

# The China Effect --- Challenges and Opportunities



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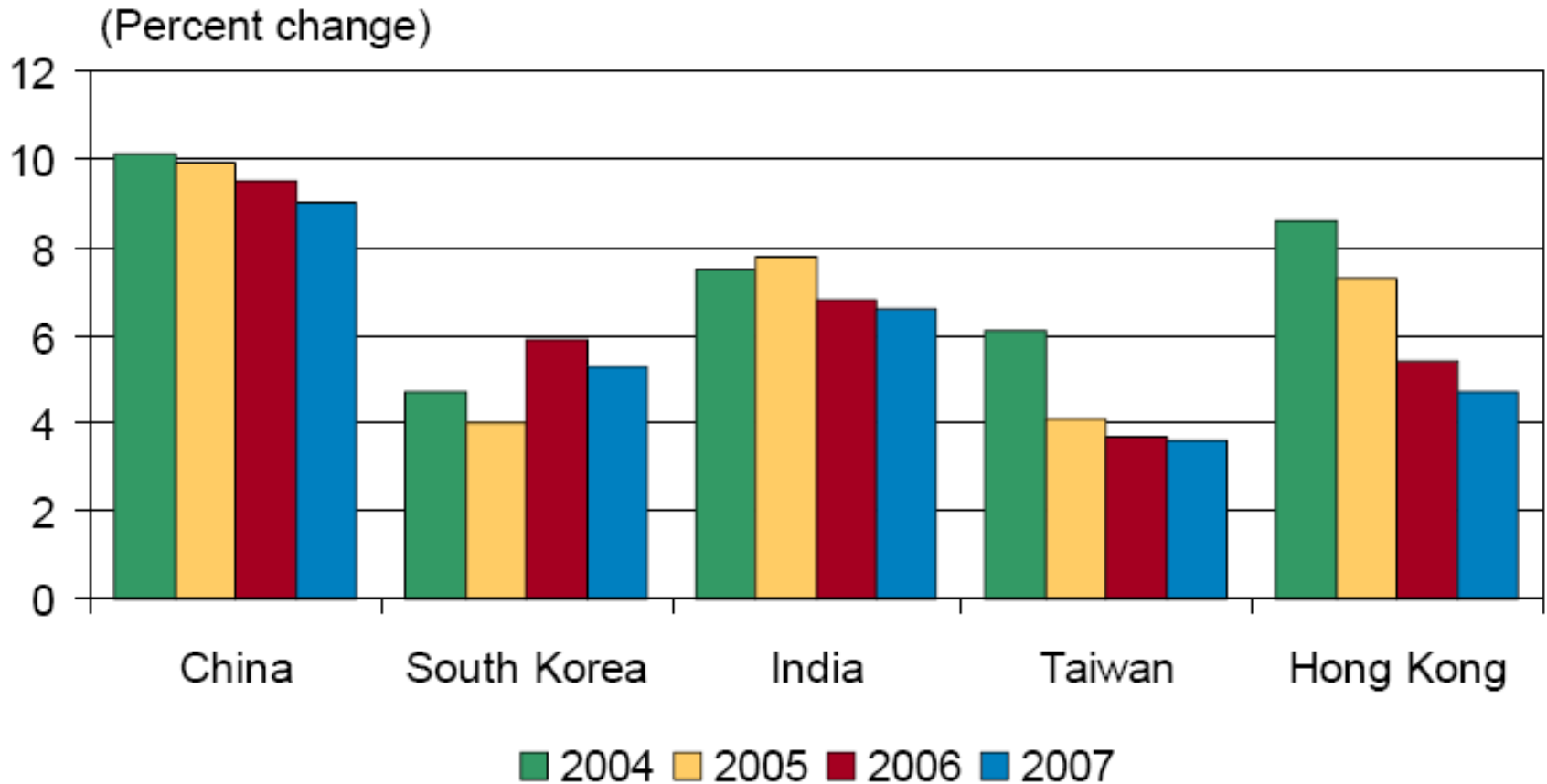
United States Merchant Marine Academy



# Outline

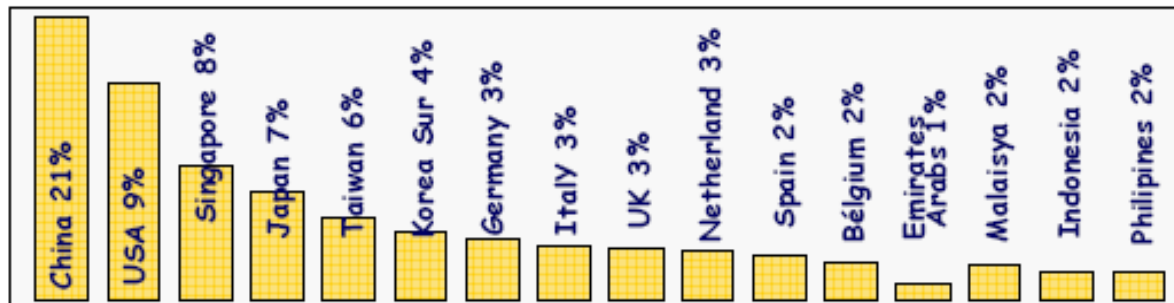
- Rapid economic growth
- Explosive growth of container volume
- Demand for infrastructure development/investment
- Challenges
- Opportunities
- Summary

# Rapid Economic Growth in Asia, China in Particular



Source: Paul Bingham, Global Insight, Inc.

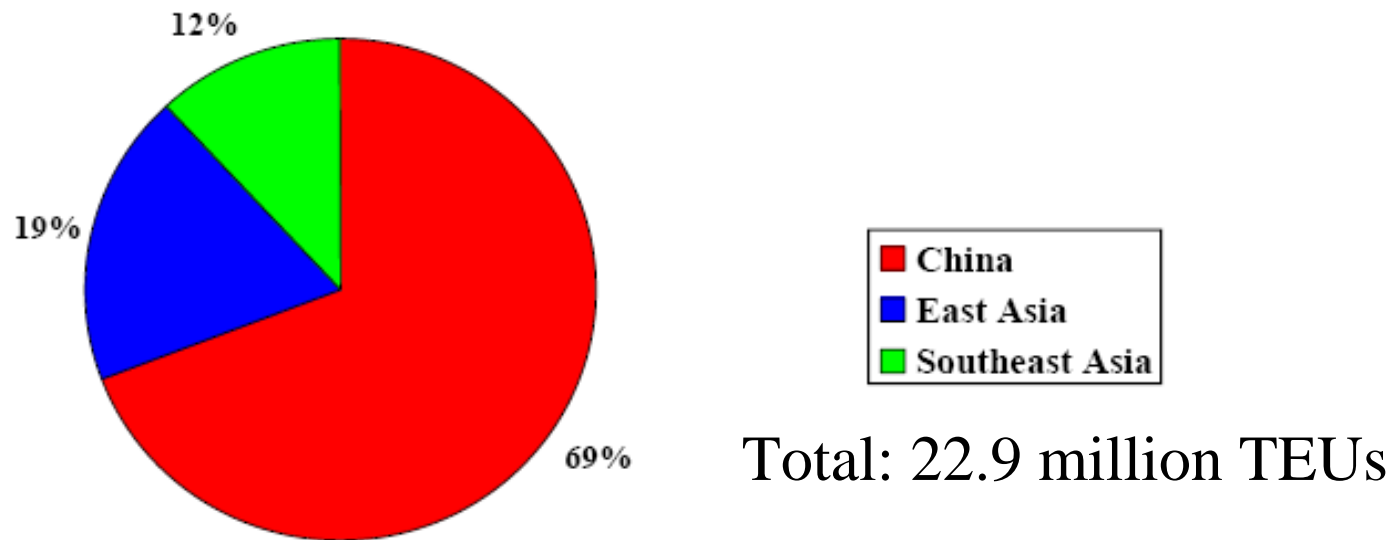
# Explosive Growth of Container Volume in China



16 Countries 78%

# China Dominates Asia - U.S. Trade

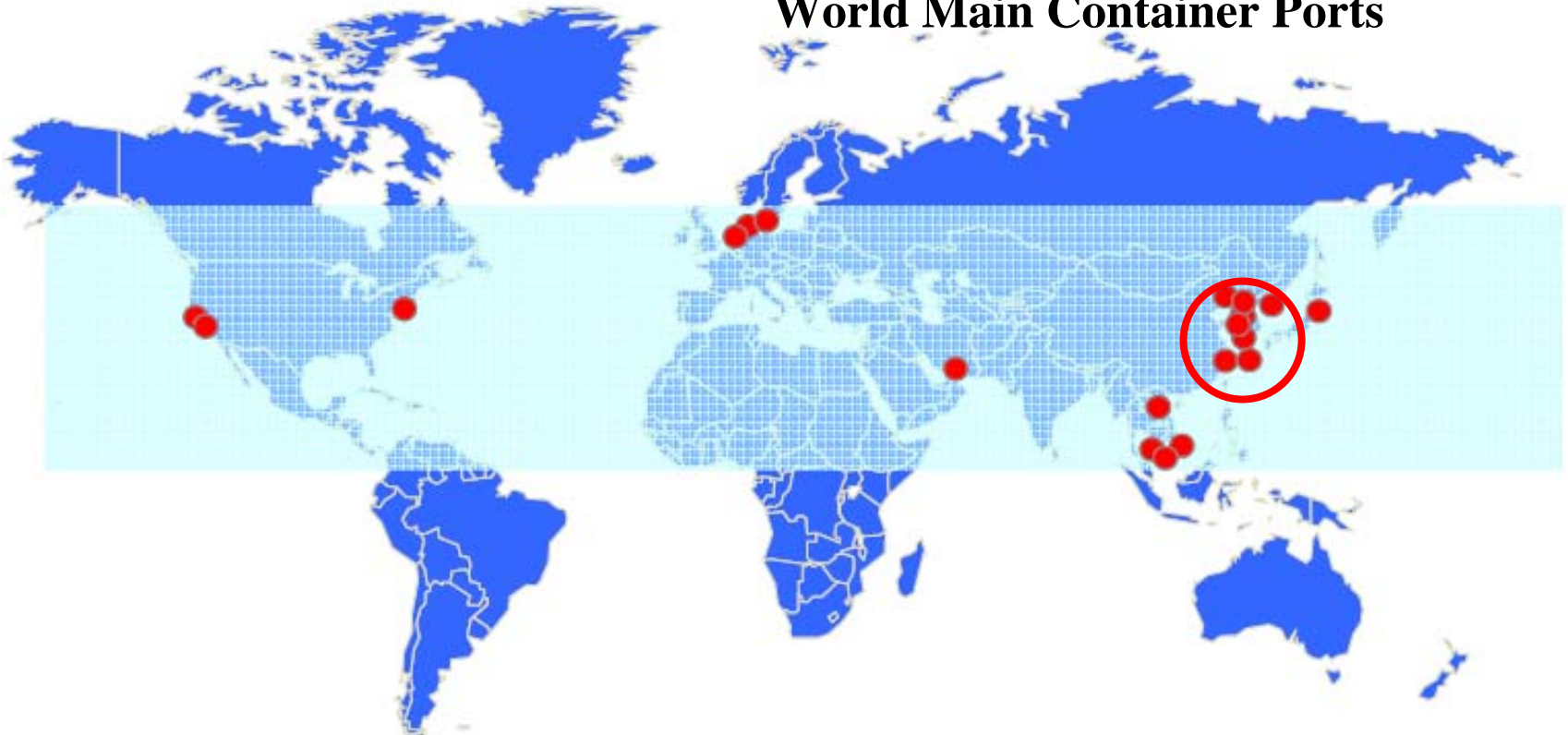
2005 Asia - U.S. Container Traffic by Asian Region



Source: James Brennan, Norbridge Inc. & Piers – Port Throughput

# China Tops World Port Ranking

## World Main Container Ports



**Shanghai, Hong Kong, Shenzhen, Qingdao, Tianjin, and Ningbo are among the world's top 10 ports. Shanghai will soon be the No. 1 port with more than 24 M TEUs.**



# Demand for Infrastructure Development

- China's growth is driven by export and investment
- With rapid increase in freight volume and automobile ownership
- Pressure on transportation infrastructure development mounts



# Challenges Ahead – Many Mind Boggling Questions

- Urbanization
- Rapid rising automobile ownership
- Fast increasing freight volume
- Increasing environmental concern
- Institutional framework
- Public-private partnership

# Urbanization and Impacts

## --- A Transportation Perspective

- Economic development in coastal areas has led to large portion of transient workers with relatively low income
- A more complex multimodal environment: car, bus, subway, jitney bus, light rail, ferry, motorcycle, taxi, bicycle/tricycle, and walking
- Rapid increasing auto ownership



# Increasing Freight Volume

- Global supply chain
- Manufacturing drives the export growth
- Leading to increase freight movement  
(container movement)
- Urban freight movement
- Warehousing and distribution



# Challenges

- Increasing demand for infrastructure development
- Intermodal connectivity
- Integration and systematic development
- Rapid increase in truck and auto
- Environmental pollution
- Institutional framework
- Public-private partnership



# Increasing Demand for Infrastructure Development

- With government's "Go West" initiative, how to develop inland transportation infrastructure to link major container ports is critical
- Rail is the dominant mode for intercity passenger travel
- With increasing truck volume and congestion, how to increase the use of rail
- The concept of intermodal connectivity is yet to take hold

# Freight Mobility

- Urban freight logistics is becoming more and more important to accommodate the continuous urbanization
- Though Chinese port productivity tops the world, 40+ per hour vs. 30+ per hour in the US
- Yet, total logistics cost still accounts for 20% of the GDP as compared to 10% in the US



# Institutional Framework and Public-Private Partnership

- Governance structure
- Privatization
- Infrastructure investment
- Transportation financing
- Transportation regulation



# Opportunities for NACOTA – A Two-way Approach

- Freight planning
- Best practice in freight modeling
- Intermodalism
- Transportation financing
- Port governance
- Private sector participation in infrastructure development
- Privatization in port development and management



Questions?

Thank you