Seamless transport – making the connections
Analytical and policy documents for the 2012 Leipzig summit

Claes Eriksson
Bertil Hylén
Preface

This Memorandum has been elaborated by VTI, the Swedish National Road and Transport Research Institute, following a commission by the Swedish Ministry of Enterprise, Energy and Communications (MEC). The Memorandum should primarily serve for preparations for the 2012 Summit of the OECD’s International Transport Forum in Leipzig, Germany. We hope that it also will provide useful suggestions for studies of the Seamless Transport field.

Linköping and Stockholm November 2011

Bertil Hylén
Quality review

Internal peer review was performed on 31 August 2011 by Gunnar Lindberg, Head of Research Department at VTI. Bertil Hylén has made alterations to the final draft of the memorandum. The report was subsequently approved by the Swedish Ministry of Enterprise, Energy and Communications. The research director of the project manager, Gunnar Lindberg, examined and approved the report for publication on 7 November 2011.

Kvalitetsgranskning

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Seamless transport – making the connections. Analytical and policy documents for the 2012 Leipzig summit
by Claes Eriksson and Bertil Hylén
VTI (Swedish National Road and Transport Research Institute)
SE-581 95 Linköping Sweden

Summary
This Memorandum has been elaborated following a commission by the Swedish Ministry of Enterprise, Energy and Communications (MEC). The Memorandum should primarily serve for preparations for the 2012 Summit of the OECD’s International Transport Forum in Leipzig, Germany.

The first section of this memorandum lists organizations, stakeholders, on-going projects etc. It is not intended to be exhaustive in any way since it was not a part of the original commission. Rather it tries to catch on-going activities and projects that still have not reached the publication and outreach phase.

The second section contains the selected references. We chose to sort them according to the six issues suggested by MEC as starting points for discussions at the summit. It must be pointed out though that several references address more than one of the issues. Borders may create Technology barriers; Technology improvements may improve Supply chains etc.

av Claes Eriksson och Bertil Hylén
VTI
581 95 Linköping

Sammanfattning


Första delen av detta notat tar upp organisationer, aktörer, pågående projekt etc. Det gör inte anspråk på att på något sätt vara fullständigt, detta var heller inte avsikten med uppdraget. Denna del försöker i stället fånga upp pågående aktiviteter och projekt som ännu inte publicerats eller implementerats.

Andra delen innehåller utvalda referenser. Vi valde att sortera dem efter de sex områden som Näringsdepartementet valde som utgångspunkter för diskussioner vid mötet i Leipzig. Det måste betonas att många referenser berör flera av dessa sex områden. Gränser (borders) kan skapa tekniska hinder (barriers), tekniska förbättringar kan förbättra logistikkedjor etc.
Seamless transport: Making the connections. Analytical and policy documents for the 2012 Leipzig summit

1.1 Introduction and reading instructions

This Memorandum has been elaborated by VTI, the Swedish National Road and Transport Research Institute, following a commission by the Swedish Ministry of Enterprise, Energy and Communications (MEC). The Memorandum should primarily serve for preparations for the 2012 Summit of the OECD’s International Transport Forum in Leipzig, Germany.

The six high-level themes and the questions were set by the MEC. The search and selection work was carried out by VTI’s Library and Information Centre (BIC) together with the Dept. of Society, Environment and Transport (SAMT).

The multitude of issues made it necessary to make the search quite broad. We have looked into several databases without digging in depth. The databases are both the traditional academic ones as well as the transport information databases ITRD (OECD) and TRID (TRB) and several less structured databases and web sites. In general we chose to limit the search to material produced during the last 10–11 years. While we tried to make a global selection we acknowledge that the vast majority of the references are from Europe and North America. Once again referring to the multitude of questions it has not been possible to cover all issues in this rather limited information search.

1) The presentation is in two sections. The first section lists organizations, stakeholders, on-going projects etc. It is not intended to be exhaustive in any way since it was not a part of the original commission. Rather it tries to catch on-going activities and projects that still has not reached the publication and outreach phase.

2) The second section contains the selected references. We chose to sort them according to the 6 issues suggested by MEC as starting points for discussions at the summit. It must be pointed out though that several references address more than one of the issues. Borders may create Technology barriers, Technology improvements may improve Supply chains and so on.

The majority of the references is to literature and the rest is to web sites. If the full text of the document is freely available you will find that the headline of the reference is a link. This memorandum together with links to the freely available full texts is accessible at: http://www.transguide.org/seamless-transport. Please note that this documents also contains references to, primarily, journal articles where you or your organization needs a paid subscription or a licence in order to access the full text.
1.2 Organisations, stakeholders, research groups, active projects etc.

**NCIT: The National Center for Intermodal Transportation**
NCIT was founded in 1998 as a University Transportation Center sponsored by the United States Department of Transportation. NCIT is a major national resource for educational, research, and technology transfer activities involving intermodal transportation. The NCIT and its studies is a collaborative partnership between two universities, the University of Denver and Mississippi State University, and multiple disciplines within each university including business, law, engineering, and science.
http://ncit.msstate.edu/

**Transportation Research Board (US) standing committee Intermodal Transfer Facilities (AP045).**
The committee is concerned with the interfaces between passenger transport modes, in particular as they relate to the function, economy, and effectiveness of multimodal passenger facilities, stations, and to terminals. Of special interest are best practices, emergent trends, concepts, and innovations in passenger facility and service design that enhance connectivity between transport modes and the effectiveness of transport networks. Also encompassed are pedestrian movement, internal and external station environments, accessibility, revenue control, and standards for facility and operational planning.
http://www.trb.org/CommitteeandPanels/Public/OnlineDirectory.aspx#DetailsType=Committee&ID=1153

**Transportation Research Board (US) Intermodal Freight Transport (AT045)**
The scope of this committee includes all aspects of research pertaining to intermodal freight transport. Attention will be given initially to rail-water, rail-highway, highway-water, and highway-air modal combinations, but other combinations may be considered later. As used here, intermodal freight transport includes all shipments that employ more than one mode in a single through movement from origin to destination; local pick-up and delivery by truck for others not included. Consideration of rates, routes, services, transfer facilities, containers, and other items that impact the movement of freight in intermodal transport are included.
http://www.trb.org/CommitteeandPanels/Public/OnlineDirectory.aspx#DetailsType=Committee&ID=1099

**North Sea Freight Intelligent Transport Solutions – NS FRITS**
The project primarily address the road freight sector in the seven countries of the North Sea Region but also aim at "improve performance, profitability and competitiveness of long distance and intermodal services". It will also "establish an ICT solution that includes telecommunications and the increasing range of sensory, location, security identification and data capture leading edge technologies within the supply chain, which will transmit data at ports and other criteria transport corridor points". In doing so it may be of interest both for its technological developments and for its ability to increase seamlessness at borders and terminals.
http://www.nsfrits.eu/
CLOSER – Connecting LOng and Short distance networks for Efficient tRansport
The purpose of CLOSER is to build upon existing research and practice, developing innovative tools for the analysis of interfaces, check these tools in a number of case studies, and make specific recommendations to stakeholders in order to get:

A more systematic approach to the whole project cycle of interfaces (from planning to design and operation).

Specific guidelines for decision makers in order to cope with the challenges of a particular project, and to get the most out of the opportunities that each project offer in the areas of transport, spatial, and economic development.

A friendlier regulatory environment; fostering cooperation and supporting better integrated interfaces.

Improved mechanisms for funding those concepts with a higher degree of integration (including EU funding schemes).

In-depth involvement of stakeholders, particularly transport operators.
http://www.closer-project.eu/

INTEGRITY – Intermodal Global Door-to-door Container Supply Chain Visibility
INTEGRITY is a new challenging project intending to significantly improve the reliability and predictability of door-to-door container chains. INTEGRITY is funded by the European Commission in the 7th Framework Programme for Research & Development and liaises with several EU Directorates.

Kernel of the project is the development of the so-called Shared Intermodal Container Information System (SICIS) allowing authorised companies and authorities to access planning and status information of selected transports. Proactive planning following the Supply Chain Event Management (SCEM) approach allows to forecast problems well before they might occur. Matching logistics data with security information, e.g. from electronic seals, container security devices, and scanning equipment together with the integration of the AEO (authorised economic operator) approach allow to satisfy both the logistics industry and Customs Authorities fulfilling their duties thus creating win-win situations.
http://www.integrity-supplychain.eu/

INTERCONNECT – Interconnection between short and long-distance transport networks
INTERCONNECT is examining the role of local and regional interconnections in the context of longer distance passenger journeys in Europe, in order to address the potential for greater economic efficiency and reduced environmental impact. Factors investigated in the project include integration, co-operation and, where appropriate, competition in the provision of local connections across all transport modes. The methodology that has been employed in the project includes literature reviews, interviews with key stakeholders and detailed investigations of selected case studies.
The INTERCONNECT project is co-funded by the European Commission within the Seventh Framework Programme, Theme 7 Transport. The project consortium comprises seven partners from six European countries.

http://www.interconnect-project.eu

OPTIC – Optimal Policies for Transport in Combination
"To help identify in advance possible adverse effects of transport policy measures taken in isolation, and to develop methodologies for the design and implementation of optimal combinations of policy measures which reduce adverse effects and/or provide positive synergies.” By offering new insights into the workings of policy measures, including adverse effects and interaction between policy measures, OPTIC will enable an assessment of the overall impact of any policy instrument or mixes of instruments aimed at the three objectives of efficiency, environment and equity.

http://optic.toi.no/

CAPRICE – Capital regions integrating collective transport for increased energy efficiency
CAPRICE comprises a network of actors from European Capital regions who are responsible for public transport. CAPRICE will contribute to reach the goals of the Gothenburg agenda by increasing efficiency of public transport services in regions, implementing policies to stimulate the accelerated introduction of 'clean' vehicle fleets in public transport, providing policy recommendations to road transport authorities aimed to maintain the modal split or to change in favour of use of public transport means, providing integrated and 'seamless' passenger information services to stimulate use of public transport and to bring down barriers for access to public transport services.

While in some of the participating regions public transport authorities (PTA) are already existing and working successfully since a series of years (Paris, Berlin), the establishment of a PTA is foreseen in other regions (Warsaw, Riga, Vilnius) in the next future. But on the way to a successful establishment of a PTA, a lot of barriers needs to be identified and overcome. This is addressing the development of the legal framework, contractual framework between key players in the regions, practical handling of efficient procurement of public transport services, the split of income from fares and subsidies, passenger information integration etc.

CAPRICE will work closely with EMTA - the European Metropolitan Public Transport Authorities Association in terms of communication, promotion and dissemination (component 2) to ensure a wide outreach of the network and to raise awareness on it's activities, outcomes and results beyond the project.

http://www.caprice-project.info

Port Integration – Multi-modal innovation for sustainable maritime & hinterland transport structures
The project is designed to identify, exchange & transfer best practices in the transport sector with the aim of an overall integration of related policies. While landside especially the road network is heavily loaded, resulting in traffic congestion & negative economic as well as environmental effects, sea-based transport, especially intra-European short sea shipping, shows high capacity reserves. These imbalances may only
be equalized within the framework of integrated concepts for the transport chain as a whole, combining its maritime angle with the hinterland one. As ports are the nuclei of maritime & hinterland transport flows, they are the logical actors for a comprehensive integration of transport chains.

However, to fulfill this “integrating” function, an analogous political environment on all levels is needed. Existing policies are mainly designed for individual parts of the transport chain, but a really integrated approach is missing. Port Integration will contribute to the development of such a political environment following a 3-staged approach of firstly identifying, secondly exchanging and finally transferring best practices between partners on policy level, e.g. by supporting appropriate multi-modal EDI concepts.

Due to the relevance of ports in this approach, partnership has been designed as a mixture of different level political actors & port authorities, all-encompassing direct linkages to the policy level. With 13 partners from 10 EU countries and Russia, the partnership builds a sound basis to achieve the goals set.

http://i4c.eu/showProject.html?ID=40195
2 References

2.1 Technology

Questions

- What technologies/technological breakthroughs and innovations will play the most critical roles in delivering more seamless transport services?
- How are information technologies facilitating connectivity for passengers and freight? How can cross-modal information sharing be improved? What is the potential of the internet and wireless technology to transform transport?
- Are organisational and institutional structures within transport impeding the implementation of innovations and information sharing?
- Are there global approaches that can contribute to innovation, including closer collaboration on technical standards (interoperability)?

References

EU DG MOVE Directorate General for Mobility & Transport

Multimodal travel – using different types of transport for one journey – is part of the answer. It may not only be better for the environment, it may also be easier on our wallets. Multimodal travel is by its very nature more complex. That is where multimodal journey planners come in. These online tools can help travellers plan a journey from A to B detailing the different types of transport to take, times and even fares.

http://ec.europa.eu/transport/its/multimodal-planners/index_en.htm

(Recent results from a public consultation:

ITS in Japan, a different approach to transportation policy

Author: Sed S. Saad Address: 21st Century COE (Centre of Excellence) Programme on ITS/Telematics, GITI Research Center on Telecommunication, Waseda University, 1011 Okuboyama Nishi-Tomida, Honjo-Saitama 367-0035, Japan

Journal: World Review of Intermodal Transportation Research 2006 – Vol. 1, No.1 pp. 45–54

Abstract: As nations face emerging challenges within the global network economy and transportation, developed countries have initiated Intelligent Transport System (ITS) strategies. ITS master plans have positioned their ITS plans as integral parts of their transportation policies. In contrast, Japan has opted for a different approach by considering ITS as part of a national telecom policy. This paper illustrates ITS in Japan through Vehicle Information and Communications System (VICS) case. Most ITS experts consider VICS as one of the most successful ITS deployments in the world whereas the global telecom industry recognises the Japanese i-mode as equally successful in the mobile internet success.
Substantial research has been developed in past years, but it is necessary to bring together all stakeholders and decision makers (terminal handling, freight villages, port, and intermodal operators, modal transport operators, forwarders, equipment suppliers, cargo owners, high educational institutions, authorities, ...) to provide and exchange advices and experiences, and to coordinate planning activities concerning research and technology programmes. To this aim, research has pursued the objective of setting up a number of networking and knowledge transfer activities (CENTRAL LOCO, 2007), and creating the European Intermodal Research Advisory Council (EIRAC), whose mission is the creation of a co-ordinated intermodal research strategy for Europe (CAESAR). Research has also focused on activities to create awareness on innovations, collect best practices, and identify intermodal transport opportunities (PROMIT), as well as on encouraging a more efficient use of intermodal transfer points (EUTP II, 2004).

A second group of objectives has concerned the technical improvement of intermodal transport technologies and procedures. In particular, research has investigated the technical and operational capabilities of horizontal transhipment technologies to improve the efficiency of transfer operations of loading units between different modes (In.Ho.Tra, 2003). Research has also developed a self-sustained intermodal technology to capture the growing market of conventional road-only semi-trailers for intermodal transport (BRAVO, 2007), and has encouraged the application of ITS technologies to support the management of containers inside terminals (MOCONT II, 2003). Another research objective has been concerned with the development of standardised small containers to be used Europe-wide (COST 339). Another research objective has been to investigate aspects relating to safety and security of intermodal transport and to develop appropriate procedures (SIT-TN).

Group of objectives was focused on the development of intermodality between EU and neighbouring countries. It has investigated solutions to strengthen intermodal transport between EU member states and the CEEC (INTERFACE, 2005), and has carried out a study for the creation of a Euro-Mediterranean intermodal network with a view to enhancing the competitiveness of the Mediterranean basin regions (REMOMED, 2006).

Comments: Especially chapter 4.5 is devoted to intermodal freight transport research findings. The subtheme 4.5 "Urban freight transport" might also be of interest.

Also contains list of completed projects.
Dryport

Dryport is a three-year public/private sector Interreg North Sea Region project with partners from the ports and logistics sector, from local authorities representing important logistics areas and from key universities. Working together through a programme of workshops, studies and site visits, the Dryport partners will examine the development, design and effective operation of dryports that are fully integrated with the freight handling systems of the seaport facilities they serve. Dryport is about helping to support port capacity by improving hinterland distribution hubs and looking at the potential of ‘inland ports’ with multimodal connections.

http://www.dryport.org

Towards an Integrated Transport System – Freight Focus


This Policy Brochure addresses the solutions which are being developed across Europe to achieve integration of the transport system. The focus is on freight transport. Operational, technical, infrastructure and legal barriers still hamper the seamless movement of goods across borders. A review is provided of the developments of EU policy relating to harmonisation of the regulatory framework; interoperable networks, based on standardised technologies; and logistics solutions, based on information and communication technologies, facilitating intermodality and comodality. Associated research, mostly from European Framework Programmes, together with some key results and implications are presented.

Comments:
A good recent summary of EU policy and research encompassing almost all of the questions raised.

Drive West – A Multi-Agency Approach to Traveller Information


Griffiths, Sharla
Alberta Infrastructure and Transportation, Canada
2006

The purpose of this paper is to identify some of the issues identified and lessons learned in the Memorandum of Understanding (MOU) that was established between the Provinces of Alberta, British Columbia (BC) and Parks Canada in order to set the framework for a collaborative and coordinated approach in delivering highway traveler information across all three jurisdictions so that the public may receive timely, accurate and consistent highway traveler information in order to plan their trips or adjust their travel plans accordingly. This multi-jurisdictional project is a first step to identifying the most efficient way to provide consistent information seamlessly across the various borders to the traveling public. Since the MOU’s inception, The Ministry of Transportation of British Columbia has launched a new province-wide web-based traveler information system called Drive BC and Alberta in partnership with British Columbia, Parks Canada, the Alberta Motor Association (AMA), and IBI Group, are piloting a new web-based traveler information system called Drive West.
The Freight Shuttle System: Advancing Commercial Readiness

Abstract:
This report summarizes the results of research aimed at advancing the commercial readiness of a new hybrid mode of intermodal freight transportation called the Freight Shuttle System (FSS). The FSS represents a unique combination of the best features of rail and truck transportation designed to mitigate many of the adverse impacts of over-the-road truck transportation; pavement damage, diesel emissions, congestion, and safety issues. A FSS business model has been developed that lends itself to private financing and operations, in keeping with the commercial nature of goods movement. A modular system design has emerged that facilitates implementation in numerous settings, such as border crossings, marine terminals, or heavily traveled commercial corridors between markets ranging in distance from 10–500 miles. The FSS has been developed to provide a lower-cost and more reliable mode of freight transportation that will induce traffic through pricing and time-certain delivery schedules. The FSS has also been shown to have the potential to play an important role in attracting private capital to the transportation infrastructure. The public benefits projected to accrue from a single FSS are significant and are detailed in the report.

Supplemental Notes:
Report date: November 2010; Published: January 2011. Research Project Title: The SAFE Freight Shuttle: A Proposal to Design, Build, and Test an Alternative Container Transport System.

Report Numbers:
FHWA/TX-11/9-1528-1
Report 9-1528-1

Authors:
Roop, Stephen S Texas Transportation Institute
Ragab, Ayman H Texas Transportation Institute
Olson, Leslie E Texas Transportation Institute
Protopapas, Annie A Texas Transportation Institute
Yager, Michael A Texas Transportation Institute
Morgan, Curtis A Texas Transportation Institute
Warner, Jeffery E Texas Transportation Institute
Mander, John Texas A&M University, College Station
Parkar, Anagha Texas Transportation Institute
Roy, Subha Lakshmi Texas Transportation Institute

Publication Date: 2011-1
Title: Transportation visibility and information sharing: a case study of actors’ requirements

Author: Henrik Sternberg    Address: Chalmers University of Technology, Div. of Logistics and Transportation, 412 96, Goteborg, Sweden

Journal: World Review of Intermodal Transportation Research 2008 - Vol. 2, No.1  pp. 54–71

Abstract: Information exchange between suppliers and customers has been extensively researched in recent years, but generally the transport operators have not been addressed. This work describes the information needs coupled with activities in an international transportation setup. To model the information necessary for each activity, an in-depth, exploratory single-case study of the intermodal transportation setup with return carriage was conducted and includes the full chain. Observations and complimentary interviews were carried out throughout the chain. The outcome of this work is an identification of the information needed to support a transportation setup involving 12 participants.

An Assessment of the Performance of the European Long Intermodal Freight Trains (LIFTS)

Janic, Milan

OTB Research Institute, Delft U Technology


Abstract:

Intermodal rail/road freight transport has always been considered as a competitive alternative to its road freight counterpart in the European medium- to long-distance corridors (markets). Such consideration has been based on the increasing competitiveness of some innovative rail services and the existing and prospective performance of both modes in terms of the full social--internal or operational and external--costs. The most recent innovation of rail technologies and related services launched by some European railway companies, still at the conceptual level, is the Long Intermodal Freight Train (LIFT). This is supposed to be a block train operating in long-distance corridors (markets) with a substantial and regular freight demand. This paper develops analytical models for assessing the performance of the LIFTs, the already-operating Conventional Intermodal Freight Trains (CIFTs), and their road counterpart as well. The performance consists of the full--internal (private) and external--costs of the door-to-door delivery of loading units-containers, swap-bodies, and semi-trailers. The internal costs embrace the operational costs of the transport (rail and road) and intermodal terminal operators. The external costs include the costs of the impacts of door-to-door delivery of loading units on society and the environment. These negative externalities include noise, air pollution, traffic accidents, and congestion. The models are applied to a simplified version of intermodal and road transport system using inputs from the European freight transport sector. The aims are to compare the full costs of particular modalities in order to investigate the potential of the LIFTs as compared with the CIFTs in improving the internal efficiency of the rail freight sector and its competitiveness with respect to its road counterpart. In addition, the paper attempts to assess some effects on the potential modal shift of EU (European Union) transport policies on internalizing transport externalities.
2.2 Political and legal issues

1) What are the main institutional, organisational and legal barriers to increasing connectivity and how can they be overcome?

2) How can we build bridges between aspects of transport that are subject to different governance regimes, ownership and/or operational structures? (How to deal with jurisdictional fragmentation, or competing jurisdictions?)

3) What are the roles of the different actors, including private companies, industry associations, and users, and particularly different levels of government? How can these actors be better coordinated? Who are the new players, including integrators and technology providers?

4) How can we establish better institutional linkages between transport and key non-transport players, such as the energy, telecoms and financial sectors?

References

Integrated approach towards sustainable development

World Review of Intermodal Transportation Research, Vol. 3, Nos. 1/2, 2010
Prabhat Shrivastava* Department of Civil Engineering,
Sardar Patel College of Engineering, Bhavan’s Campus, Andheri (W), Mumbai – 400058, India
E-mail: shrivas@gmail.com E-mail: prabhat_shri@vsnl.net
*Corresponding author

Margaret O’Mahony Department of Civil, Structural and Environmental Engineering,
Centre for Transportation Research, Trinity College, University of Dublin, Dublin-2, Ireland
E-mail: margaret.omahony@tcd.ie

Abstract:
Public transport systems, both rail and road, have over previous years developed relatively independent of each other and in competition with the private car. In recent years the changes in demand for public transport due to increase in car ownership, changes in land use and wider economic forces have highlighted the importance of integrating existing networks as an alternative to mass development of new transport systems. At the same time, citizens are becoming more demanding. This multi-faceted challenge can only be addressed by adopting an integrated approach to mobility issues with the support of all protagonists. This approach must be based on twin foundations: on the one hand, the coordination of urban policies with journey policies, and, on the other hand, modal integration between transport networks. The integration of different modes including non-motorised transport (NMT) with public transport services is essential for sustainable development and is a real challenge for transport planners. In view of the above the overall concepts of system integration, issues related to integration of NMT services with public transport modes, more effective operations of demand responsive transport (DRT) over conventional bus services in the present scenario, improvement of network characteristics due to
integration of modes, etc. have been discussed in this paper. Various policies, issues, challenges and problems to be faced for integrated urban mass transportation system planning towards sustainable development are presented in this paper.

What's So Funny about Peace, Love and Transport Integration?

Preston, John

U Southampton

Research in Transportation Economics, 2010, v. 29, pp. 329-38 (ISSN: 07398859)

The 1998 White Paper proposed integration as the solution to Great Britain's land transport problems. Most commentators agree that this much vaunted New Deal for Transport has been a failure. Yet some ten years later policy papers from bodies such as the Institution of Civil Engineers and the Centre for Cities are still proposing integration as a possible panacea. There are a number of reasons for the failure of integrated transport over the last decade. The first is the failure to define the concept. The second is the failure to operationalise the concept. The third is the lack of an evidence base on the success of integrated transport policies. Evidence is now emerging in Britain on the benefits (and indeed the costs) of some aspects of integrated transport policies. The fourth, and perhaps the most crucial, is the lack of will in terms of politicians, civil servants and the public at large, to adopt the behavioural changes necessary for an integrated transport policy to be successful. A series of organisational and funding changes are proposed that could advance the prospects for integration.

Title: Assessing intermodal transportation planning at state departments of transportation

Author: Andrew R. Goetz, Joseph S. Szyliowicz, Timothy M. Vowles, G. Stephen Taylor

Address: Department of Geography and Intermodal Transportation Institute, University of Denver, 2050 E. Iliff Ave., Denver, CO 80208, USA. ' Graduate School of International Studies, Intermodal Transportation Institute, University of Denver, 2201 S. Gaylord St., Denver, CO 80208, USA. ' Department of History, B357 Clark Building, Colorado State University, Fort Collins, CO 80523-1776, USA. '

Management and Information Systems, Mississippi State University, P.O. Box 9581, Mississippi State, MS 39762, USA

Journal: World Review of Intermodal Transportation Research 2007 - Vol. 1, No.2 pp. 119 - 145

Abstract: We assessed the practice of freight and passenger intermodal planning at seven state departments of transportation – Alabama, Arizona, Colorado, Florida, Louisiana, Mississippi, and Texas – through analyses of previous studies, long- and short-range plans, organisational structures, surveys, and interviews. Results indicate that these states have altered their organisational structures and have produced plans that increasingly reflect an intermodal orientation, but that Florida and Louisiana were rated somewhat higher. Specific intermodal projects, public participation, and coordination among agencies tended to be rated more highly, while funding for and state DOT attitudes toward transit, bicycle/pedestrian, and intermodal connectors were rated much lower.
Port risk management and Public Private Partnerships: factors relating to risk allocation and risk sustainability


World Review of Intermodal Transportation Research, Vol. 3, Nos. 1/2, 2010

Morrison Handley-Schachler*
Teesside Business School,
University of Teesside,
Middlesbrough Tees Valley, TS1 3BA, UK
E-mail: M.Handley-Schachler@tees.ac.uk
*Corresponding author

Jyoti Navare
Middlesex University Business School,
The Burroughs, Hendon, London NW4 4BT, UK
E-mail: j.navare@mdx.ac.uk

Abstract: Ports are complex operations involving government and private-sector partners in creating economic benefits and in identifying, managing and absorbing economic, environmental and security risks. Allocation and assessment of risks is necessitated and facilitated by the diversity of organisations involved. Allocation of the cost of risks among the partners or its transfer to outside agencies through insurance or financing arrangements is essential. However, this allocation is not purely a function of attributes of the risks themselves and their controllability by each of the partners but depends in part on factors such as power structures within partnerships and capacity to absorb risks.

The impact of governance modes on sustainable transport – the case of bus transport in Greater Manchester, UK


World Review of Intermodal Transportation Research, Vol. 3, Nos. 1/2, 2010

Claus Hedegaard Sørensen* Institute of Transport Economics,
Gaustadalléen 21, NO-0349 Oslo, Norway and Department of Transport, Technical University of Denmark, Bygningstorvet 116 Vest, DK-2800 Kgs. Lyngby, Denmark
E-mail: chs@transport.dtu.dk
*Corresponding author

Henrik Gudmundsson Department of Transport, Technical University of Denmark, Bygningstorvet 116 Vest, DK-2800 Kgs. Lyngby, Denmark E-mail: hgu@transport.dtu.dk

Abstract: ‘Sustainable transport’ has become a priority for transport planning and policy making around the world. Sustainable transport plans often promote efforts to shift passengers from private cars to other modes such as public transport. However, the actual success of such efforts is likely to depend on how the transport sector is organised and governed. In this paper, we study the impacts of new public manage-
ment (NPM) reforms in the British local transport sector on the attraction of passengers to buses. Britain is an interesting example since high level sustainable transport policies have been pursued in a deregulated context. We focus on bus transport in Greater Manchester as the case in point. First, we study the effects of the NPM reforms on modal shift. We find that the reforms generally have contributed to a decline in bus passengers, while some reform elements have made positive contributions. Second, we apply theoretical notions of ‘governance modes’, to examine whether the strengths and failures of ‘market’, ‘hierarchy’ and ‘network’ governance respectively can help to explain the results we observe. We find that these concepts are particularly useful to clarify the conditions under which public transport can attract travellers.

**Transport integration – an impossible dream?**


Transport Integration and an Integrated Transport Policy have been widely espoused for many years, yet remain an ambiguous and ill-defined concept. This paper explores the meaning of Integrated Transport. It concludes that there is no point in attempting to identify a single definition, but that there are overlapping layers of meaning, with higher levels incorporating lower, or narrower, understandings of the term Integrated Transport.

This exploration of meanings of integration is important as the alternative meanings lead to different transport policy responses. These meanings include:

- Locational Integration: being able to easily change between transport modes (using Interchanges) - this is about services connecting in space
- Timetabling Integration: Services at an interchange connect in time.
- Ticketing Integration: Not needing to purchase a new ticket for each leg of a journey
- Information Integration: Not needing to enquire at different places for each stage of a trip – or that different independent sources are easily connected
- Service Design Integration: That the legal, administrative and governance structures permit/encouraging integration
- Travel Generation Integration: Integrating the planning of transport with the generators of travel (particularly integration with land use planning).

Furthermore, there are inherent tensions which make transport integration difficult to achieve. Only limited progress has been achieved in the UK since the 1998 White Paper, and even in Germany, with their strong transport policy structures, integration has failed. This exploration of meanings will also explore the tensions involved as there is a danger of the UK chasing again a flawed concept.

Publication year: 2010
Pages: 11 p

Author:
Potter, Stephen
Professor of Transport Strategy, The Open University
eMOTION

eMOTION is a co-operation between public authorities, transport service operators, telecommunication operators, IT suppliers, research centres, and transport consultancies from Austria, Belgium, Czech Republic, Germany, Italy and Spain with the aim to investigate, specify and assess multi-modal, on-trip Traffic and Travel Information Services for the European travellers.

 Started in May 2006, eMOTION has successfully completed the planned project activities in July 2008.

http://srvweb01.softeco.it/emotion/

Les syndicats mixtes de transport de la loi SRU: Un outil pour la gouvernance interterritoriale des mobilités? (The mixed public transport authorities of the SRU law: A tool for the interterritorial governance of mobilities?)

Richer, C., Hasiak, S., Jouve, N.
Équipe de Recherche Associée (ERA), Mobilité avec l'IFSTTAR, Pôles de Compétences et d'Innovation (PCI), France
CETE Nord-Picardie, Groupe Mobilité et Territoire, Pôle de Compétences et d'Innovation (PCI), France
CETE Nord-Picardie, Groupe Mobilité et Territoire, SRU, France
Flux – Issue 83, January 2011, Pages 51–67

In 2000, the French law on Urban Solidarity and Renewal (SRU) encouraged the development of mixed public transport authorities under a new institutional form to promote cooperation between the authorities in charge of public transport at different levels. Ten years on, this article analyses these authorities in order to draw an assessment of the existing situation and to open discussion on the local implementation of the reform. Faced with the increasing challenge of making urban policies more interactive, beyond sectoral or spatial divisions, do the mixed public transport authorities constitute a real stake for a new governance of mobilities, which might better take into account the 'interterritoriality' of contemporary problems? The initial analysis of these authorities highlights the flexibility of the tool with regard to the diversity of local situations. These authorities appear to be a fragile cog in the interterritorial architecture in spite of the extent of the stakes that they bear regarding intermodality and 'sustainable mobility'. These results should however be nuanced by recent changes and the creation of new mixed authorities not studied in this article.
Smart and integrated ticketing in the UK: Piecing together the jigsaw

Turner, M., Wilson, R.
Herbert Smith LLP, London


In its recently published "Smart and Integrated Ticketing Strategy", the Department for Transport (DfT) set out its vision for a seamless transport ticketing infrastructure across England by 2020, built on smart card ticketing technologies. This article discusses the core aspects of the DfT's strategy, the existing jigsaw of discrete ticketing schemes in the UK, and the challenges of integration. The authors review both legal and commercial risks associated with the procurement of new ticketing infrastructures and outline the key contractual issues to be addressed by operators in smart card ticketing projects.

2.3 Borders

1) Improving border crossings has been the subject of years of study and recommendations, such as specific target times for border crossing. What is preventing us from making progress?

2) What are the means for better integrating freight customs and security processing to reduce costs, improve security and facilitate trade? Can port/airport freight processing be more customer-oriented?

3) Do governments need to invest more in capacity to process security, immigration/visas, customs and transport permits at land borders?

4) How can international governments improve the mutual recognition of freight customs and security processing in shipping, rail and aviation?

5) What are the technologies that can facilitate smooth flows across borders and through key international terminals? How can their deployment be facilitated?

6) What more can be done to address corruption?

References

A Total Logistics Cost Approach to Measuring Collateral Benefits of Security and Supply Chain Improvements at International Gateways


Abstract:
This paper, from an International Conference on Canada’s Asia-Pacific Gateway and Corridor Initiative, proposes a total logistics cost approach to measuring the collateral benefits of security and supply chain improvements at international gateways. The author maintains that freight security initiatives do not necessarily result in cost
increases or reduced service. Security improvement can also reduce logistics and supply chain costs by improving supply chain visibility and enhancing transit reliability, resulting in collateral benefits to the supply chain. The author describes a total cost logistics model that can be used to simulate alternative logistics scenarios and security strategies and thus determine the influence of security initiatives on total logistics cost. The model recognizes inventory-related as well as transportation costs and is applied to a scenario which reflects relative values rather than exact values. A hypothetical application of the model to competing gateways is used to demonstrate the model's usefulness in evaluating how security impacts the total cost of using a specific gateway. The model shows that improvement in the reliability of transport has a greater impact on total cost than improvements in transit time. The author cites emerging evidence that differences in security enforcement between inbound and outbound movements between the United States and Canada have changed the balance of north-south trade at some border crossings and therefore on the competitiveness of U.S.-routed produces versus Canada-routed products.

Pagination: 19p
Authors:
Chow, Garland
University of British Columbia, Vancouver
Monograph Title: Canada's Asia-Pacific Gateway and Corridor Initiative
Publication Date: 2007
Conference: Canada's Asia-Pacific Gateway and Corridor Initiative
Location: Vancouver British Columbia, Canada
Date: 2007-5-2 to 2007-5-4
Corporate Authors: Transport Canada
1000 Sherbrooke Street, West, P.O. Box 549
Montreal, Quebec H3A 2R3 Canada

CREAM EU-PROJECT
CREAM – Customer-Driven Rail-Freight Services On A European Mega-Corridor Based On Advanced Business And Operating Models
"The CREAM improvement activities have been integrated into an innovative corridor-related freight service concept; they are related to:
* Innovative rail-based supply chains including intelligent rail and multimodal operation models
* Quality management system
* Interoperability and border crossing
* Integrated telematics solutions for train control, tracking & tracing of shipments and customer information
* Rail logistics for temperature-controlled cargoes
* New technology for the transport of unaccompanied semi-trailers in intermodal transport"
http://www.cream-project.eu/home/index.php
The Many Facets of ETC Interoperability


ITS World Congress, October, 2006

From the table of contents:

- Current Interoperability Models
- U.S. Interoperability
- E-ZPass Interagency Group (IAG) Model
- California Model and Title 21
- Florida Model
- Texas Model
- European Interoperability
- Interoperable EFC and Road Pricing in Europe Directive 2004/52
- ASECAP
- ERTICO
- Via T Business Model
- PISTA Project
- NORITS Project (Nordic Interoperability for Tolling Systems)
- CESARE III Project
- MEDIA Project – Alpine Region Interoperability
- TelePass
- The UK DIRECTS Project
- Australian Interoperability
- Interoperability in Chile
- OmniAir Vision for Interoperability
- US 5.9 GHz Project
- OmniAir Back Office Model
- Recommendations for promoting interoperability
- Technical Interoperability
- Equipment Standards
- Software Interface Standards and Security Guidelines
- Contractual Interoperability
- Operational Interoperability
- Formulation of an Interoperable ETC Framework
Trade Logistics in Developing Countries: The Case of the Middle East and North Africa

Devlin, Julia; Yee, Peter
World Bank; Consilium International
World Economy, March 2005, v. 28, iss. 3, pp. 435-56 (ISSN: 03785920)

This paper presents an analysis of obstacles facing exporting firms in developing countries by diagnosing the efficiency of trade logistics in the Middle East and North Africa region (MNA). Using logistics chain analysis for six export commodities, it presents evidence that transport and non-transport logistics costs for export commodities from the MNA region are quite substantial, ranging from 725 per cent of landed product prices. Underlying these costs are key bottlenecks identified as: inefficient trucking and transport services, low export volume leading to long shipping times and the need for costly inventory accumulation, aggressive, obstructive customs authorities and procedures, low and inconsistent product quality, an underdeveloped transport intermediary sector, inefficient cross-border transit procedures and others. Recommended actions to address developing a national transport policy, overhauling the regulatory regime for the trucking sector, export promotion measures, increasing competition in port and air freight services, reorienting customs authorities towards trade facilitation and developing cross-border transit procedures similar to the TIR Carnets model.

Institutional perspective on the adoption of technology for the security enhancement of container transport

Lun, Y.H.V., Wong, C.W.Y., Lai, K.-H., Cheng, T.C.E.
Department of Logistics, The Hong Kong Polytechnic University, Kowloon, Hong Kong
Transport Reviews Volume 28, Issue 1, January 2008, Pages 21-33

The adoption of technology for security enhancement by organizations in a container transport chain has become a necessity for enhancing container transport security. Organizations in a container transport chain, including shippers, consignees, freight forwarders, transport operators, maritime carriers, container terminal operators, customs authorities and government agencies, adopt technologies, such as radio-frequency identification (RFID) technology, smart box initiative and container non-intrusive inspection (NII) technology, due to the institutional pressures exerted by partners in the chain. This paper explores the implications of the different types of institutional isomorphisms, namely coercion, mimesis and norms, from both the perspectives of organizations that have taken the initiative to adopt technology for container transport security enhancement and those that have followed other organizations to adopt technology. The possible impacts of the different types of institutional isomorphisms elaborated in this study can help managers better understand the institutional pressures that they put on, and the institutional pressures that drive them to adapt to their container transport chain partners; in particular, the possible problems and compliance requirements they may face in the course of adopting technology for enhancing container transport security.
Perceptions and assessment of maritime security management – The perspectives of liner shipping companies
Chen, S.-Y. , Chang, C.-C.
Proceedings of International Forum on Shipping, Ports and Airports, IFSPA 2008 - Trade-Based Global Supply Chain and Transport Logistics Hubs: Trends and Future Development
2008, Pages 286–296
Since the 9/11 terrorist attacks, monitoring on container shipping transportation has been strengthened under the international measures. The shipping operators are required not only to pay more attention to the "safety operations and environmental protection" in their ship navigation and shipment transportation but also to well implement the "security management" at all times following the new regulations, such as the "International Ship and Port Facility Security Code" (ISPS Code), Container Security Initiative (CSI) and Customs-Trade Partnership Against Terrorism (C-TPAT) etc. The purpose of this research is to identify the perceived priority of essential dimensions in maritime security when formulate strategic response from international liner shipping companies' perspectives. This system approach consists of maritime security dimensions identification, maritime security measurement and assessment processes using three methods of In-depth interview, content analysis and fuzzy analytic hierarchy process. The results suggest that shipping companies identified four main dimensions of maritime security and perceive "people security," to be the most important dimension of conducting a maritime security strategic response, followed by "vessel security", "cargo security" and "environmental security". At last, theoretical and managerial implications of these findings are discussed.

Does corruption discourage international trade?
de Jong, E.
Department of Economics, Radboud University Nijmegen, Nijmegen, Netherlands
Bogmans, C.
Department of Economics and Business, Center, Tilburg University, Tilburg, Netherlands
We use measures of trade-related corruption to investigate the effects of corruption on international trade and compare the results with those of corruption in general. We distinguish corruption in an exporting economy from that in an importing economy. Both distinctions appear to be important. Corruption in general hampers international trade, whereas bribe paying to customs enhances imports. This effect is most robust in importing countries with inefficient customs. High waiting times at the border significantly reduce international trade. The effects of unpredictability of corruption and policies are inconclusive.
The pursuit of integrity in customs: Experiences from sub-Saharan Africa


Fjeldstad, O.-H.
Chr. Michelsen Institute, P.O. Box 6033, Postterminalen, N-5892 Bergen, Norway


This paper examines recent experiences from sub-Saharan Africa in combating corruption in customs. It argues that integrity reforms have been too focused on reforming formal institutions, and too little attention has been paid to the political economy of reforms and the role of informal institutions. In many customs administrations patronage runs through networks grounded on ties of kinship and community origin. Patronage undermines the implementation of policies and rules-of-law more generally. Opportunities for accessing illegal income tend to become institutionalised, leading to the creation of parallel organisations within customs, in which posts are valued essentially on the basis of the illicit gains to which they provide access. In such settings, customs officers are torn between compliance with abstract bureaucratic norms and concrete expectations of their networks of social belonging. Accordingly, policy initiatives should focus more on measures that reduce the possibility or attraction of favouritism versus acting in the general public interest. This calls for anti-corruption efforts based on thorough analysis of the political economy of customs, in order to understand the interests and incentives of key players.

Port security in EU: A systemic approach

Andritsos, F., Mosconi, M.
European Commission, JRC, IPSC, Maritime Affairs, Italy

2010 International Waterside Security Conference, WSS 2010
2010, Article number 5730222

In response to the tragic events of September 11 2001 and the growing concern for the security of ships and ports, the International Maritime Organization set up new security regulations implemented in the International Ship and Port facility Security code as an amendment to the Safety of Life at Sea convention on minimum security arrangements for ships and port facilities. It has been transposed to the Community legal framework by the Regulation 725/2004, successively, extended into the whole port area by the Directive 2005/65/CE. Ports constitute crucial intermodal nodes in the freight and passenger transport network as well as important border control points. Their security is therefore of paramount importance not only because of their critical transport functions but also because of their specific role, as control points, in the regional, national and European security. Indeed, port security is a cornerstone for the implementation of the new international maritime transport security regime in what regards the protection of port users and public as well as the protection of the maritime vessels. The aim of the present paper is to analyse the problem, highlight the issues faced in a systematic way and provide a systemic framework towards a better port security without penalising excessively the trade or the port related
activities. To this end:

- A basic taxonomy concerning ports, port facilities and security is established,
- The main requirements from the EU and international regulations are highlighted.
- The port facility security, basic functional block for the port security, is analysed and its main parameters are derived.
- The current situation of EU port facilities is highlighted and some conclusions on the short term priorities and the way ahead are drawn.

2.4 Economic issues

1) Is seamlessness sufficiently integrated in appraisal?
2) Are market failures or institutional structures in transport impeding greater connectivity between the modes?
3) To what extent does increased information-sharing in transport make business sense in competitive markets?
4) Is increased connectivity likely to result in more market concentration in some areas of transport? Does increased intermodal integration require greater internalisation of transport service provision within single companies, thus providing less choice to customers? (What role does access to essential facilities play and what regulatory approach is needed if any?) (See also Supply chains question no. 5.)

References

Maritime Transport and Trade: The Impact of European Transport Policy: An Overview of Maritime Freight Transport Patterns

Novo-Corti, Isabel; Gonzalez-Laxe, Fernando
U A Coruna; U A Coruna
European Research Studies, 2009, v. 12, iss. 1, pp. 129-45 (ISSN: 11082976)

Abstract:
In order to unblock major transport routes and to ensure sustainable mobility, the changing of freight road to rail or maritime transport is an European Union objective. The increasing seaborne transport, the growing process of containerization and building an infrastructure for regular maritime lines and increasing Short Sea Shipping draws a scene with maritime sector of companies of major size, as a result, in many occasions, of mergers and acquisitions. These dynamics seems to draw a new stage, with more concentrated markets. In this paper, we intend to make an approach to the levels of concentration of maritime transport in Europe, trying to find a possible connection between new market structure in the maritime transport sector and the new economic situation promoted by European Transport Policy rules.
Globalized Freight Transport: Intermodality, E-Commerce, Logistics and Sustainability

Abstract:

The book’s starting point is the fact that freight transport is the main element supporting global supply and commodity chains, from the transformation of raw materials to market distribution and after-market services. However, as the authors point out, the rising costs associated with security and various other constraints, as well as the complexity of getting goods delivered, is adding to profit pressures faced by manufacturers around the globe. Despite the application of technology and increasingly efficient solutions to the movement of freight, constraint points and conditions obstructing smooth operations and sustainability have developed. These difficulties affect both the environment and economic growth. Examining the issues from four critical perspectives – intermodality, e-commerce and technology, logistics, and sustainability – Globalized Freight Transport captures the concern for the viability of freight systems and the ways they are impacting the global economy. This cutting-edge study will be of great interest to students and scholars of transportation, as well as to public sector policymakers and private sector managers.

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Corporate Authors:
Edward Elgar Publishers
William Pratt House, 9 Dewey Court
Northampton, MA 01060-3815 USA
Editors: Thomas R Leinbach
University of Kentucky, Lexington
Cristina Capineri
University of Siena, Italy
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Edward Elgar Publishers
William Pratt House, 9 Dewey Court
Northampton, MA 01060-3815 USA
ISBN: 978184542502p
Title: Characteristics and competitive implications of air–rail links in Germany

Author: Andreas Eichinger  
Address: Economics, National and International Economic Policy, German University of Administrative Sciences Speyer, Freiherr-vom-Stein-Str. 2, 67346 Speyer, Germany

Journal: World Review of Intermodal Transportation Research 2007 - Vol. 1, No.3 pp. 264 - 285

Abstract: This paper highlights and analyses the ambivalent competitive relationship between air and rail passenger transport. Whereas the issue of competition between the two modes is only briefly addressed the paper focuses on air-rail links, which represent a good example of cooperation between air and rail operators. In the course of the paper, actual service quality of air-rail links and corresponding offers in Germany are described. In essence, the paper argues that air-rail links could on the one hand pose as a means to intensify competition between incumbent airlines and foreign competitors and on the other hand as a means to cement the market share of participating airlines and airports.

Measuring Economic Benefits of Intermodal Transportation


Dr. Yuri V. Yevdokimov

Usually benefits for transportation investments are analysed within a framework of cost-benefit analysis or its related techniques such as financial analysis, cost-effectiveness analysis, life-cycle costing, economic impact analysis, and others. While these tools are valid techniques in general, their application to intermodal transportation would underestimate the overall economic impact by missing important aspects of productivity enhancement.

Intermodal transportation is an example of the so-called general purpose technologies (GPTs) that are characterized by statistically significant spillover effects. Diffusion, secondary innovations, and increased demand for specific human capital are basic features of GPTs. Eventually these features affect major macroeconomic variables, especially productivity. Recent economic literature claims that in order to study GPTs, micro and macro evidence should be combined to establish a better understanding of the connecting mechanisms from the micro level to the overall performance of an economy or the macro level.

This study analyses these issues with respect to intermodal transportation. The goal is to understand the basic micro and macro mechanisms behind intermodal transportation in order to further develop a rigorous framework for evaluation of benefits from intermodal transportation. In doing so, lessons from computer simulation of the basic features of intermodal transportation are discussed and conclusions are made regarding an agenda for work in the field.
**Concentration and the formation of multi-port gateway regions in the European container port system: an update**

Abstract:

The European container port system features a unique blend of different port types and sizes combined with a vast economic hinterland. This paper provides an update of the detailed container traffic analysis developed by Notteboom (1997) by extending it to the period 1985–2008 and to 78 container ports. The paper also aims at identifying key trends and issues underlying recent developments in the European container port system. These trends include the formation of multi-port gateway regions, changes in the hinterland orientation of ports and port regionalization processes. While the local hinterland remains the backbone of ports' traffic positions, a growing demand for routing flexibility fuels competition for distant hinterlands between multi-port gateway regions. The prevailing assumption that containerisation would lead to further port concentration is not a confirmed fact in Europe: the European port system and most of its multi-port gateway regions witness a gradual cargo deconcentration process. Still, the container handling market remains far more concentrated than other cargo handling segments in the European port system, as there are strong market-related factors supporting a relatively high cargo concentration level in the container sector.

Pagination:
pp 567–583
Authors:
Notteboom, Theo E
University of Antwerp
Publication Date: 2010-7
Journal of Transport Geography, Volume: 18, Issue Number: 4
Publisher: Elsevier, ISSN: 0966-6923

**Modelling the Full Costs of an Intermodal and Road Freight Transport Network**

Janic, Milan

OTB Research Institute, Delft U Technology


This paper develops a model for calculating comparable combined internal and external costs of intermodal and road freight transport networks. Internal costs consist of the operational-private costs borne by the transport and intermodal terminal operators, and the time costs of goods tied in transit. The external costs include the costs of the impacts of both networks on society and the environment such as local and global air pollution, congestion, noise pollution, and traffic accidents. The model is applied to the simplified configurations of both networks using the inputs from the European freight transport system. The objective is to investigate some effects of European Union policy, which aims to internalise the external costs of transport, on the prospective competition between two networks from a social perspective.
**Competition and Cooperation in Local Public Transport: Realistic Scenario or Just a Fantasy?**

Gross, Mirco

Institute for Public Services and Tourism, U St Gallen

Transformations in Business and Economics, 2009, v. 8, iss. 1, pp. 86–100 (ISSN: 16484460)

For decades, local public transport (LPT) has been losing its market share in intermodal competition. For this reason, and given its particular economic and ecological significance, action needs to be taken to counter this trend. In this connection, above all, two goals which should be aspired to will be outlined in this paper: the coordination of the range of services offered as a result of local transport companies working together to enhance the attractiveness of LPT and the implementation of competition in local public transport. This raises the question of whether these two goals can be achieved complementary given the conditions that exist in LPT or whether competition and cooperation among the transport companies do not instead cancel each other out. Bearing this issue in mind, this paper will analyse the two organisational forms applied in practice in LPT: the "3-level model with tendering competition" and the "deregulated market". In this context, focus will be given to public road passenger transport. Analysis has shown that fully deregulating the local transport markets would further weaken LPT. In contrast, the "3-level model with tendering competition" could prove to be a suitable organisational model for LPT if the public transport authorities observe certain criteria when implementing this model.

**Intermodal Alliance and Rivalry of Transport Chains: The Air Cargo Market**

Zhang, Anming; Lang, Chunmei; Hui, Y. V.; Leung, Lawrence

U British Columbia; City U Hong Kong; City U Hong Kong; Chinese U Hong Kong


This paper examines the effect of multimodal integration on the rivalry between two transport chains--a forwarder-airline alliance and an integrator--under the economies of traffic density. An improvement in multimodal integration by a forwarder-airline alliance would increase the alliance's output, while reducing the integrator's output, not only in the multimodal market but also in other markets of the cargo network. It would further increase the alliance's profit, provided the intermodal improvement is not too costly, while reducing the integrator's profit, and would likely improve both consumer surplus and total surplus. We also find that an alliance in general leads to greater market shares for the firms involved than outsourcing.
Port Competition Regulation: A Tool for Monitoring for Anti-competitive Behavior
Kent, Paul E.; Ashar, Asaf
Nathan Associates, Inc, Arlington, VA; National Ports & Waterways Institute, LA State U
Experience and research strongly suggest that privatisation has been effective for enhancing efficiencies and lowering costs, provided there is a competitive environment. While governments for the most part have avoided transfers of public sector monopolies to private ones, the result in the port sector has still tended towards highly concentrated markets, as determined by any one of a number of market tests. Fierce competition may exist in such markets, but ports in these circumstances may also be more susceptible to anticompetitive behaviour. Regulators today rely on concentration ratios to measure the extent of firm dominance. These ratios, however, only focus on market structure, and are not indicative of market performance (e.g. the extent to which conditions may exist for anticompetitive behaviour). This article first reviews the typical "tests" used by countries to determine the extent of market concentration and then presents a model for monitoring the conditions in which anticompetitive behaviour is likely to occur. A test application of the model is demonstrated that can facilitate the regulator's need to monitor for anticompetitive behaviour.

The Competitive Effects of Rail Freight Mergers in the Context of European Liberalization
Stehmann, Oliver; Zenger, Hans
European Commission Directorate General for Competition; European Commission Directorate General for Competition
Journal of Competition Law and Economics, June 2011, v. 7, iss. 2, pp. 455–79 (ISSN: 17446414)
The recent liberalization of rail freight services in Europe has created the possibility of cross-border competition and market integration for European rail freight operators. In other regulated network industries, such as the electricity sector, liberalization subsequently led to a significant number of cross-border mergers. A merger wave also followed the deregulation of U.S. rail freight in the early 1980s. It is therefore not unlikely that an increased number of rail freight mergers might occur in Europe in the upcoming years. This article discusses the competitive effects of such mergers in the context of recently liberalized markets. In particular, it draws from the experience of recent cross-border mergers that were notified before the European Commission. This article proposes several conclusions for market definition, the assessment of the theory of harm, and possible efficiency defenses.
A Macroeconomic Analysis of the Public Investments in European Combined Transport
Berrittella, Maria
U Palermo

Intermodal transport has been recognized as a priority by the European Union, that has defined different budget allocations of investments to improve the shifting from road to intermodal transport, which is more sustainable. In this context, the main aim of the paper is to discuss the macroeconomic effects, in terms of economic growth, welfare and trade, of these public investments for combined transport, which aspects have been neglected in literature. A multi-country computable general equilibrium model has been used. The main results have been that the European Union benefits from these investments, but at international level, USA and Japan would lose in terms of welfare. Furthermore, the welfare change has been decomposed in its components and the results show that the trade effects are higher than the allocative effects. The robustness of the results has been tested over time and by a sensitivity analysis of the exchange rate.

Economic organization of intermodal transport
Photis M. Panayidesa
Transport Reviews, Volume 22, Issue 4, pages 401–414, 2002

The paper considers in detail strategic changes occurring in the organizational context of intermodal transportation and discusses the application of economic approaches (primarily transaction-cost economics) for assessing the effectiveness of the appropriate governance structure in organizing the intermodal transport economic system. The paper reviews the developments in intermodal transportation, particularly in the context of logistics and supply chain management, and recognizes the trend for the formation of one-stop shopping megacarriers spurred by deregulation and market requirements. This culminates in the need to consider how companies should organize the economic governance of the intermodal transport system. The main governance structures include market (subcontracting) or hierarchy (internal organization). The transaction-cost economics approach is reviewed and applied at a conceptual level to provide the core basis upon which the assessment of the optimal governance structure in intermodal transport can be based. The review of the core economic principles indicates that the governance structure in intermodal transport is dependent on transaction costs, production costs and strategic considerations that a particular structure might entail and the policy implications thereof. The potential for empirical research in the application of the transaction-cost economics approach to intermodal transport is discussed and detailed direction for further empirical research is provided as well as discussion of policy implications particularly with respect to competition and antitrust.
2.5 Urban transport

1) Where are the biggest potential benefits for increasing connectivity between modes in cities?

2) How can we improve connectivity for passengers with reduced mobility?

3) How can governments overcome the institutional impediments to integrated planning of urban transport systems, as well as the introduction of integrated ticketing of public transport?

4) What are the options for improving throughput at key nodes and terminals that link urban and inter-urban transport, such as railway stations and airports?

5) How can pedestrian and non-motorised access to public transport nodes be improved?

6) How can we pay for these investments? Can the challenge of revenue-sharing in integrated transport systems be easily overcome?

References

Fare integration. Exploring barriers to successful implementation.
Raphael Sammut and Kevin P. Siu
2009

Presents the Hong Kong Octopus card as a case study and argue that not only technological issues should be addressed. The major problems barriers are, the authors claims, institutional.

Long-Term Perspectives of Intermodal Integration at Airports

Abstract:
This paper provides an overview of current and future developments in intermodal concepts in the aviation sector. It also analyzes the major external influences on these concepts and the motivations of different stakeholders with respect to the integration of their infrastructure. The paper uses results from a survey of airports in Europe, Asia, North America and South America to elaborate on the current state of intermodality. The results indicate that many airports still are primarily accessed using automobiles. Potential developments under a changing environment are analyzed for two different scenarios to derive future trends in intermodal integration. The analysis indicates that regardless of the scenario, intermodality for the aviation industry, especially air-rail integration, is likely to increase in importance.

Pagination: pp 252–264
Authors: Vespermann, Jan
International University Schloss Reichartshausen
Wald, Andreas
International University Schloss Reichartshausen
Older and Disabled People’s Need and Valuation of Traveller Information in Public Transport


Abstract:

The purpose of this study was to study the need and valuation of traveler information in public transport among older and disabled people in order to understand what traveler information is needed when planning a trip. However, the need varies depending on which of the older and disabled that are discussed; some traveler information is important for all of the older and disabled whereas other types of traveler information is important only to subgroups based on physical restrictions. The traveler information needs of the subgroups are specific for the disability in question as well as for the handicap it results in when traveling with public transport. The need of some traveler information also increases with the severity of the disability. Traveler information is necessary regardless of physical restrictions. This traveler information covers aspects important for all travelers, like price of the trip and options when booking, but the older and disabled also need practical traveler information during the trip, for example knowing the stop/platform on departure, at connections and at destination and where to stand on the platform to board the right compartment as well as the number of steps when boarding. Furthermore, they need to know the service available during the trip and that there will be staff available at the terminal/station during their trip. This study points out some of the pre-trip travel information requirements of the older and disabled travelers, but much work remains before a comprehensive, comprehensible and coherent traveler information service that includes the needs of the older and disabled can be provided.

Pagination: 21p

Authors:

Waara, Nina

Monograph Title: European Transport Conference, 2009 Proceedings

Conference: European Transport Conference, 2009

Location: Leiden Leeuwenhorst Conference Centre, Netherlands

Date: 2009-10-5 to 2009-10-7
Developing Transit Station Design Criteria with a Focus on Intermodal Connectivity


Abstract:

This paper presents a procedure that could be used to develop transit station design criteria and guidelines with a focus on intermodal connectivity. The proposed procedure is appropriate for high-capacity transit systems, including rail and bus rapid transit. The design guidelines focus on ensuring safety, seamlessness and comfortable use. The procedure proposed in this paper is inclusive of all user groups, including people with disabilities. Although the proposed procedure was developed for transit stations in Florida, it can be used by any transportation planners and engineers when developing and evaluating transit station designs.

Pagination:

pp 77–91

Authors:

Mbatta, Geophrey
Sando, Thobias
University of North Florida, Jacksonville
Moses, Ren
FAMU-FSU College of Engineering

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Standards für intermodale Schnittstellen im Verkehr


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Author:
De Tommasi, Roberto
synergo,
Planung und Projektmanagement,
Zürich

Author:
Müller, Guido
Institut für Landes- und Stadtentwicklungsforschung und Bauwesen des Landes Nordrhein-Westfalen

Author:
Oetterli, Dominik
synergo,
Planung und Projektmanagement,
Zürich
Accessible public transport. A view of Europe today – policies, laws and guidelines

http://www.transguide.org/seamless-transport/Seamless%20trp%20PDF/Seamless-trap-017.pdf

This report describes about 350 documents containing current policies, action plans and strategies, legal frameworks and other means (concessionary fares, economic incentives, strategic plans, training etc.) in the EU countries plus Norway and Iceland. The references are organised as an inventory, listed by topic and country, and may be useful for those dealing with accessibility of public transport system. The report is a deliverable from the EU project "For a European Accessibility of Public Transport for People with Disabilities (Euro Access).

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Pages: 142 p.

Author:
Dotterud Leiren, Merethe
Author:
Tennøy, Aud

Publisher:
Institute of Transport Economics
Gaustadallen 21
NO 0349 Oslo
Norway

SPUTNIC (Strategies for Public Transport in Cities)

SPUTNIC is dedicated to challenges faced by local and regional public transport systems in transition. These challenges include the emergence of a competitive environment, changing institutional frameworks and increasingly scarce financial resources.

Among the priority areas the following seems to be relevant for seamless transport within urban areas:

"MARKET ORGANISATION

This working group focuses on effective cooperation of public transport actors, tariff optimisation and integration, innovative financing, incentive contracts and monitoring systems which improve system quality and reduce costs."

http://www.sputnicproject.eu/
Reviewing transport governance: The case of Leeds, UK

English, J., Spear, J.
West Yorkshire Passenger Transport Executive, Leeds, United Kingdom
Atkins, London, United Kingdom

Proceedings of the Institution of Civil Engineers: Municipal Engineer
Volume 162, Issue 3, 1 September 2009, Pages 141–148

The UK Department for Transport recently announced a range of initiatives to support a more coherent approach to transport planning and delivery in the major urban areas of England. Specifically, the Local Transport Act, which received royal assent in late 2008, enables groups of local authorities and their partners to review their transport governance arrangements and, if appropriate, publish a programme of statutory and non-statutory reforms aimed at improving integration, efficiency and effectiveness of decision making. This paper considers the process of carrying out a governance review in the specific context of Leeds city region. This area comprises 11 local authorities centred on the West Yorkshire conurbation, but also includes parts of North and South Yorkshire, where responsibilities for transport planning, funding and delivery are split across a range of councils, national and regional agencies, as well as multiple public and private sector service providers. The governance review is designed to assess current arrangements, establish whether there is a case for reform and consider reform options to deliver more efficient and effective transport outcomes that support sustainable economic development and quality of life. Options considered include powers for local public transport, rail and highways, governance structures and administrative boundaries, including the transition from West Yorkshire passenger transport authority and executive to a new integrated transport authority. As well as the process of the review itself and some early findings, the paper describes a number of practical, operational and political challenges encountered by those undertaking the review.
Governance of urban mobility: Complex systems and integrated policies

Cascetta, E., Pagliara, F., Papola, A.
Dipartimento di Ingegneria dei Trasporti L. Tocchetti, Università degli Studi di Napoli Federico II, Via Claudio 21, 80125 Napoli, Italy

Advances in Complex Systems - Volume 10, Issue SUPPL. 2, 2007, Pages 339-354

Transportation systems are "internally" complex systems, made up of many elements influencing each other both directly and indirectly, often nonlinearly, with many feedback cycles. Apart from the internal complexity, transportation systems are closely interrelated with other systems, which can be defined as external. Transport projects may have implications for the economy, the location and intensity of the activities in a given area, the environment, the quality of life and social cohesion. Actually, today, in order to have a better view of the urban problems and mainly for better governance of mobility, the urban system per se is no longer studied, but rather the whole metropolitan area surrounding it. Transport and land use are clearly integrated. Each technological innovation in transport has encouraged both people and industry to change their location to take advantage of the improved mobility; similarly, each change in land development (e.g. houses, factories, offices and shops) has influenced the demand for travel and ultimately the provision of new transport infrastructures and services. An example of integrated land use and transport planning is the Regional Metro System (RMS) project, carried out in Campania, which is finally reported.
2.6 Supply Chains

1) Where are the greatest impediments to the seamless flow of goods?

2) What is the potential of connectivity to contribute to greening supply chains?

3) What are the differences in technical standards that continue to hinder interoperability (e.g. rail gauges, container sizes, data interchange standards) and what institutional structures are required to get beyond these? What global institutional structures are needed to avoid a proliferation of standards for future innovations?

4) How can freight traffic be better managed in cities?

5) Is there an inherent link between market concentration and improved connectivity? (See also Economic issues question no. 4.)

References

Title: A Global Electronic Market (GEM) for logistics services and supply-chain management: the expert view

Author: Sveinn Vidar Gudmundsson

Address: Department of Strategy and CERMAS Research Centre, Toulouse Business School, 20 Blvd Lascrosses, 31068 Toulouse, France

Journal: World Review of Intermodal Transportation Research 2006 – Vol. 1, No.1 pp. 3–23

Abstract:

The aim of the research was to clarify why integration efforts in logistics, through electronic markets, have been difficult to accomplish and to seek industry expert opinion on where the key benefits and barriers lie. A three round Delphi approach was used. The first step was to generate factors in response to three probes and then to iterate the responses among the experts until stability occurred. Factors suggested by the experts fall into groupings suggested in prior research on Inter-Organisational Systems (IOS). Factors having high consensus likely to influence adoption, fell into three categories: trust, pressure and perceived benefits. This research indicates that logistics integration through electronic markets is viable and sellers are likely to feel pressure from buyers, but are most likely to resist market adoption on trust and competition issues.
Title: The emergence and significance of dry ports: the case of the Port of Goteborg

Author: Violeta Roso

Address: Division of Logistics and Transportation, Chalmers University of Technology, SE-412 96 Goteborg, Sweden

Journal: World Review of Intermodal Transportation Research 2009 - Vol. 2, No.4 pp. 296–310

Abstract:

The dry port concept is based on a seaport directly connected by rail to inland intermodal terminals, where shippers can leave and/or collect standardised units as if directly at the seaport. The purpose of this paper is to present the dry port concept, to identify and categorise existing dry ports for the Port of Goteborg and to evaluate the concept from an environmental perspective. The conclusions indicate that implementation of a dry port in the seaport's hinterland enables the seaport to increase its terminal capacity; the modal shift from road to rail results in a reduced congestion at the seaport gates and its surroundings and consequently in improved inland access, as well as in a lesser environmental effect. Only two of the surveyed intermodal terminals can be categorised as simple dry ports for the Port of Goteborg.

Intermodal transport: Thematic Research Summary (2006)


DG Energy and Transport

Nils Meyer-Larsen and Wiebke Duhme

Intermodal Transport is one of the approaches on the European level to solve the actual and the expected problems in freight transport; growing freight transport means the European Union transport system is showing signs of inefficiency from a socio-economic point of view. This paper provides a structured guide to the results of Research and Technical Development projects relating to Intermodal Transport, carried out in transport research programmes throughout the European Research Area.

Comments:

Also contains list of completed projects.
Integrated Modeling and Simulation Framework for Freight Transportation in Metropolitan Areas


(2010)

Viktor Prasanna, Principal Investigator
Amol Bakshi, Principal Investigator

Ming Hsieh Department of Electrical Engineering
University of Southern California
Los Angeles, CA 90089-2562

Freight transportation at distribution nodes such as marine ports, airports and rail yards contributes to congestion, environmental pollution, traffic accidents and has been putting tremendous pressure on metropolitan areas to deal with such issues. The framework is designed to be modular and extensible. Researchers developing simulation models, control algorithms etc., can insert new modules into the overall environment with little effort and synergistically with other existing modules. We demonstrated our system by integrating existing models.

SUGAR – Sustainable Urban Goods logistics Achieved by Regional and local policies

SUGAR aims to address the problem of inefficient and ineffective management of urban freight distribution, a critical component of the overall urban transport system and a primary source of vehicle pollutant emissions. To accomplish this goal, the projects promotes the exchange, discussion and transfer of policy experience, knowledge and good practices through policy and planning levers in the field of urban freight management, between and among Good Practice and Transfer sites.

The SUGAR partnership brings together 17 institutions divided in:
- 4 good practice sites
- 7 European transfer sites
- 2 European networks targeting key public administration stakeholders working in transport
- 4 public equivalent bodies in the policy making activities.

http://www.sugarlogistics.eu/
Global Supply Chain and Port/Terminal: Integration and Competitiveness

Song, Dong-Wook; Panayides, Photis M.

Logistics Research Centre, Heriot-Watt U; Cyprus International Institute of Management
Maritime Policy and Management, February 2008, v. 35, iss. 1, pp. 73–87 (ISSN: 03088839)

Much has been said of the importance of port and terminal integration in the supply chain. Authors have stressed the importance of agility to the port environment, which involves being proactive along supply chains, facilitation of intermodal integration, as well as organizational integration and partnership between ports and users. Despite the well-articulated importance of the issues, little has been offered in terms of conceptualizations and empirical evidence of what really is meant by port/terminal integration in the supply chain, how such integration can be measured and quantified as well as the extent to which different ports/terminals in the world are integrated in the supply chain and competitive performance implications arising thereof. This paper aims to make a contribution in this respect by (i) reviewing the relevant literature on supply chain integration and port integration in the supply chain, (ii) conceptualizing measures for port/terminal integration in the supply chain, (iii) empirically testing the influence of port/terminal integration in the supply chain on port competitiveness and (iv) outlining the significance and value of the study for port operators, shipping lines, transport providers and for further research.

Challenges for Using ICT to Improve Coordination in Hinterland Chains: An Overview

de Langen, Peter; Douma, Albert

Port of Rotterdam Authority and Eindhoven U Technology; U Twente


The importance of hinterland transport in intercontinental door-to-door chains is widely recognised. Intermodal hinterland transport services are provided by many different firms, each taking care of a part of the chain. Consequently, there is a need for cooperation and coordination in hinterland chains, to ensure an attractive overall service for shippers. However, different firms have different market positions and business models. This leads to differences in incentives, resources, capabilities, and attitudes concerning coordination and cooperation. Analysis of their business models suggests that there is so much competition between players with different business models, especially for involvement in design of scheduled transport networks, that initiatives to enhance coordination often have strategic implications. Consequently, coordination and cooperation do not (always) emerge, even when beneficial for the overall hinterland chain. This conclusion is relevant for the potential of ICT in improving coordination. Mechanisms to improve coordination will only be successful if they are in line with the business model of the firms involved. Distributed planning is a promising approach in this respect, as it may offer solutions to hinterland coordination problems, while, unlike traditional centralized systems, not effecting business models of the involved firms.
Vertical integration and exclusivities in maritime freight transport


CANTOS-SANCHEZ, Pedro; MONER-COLONQUES, Rafael; SEMPERE-MONERRIS, Jose J.; ALVAREZ-SANJAIME, Oscar

Department of Economic Analysis and ERI-CES, University of Valencia, Spain;
Department of Economic Analysis and ERI-CES, University of Valencia, Spain;
Department of Economic Analysis and ERI-CES, University of Valencia, Spain and Universite catholique de Louvain, CORE, B-1348 Louvain-la-Neuve, Belgium;
Department of Economic Analysis and ERI, University of Valencia, Spain

Universite catholique de Louvain, Center for Operations Research and Econometrics (CORE), CORE Discussion Papers: 2011015

A key recent theme in maritime freight transport is the involvement of shipping lines in terminal management. Such investments are costly but allow liners to provide better service. Most of these new terminals are dedicated terminals but some are non-exclusive and let rivals access them for a fee. In this paper, we show that a shipping line that builds its own terminal finds it strategically profitable i) to continue routing part of its cargo through the open port facilities, and ii) to keep its terminal non-exclusive. In this way, the liner investor pushes part of the rival's freight from the open to the new terminal. Besides, under non-exclusivities, the shipping lines offer a wider variety of services, total freight increases and the resulting equilibrium fares are higher than with a dedicated terminal.

Urban Freight Policies and Distribution Channels

Danielis, Romeo; Rotaris, Lucia; Marcucci, Edoardo

U Trieste; U Trieste; U Rome III

European Transport/Trasporti Europei, December 2010, iss. 46, pp. 114–46 (ISSN: 18253997)

Urban areas are vital centers of economic activity and innovation generating large economies of density and proximity. Yet, procuring and distributing goods in an urban context is fraught with difficulties because of infrastructure congestion, external costs, conflicting objectives among stakeholders, and asymmetric information. In order to improve the performance of the urban goods transport system many policies have been proposed, including goods vehicle time windows, vehicle-type restrictions, loading/unloading policies, fiscal policies, the promotion urban transhipment, and consolidation centres. Unfortunately, not much is known concerning how these policies affect the existing distribution practices. It is quite likely that the impact is differentiated by type of product and distribution channel. The aim of this paper is to explore this issue. Drawing on the existing literature and on the empirical evidence from some Italian cities, the paper identifies and discusses the relationship between each of the above-mentioned policies and the distribution channels of some goods (fresh food sold in retail stores, food distributed by hotels, restaurants, and catering (Ho.Re.Ca.), pharmaceutical products and clothing and footwear) which are commonly distributed in Italian urban centers. It is found that the
distribution of pharmaceutical products is unaffected by these policies, whereas the distribution of fresh food is negatively affected especially by access time regulation and loading/unloading policies. The Ho.Re.Ca. and the clothing and footwear channels are likely to be impacted the most by fiscal policies and by the promotion of urban transhipment and consolidation centres.

**Intermodal Freight Transport in Urban Areas in Japan**

Taniguchi, Eiichi; Nemoto, Toshinori

Kyoto U; Hitotsubashi U


(ISBN: 978-1-84542-238-)7

Publisher Information:


**An integrated sea-land transportation system model and its theory**

Xie, X.


To enhance the efficiency of intermodal transportation for large quantities of goods, the current sea-land transportation system has been reviewed and systematically analyzed, and a bottleneck is pinpointed in the linkage or goods transfer between the waterway and railway. The bottleneck impacts the efficiency of the goods through transportation combining the two modes. To eliminate the existing bottleneck and inefficiency towards intermodality, a new type of flexible double-rail track has recently been invented together with innovations both in trestle bridges and in train ferries. The outcomes of the research in progress show that the flexible double-rail track is feasible from the viewpoints of both geometry and engineering mechanics, it can be used to improve the compatibility of a trestle bridge with various types of train ferries and hence it can support the development of train ferries on a large scale. Based on the innovations, an integrated sea-land transportation system model is proposed as a systematic solution, which is expected to effectively overcome the existing bottleneck and to enhance the efficiency of the whole sea-land combined transportation. Further research on this system model and its major components is also addressed in the paper.
Green shipping practices in the shipping industry: Conceptualization, adoption, and implications

Lai, K.-H. Lun, V.Y.H.a, Wong, C.W.Y., Cheng, T.C.E.

Department of Logistics and Maritime Studies, Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong

Institute of Textiles and Clothing, Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong

Resources, Conservation and Recycling
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There have been increasing concerns about the adverse impacts on the environment caused by cargo movement in international trade. Different stakeholders ranging from shippers and carriers to government bodies and international communities have expressed worries about the environmental impacts brought by shipping related activities. The pollution and waste created in the shipping processes have imposed environmental burdens and accelerated resource depletion. The situation is set to worsen in the face of intensifying trade globalization, which has contributed to sustained growth in international shipping activities. To help protect the environment, many shipping firms have taken the initiative to find ways to lessen the environmental damage of their operations while enhancing their performance. The objective of this study is to examine the environmental awareness and the environmental measures taken in the shipping industry. We propose a conceptual framework for evaluating green shipping practices and develop several propositions stating the conditions under which shipping firms would behave in an environmentally responsible manner. We conclude with managerial and policy implications of the conceptual framework to promote green shipping practices in the shipping industry. © 2010 Elsevier B.V. All rights reserved.
VTI är ett oberoende och internationellt framstående forskningsinstitut som arbetar med forskning och utveckling inom transportsektorn. Vi arbetar med samtliga trafikslag och kärnkompetensen finns inom områdena säkerhet, ekonomi, miljö, trafik- och transportanalys, beteende och samspel mellan människa-fordon-transportsystem samt inom vägkonstruktion, drift och underhåll. VTI är världsförmärkt inom ett flertal områden, till exempel simulatorteknik.

VTI har tjänster som sträcker sig från förstudier, oberoende kvalificerade utredningar och expertutlåtanden till projektledning samt forskning och utveckling. Vår tekniska utrustning består bland annat av körsimulatorer för väg- och järnvägstrafik, väglaboratorium, däckprovningsanläggning, krockbanor och mycket mer. Vi kan även erbjuda ett brett utbud av kurser och seminarier inom transportområdet.

VTI is an independent, internationally outstanding research institute which is engaged on research and development in the transport sector. Our work covers all modes, and our core competence is in the fields of safety, economy, environment, traffic and transport analysis, behaviour and the man-vehicle-transport system interaction, and in road design, operation and maintenance. VTI is a world leader in several areas, for instance in simulator technology. VTI provides services ranging from preliminary studies, highlevel independent investigations and expert statements to project management, research and development. Our technical equipment includes driving simulators for road and rail traffic, a road laboratory, a tyre testing facility, crash tracks and a lot more. We can also offer a broad selection of courses and seminars in the field of transport.