Public defence Ph.D. in Applied Economics: Business Engineer by Tom Vermeiren

The public defence of the Ph.D. in Applied Economics: Business Engineer by Tom Vermeiren will take place on Monday December 9th 2013 at 5pm on the Etterbeek-campus of the Vrije Universiteit Brussel, Pleinlaan 2, 1050 Brussels in Building D, level 2, room D2.01.

The Ph.D. thesis is called "Intermodal Transport: the Delta in the Delta." (Promoter: Prof. dr. Cathy Macharis)

Please confirm your attendance by Friday December 6th to Tom Matthijs.

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Abstract

The container transport system is depicted as an automated transport belt gluing the geographically dispersed production and consumption centres around the world all together. Containerized transports form the backbone of our global economic model. Besides, transportation of general cargos by means of containers opens the opportunity to combine multiple transport modes on the land-side.

The swift exchange of the container between different transport modes has set the focus among researchers in intermodal transport to move freight from the dominating road transports to a combination lead by alternative transport modes being barge, rail or even short-sea. Growing concerns about People and Planet foster the need for such a modal shift.

Contrary to these classic analyses addressing opportunities for modal shift, Tom Vermeiren emphasizes in his PhD. the competition between end-to-end container transport chains. Embracing a ‘global perspective’, the research is not limited to the intermodal transport systems responsible for the exchange of containers between the hinterland and the port, but also accounts for the supplementary ocean transport systems which consolidate their volumes in the maritime load centres by employing container ships which continue growing in size. The encompassing approach following the markets’ praxis of door-to-door chains allows reiterating the role of intermodal land transport systems on the land-leg.

The research specifically concentrates on the Rhine-Scheldt Delta, handling the bulk of Europe’s maritime containers through its main ports of Antwerp and Rotterdam which are engaged in a competitive battle. The rigorous examination of the door-to-door transport chains leads to the conclusion that the future of both maritime gateways is highly uncertain and volatile. This thesis is supported by empirical analyses proving that:

- The profit margin of the shipping lines, being the directors of the maritime chains connecting port-to-port, does not vary for the alternative ports of call serving the Rhine-Scheldt delta hinterland (assuming equal vessel load factors). On top, the improved efficiency of the bigger container ships makes that the cost to traverse the River Scheldt diminishes.
- The shippers, owners of the cargo and the directors of the end-to-end chains, do not have a specific preference for one of the two load centres. The routing of their containers is simply driven by cost considerations, while accounting for the service level constraints of their supply chain model.

These premises lead to the theorem of ‘the delta in the Delta’, implying that multi-modal transport chains connecting the main ports with the shared hinterland are the single key
differentiators in the container supply chains. In particular, the scale-driven intermodal systems contain the potential to (re-)distribute volumes between the competing ports which are embedded in substituting end-to-end chains. The economic value of intermodal land transport systems therefore supersedes its claimed environmental and social importance.