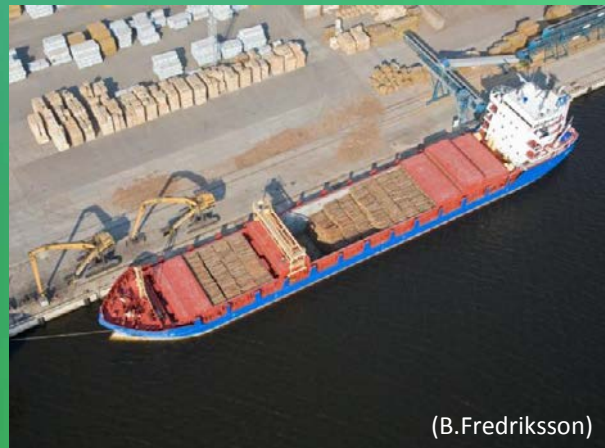




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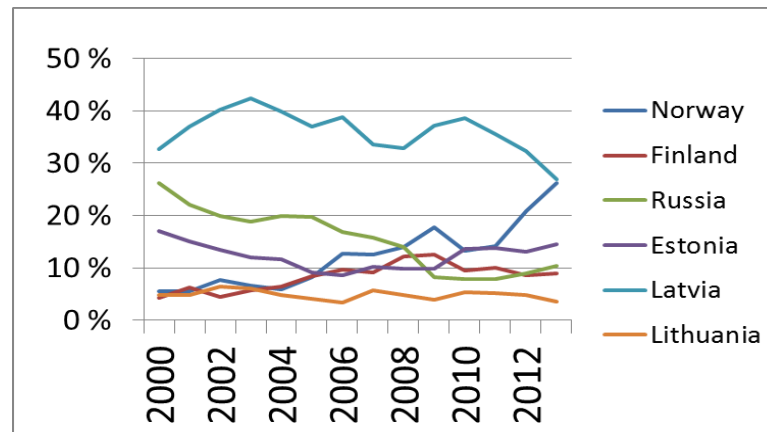
Time of arrival variation for short-sea shipping of roundwood and chips within the Baltic Sea



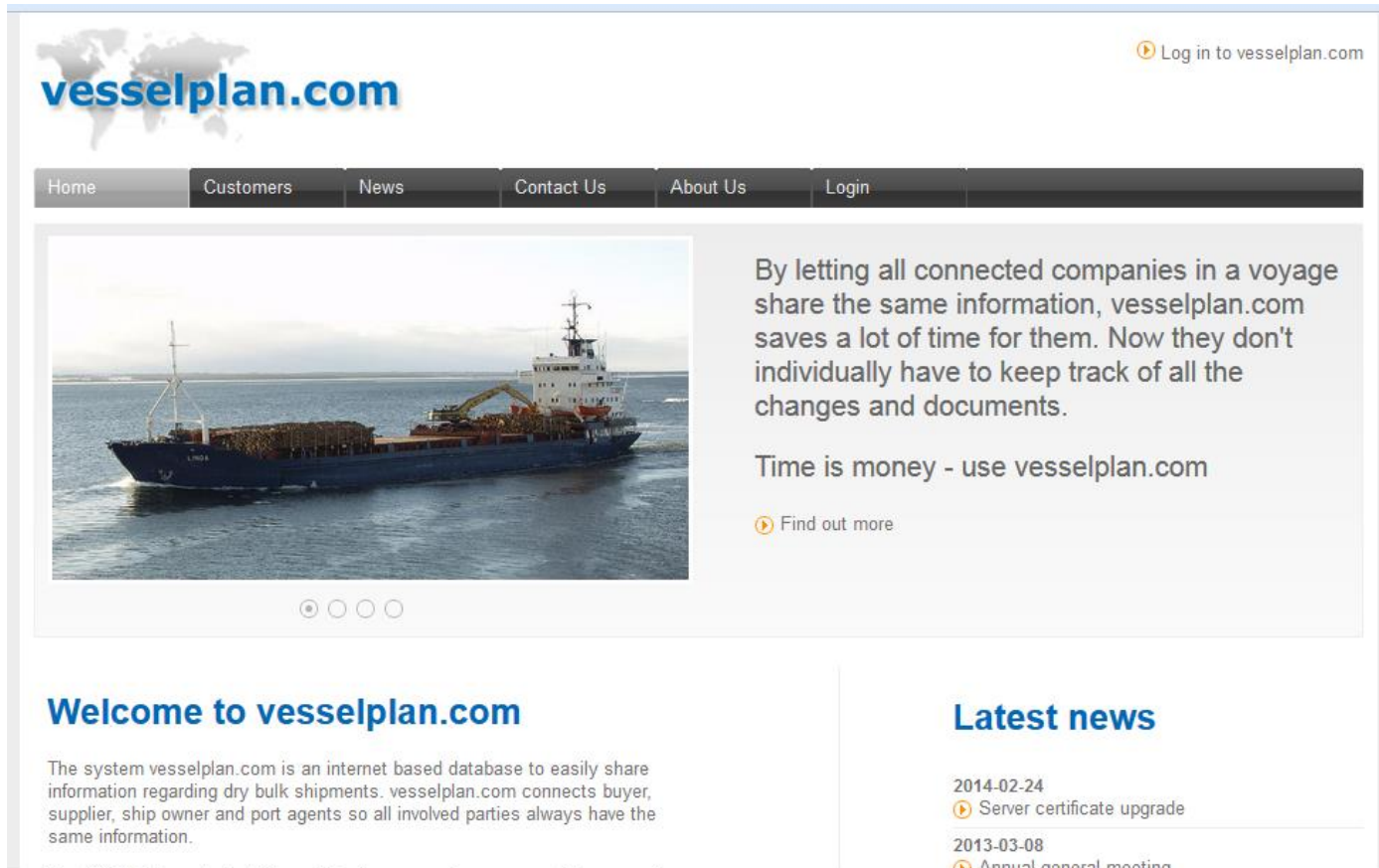
Dag Fjeld
Bruce Talbot

Introduction

- Much of Swedish import sourcing 2000-2013 (LV, EST, RU) is via short-sea shipping
- One vessel carries same volume as 100 trucks or 3-4 trains, so precise arrival times are important:
 - How precise is short-sea shipping in the Baltic Sea?
 - How does precision vary between sources?



Material & Methods - Data



The screenshot shows the homepage of vesselplan.com. At the top left is the logo 'vesselplan.com' with a world map background. To the right is a 'Log in to vesselplan.com' link. Below the logo is a navigation menu with links for Home, Customers, News, Contact Us, About Us, and Login. The main content area features a large image of a blue bulk carrier ship at sea. To the right of the image is a text block: 'By letting all connected companies in a voyage share the same information, vesselplan.com saves a lot of time for them. Now they don't individually have to keep track of all the changes and documents. Time is money - use vesselplan.com'. Below this text is a 'Find out more' link. Below the image is a row of four small circular icons. At the bottom left is a 'Welcome to vesselplan.com' section with a paragraph: 'The system vesselplan.com is an internet based database to easily share information regarding dry bulk shipments. vesselplan.com connects buyer, supplier, ship owner and port agents so all involved parties always have the same information.' At the bottom right is a 'Latest news' section with two entries: '2014-02-24 Server certificate upgrade' and '2013-03-08 Annual general meeting'.

Material & Methods

- Data collected for 335 roundwood & chip cargoes during 2013
- Flows were from aggregated to 3 export sources (LV, EST, RU) and 3 regions of discharge (S SWE, SE SWE, N SWE)
- cargo wts (mt)
- times at PoL, during voyage, time at PoD

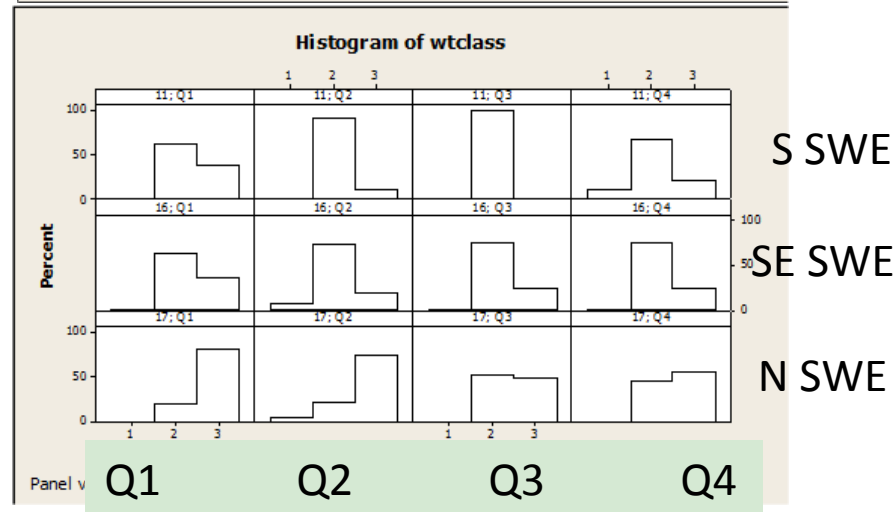
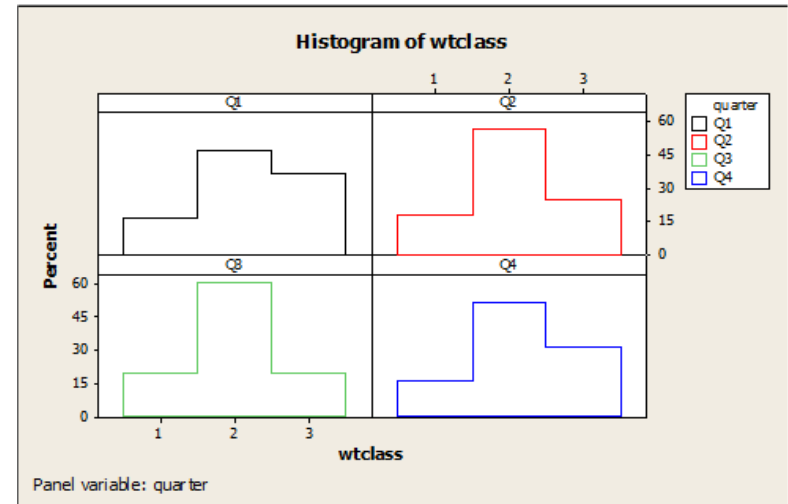
Table 1: Number of cargoes per selected flow from Ports of Lading to Ports of Discharge



Ports of lading	No. of cargoes to Ports of Discharge		
	S SWE (11)	SE SWE (16)	N SWE (17)
LV (4)	38	76	76
EST (2)	11	46	29
RU (8)	0	32	27

Results:

- Seasonal vessel cargo sizes (Q1-Q4)
 - Wtclass 1: < 2000 mt
 - Wtclass 2: 2000-4000 mt
 - Wtclass 3: >4000 mt
- Class 2 cargoes dominate for the PoD's in the south (11, 16)
- Class 3 cargoes dominate in the north (17)



Results:

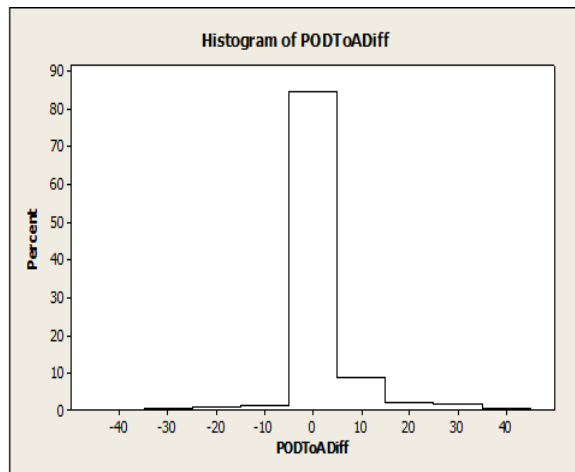
- Average time between loading and unloading 60 hrs (59% voyage time, 36% delays before leaving PoL and 5 % delays before discharging at the PoD.
- Average times between PoL-PoD flows: 26-66 hrs.

Table 2: Average voyage times from Ports of Lading (PoL) to Ports of Discharge (PoD).



(PoL)	Avg. voyage times to PoD (hrs)		
	S SWE (11)	SE SWE (16)	N SWE (17)
LV (4)	33	26	56
EST (2)	40	34	54
RU (8)	n/a	n/a	27

Results: Deviations from EToA



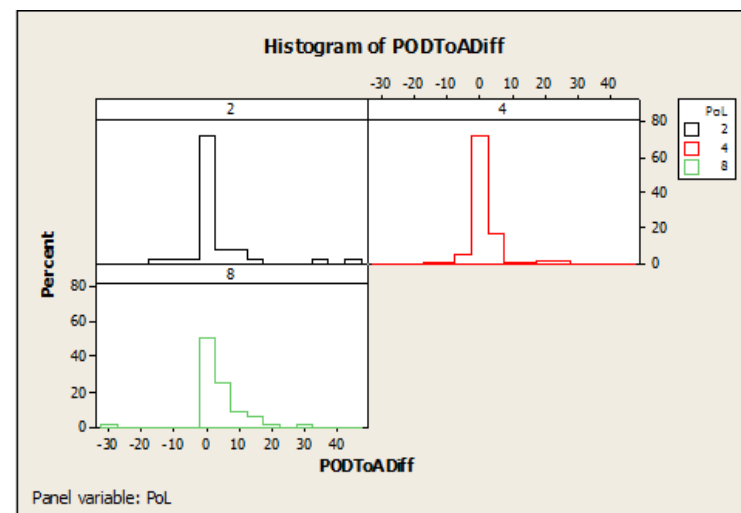
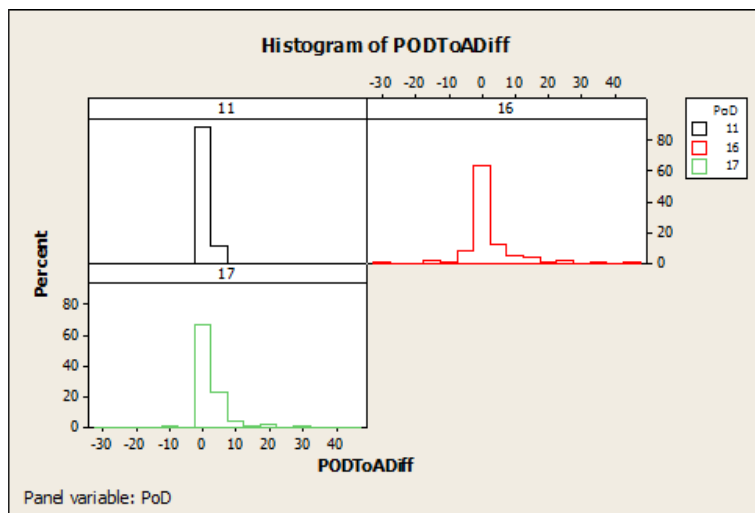
85 % of all cargoes arrived at PoD within 5 hours of EToA with right-skewed distribution (more late than early arrivals)

PoDs

- smallest deviations were for S SWE (11)
- largest deviations were for SE SWE (16) and N SWE (17)

PoLs

- smallest deviations were for LV (4) and EST (2)
- largest deviations were for RU (8)

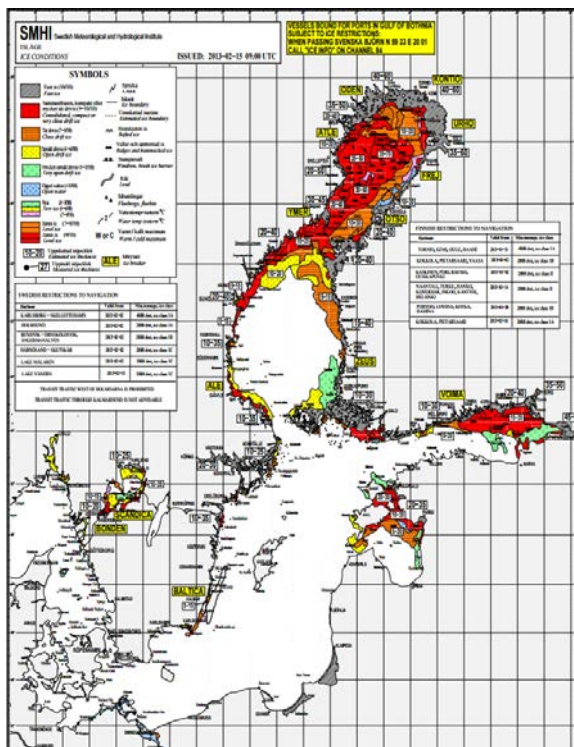


Discussion

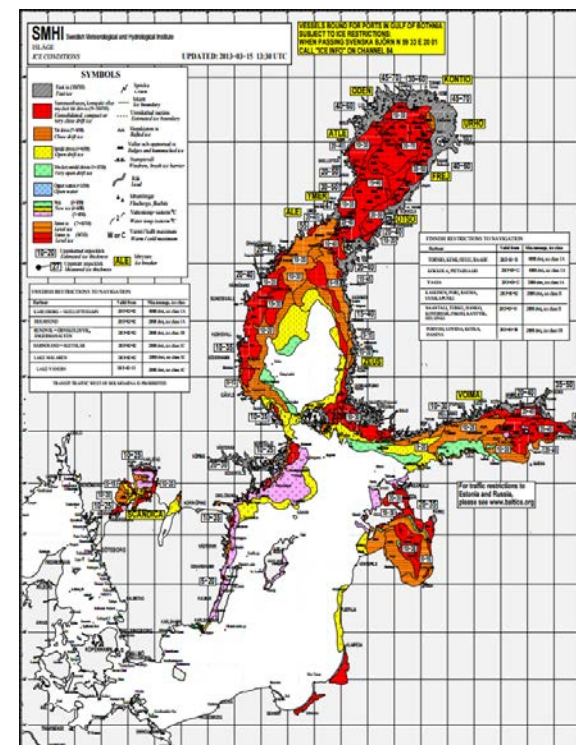
- Follow up of delivery data provide a useful source for quantifying precision in short-sea shipping of roundwood and chips
- Reduced import volumes and consolidation of sources has increased the use of specialty wood-shuttles
- Given the larger vessel cargo sizes for the northern PoD flows, the trend for specialized vessels is most relevant for the shorter southern routes
- This study did not show any increase in PoL-PoD times during winter conditions

Discussion

- Limited fast ice for PoL RU (8) and PoD N SWE (17) during normal peak ice period in the studied period.



SMHI, Feb 2013



SMHI, Mar 2013

Conclusions

- For firms using Vesselplan, 85% of cargoes arrived within 5 hrs of the estimated time
- The system provides a base for
 - Comparing risks between PoL-PoD combinations
 - Following-up lead times
 - Planning and coordinating capacity for parallel (truck and rail) flows



(B.Fredriksson)

Acknowledgements

Thanks to

- Jon Ruthström for making data available from Vesselplan.com
- Björn Fredriksson (Billerud) and Per Salokannel (Unér shipping) for sharing their knowledge of roundwood shipping
- Bo Rydins Stiftelse for financing the data collection

