U.S. CONTAINER TRADE OUTLOOK

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Parsons Brinckerhoff

Source: www.pancanal.com
Agenda

- U.S. Container Trade:
  Why the Fundamentals are Important

- Panama Canal Expansion Impacts:
  Myths vs. Reality

- Implications for Southern California
2003-2007

- Five Years of High Growth
- Container Trade = Multiple of GDP?
2008-2012
- Historic Downturn in the Economy
- Unprecedented Drops in Container Trade

Graph showing TEUs and Real GDP from 2007 to 2012.
U.S. Container Trade Fundamentals

- Fundamental Drivers of U.S. Container Demand
  - Real U.S. economic sectors
    - Import/export imbalance
  - Containerization
  - U.S. import propensity (outsourcing)
  - Sourcing/Routing
  - Product-specific factors
U.S. Container Trade Fundamentals

- U.S. import propensity (outsourcing) - Apparel

![Graph showing U.S. import propensity and consumer spending over time](image)

- Consumer Spending
- Imports


Note: The graph illustrates the trends in consumer spending and imports over the specified years, highlighting the impact of outsourcing on U.S. import propensity.
Sourcing/Routing

Shares of U.S. Import Value for Apparel

- China
- Mexico
- Vietnam
U.S. Container Trade Fundamentals

- U.S. Economic Sectors
  - Consumer Spending
    - Durables
    - Nondurables
  - Fixed Investment
    - Residential
    - Commercial Structures
  - Inventories
- Import Product Detail
  - Food and Beverages
  - Apparel
  - Furniture
  - Appliances
  - Consumer Electronics
  - Vehicle Parts
  - Building Materials
  - ...
U.S. Container Trade Fundamentals

Apparel Modal Detail

- Air
- Other
- Other Vessel
- Container
- Demand
U.S. Container Trade Fundamentals

- U.S. Consumer Spending – Durable Goods

- Recreational goods & vehicles
- Furnishings & household equip
- Other durable goods
- Motor vehicles and parts
## U.S. Container Trade Fundamentals

### Total of Real GDP Components

<table>
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<th>Year</th>
<th>Residential Fixed Investment</th>
<th>Nonres Structures - Other</th>
<th>Nonres Structures - Manufacturing</th>
<th>Nonres Structures - Commercial</th>
<th>Other Nondurables</th>
<th>Clothing and Footwear</th>
<th>Food and Beverages</th>
<th>Other Durables</th>
<th>Recreational Goods &amp; Vehicles</th>
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The graph shows the growth of different components of Real GDP from 2006 to 2022, with a significant increase in Residential Fixed Investment and Nonres Structures - Other.
Real GDP Components Summary

- Residential fixed investment growth 3X GDP, highest growth in first four years.

- High growth in furnishings and household equipment through 2016.

- Slightly outpacing GDP:
  - Nonresidential structures
  - Consumer spending on recreational goods
  - Non-durable goods, excluding gasoline

- Growth slower than GDP: Other durable goods
Early growth in U.S. container import volumes in 2014 to 2017, led by housing related goods, should not be taken as an indicator of a return to high long term growth rates.
Fundamental Drivers of Volume are Changing

- Other fundamental drivers of historic growth have reached limits and/or may reverse course:
  - Containerization (of imports)
  - Increased import propensity due to re-shoring
  - International sourcing from China moving to Mexico
  - International routing through Mexico or Canada
Panama Canal Expansion: Program Elements
Panama Canal Expansion: Locks

Source: www.pancanal.com
Panama Canal Expansion: New Locks
Panama Canal Expansion: Larger Ships

**EXISTING LOCKS**
- Vessels up to 5,000 TEUs
- 12.04m (39.5')

**NEW LOCKS**
- Vessels up to 13,000 TEUs
- The use of rolling gates will ease maintenance
- 15.2m (50')

**Comparative Dimensions**
- Existing Locks: 12.04m (39.5')
- New Locks: 15.2m (50')
Panama Canal Expansion: U.S. Trade Lanes

- Panama Canal trade is concentrated in U.S. routes
- Largest trade lane is Northeast Asia – U.S. East Coast
Expansion Effects: Coastal Shifts

- Three interrelated factors will affect potential shifts:
  - History of shifts and remaining potential
    - Supply chain network development
  - Market segments and drivers
    - Competitive dynamics
  - Transportation cost reductions
    - Port readiness and inland infrastructure
Expansion Effects: Coastal Shifts – Recent History

- Significant shifts have already occurred over the past decade
- This trend may continue apart from expansion impacts

East and Gulf Coast Share of NE Asia Container Volume Tonnage by 2013 $/kg

Sources: US Census Bureau and Parsons Brinckerhoff analysis
Expansion Effects: Coastal Shifts – Supply Chains

- Flexibility and redundancy / closeness to end markets

**Container Port (CP)**
- Gateway for goods
- Intermodal transfer
- Often land constrained

**Import Distribution Center (IDC)**
- Unloads containers, redirects goods
- Preferably near port

**Inland Port (IP)**
- More land for intermodal transfer and import DCs

**Mixing Center (MC)**
- Mixes domestic & import goods for distribution
- Stores, consolidates, redirects goods
- Uses, not keyed to intermodal service

**Intermodal Logistics Center (ILC)**
- Container transfer hub (rail ↔ truck)
- Distribution keyed to intermodal service
Global Shipping Alliances: G6 and P3

Maersk Transpacific 3 Eastbound Service
Expansion Effects: Coastal Shifts – Market Segments

- All containers are not created equal
  - Container volumes are too often thought of as homogeneous and destined for a general U.S. inland destination

- Distinct market segments have significantly different drivers:
  - Sources/destinations
  - Product type and end uses
  - Product value
  - Mode of transport (air, truck, rail, barge)
Expansion Effects: Coastal Shifts - Competition

- Who are competitors for serving U.S. markets? West Coast vs. Canal? West Coast vs. East Coast railroads?
Expansion Effects: Coastal Shifts - Competition

“Competitors” have:

- Different capabilities to segment the market and price services:
  - Premium versus slower and less frequent services
  - Origin/destination pricing vs. Canal tolls
Expansion Effects: Coastal Shifts - Competition

Most Competitive Region
Expansion Impacts: Coastal Shifts – Southeast
Expansion Effects: Coastal Shifts – Cost Reductions

A variety of cost factors are likely to affect potential shifts

- Per TEU cost reduction to the US East Coast - $400
  13,000 TEU vessel rather than a 5,000 TEU Panamax vessel

- Cost reductions must be *realized by shippers* to affect shifts
  - Carriers, US and transshipment ports and the Panama Canal will likely retain a portion of East Coast cost reduction savings
  - Net savings passed on to shippers could be: $200

- Cost reductions are *relative* to those on the West Coast
  leaving a comparative per TEU cost reduction of: $100
Expansion Effects: Port Readiness

- US ports capable of handling much larger ships:
  - US East Coast ports
    - New York/New Jersey, Baltimore, Virginia, Miami
  - Other major ports are less certain
    - Charleston, Savannah

- Multiple ports of call are desired by liner companies to fully utilize larger ships, i.e. 2-3 calls on US East Coast
Panama Canal Expansion Impacts - Summary

- The historic frenzy about coastal shifts is overblown

- There will be shifts, but not explosive
  - Major factor is the development of supply chain networks
  - Net cost reductions are likely less than expected
  - Competition between the West Coast and Panama Canal will be less than imagined
  - Shifts are likely focused on the Ohio Valley and Atlanta regions
  - Shifts could evolve slowly depending on Southeast port development and use of transshipment
  - Local impacts could be significant
Implications for Southern California

- Five-year U.S. container volume growth appears positive
- Long term volume growth is likely modest
- Beware a “return to normal” view of U.S. volume growth
- Direct Panama Canal expansion impacts on coastal trade are likely to be minimal and gradual
- Pay attention to fundamentals (product detail, economic sectors, sourcing, ...) for U.S. as well as coastal trade
- Examine upside potential/downside risk
Thank You

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