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Naciones Unidas United Nations CEPAL ECLAC

HSB Hochschule Bremen City University of Applied Sciences

A Chilean Maritime Highway: Is It a Possible Domestic Transport Option?

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Background and Study Focus

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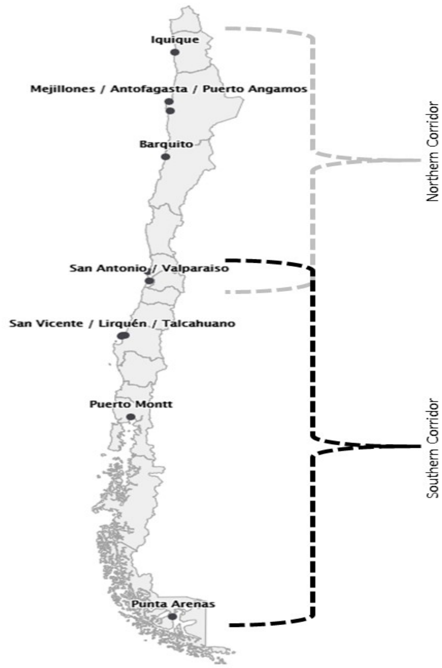
- Cabotage re-regulation in Chile has proven difficult to achieve politically but provides a study 'what if'
- Two modes to evaluate general cargo mode-switching potential (truck to short sea) in two corridors of study
  - bulk only has maritime option
  - rail only east-west (e.g., mine to port)
- Focus of study: Can general cargo be switched from road to sea? What policy options on the continuum of cabotage – exceptions – no cabotage might make sense.



The Study Corridors

Coastline (N-S)= 4300 kms.
Inland (E-W)= 180 kms.

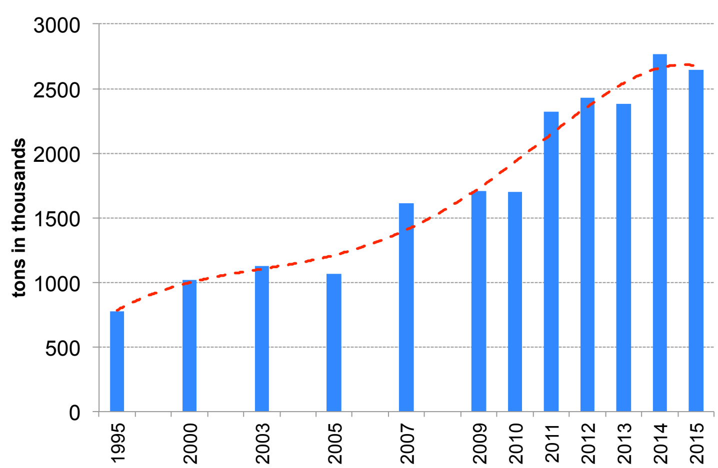
Two corridors overlap with Valparaiso and San Antonio ports close to Santiago.

Northern Corridor = Iquique–S.Antonio

Southern Corridor = P. Montt–Valpariso.

No rail N-S. About 90% moves by truck.

Development of Maritime Cargo 1995-2015



Source: Authors, based on Directemar Chile

Evolution of Chilean cabotage by mode in tonnes ('000s), 2006–2014

Year	Road	Maritime	Rail	Air
2006	445 131	12 183	25 747	31
2007	551 099	12 378	26 616	30
2008	661 187	12 999	27 185	28
2009	575 037	11 790	25 492	27
2010	613 571	11 807	25 215	29
2011		12 546	27 375	31
2012		[illegible]2 612	27 537	31
2013		13 [illegible]3	26 036	28
2014		14 210		27
2015		14 898		

90.8%

Sources: INE, Directemar, JAC, MTOP

Northern Corridor General Cargo Volumes in Tonnes [& TEU] 2015 (some ports removed)

from / to	Iquique	Antofagasta	Barquito	Valparaiso	San Antonio	Total corridor	Number of containers*	Intercorridor South-North
Iquique				900	3472	4372	437	471
P Angamos			93 349	90 048		183397	18 340	
Mejillones			6 946	3 828	32 661	43435	4 34[illegible]	97866
Antofagasta								975
Valparaiso	7 192	7 508	38 074			52774	5 277	
San Antonio		400				400	40	8190
Total corridor	7 192	7 908	138 369	94 776	36 133	284 378		
No. of containers*	719	791	13 837	9 478	3 613		28 438	
Intercorridor (North-South)	3 600				58 656			169 758

Southern Corridor General Cargo Volumes in Tonnes [& TEU] 2015

(some ports removed)

from / to	Valparaiso	San Antonio	San Vicente	Puerto Montt	Punta Arenas	Total corridor	Number of containers*	Intercorridor North-South
Valparaiso								52 774
San Antonio					8 190	8 190	819	400
San Vicente		383			5 969	6 352	635	
Lirquén		1 067			1 290	2 357	236	3 600
Punta Arenas		57 206	36 074			93 280	9.328	
Total corridor	-	58 656	36 074		15 449	110 179		
Number of containers*	-	5 866	3 607		1 545		11 018	
Intercorridor South-North	94 776	36 133	97 866	71	975			286 995

Key Conclusions From General Cargo Data

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- Northern Corridor:
  - Annual intra-corridor volumes for shipping services have grown by more than 2.5 times from 2000 to 2015, and is currently about 28,400 containers
  - Inter-corridor traffic is relatively stable.
- Southern Corridor:
  - Annual intra-corridor volumes have declined and are now about 11,000 containers.
  - Puerto Montt not a hub on the southern corridor; really only serves intercorridor requirements.

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Key Facts

- In 2015, two national shipping companies (Naviera Ultranav Ltda and Navimag Carga S.A.) transported 26% of general cargo.
- The incumbent operators also have relevant market share in the other cabotage trades (bulk and liquid bulk).
- Containers in inter-corridor traffic available to top up the service demand should both corridors be developed.
- Need to understand if there is seasonality at play. If stable, there could be demand to support a weekly general cargo service carrying less than 100 TEUs.

Northern Corridor Comparison

Shipping Route (O-D)		Distance (km)	Container Size & Type*	Freight Rate in USD **	Transit Time (hrs)***
San Antonio	Iquique	1520	40' DV	1600	48- 72

Road Route (O-D)		Distance (km)	Container Size & Type*	Freight Rate in USD**	Transit Time (hrs)***
San Antonio	Iquique	1810	40' DV/R full	3600	36

Sources: Multiple; see paper; Notes: see paper

Southern Corridor Comparison

Shipping Route (O-D)		Distance (km)	Container Size & Type*	Freight Rate in USD **	Transit Time (hrs)***
San Antonio	Talcahuano/ San Vicente	354	40' R	n/a	48
	Puerto Montt	1083	40' DV	2970	48- 72
	Punta Arenas	2667	40' DV	1971	72-96
			40' R	2816	72-96

Road Route (O-D)		Distance (km)	Container Size & Type*	Freight Rate in USD**	Transit Time (hrs)***
San Antonio	Talcahuano	518	40' DV/R full	845	9
	Puerto Montt	1048	40' DV/R full	1760	16

Sources: Multiple; see paper; Notes: see paper

Additional Considerations

- In 2015, an estimated 8,500 units were repositioned via maritime cabotage services but in total over 800,000 empty containers were handled in Chile’s ports. Policy option: Chile to allow international operators to reposition own empty containers between ports in Chile. (Research is needed to determine the ratio of empty to full loads.)
- Road transport is a competitive transport option in terms of port-to-port transit time (faster but more expensive) on the Northern Corridor but not so on the Southern Corridor. There is no incentive for trucking companies to use a maritime leg.
- The trucking sector is an atomized, highly fragmented industry; in 2014, over 80% of companies operated 1-2 trucks in 2014. Small companies’ advantage: not bound by the hours of service =Puerto Montt – San Antonio 16 hours or less with one driver.

6 Conclusions (1)

1. The economic and physical geography of Chile provides two corridors of promise. Volumes are small but there is inter-corridor traffic to top-up potential.
2. The trucking industry is so fragmented that there is little possibility of large-scale trucking companies introducing an integrated SSS service; market structure means that a ferry cannot operate a roll on–roll off service to the trucking industry.
3. The small feeder option appears to be best. Secondary ports in Chile have grown and are committed to growing new business.

6 Conclusions (2)

4. 3 international lines have routes that would alleviate road congestion if they could move their own empty boxes (Hapag-Lloyd, K-Line and NYK).
5. There is a data vacuum for making sound freight policy decisions; a truck roadway data collection effort should be a national priority (we make data element recommendations).
6. Modal switching study (stated preference) is needed as next step. Description in paper.

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Three Cabotage Policy Options for Future Research

Each option requires **different levels of policy intervention**. A stated-preference study should be developed with the assistance of a domestic or international operator to examine:

- Full access to cabotage markets for international container shipping lines.
- Access by international container shipping lines to carry their own empty equipment for repositioning purposes between Chilean ports.
- A concession offering a diminishing subsidy to establish a coastal feeder service by either a domestic or international shipping line. The diminishing subsidy would support the marketing and start-up costs in its early years.

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Thank You

TRB-17-00885 Paper for more details

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