Optimisation of Transport Costs: What is first, the market or infrastructure? ©

XIX AAPA Latin American Congress of Ports
Manta Ecuador
Summary

- Ports’ sector performance
- Evolving supply chain
- Regionalisation

- Foreland Regionalisation
- Private sector capital participation
- Opportunities – a concrete example
How resilient an industry?

PORTS’ SECTOR PERFORMANCE

8 June 2010
Today the focus is on the negative

- **World Bank**: this recession was first decline in Global trade in 80 years.

- **IMF**: first contraction in global GDP since WWII.

8 June 2010
What happened?

• A restructuring of massive cheap debt and bloated organisations - but work out process well underway.
• Question: Have we been too harsh with the port sector though in our negative estimates and short sightedness going forward?
The industry’s silver lining: Riding out recessions…

The global container port industry has shown resilience against recessions in the past – 2009 was different though; but its forecasted turnaround indicates a resilient sector.

Source: Drewry Shipping Consultants Ltd

The global container port industry has shown resilience against recessions in the past – 2009 was different though; but its forecasted turnaround indicates a resilient sector.
Last quarter of 2008, first quarter 2009

- US sub-prime mortgage crisis hit mid 2007!
- Recession started to bite the last quarter of 2008 and hit hard in 1H 2009
- But the banking crisis in the second half of 2008 was the really critical factor

Quarterly global container port volume growth/decline

Source: Drewry Shipping Consultants Ltd
The port industry’s resiliency

- 1982 worst year prior to this recession with 4.2% annual growth. By 2012 TEU traffic volumes will exceed 2008.

Source: Drewry

8 June 2010
Contrast with liner shipping margins – examples of 2009 losses

Maersk Line  Hapag Lloyd  Hanjin  APL  CSAV  Hyundai

Source: Drewry Shipping Consultants Ltd
But freight rates recovering – for now…

Drewry Global Freight Rate Index

Source: Drewry Shipping Consultants Ltd

8 June 2010
Defending container terminal profit margins

- Volumes, revenue and absolute profitability were down in 2009
- Margins were generally maintained though, e.g.
  - DP World
  - ICTSI
- A profit margin was still there – in the worst year the container port industry has ever experienced

Source: Drewry Shipping Consultants Ltd
Forecast global container port demand growth to 2015: 3 year comeback - now that’s industry resilience

What is the “new normal”?

Numbers on top of bars indicate percentage y-o-y growth

Source: Drewry Shipping Consultants Ltd
Forecast demand highlights

<table>
<thead>
<tr>
<th>Region</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Europe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Europe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Far East</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South East Asia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid East</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carib/C.America</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.America</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oceania</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Asia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Africa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Europe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>World</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shaded cells show when throughput levels are expected to return to peak of 2007/08

Eastern Europe may be beyond 2015

Source: Drewry Shipping Consultants Ltd

8 June 2010
Result

• Port industry very resilient.
• Also very capital intensive.
• And requires very long lead time to address market changes.
And the continuing need to compress it

EVOLVING SUPPLY CHAIN
### Growth in container ship size

<table>
<thead>
<tr>
<th>Year</th>
<th>Average ship size (teu)</th>
<th>Largest ship in world fleet (teu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>375</td>
<td>3,057</td>
</tr>
<tr>
<td>1990</td>
<td>1,355</td>
<td>4,409</td>
</tr>
<tr>
<td>2000</td>
<td>1,741</td>
<td>7,200</td>
</tr>
<tr>
<td>Current</td>
<td>2,191</td>
<td>13,500+</td>
</tr>
</tbody>
</table>

Source: Drewry Shipping Consultants Ltd
Growth in containership size

Length (metres)

Source: Drewry Shipping Consultants Ltd

Largest Ship in Fleet

27 June 2008
8 June 2010

AAPA Port Property

www.aegirports.com

Aegir Port Property Advisers
Emma Maersk (PS) class
Result: hinterland reach

- Big ships only work as part of a global network. They need to reach deep into the hinterland to be financially viable.

- Big ships are inflexible - could be a serious liability in a downturn; the bigger the ship the larger the risk.

- Big ships need deeper water, bigger cranes, longer berths, bigger container yards, in short – more port infrastructure and land in the port and throughout the logistics chain.

- Increased time in port can quickly outweigh economies of scale.
Port property – the new strategic asset

• 8,000 TEU ship requires 100 acres to keep container flow inbound smooth; most large ports are land constrained.

• Throughput per acre is key to making customers happy and money eg, in US about 4,000 – 5,000 TEU/acre yet in Europe and Asia 10,000 TEU/acre and higher is not unusual
Shortening the logistical supply chain: Requires intermodality and real estate

Source: A.T. Kearney

8 June 2010
Evolution of a port

PORT REGIONALISATION

8 June 2010
Ports – now nodes in an ever expanding and integrating global supply chain

• Within present supply chain weakest link are ports and their inability to process more throughput.
• Just in time is now ‘integrated time’, requiring more specialised facilities such as ‘fast buildings’.
• Property and its management at, near and related to ports is key to addressing these issues.
Regionalisation

• Ports will integrate into new freight paradigm (major impact on land usage).
• Inland distribution cost - now savings area as over water transport now a commodity.
• Constraints (political, ecological, economic) will force hinterland expansion and access
• All requires substantial use and need for real estate facilities
Regionalisation (cont.)

• Corridors and inland terminals – cornerstones in port regionalisation.
• Inland ports critical to in maintaining major seaport efficiency, attractiveness and competitive advantages (eg velocity/productivity).

Regionalisation: heavily dependent on property

Level of functional integration

Setting

Expansion

Specialisation

Regionalisation

Evolution of a Port

8 June 2010
Next phase

FORELAND REGIONALISATION

8 June 2010
Regionalisiation: heavily dependent on property

Level of functional integration

Evolution of a Port


8 June 2010

Port

Container

Bulk

Freight dist centre
General cargo
Reconversion
Freight corridor
Urban area
Foreland Regionalisation

Cooling off now but will come back with a vengeance

INVESTMENT DEMAND FOR YOUR PORT ASSETS
Infrastructure trends and opportunities – the money is there

• OECD estimates **US$70 trillion required for infrastructure development and improvement – 2030.**
• Average size of infra fund now US$3.3b from US$159m in ’03; ‘Dry Powder’ for 2012 – US$100b.
• Current financial crisis has resulted in less debt - opening door for more equity participation.
• Although assets are priced at more realistic levels there are also lower return (IRR) expectations as well in the 15%-18% from 18%-20% in the 2006-2008 period.
The interest by the sector for PPP’s and direct investment is there...

- ‘Private/Public financing of freight transportation infrastructure is a compelling need that is being inadequately addressed.’

*Critical Issues Impact in the Freight Transportation in the Southeast Region, CIFTS, Issue 4 – Fall 2009*
### Comparative infrastructure yields with port investments

<table>
<thead>
<tr>
<th>Asset segment</th>
<th>Risk</th>
<th>Avg cash yield (yrs 1-5)</th>
<th>Avg leveraged IRR</th>
<th>Capital appreciation potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toll roads</td>
<td>Low</td>
<td>4%-9%</td>
<td>8%-12%</td>
<td>Limited</td>
</tr>
<tr>
<td>Seaports</td>
<td>Medium</td>
<td>4%-7%</td>
<td>15%-18%</td>
<td>Yes</td>
</tr>
<tr>
<td>Merchant power stations</td>
<td>High</td>
<td>4%-12%</td>
<td>15%-25%</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Source: JP Morgan

8 June 2010
OPPORTUNITIES – A CONCRETE EXAMPLE

Where ports and the private sector meet

8 June 2010
Opportunities

• Maximise port’s value through land banks
• Create new revenue streams focused on value added activities
• Release tied up capital to expand/modernise port
  – Raise off balance sheet debt & equity with:
    • PPP – Public Private Partnerships
    • L-T ground leases
    • Build-to-suits

8 June 2010
Opportunities

- Create port competitive advantages by:
  - Integration of hinterlands and port to shorten supply chain eg, intermodal platform
  - Address client specific needs for specialised RE facilities.
  - Develop specific use, non-traditional port properties eg, distribution, to support core business.

All of which are property based

8 June 2010
Challenge for East coast load centres post Panama Canal widening

• Depth, bridge clearance and terminal capacity.
• Deep reach into the hinterlands.
• Efficiency, velocity and throughput requiring intermodal capabilities.
Port property – intermodal and value added services

• As transport costs increase (fuel, manning, etc – about US$ 50,000 to $60,000/day for an 8,000 TEU ship), local, value added service become increasingly attractive to shippers – requires land and facilities.

• Intermodal capabilities increasingly critical for viability of port transport nodes and larger ships to access hinterlands deeper.
Charleston South Carolina

Proposed intermodal facility

New 1.5m TEU terminal

Proposed intermodal facility

Historic Charleston
Intermodal Concept Charleston South Carolina
Private sector participation in this case:

- Private sector can deliver imperative competitive advantage to a port.
- Both projects represent an investment in excess of US $600m, which will not have to come form either the port’s or state’s coffers or balance sheets.
- Projects will have largest positive ecological impact on the region.
- Will create the platform necessary for a viable gateway port.
Conclusion

Once building infrastructure before market demand would create it – there is far too much capital required, planning and development time to do this without far too much risk now.

8 June 2010
‘Navigating the World of Port Properties – To Maximise the Value of Ports’

Thank You

Aegir Port Property Advisers
Drewry Shipping Consultants

8 June 2010