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FROM THE AMERICAN PEOPLE



Trade-Related Transport and Logistics

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What is logistics?

- Process of planning, implementing, and controlling the efficient, effective flow and storage of goods, services, and related information from point of origin to point of consumption for the purpose of conforming to customer requirements (Council of Logistics Management)
- Having the right thing at the right place at the right time at the right cost
- Components of transport logistics:
 - Infrastructure nodes (e.g. ports, intermodal yards)
 - Infrastructure links (e.g. rail, roads, inland waterways)
 - Transport service providers
 - Conveyance of information among logistics participants

Why is transport logistics important?

- Clark, Dollar, Micco (2001) – port inefficiency increases distance by 60%
- Wilson, Mann, Otsuki (2003) – port efficiency more important than Customs and e-business
- Kent, Fox (2004) – assess impact of port inefficiency on welfare – port inefficiency, when mitigated, induces GDP growth by 0.47 percent
- Djankov, Freund, and Pham (2006) -- each additional day required for a shipment imposes “extra” economic distance of 70 km per day

How is logistics performance measured?

- Published works:
 - World Bank, *Doing Business*, “Trading Across Borders”, World Bank (www.doingbusiness.org);
 - focuses on time
 - ranking of 181 countries
 - World Bank, *Connecting to Compete: Trade Logistics in the Global Economy*, “Logistics Performance Index and its Indicators”, 2007
 - perception surveys
 - some (limited) time-performance related data
 - ranking of 100 countries
- Indicators important to shippers
 - Time
 - Cost
 - Reliability
- Collection/calculation of performance-related indicators

What are the logistics nodes of a port?



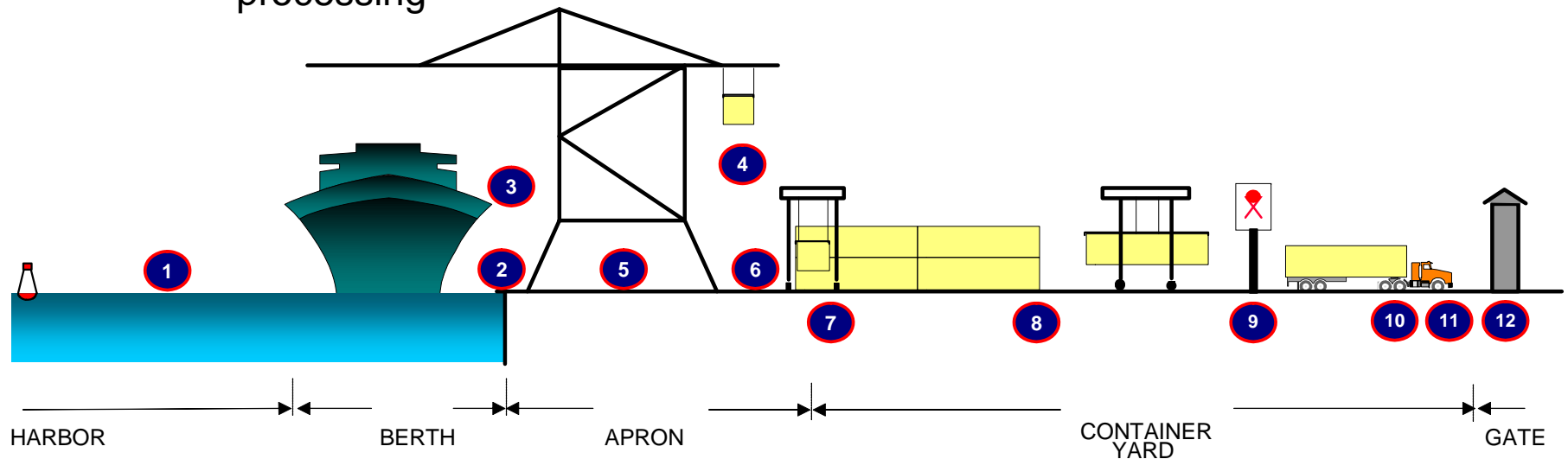
Storage yard

Gate

Gantry cranes

Logistics chain in a port

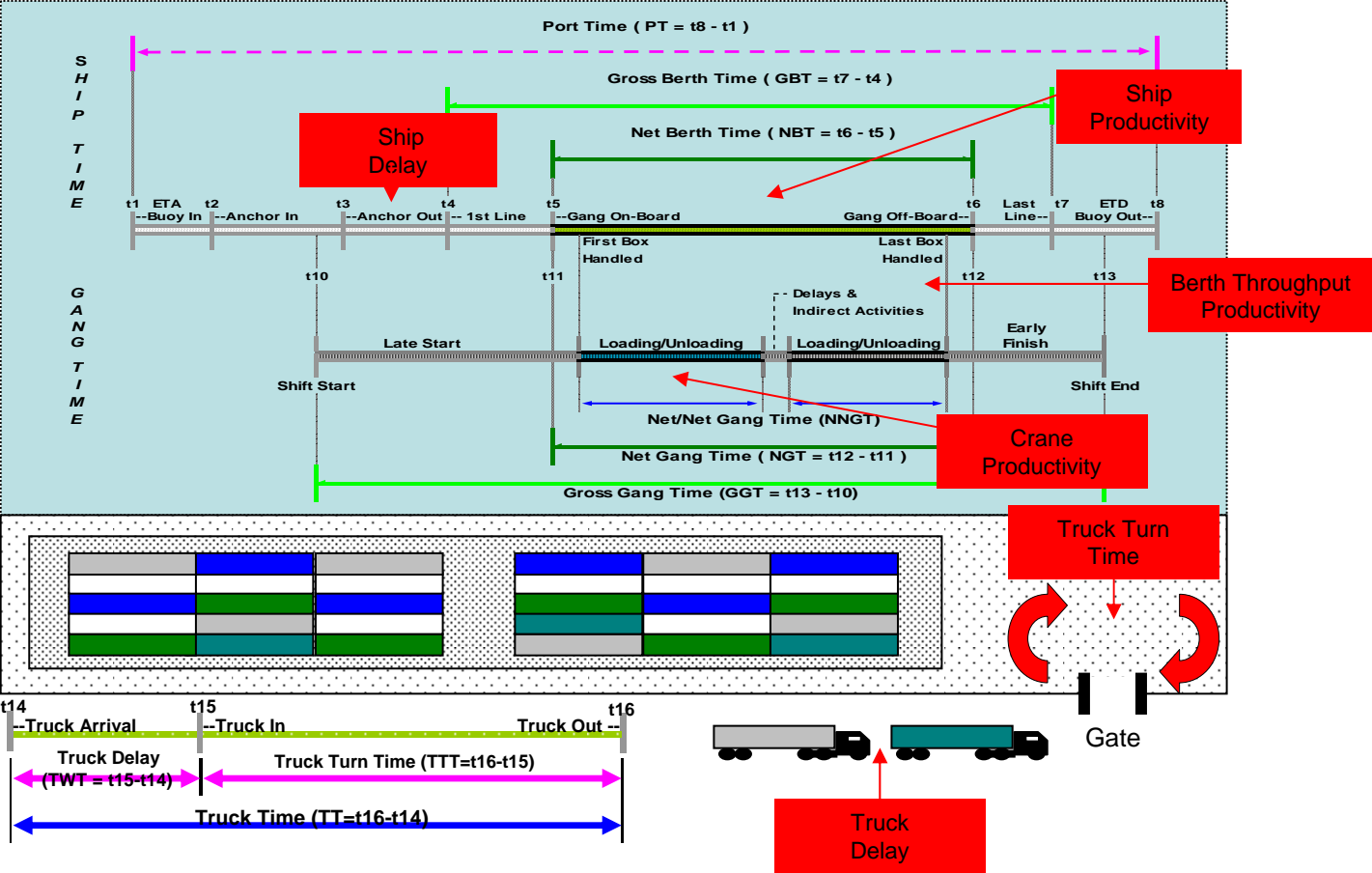
- 12 areas of activity occurring
 1. Pilotage
 2. Line handling
 3. On-board inspections
 4. Gangs (workers) mobilized
 5. Seal inspected
 6. Container moved from storage to chassis for evacuation or Customs processing
 7. Container is fumigated
 8. Truck/container is weighed
 9. Gate processing
 10. Truck/container is weighed/scanned
 11. Gate processing
 12. Truck leaves terminal



Drilling into the details for logistics analysis

- Entre, entre, por favor, toma un asiento
- Between, between, please, drink a chair
- Come in, come in, please, have a seat

The port example: how do we measure port operational performance?

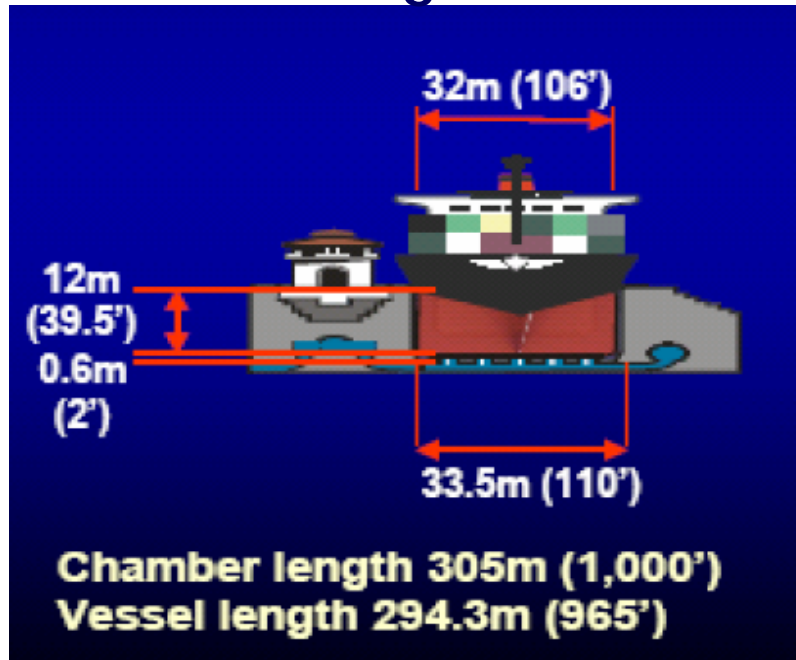


What are the emerging trends that affect logistics performance?

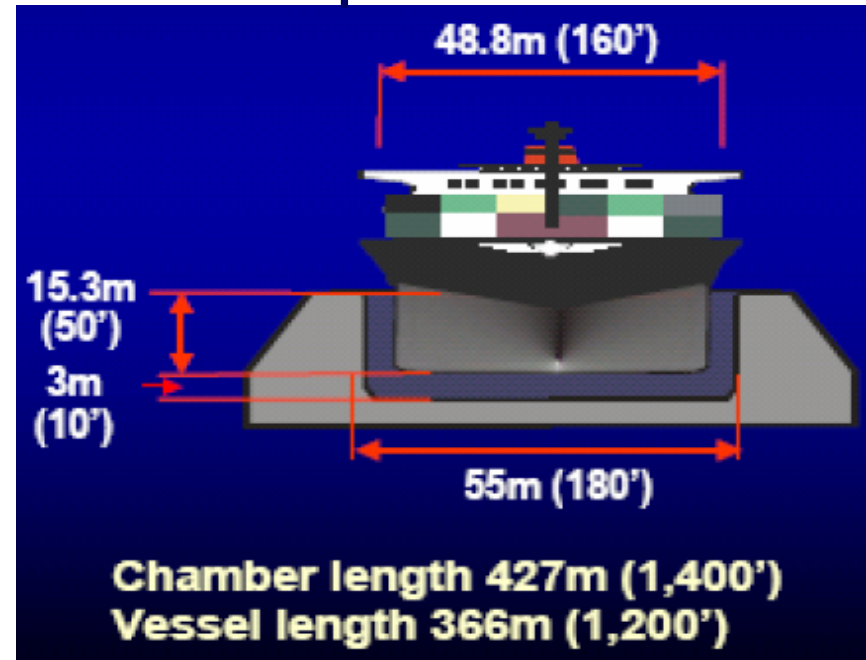
- Port operations performance being constrained by factors outside port gate
- Inter-port competition has evolved to inter-corridor competition
- Direct calls becoming more competitive with minimum handling volume of 500 moves/call
- Fuel prices negating labor cost advantages – aka the China factor
- Larger vessels being introduced by carriers in response to Panama Canal Expansion
- Introduction of regional security protocols
- Port expansion being constrained by urban development
- Countries generally are not mindful of the potential for monopolistic or oligopolistic abuses by terminal operators

Panama Canal Expansion Program

Existing Locks



Post-Expansion Locks

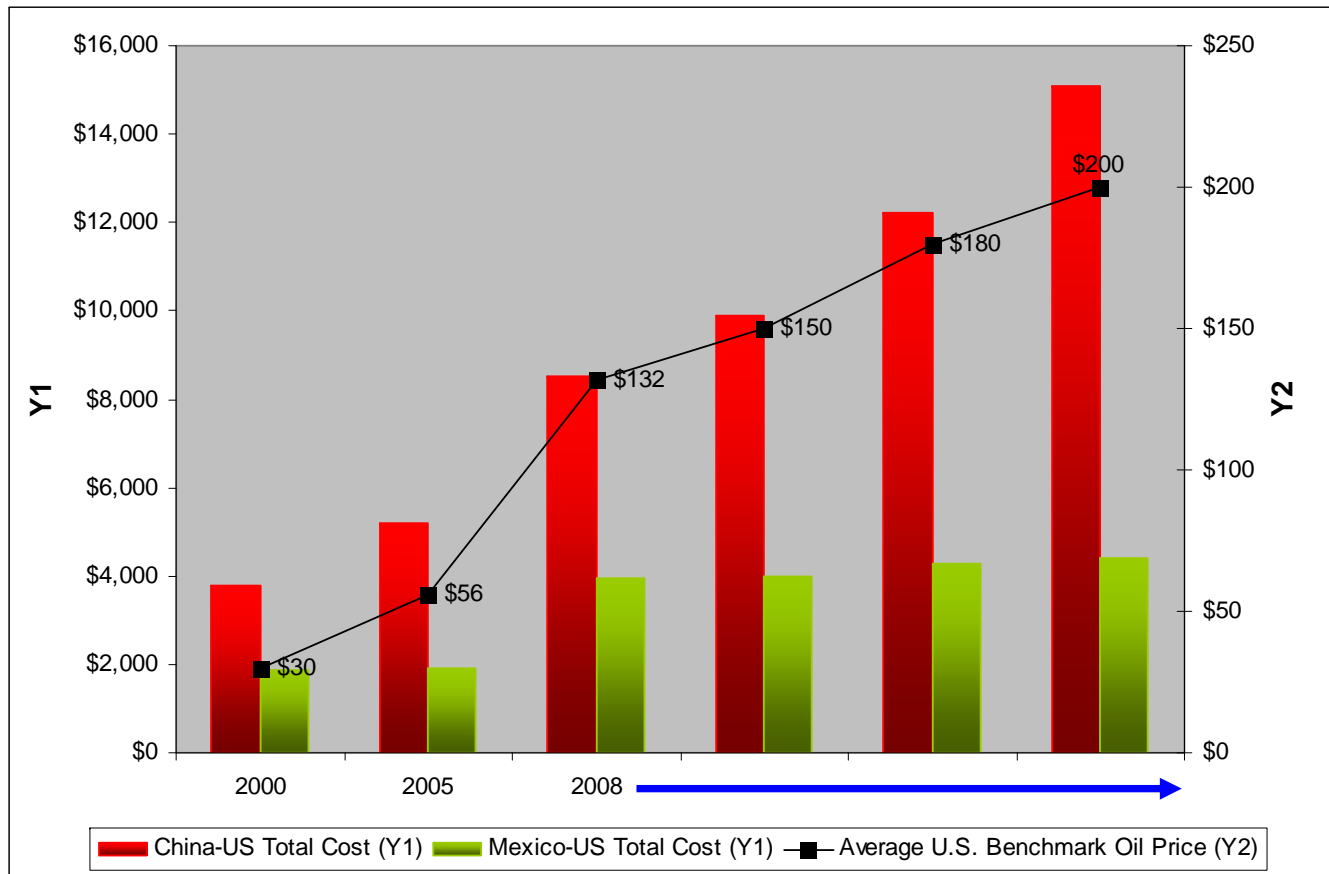


How are vessel economics changing?

	Direct Regional Services	Hub and Spoke		Fourth Revolution	
		Mother Vessel	Feeder Vessel	East/West Trades	North/South Trades
Vessel Capacity (TEUs)	6,000	7,500	2,500	12,500	6,000
Ships in String	8	7	1	7	1
Rotation Time	56	49	7	49	7
Daily Ship Cost (per FEU)	25.4	24.2	30.4	21.8	25.4
Subtotal Ship Cost per Round Trip (\$/FEU)	710	593	107	533	89
Total Ship Cost (one-way per FEU)	355		350		311
Port Cost (per FEU)			120		120
Total Ship and Port Cost (per FEU)	\$355		\$470		\$431

What we can expect: bigger ships, fewer calls, higher peak loads per call

How are fuel costs affecting competitiveness?



Source: U.S. Crude Benchmark Prices, U.S. Department of Energy; Shipping Costs – estimated averages from sample data from shipper manifests/carriers and phone quotes from freightforwarders; projected costs calculated by Nathan Associates Inc.

The anecdotal evidence of a shift towards regionalization -- steel

	China	United States
Cost of producing a ton of hot-rolled steel sheet	\$600	\$650
Transport cost/ton	\$100	--
Total	\$700	\$650

Logistics costs and fuel prices

- Soaring transport costs, not tariff barriers, pose the greatest challenge to trade today
- Using GTAP model, early results indicate:
 - At \$20/barrel, transport costs equivalent to 3% tariff rate
 - At \$80/barrel, transport costs equivalent to tariff rate of 9%
 - At \$150/barrel, transport costs equivalent to tariff rate of 11% (same as tariff rates in 1970)
- Long-distance routes especially vulnerable
 - Every 10% increase in distance = 4.5% increase in total transport cost

Are urban barriers a problem?

- Buenos Aires
- Santos
- Itajaí (Brazil)
- Buenaventura
- Cartagena
- Santa Marta
- Tema
- Alexandria
- Ensenada (Mexico)
- Shanghai
- Los Angeles



Colombian Logistics Performance – World Bank *Logistics Performance Index*

Singapore	1
Canada	10
U.S.	14
United Arab Emirates	20

Sudan	64
Mauritania	67
Kenya	76
Iran	78

Colombia	82/150
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Chile	32
Argentina	45
Brazil	61

Uganda	83
Cameroon	84
Benin	89

Rwanda	148
Timor Este	149
Afghanistan	150

Source: World Bank, *Connecting to Compete – Trade Logistics in the Global Economy*, 2007.

Returning to the old paradigm?

- Import trading partners may source their supplies/products from countries closer to home
- Likely to see diversions in some markets from truck to rail and from rail to all-water routes
- “Source” factories may be relocated to proximity markets or abandoned plants re-started
- Squeezing efficiencies into logistics systems will be major challenge

What are the solutions to counter fuel cost disadvantages?

- Squeeze more efficiencies out of the logistics chain
- Establish regional distribution centers
- Build intelligent logistics thinking into the transport system

How can USAID support efforts to improve logistics performance?

- Assist countries establish regulatory mechanisms to assure competitive behavior among port operators
- Assure that the ability to induce competition is adequately considered in the design of concession programs
- (Continue to) Promote development of corridor options
- Conduct diagnostics of logistics chains to assist countries and donors prioritize interventions
- Train country planners and economists to conduct logistics analysis to establish benchmarks and monitor performance on periodic basis

Thank you!



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