Duty collection
- Security
- Smuggling prevention

**Industry main concerns:**
- Lower costs
- Predictability & flexibility
- Efficient flow of goods

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Need for Information Sharing & Compliance with Inspections

**Information Barriers result from:**
- Lack of training
- Changing regulations
- Different standards within same country
- Inflexible processes
- Costs and unpredictable delays

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Need for Information Sharing & Compliance with Inspections

**Information Barriers result from:**
- Lack of training
- Changing regulations
- Different standards within same country
- Inflexible processes
- Costs and unpredictable delays
Complexity in regulations creates security barriers

- Regulations
- Lack of education
- Different level of security concerns and regulations in different economies

Security Barrier

24 hour rule exemplifies conflict of interest

**Technologically advanced economies**
- May lose some of their efficiency advantage (Japan)

**Labor rich economies**
- Can more easily absorb the added cost (China)

**Shipping Companies**
- Some shippers increased efficiency

**Export Companies**
- A large Japanese exporter lost ten years of progress
Three main barriers prevent free open trade

Capacity Constraints
- System-wide issue
- Conflicts among six forces

Information Barrier
- Conflicts between two forces
- Lack of information sharing
- Few technology resources
- Few standards

Security Barrier
- Regulations
- Lack of education
- Different level of security concerns and regulations in different economies

Precision gained from separate analysis
Proposed Solutions and Best Practices

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Solutions to capacity barriers

Capacity Constraints
• Common goal negotiation
• Advanced equipment
• System-wide solution

Information Barrier

Free Open Trade

Security Barrier
Collaboration helps overcome capacity constraints

Advanced Equipment
- Multi-container hoist systems
- Gantry Cranes with longer reaches

Common Goal Negotiation
Off Dock Terminals

System wide solution

- Increase visibility
- Better planning
- Improve efficiency
Solutions to information barriers

Capacity Constraints

Information Barrier
- Information technology
- Standards
- Information sharing

Security Barrier

Free Open Trade

Supporting common standards

Confusion costs money

Standards

Save money

- Cannot compare
- Enables false documents
- Inefficient transfer of info

Standards

- Easier to compare
- More quality
- Increased efficiency
Promote information sharing

- Share Customs Info
- Leverage Tiered System
- Communicate Errors
- Communicate Priorities

Increases Efficiency
Creates Incentives
Improves Processes
Reduces Costs

Solutions to barriers

- Capacity Constraints
- Information Barrier

- Security Barrier
  - Technology
  - Standard
  - Coordination
  - Education

Free Open Trade
Overcoming security barriers

Container
• Smart containers
• Electronic Seals
• RFID

Transportation Route
• C-TPAT
• CSI
• WCO Framework of Standards
• RFID
• X-ray/ Gamma Gates and Portals

Illustrative Example
Increased inspections create significant delays

“Security checks add about 1 week lead time (3 weeks worst case) and sometimes force the exporting company to sell merchandise at a substantial discount to the retailer”

Chinese Exporter

Reducing port inspections as part of a wider effort

A systemic approach to reduce intrusive inspections and resulting delays.
Lack of resources to inspect contributes to delays

“Customs will randomly check about 5% to 10% of containers. But … there are few officers from US Customs. As a result the checks waste a lot of time.”
US Importer

Better targeting can reduce inspections

“Information sharing across customs for background checks would help better target risky containers for inspections.”
US Security Specialist
“We must educate our clients by regularly distributing C-TPAT information, circulars and creating awareness about the 24 hr rule”.

Freight Forwarder

Non-intrusive devices can reduce inspections

- Shipping companies in Singapore suggested setting up radiation portals
- Shipping companies in China suggested having an X-ray gate
Ports should not be the only point of inspection

- Supervised consolidation of cargo at Singapore
- Japan’s informal preferential clearance policy

Security Driven Intrusive Inspections

Allocate necessary resources
Share info across customs
Help prevent paper work errors
Sophisticated non intrusive inspections & automation

Decrease risks along the whole supply chain

Summary
Conflict of interest leads to barriers

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Solutions</th>
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<tbody>
<tr>
<td>Capacity constraints</td>
<td>Optimize &amp; increase system capacity</td>
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<tr>
<td>Information barriers</td>
<td>Increased integration/standardization of information resources</td>
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<td>Security barriers</td>
<td>Technology solutions</td>
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Alignment of interests will increase trade facilitation

- Decrease in transaction costs & friction
- Transparency

Secure Business Environment

Free Open Trade

Align incentives to break down barriers
APEC needs to champion change

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<th>Responsibility</th>
<th>Action</th>
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<tr>
<td>Coordinate interests</td>
<td>Align incentives, Establish priorities</td>
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<td>Support system capacity building</td>
<td>Find ways to fund expansions</td>
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<tr>
<td>Promote education</td>
<td>Support WTO/ WCO</td>
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- **Objectives**: Research, Approach, What We Learned, Trade Barriers, Proposed Solutions, Illustrative Example
- **Summary**: Questions