AAPA/NAWE/MARAD Marine Terminal Management Training Program
Role of Marine Terminal Operations in the Global Supply Chain
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Key Themes

- **Gateway-centric, not port-centric**
  - Supply chain is only as strong as its weakest link
  - Supply chain partners have alternatives

- **Shipping costs limit the size of addressable import and export markets**
  - Productivity – impacts shipping costs
  - Reliability – impacts inventory carrying costs
  - Compatibility – different shippers have different business models and strategies

- **Worry about what worries the supply chain partners**
  - Where will their markets be tomorrow?
  - Environmental accountability matters
Issues For Importers

- **Fallout from ocean carriers’ financial troubles**
  - Equipment shortages
  - Some carriers no longer providing chassis
  - Higher rates and fewer slots

- **Fallout from higher fuel costs**
  - Fuel surcharges
  - Slow steaming
  - Re-think warehouse/distribution center locations

- **Uncertainty about consumer markets**
  - Costs are difficult to pass on to consumers
  - What will happen to those markets?
Low wages in emerging markets are partly due to their younger populations
Outsourcing services maturing markets more cheaply and accesses growing markets
Low wages in Latin America indicate they are prime locations for manufacturing “near-sourcing”
Declining Inventory/Sales Ratio

Supply chains are longer due to outsourcing but less responsive to changing market conditions

- Less inventory = lower financial cost and less risk of over-stocking
- Higher productivity = higher origin to market speed
- Greater reliability = less safety stock

Source: Census Bureau, Moffatt & Nichol
Inventory Has To Be Financed

- At 5%, $450 billion of inventory costs companies $22.5 billion per year
- A 1% reduction in inventory would save companies $225 million in financing costs

AAA-rated Corporate Bond Yields

Source: Census Bureau, Moffatt & Nichol
World consumer markets are changing due to the significant rise in developed economies’ elderly populations and rising income in emerging markets.
Markers Locations Are Changing

- US population is moving to urban, coastal and Southern locations
- Shippers are constantly re-thinking their logistics and the supply chain is reacting too
- Similar trends are evident in other parts of the Americas – e.g., Canada and Brazil

Source: US Census Bureau, Moffatt & Nichol
Weak Outlook For The US Dollar

- It is unlikely that the US service sector surplus will ever offset the goods trade deficit.
- Until the US trade deficit begins to reverse, the dollar will weaken further, which will help exports and eventually hinder imports.
- Latin American exporters may be negatively impacted by this.

Source: US Department of Commerce, Moffatt & Nichol
Relative to faster growing Emerging Markets, the US has

- Lower cost of capital, higher cost of labor
- More advanced biotechnology
- More reliable quality control and surveillance of compliance
- Relative abundance of scarce resources such as water

A partial list of high potential exports fitting these advantages:

- Low labor-content capital goods
- Grain and oilseed
- Meat
- Wood pellets
Growing income in emerging markets increases demand for meat and grain feedstock

Lack of investment in inland waterway infrastructure is a significant bottleneck for US exports
Containerization Is Still Increasing

Both imports and exports are increasingly containerized:
- Partly due to technical requirements for handling genetically modified grain/oilseeds
- Partly due to shippers’ desires to be flexible in order to keep shipping costs down
Port Container Volumes Reflect Macro Data

- Imported and empty containers are leading port volume growth
- Exports have been flat since March despite growth of the global economy

Source: AAPA, port authorities, Moffatt & Nichol
Containers Concentrate In Population Centers

- These are the locations where the bulk of consumption takes place
- Containers are increasingly retained near ports – exporters need transflow facilities at or near ports
Shippers are making great strides to improve truck fleet efficiency
- Nitrogen-filled low rolling resistance tires
- Trailer side-skirts
- Idling time management
- Driver training
- Nitrogen refrigeration

Shippers are using trains to reduce emissions

Ports are expected to contribute too
- Cold ironing
- Equipment electrification
- Efficient gate management
Summary

- Shippers need high productivity and reliability
  - Larger ships are good for shippers
  - Gate management
  - Equipment availability

- Shippers want supply chain partners/stakeholder managers
  - Understand their business model

- Anticipate their future needs
  - How will they supply their markets?
  - Environmental accountability will become increasingly important