Puerto de Gran Escala
The case for a new container terminal in central Chile

Port Investment and Container Shipping Markets
International Transport Forum | Roundtable

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Agenda

Part I: The chilean state port system

Part II: Puerto de Gran Escala
Agenda

Part I: The chilean state port system

Part II: Puerto de Gran Escala
A rough country profile

- 17.5 million inhabitants
- Life expectancy: 76 years (men), 82 years (women)
- Approximately 4,300 km long, but 180 km wide on average
- In very approximate terms:
  - 1,800 km of desertic or semi-desertic north → mining
  - 500 km of ‘mediterranean’ centre → agriculture
  - 2,000 km of ‘green’ south → wood-related, fish farming
- 38% of GDP generated by exports (OECD average 27%)
- “Insular” nature (Los Andes, deserts, etc)
- 110 million ton/yr of foreign trade, 94% of which goes through seaports
State-owned ports (I)

- System modernisation in 1997 (Law 19,542), which subdivided the former Empresa Portuaria de Chile (Emporchi) into 10 autonomous and local Empresas Portuarias (EP)
- EPs: landlord model
- Have a mandate to ensure good quality infrastructure and efficient port operation, whilst maintaining a sound financial position
- Not allowed to carry out freight transfer operations or develop pier infrastructure
State-owned ports (II)

- Terminal operation down to the private sector under two alternative regimes:
  - ‘Mono-operator’: sole concessionaire operates an entire terminal; or
  - ‘Multi-operator’: multiple agents operate within a terminal administered by the EP
- Currently, 7 out of 10 EPs have concessioned at least one terminal under mono-operator regime
- At least 2 of the remaining 3 are planning concessions for the mid-term
- Approximately 75% of total tonnage is transferred by the main three ones
Roles within the system

- **Port companies:**
  - Autonomous, accountable, expected to turn a profit
  - But: board of directors appointed by the Government

- **Ministry of Transport and Telecommunications (MTT):**
  - Central/systemic role
  - Defines and approves yearly management plans (i.e. goals), port Master Plans, modifications to port authority domain
  - Produces non-binding opinion on tender projects

- **Sistema de Empresas Públicas (SEP):** oversees and safeguards financial performance of state companies in general
Agenda

Part I: The chilean state port system

Part II: Puerto de Gran Escala
Central Chile

- 66% of the population
- 60% of national GDP
- 60% of public ports tonnage (V+SA)
- Among others, significant volume of imported retail goods and agricultural produce for export.
- Important container volumes: average traffic in the last three years (2010-2012) totalling 1.9 millions TEU/yr.
- By throughput, Valparaiso ranks 15th along the WCLA, San Antonio 13th
Valparaíso
San Antonio
Connectivity with Santiago
Balance between demand and capacity
Balance between demand and capacity

At some point in the first half of the decade, more capacity will be needed.
But nominal...
But nominal...

Exhaustion of nominal capacity in 2015

Demand @ GDP 4%
Current capacity
But nominal...

Exhaustion of nominal capacity in 2015

But that is on average, without seasonality
But nominal...

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So port congestion will be experienced earlier

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Current capacity
**But nominal...**

- Exhaustion of nominal capacity in 2015
- But that is on average, without seasonality
- So port congestion will be experienced earlier

In 2011, average waiting time (at STI and TPS), as percentage of total service, was 16.8% --but best practice calls for 10%
Balance between demand and capacity

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A final reflection on this

Demand curves will certainly not curl up indefinitely, at some point they will start looking s-shaped
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The question is when (and we need to study this in more detail)

but also, does it really matter at this stage of the planning process?
The need to advance rapidly (I)

• Scale and complexity: engineering challenges, environment permit approvals, port-city relations, etc → long time until inauguration of the first terminal

• First time since the early 1900s that new breakwaters will be built in the country, so no recent experience on this type of project, and certainly not with the environmental regulation now in place

• Existing terminals might face a degree of obsolescence: not only will you need longer docks but also deeper waters (current draft in Valparaíso is 11.4 m, in San Antonio 12.4 m)
The need to advance rapidly (II)

• Exact (but potentially catastrophic) consequences of severe port congestion on foreign trade are uncertain but, for example, could include:

  • Ships being diverted 500 km south to ports in the Concepción Region ➔ additional cost of longer journeys by truck, and/or

  • The introduction of ‘congestion fees’ such as those imposed in Chennai (India) in 2011, where charges between USD 75 and USD 145 per TEU were reported.

• The unknown economic and strategic consequences of a potentially significant fraction of Chilean exports being forced to rely on feeder services to Callao (Perú).
A world of pain? Example

- Hypothetical 5,500 TEU ship Long Beach - Valparaíso, transferring 1,200 TEU and currently facing total port costs of approximately 74,000 USD.

- A surcharge of 75 USD/TEU would result in an additional cost of 90,000 USD, thus more than doubling the total port cost of calling at Valparaíso.

- In the case of a hypothetical post-panamax vessel of 10,000 TEU capacity, assuming a transfer lot of 2,500 TEU, the 75 USD surcharge would result in an additional 187,500 USD per port call.
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OK, but, does it really matter?
Logistic costs are a barrier to foreign trade

Example: *ad-valorem* logistic cost of chilean manufacturing trade:

\[
\text{Fletes} = 4 \times \text{aranceles}
\]

Countries on a commercial agreement with Chile

- Chile has 22 trade agreements with 59 countries
- From its 16.8 million inhabitants to more than 4,000 million potential consumers (86% of world GDP and 62% of world population)
- In practice, 93% of chilean exports occur under some agreement

Fuente: DIRECON; International Investment Commission (Chile)
Logistic costs are a barrier to foreign trade

Example: *ad-valorem* logistic cost of chilean manufacturing trade:

Chile has already made the big gains in competitiveness regarding tariffs, we now need to concentrate on the logistic cost of our exports

Ad-valorem logistic costs...how significant are they?

Fuente: LBO Consulting Group, 2010
Enter PGE: 4 possible locations

- La Ligua
- Ritoque
- Yolanda
- San Antonio
### Profile of the two finalists

<table>
<thead>
<tr>
<th>San Antonio</th>
<th>Valparaiso</th>
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<tbody>
<tr>
<td><img src="image1" alt="San Antonio Image" /></td>
<td><img src="image2" alt="Valparaiso Image" /></td>
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<tr>
<td><strong>Design vessel:</strong> post-panamax of 400 m LOA</td>
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</tr>
<tr>
<td>Maximum total dock length: 3 560 m in two fronts</td>
<td>Maximum total dock length: 1 770 m in one front</td>
</tr>
<tr>
<td>Breakwater length: 3 700 m</td>
<td>Breakwater length: 2 300 m</td>
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<tr>
<td>Backup area: 170 ha</td>
<td>Backup area: 44 ha</td>
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<tr>
<td>Nominal capacity: 6 MMTEU/yr</td>
<td>Nominal capacity: 3 M TEU/yr</td>
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<tr>
<td>Estimated total investment: US$ 2 750 M</td>
<td>Estimated total investment: US$1 420 M</td>
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PGE: so what next?

• From a technical point of view, port companies could probably be ready for tendering within a year or so.

• Hurdles lie elsewhere:
  – Decision and instruction about which project to start with
  – Pronouncement from anti-trust authorities
  – Contractual commitments made by the port companies not to tender new terminals before 2017 (San Antonio) and 2018 (Valparaíso)

• Some key questions:
  – Could a 30 year concession provide efficient funding and financing for the breakwater, itself a large and potentially risky expenditure?
  – Would it be better to jointly tender the breakwater and port terminal, or to do it separately?
  – Would the current bid-winning system, i.e. by lowest composite transfer rate offered (in $), work well in this case?
  – Is four operators just enough? Is it in a scenario where everyone has to compete with (big and fancy) PGE?
Thank you
First time since the early 1900s

Proyecto Otaegui et al. 1897

Proyecto Pearson 1911

Proyecto Kraus 1905 (parcial)