

ICLT 2013

THE 5th INTERNATIONAL CONFERENCE
ON LOGISTICS & TRANSPORT 2013



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THE 5th INTERNATIONAL CONFERENCE ON LOGISTICS & TRANSPORT 2013 (ICLT 2013)

“SUSTAINABLE SUPPLY CHAIN MANAGEMENT IN ASIA PACIFIC”

November 5-8, 2013.

Doshisha University, Kyoto, Japan

INTRODUCTION

This is the 5th international conference organized by the Thai researchers' consortium of Value Chain Management and Logistics (ThaiVCML), the Centre for Logistics Research at Thammasat Business School, Thammasat University and the Faculty of Engineering, Chiang Mai University. This is major event for researchers in transport, logistics, supply chain and value chain management. This year's event in Kyoto, Japan continues with successful conferences held in Chiangmai (Thailand), 2009; Queenstown (New Zealand), 2010; Male(Maldives), 2011 and Chiangmai (Thailand), 2012. This year's event is held during 5th – 8th November 2013 which is hosted by the Faculty of Commerce, Doshisha University in Kyoto.

Under the theme of “Sustainable Supply Chain Management”, the following topics werewelcomed at the conference:

- Procurement & Supply Management
- Supply Chain Design/Configuration
- Planning & Forecasting
- Supply Chain Risk
- Relationship & Collaboration
- Sustainable Supply Chain
- Production Planning & Operations
- Production & Inventory
- Inventory Fulfilment
- Supply Chain Performance
- International Logistics
- Global Supply Chain
- Humanitarian Logistics
- Multimodal transport
- Maritime Logistics
- Freight Logistics
- Logistics Service Providers
- E-Logistics
- Logistics Development Policies
- Logistics Facilitation

The conference best paper of this year will be speciallyselected and considered for publication in the International Journal of Physical Distribution and Logistics Management and there will be a special ICLT2013 issue in the International Journal of Logistics Research and Applications. The selected papers will undergo future blind review from our scientific committee panel.

WELCOME ADDRESS FROM THE CONFERENCE CHAIRS

On behalf of the organising committee, we would like to welcome all participants to the 5th international conference on Logistics and Transport (ICLT 2013). It has been 5 years since the first conference was hosted in Chiangmai (Thailand). This ICLT conference is expected to continue on an annual basis in order to facilitate the sharing of ideas, research findings, and teaching directions related logistics and supply chain from an academic perspective.

The theme for this year's event is "Sustainable Supply Chain Management in Asia Pacific". This theme is a reflection and an extension of ICLT2012's theme, "Supply Chain Risk Management in Asia Pacific" and tries to further explore the growing importance of "Sustainable Supply Chain Management" in today's business world.

"Sustainable Supply Chain Management" is a concept that still remains fuzzy with numerous interpretations. Sustainability can be understood based on 3 dimensions: (1) economic sustainability; (2) environmental sustainability and (3) social sustainability. The challenge to identify the balance between these 3 seemingly opposite objectives remains an elusive challenge.

Nonetheless this concept does lead to greater opportunities in reviewing and revising processes, operations, and production activities that can comply with this given paradigm. Other potential advantages of sustainable supply chain management can cost reduction, waste reduction, cycle time reduction, risk mitigation, and asset utilization.

We would like to sincerely thank all presenters, reviewers, our scientific committees, and keynote speakers for their appreciated contribution. We also apologise in advance if there are any difficulties you may encounter while participating the conference. Finally, we hope that you will enjoy this conference and we hope that the deliberations will be fruitful and successful.



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Thammasat Business School
Thammasat University, Bangkok, Thailand, 10200
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Email: ruth@banomyong

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Faculty of Engineering, Chiang Mai University
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Tel: +66-5394-4125
Fax: +66-5394-4185
Email: apichat@chiangmai.ac.th

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Osaka, 602-8580, Japan
Tel/Fax: +81-75-251-2660
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Faculty of Commerce, Logistics & Transport
University of Marketing & Distribution Sciences, Kobe, Hyogo 651-2188, Japan
Tel/Fax: +81-78-796-4904
Email: Takayuki_Mori@red.umds.ac.jp

Programme Co-Chair

Dr. Piyawat Chanintrakul,
Faculty of Logistics, Burapha University
Chonburi, Thailand 20131
Tel: +66-3810-2222
Fax: +66-0-3839-3231
Email: p.chanintrakul@gmail or piyawatc@buu.ac.th

Programme Co-Chair

Dr. Poti Chao
Faculty of Engineering, Chiang Mai University
Chiang Mai, Thailand 50200
Tel: +66-5394-4125
Fax: +66-5394-4185
Email: poti@eng.cmu.ac.th

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A CAUSAL RELATIONSHIP MODEL OF GREEN SUPPLY MANAGEMENT AND COMPETITIVENESS

Porpan Vachajitpan

Faculty of Logistics, Burapha University, Thailand

ABSTRACT

Purpose: The purpose of this paper is to study the relationship between green supply management of companies in Thailand and their competitiveness. A structural equation model is presented consisting of latent variables representing the environmental policy and implementation, management support and employee participation, CSR and corporate image, supplier selection, supplier relationship, purchasing decision, cost and competitiveness. These variables relate to green supply management and impacts on the environment. The main question in the research is whether these factors lead to benefits in terms of cost and competitiveness.

Design/methodology/approach: LISREL software was used to analyze the structural model. Results indicate that the proposed model has a good fit (Chi-square, p-value, RMSEA, CFI, SRMR tests of goodness of fit) with the empirical data.

Findings: The model accounts for 32% to 88% of the variances of dependent variables. Environmental policy commitment and implementation has statistically significant direct and indirect effects on other variables. Green purchasing decision has significant effects on supplier selection and relationship and a direct impact on cost and competitiveness.

Research limitations/implications: This research is limited to data collected from 149 companies located in Thailand. The study proposes a model which suggests a causal relationship in green supply chain management.

Practical implications: Results confirm that companies' adoption of green supply management can increase their competitiveness. It is imperative that they have strong commitment to environmental policy and implementation.

Originality/value: The structural equation model was tested with empirical data to explain the effect of environmental commitment and green purchasing on business competitiveness.

Keywords: Competitiveness, Green purchasing, Green supply management, Structural equation model

Paper type: Research paper

A METHODOLOGICAL FRAMEWORK ON AIRPORT PERFORMANCE MEASUREMENT

Bérengère Pin[^], Poti Chao^{*}, Apichat Sopadang

French Institute for Advanced Mechanics (IFMA), Clermont-ferrand, France[^]

Supply Chain and Engineering Management Research Unit

Department of Industrial Engineering Faculty of Engineering,

Chiang Mai University, Chiang Mai, Thailand

E-mail: poti@eng.cmu.ac.th^{}*

ABSTRACT

Purpose: The purpose of this study is to identify criteria and to provide a methodology so as to evaluate an airlines hub.

Design/methodology/approach: A methodology is presented with a process flow diagram. Then, criteria are determined in two groups: internal and external criteria. Internal criteria refer to specific measures to one airport like the number of passengers. External criteria underline threats and opportunities, like an important economic growth in the country or seasonality issues in the area. Afterwards, benchmarking is used for internal criteria. Benchmarking is divided in two tools: internal (or self-) benchmarking and external (or peer group) benchmarking in aims to gain competitive results.

Findings: Based on the proposed methodological framework, we were able to apply it on Thailand as a case study. The result has helped to clarify the competitive strategy of the airline company as well as to gain a deeper understanding of the drivers of efficiency.

Research limitations/implications: This research is a qualitative exploration of the performance criteria of airlines hub and intends to bring a model of evaluation. The contributing criteria are mainly derived from context analysis.

Practical implications: In combining these three analyses, it's possible to obtain a basis of a SWOT analysis of the airport which can help managers to plan actions. The proposed methodological framework is aimed to provide a solid foundation in measuring the performance of an airport.

Originality/value: This research has attempted to use multiple analytical methods to gather more precise data and improvement solutions for airline hub performance measurements.

Keywords: Methodological framework, airline hubs, benchmarking, performance measurement

Paper type: Conceptual research paper

A MULTI-OBJECTIVE OPTIMIZATION OF THE FLEET SIZING PROBLEM FOR THAI RICE EXPORTER: A CASE STUDY

Rachata Khumboon

*Department of Logistics and Supply Chain Management,
School of Business Administration,
Dhurakij Pundit University*

ABSTRACT

Purpose: This paper aims at providing the multi-objective optimization model which deals with the fleet sizing problem for a rice exporting company in Thailand. The company transports the rice from Northern area to Bangkok seaboard with the distance of 300 km. The fleet sizing decision is made based on three objectives including 1) minimizing total fleet cost, 2) minimizing total environmental impact, and 3) maximizing the customer satisfaction (demand) simultaneously. The time uncertainty of unloading process at the seaport is considered as a primary factor to determine fleet size.

Design/methodology/approach: The methodology consists of 3 main steps. In the first step, the decision problem is formulated as a multi-objective, integer, non-linear programming minimized simultaneously. The number of truck in the fleet is the finding variable. In the second step, the significant data is collected from the company who collect the rice from local area and transport them to the seaport. The data of unloading process at the seaport is also collected to identify the total travelling time of the truck. In the last step, the model is verified and validated using the collected data from company.

Finding: This paper is to find the effect of time uncertainty due to unloading process at the seaport on the fleet size.

Originality/value: The uncertainty of unloading process at the seaport is firstly considered in the model.

Keywords: Fleet sizing, Multi-objective optimization

Paper type: Case study

A PILOT STUDY ON THE ATTRACTIVENESS OF CONTAINER TERMINAL OPERATORS

Taih-Cherng Lirn^{a*}, Kuo-Chung Shang^b

^a*Department of Shipping and Transportation Management, National Taiwan Ocean University, No. 2, Beining Rd., Keelung City 202, Taiwan, R.O.C.*

^b*Department of Transportation Science, National Taiwan Ocean University, No. 2, Beining Rd., Keelung City 202, Taiwan, R.O.C*

**Corresponding Authors (e-mail: tedlirn@mail.ntou.edu.tw)*

ABSTRACT

Purpose: This research firstly summarizes the service attributes which influence a terminal operator's attractiveness. Secondly, this research finds out the determinants of a port operator's attractiveness index. Finally we summarize strategies to attract users for a newly structured state owned third party terminal operator.

Design/Methodology/Approach: An analytic hierarchical process (AHP) technique is employed to carry out a local questionnaire survey to ocean carrier executives to understand the degree of importance of each criterion and sub-criterion in the AHP model. Fuzzy semantic wordings technique and importance-performance analysis (IPA) model is employed to allow the surveyees to evaluate the degree of the performance of their container terminal service providers on these seventeen sub-criteria.

Findings: Low cargo handling fee, berthing fee, dense connectivity of its terminals, number of terminals operated, and equipments are the top five important subcriteria that port operators can employ to attract ocean carriers to use their terminal services.

Practical Implications: Container terminal operators can use these research findings as a basis to design their cargo handling service package. Hopefully terminal operators' limited resources can be rightly allocated to make their cargo handling services more attractive to the ocean carriers.

Originality/Value: Terminal operators' attractiveness to their users has not been systematically and quantitatively investigated before this research.

Keywords: Container Terminal Operator, Attractiveness, IPA, AHP

Paper type: Research paper

A SUSTAINABLE LOGISTICS NETWORK FRAMEWORK DEVELOPMENT

Kamol Tharuarak^{1*}, Shahyahan Khan², Vuttichai Chatpattananan³

^{1*}*School of Management and Marketing, the University of Southern Queensland, Australia*

²*School of Agricultural, Computational, and Environmental Sciences the University of Southern Queensland, Australia*

³*Department of Civil Engineering, Faculty of Engineering, King Mongkut's Institute of Technology Ladkrabang, Thailand*

E-mail: nicintania@yahoo.com, shahyahan.khan@usq.edu.au, vuttich@hotmail.com

ABSTRACT

Purpose: The purpose of this paper is to present a conceptual framework of sustainable logistics network. The use of this conceptual framework introduces the concept of model development and demonstrates the relationships among environmental, economic performance with logistics network management.

Design/Methodology/Approach: This framework divides the research approach into five stages such as 1) A problem formulation 2) Model assumption 3) Conceptual framework 4) Discussion the guideline for model development from conceptual framework 5) Conclusion and further research

Finding: A proposed conceptual framework, based on the proposition of incorporating the major economic and environment cost elements, found that variables from unchanged traveling characteristics, from both an emission based model and fuel consumption of nonlinear speed relationship are the critical points to model development of the concept of sustainability by integrating environmental and economic criteria. This enables a logistics organization to achieve long term economic viability. Based on this proposition, the finding will lead to a guideline for model development in the future.

Research limitations/implications: Research limitation emerges from certain parameters, which come from the ideas or assumptions of the model.

Originality/Value: This paper provides a comprehensive review of conceptual framework development of sustainable logistics network, and introduces sustainability to the field of logistics management, and also presents managerial insights on economies of environmentally conscious logistics management. This framework is of significant importance for a sustainable logistics network framework development in the future.

Keywords: Sustainable logistics model, Nonlinear programming, Mixed integer programming, CO₂ emission, Environmental logistics model, Conceptual framework development, Piecewise function, Linearization, Logistics planning, Model development

Paper type: Conceptual paper

AN EMPIRICAL ANALYSIS OF THE EFFECTS OF LCC PASSENGER ON AIRPORT'S COMMERCIAL ACTIVITIES IN THE UK

Muneki Yokomi

*Faculty of Business Administration, Osaka University of Commerce,
4-1-10 Mikuriyasakae-machi Higashiosaka, Osaka, 577-8505, JAPAN.
yokomi@daishodai.ac.jp*

ABSTRACT

Purpose: Traditionally, we believe that LCC (low cost carriers) passengers spend more in airport than FSC (Full Service Carrier) passengers, because LCC in general have no in-flight service (drink and food). However, some opposite findings such as Lei & Papatheodorou (2010) appear in these days. If we assume that income of LCC passenger is relatively low than FSC passenger, LCC passenger will spend less in airport commercial facilities (restaurant and gift shop). Which theory is correct? Therefore, the purpose of this study is to make clear the effect of LCC passenger on airport's commercial activities.

Design/methodology/approach: We solve the question noted above by OLS (Ordinary Least Squares). We use panel data of UK airports from 2000 to 2008. The number of observations is 79. Explained variable is non-aeronautical revenue per passenger of each airport. Explanatory variables are composed of some variables that are represented by proportion of passenger type (domestic or international and business or leisure) of each airport, and one dummy variable of airport with high level of LCC passenger ratio.

Findings: Our main findings that LCC passengers tend to spend less in airport commercial facilities, because LCC dummy show negative sign at 10% significant level in our model.

Practical implications: This research could give many airport managers useful information about strategies of attracting LCC and maximizing revenue in commercial activities.

Originality/value: Empirical analysis about LCC passenger impacts to airport commercial activities is research field with fewer previous studies.

Keywords: LCC (low cost carriers); Airport management; Airport's commercial activities.

Paper type: Research Paper

AN EMPIRICAL INVESTIGATION ON THE IMPLEMENTATION OF GREEN PRACTICES IN THE LOGISTICS SERVICE INDUSTRY

*Pietro Evangelista^a, Jukka Hallikas^b, Anni-Kaisa Kähkönen^b,
Katrina Lintukangas^b*

^aIRAT-CNR and Department of Industrial Engineering, University of Naples Federico II, Naples, Italy

*^bLappeenranta University of Technology, School of Business, Lappeenranta, Finland
E-mail: p.evangelista@unina.it, jukka.hallikas@lut.fi*

ABSTRACT

Purpose: Due to the increasing demand for advanced logistics services, third-party logistics service providers (3PLs) are increasingly requested to provide more 'green' services. This development provides 3PLs business opportunities but also challenges on how to translate green initiatives into practise. The purpose of this paper is to investigate the implementation of green initiatives and influencing factors.

Research approach: The research methodology used in this paper is based on two-phase approach. Firstly, a systematic literature review on sustainability in 3PLs has been carried. Subsequently, a case study investigation on a 34 Italian 3PLs allows to address research objectives.

Findings and Originality: The research results indicate a different degree of involvement of 3PLs in green initiatives in relation to the different breadth of service offered. The adoption of "point" initiatives focused on one or few logistics functionalities is prevalent. Main drivers and inhibitors affecting the adoption of green initiatives were identified.

Research impact: This paper provides a deeper knowledge on how 3PLs respond to changing market conditions driven by sustainability pressures. It provides a broad base for further research on 3PLs strategy development to facing future green requirements both from customers and government.

Practical impact: The paper describes the level of implementation of 3PLs' green initiatives. Furthermore, the study provides a deeper understanding on how green logistics services can be approached and what drives and inhibits that process.

Keywords: logistics service providers, green initiatives, drives and inhibitors, Italian logistics market, case study analysis

Paper type: Research paper

AN EMPIRICAL STUDY OF TRUCK PAYLOAD ALLOCATION

Areekamol Tor.Chaisuwan¹, Nakorn Indra-Payoong¹, Sarawut Jansuwan²

¹*Faculty of Logistics, Burapha University, Chonburi, Thailand 20131*

E-mail: areekamol@gmail.com, nakorn.ii@gmail.com

²*Department of Civil and Environmental Engineering, Utah State University, Logan*

UT 84322; E-mail: sarawut.j@aggiemail.usu.edu

ABSTRACT

Purpose: This study estimates the number of trucks by type and the level of service on the Interstate highway 15 (I-15) located in Utah. Since an increasing number of trucks affect the efficiency of the highway, providing the trips by truck types, body types and commodity types can be more clearly analyzed the relationship between density and delay on the highway.

Findings: The predicted commodity flow data from the Freight Analysis Framework version 3 of the United States Department of Transportation in the year 2015 is derived. The truck allocation factors are used to convert the commodity flow data to the average daily truck traffic (ADTT).

Originality/value: The resulting degree of saturation on the I-15 highway for the year 2015 approaches a full capacity, requiring a short-term solution.

Keywords: freight analysis frame work, truck trip allocation, freight flow estimation, average daily truck traffic, truck payload allocation

Paper Type: Research Paper

AN EXPLORATORY STUDY OF THAI SMES SUPPLY CHAIN MANAGEMENT PRACTICES

Therakorn Yardpaga, Phil Megicks, Dongping Song

School of Management, University of Plymouth, Drake Circus, Plymouth, UK

Contact email: therakorn.yardpaga@plymouth.ac.uk

ABSTRACT

Purpose: The overall aim of this paper was to undertake an exploratory study of relationships between supply chain management (SCM) drivers, facilitators, impediments, practices and firm's performance in the context of Thai Small and Medium Enterprises (SMEs).

Design/methodology/approach: A framework of SCM practice model was conceptualised based on literature review, and further modified through semi-structured interviews. A factor analysis and multivariate techniques were deployed in analysing quantitative data.

Findings: The results of this study provide empirical evidence that the antecedents of supply chain management had relationship with SCM practices. Additionally, SCM practices led to firm's performance. Furthermore, SCM practice had radically influenced to difference level on firm's performance.

Research Impact: The factor analysis generated an exploratory idea to cluster observed variables into latent variables. The multivariate analysis exhibited casual relationship between SCM drivers, facilitators, impediments, practices and firm's performance. The model had been statistically confirmed that it was significantly fit with the data.

Practical Impact: This research is valuable for those SMEs that are interested in implementing SCM practices by identifying drivers, facilitators and impediments of SCM. The understanding of these SCM antecedents assists SMEs in gaining sufficient confidence to implement SCM. The paper also provides casual relationships between these antecedents and SCM practices and their effect to firm's performance.

Originality/Value: This study provided insights into SCM practices for Thai SMEs, which was scant in the literatures. The model can be applied to SMEs in other countries.

Keywords: *Supply chain management, Small and medium enterprises, Thailand, Exploratory factor analysis.*

Paper type: Research paper

AN INVESTIGATION INTO THE FREIGHT PICK-UP DELIVERY ACTIVITIES IN CITY CENTER OF JAKARTA

Nahry, R. Jachrizal Sumabrata

Dept of Civil Engineering, Faculty of Engineering, Universitas Indonesia, Kampus UI Depok 16424

Email: nahry@eng.ui.ac.id, rjs@eng.ui.ac.id

ABSTRACT

Purpose: This study is aimed to investigate the current operations of freight transport in a prominent wholesale shopping area in center of Jakarta, namely Jatinegara. The improper traffic condition which is much related to freight pick-up delivery is drawn out. It seems that local authority does not have holistic solution instead of punitive actions to freight movements

Methodology: This study will identify the characteristics of pick-up delivery activities through field survey and measures are proposed to maximize the utilization of parking space. Interview to the stake holders are carried out to confirm the proposed measures.

Findings: Lack of parking space, the existence of illegal freight cars and mobile warehouses contribute to the severe parking service. The insufficient access road and pedestrian facilities have also made it worse. Some measures are proposed in order to improve current condition and give more priority to freight cars.

Practical Implications: Local authority should identify carefully the local characteristics of each traffic generator, and also conduct the holistic study prior to apply the punitive instruments to freight movements. The proposed measures could be applied to other locations in city center, and local government is expected to consider them in their city transportation planning. Law enforcement take the major role in its implementation.

Originality: Yet there have no measures stand up for freight movements, whereas it is deemed that the traffic problems related to this shopping center obviously dominated by freight issues. This research is supposed to be the first that propose measures from the different point of view.

Keywords: Urban Freight Transport, Pick-up Delivery, City Center, Parking.

Paper Type: Research Paper

ANALYSIS OF OPTIMAL NUMBER OF MANUAL AND E-TOLL SERVICE GATES AT LAEM CHABANG PORT

Usa Sathitmon, Pairoj Raothanachonkun
Faculty of Logistics, Burapha University

ABSTRACT

Purpose: This research aims to identify the optimal number of manual and e-Toll gates.

Design/methodology/approach: The paper collected the queuing length, number of gates, service time and others at the main service gate. Then, the model of current service system was examined and calibrated. The proposed number of e-Toll systems was modelled by using Arena simulation program to determine the optimal number of manual and e-Toll gates.

Findings: The simulations show that the current system of 7 manual gates cause the waiting time and number of waiting car around 65.58 minutes/vehicle and 211 vehicles, respectively. The optimal number of manual gates should be 9 gates because both waiting time and number of waiting car are only 3.45 minutes/vehicle and 11 vehicles, respectively. In case of using the e-toll together with manual gates, the single e-Toll gate and 6 manual gates provided a satisfied results. Therefore, the remaining average waiting time of vehicles is 5.26 minutes/vehicle and the average queue length is only 5 vehicles.

Research limitations/implications (if applicable): The research still does not consider the behaviour of the drivers and the effect of traffic from other area.

Practical implications (if applicable): The paper demonstrates the optimal number of e-Toll gates for decreasing queuing length.

Originality/value: Optimal number of e-Toll gates at Laem Chabang Port.

Keywords: Queuing Model, Simulation, E-Toll

Paper type: Research paper

APPLICATION OF RAMP-UP MANAGEMENT METHODS FOR JOB PRODUCTION

*Dipl.-Wirtsch.-Ing. Henning Strubelt, Prof. Dr.-Ing. Hartmut Zadek
Institute of Logistics and Material Handling Systems, Otto-von-Guericke-University
Magdeburg, Magdeburg, Germany
Email: strubelt@ovgu.de*

ABSTRACT

Purpose: This research discusses the possibilities of ramp-up management methods for job production and presents the current state of application, combining a theoretical approach with the practitioners' view. Special focus is being placed on supplier management as logistics-related management method. An overview of the most important and most effective methods as well as their specific application fields is provided. Best practices for job production are identified. Furthermore, a ranking in which order the researched methods should be implemented and general advice on the implementation of ramp-up management methods is given.

Design/methodology/approach: The research takes the form of an empirical study using a questionnaire, encompassing up to 3,000 job production companies. The questionnaire is used to determine the current application and to deliver an assessment of the researched methods by the industry.

Findings: Identification of best practices and advice considering the order of method implementation.

Research limitations/implications: The number of researched methods is limited to ten. The questionnaire study only encompasses German job producers out of the mechanical and plant engineering industry.

Originality/value: Ramp-up management is a well-known and frequently applied management approach for series production. Its application for job production appears promising, but has not been researched so far.

Keywords: Ramp-up Management, Job Production, Management Methods

Paper type: Research paper

CHALLENGES IN DELIVERY FULFILMENT OF ONLINE SHOPPING

Veron Tai¹, Max Ee², Yan Weng Tan³

¹Logistics and Supply Chain Management undergraduate, SIM University, Singapore

²SCMi Group LLP, Singapore

³School of Business, SIM University, Singapore

Email: ywtan@unisim.edu.sg

ABSTRACT

Purpose: Online shopping has grown rapidly with the pervasive use of the Internet, advancements in Information and Communication Technologies and availability of online payment options. This paper investigates the importance of delivery fulfilment in the fashion apparel industry and the challenges faced by online retailers as well as the effectiveness of delivery fulfilment models from the Singapore perspective.

Design/methodology/approach: Qualitative and quantitative data were collected through self-completion questionnaires. A business survey was targeted at online retailers to provide insights into the delivery fulfilment processes offered, issues encountered and criteria considered important when choosing a delivery service provider. A consumer survey targeted at online shoppers was conducted to find out perceptions of online shoppers towards delivery fulfilment.

Findings: Online retailers relied mainly on a combination of own delivery, outsourcing and self-collection for delivery fulfilment. They had different perceptions of service performance towards different service providers. Online retailers and shoppers reported that they were most concerned with late delivery issues in delivery fulfilment. Online retailers considered lead time as the most important factor when choosing a delivery service provider. Online shoppers felt that they could cope with longer delivery times if there was an online tracking system in place to provide up-to-date delivery information.

Originality/value: The study provides insights into opportunities for online retailers and delivery service providers to improve their service offerings and create a better online shopping experience.

Keywords: Delivery Fulfillment, Online Shopping, Fashion Apparel, Retailer and Customer Perceptions

Paper type: Research paper

CONTAINER SHIPPING TRENDS AND THEIR IMPACT ON PORT DEVELOPMENT AND COMPETITIVENESS

Wei Yim Yap¹, Yan Weng Tan²

¹School of Economics, Singapore Management University, Singapore

²School of Business, SIM University, Singapore

Email: ywtan@unisim.edu.sg

ABSTRACT

Purpose: Container ports play a critical role by enabling seaborne trade to occur in a reliable, secure, cost efficient and environmentally sustainable manner. The competitive position of a container port is determined by its competitive offering to the host of shippers and shipping lines to which the port serves. This paper examines key trends and developments in the container port industry from the perspective of the market structure of a container port.

Design/methodology/approach: This paper uses market structure analysis with case studies drawn from the development experience of the port of Singapore, which is the world's largest container transshipment hub and second busiest container port.

Findings: The paper uncovers major trends that have impacted the nature of demand and supply in the container port industry. It analyses how container ports can capitalise on these developments to bring about port development and enhanced competitiveness to the benefit of their respective communities.

Practical implications: Container ports increasingly face the challenges of limitations to physical expansion while attempting to capitalise on growing demand and needs posed by larger container shipping lines. Case studies will be drawn from how these challenges can be addressed to ensure that the container port community continues to thrive and grow.

Originality/value: Port planners will be able to make use of the analyses on container port competitiveness and port development based on empirical evidences drawn from the industry.

Keywords: Port Competitiveness, Container Shipping, Container Ports, Port of Singapore

Paper type: Research paper

CRITICAL EVALUATION OF MANDALAY DRY PORT, MYANMAR

John Black¹, Thida Kyu², Violeta Roso³, Kam Tara⁴

¹ *UNSW, Australia (corresponding author: j.black@unsw.edu.au)*

² *Yangon Institute of Economics, Myanmar;*

³ *Chalmers University of Technology, Sweden;*

⁴ *Urban Research and Planning Pty Ltd, St Leonards, Australia*

ABSTRACT

Purpose: In the UNESCAP Intergovernmental Agreement on dry ports the Government of Myanmar has nominated Mandalay as a potential site. A critical evaluation of this dry port concept is undertaken. Additional policies are investigated to support the implementation of this dry port.

Design/methodology/approach: A summary of the success factors in the planning and operation of dry ports based on international literature is presented. Supporting policies are identified including special economic zones (SEZ). Data collection from stakeholders is conducted through interviews in Myanmar in 2012-13. A qualitative assessment of the Mandalay dry port location is made based on success factors, supporting policies and findings from the interviews.

Findings: The ASEAN Master Plan for Connectivity necessitates streamlining sectoral strategies with reference to multimodal transport systems and dry ports in order to enhance intra- and extra-ASEAN connectivity. A Roadmap for the Integration of Logistics Services was endorsed in August 2008 to strengthen ASEAN as a single market and to enhance its competitiveness through trade and transport facilitation. Major transport corridors must be integrated with economic development corridors that can be supported by the planning processes for successful dry ports and special economic zones (especially the strategic and master planning exercises to be undertaken by governments).

Originality/value: By taking an integrated, cross-sectoral approach to the planning of freight transport, logistics and land use the paper identifies the success characteristics to minimise risk to both public and private sectors with dry port development.

Keywords: Dry ports, Success factors, Special economic zones, Mandalay, Myanmar

Paper type: Case Study

Acknowledgements: Professors Black and Thida Kyu, who wrote (with Dr Tha Pye Nyo) a Myanmar report on an institutional analysis of infrastructure for the Economic Research Institute of ASEAN and East Asia (ERIA), collected these additional data for Myanmar, although this paper is outside the scope of the ERIA research project RA-001-002-205.

DEVELOPMENT OF GREEN SUPPLY CHAIN PERFORMANCE INDICATORS FOR AN ARABICA COFFEE CHAIN

Rungchat Chompu-inwai, Pischanok Jamigranont

*Department of Industrial Engineering, Faculty of Engineering,
Chiang Mai University, Chiang Mai, Thailand 50200, e-mail: rungchatc@hotmail.com*

ABSTRACT

Purpose: The aim of this research was to develop green supply chain performance indicators for an Arabica coffee chain.

Design/methodology/approach: The first step began with a study of the relevant factors, covering four major groups of factors: green procurement, green manufacturing, green distribution and green logistics. Questionnaires and the analytic hierarchy process were used to screen for those factors actually affecting the performance of the green supply chain, and such factors were then employed as indicators within the supply chain assessment process. During the second step, the screened factors were used to develop performance indicators, based on the applied balanced scorecard concept and covering four traditional key areas, these being the financial, customer, internal process, and learning and development perspectives, plus one additional area - the environmental perspective. The results of these steps were then used to design an assessment model.

Findings: In the final step, the designed assessment model was utilized as part of an experiment covering two of the Arabica coffee chains, in order to compare performance levels and establish guidelines for improvement, plus create a green supply chain performance assessment manual.

Originality/value: The proposed model may be used to assess the Arabica coffee supply chain and also provide information which may be used to develop its business strategy.

Keywords: Green Supply Chain, Performance Indicator, Balanced Scorecard, Arabica Coffee

Paper type: Research paper

DYNAMIC FACILITY LOCATION PROBLEM FOR MAE MOH MINE

Poon Thiengburanathum^{1(*)}, Thanakorn Saungkaew²

¹ *Civil Engineering, Faculty of Engineering, Chiangmai University*

² *Industrial Engineering, Faculty of Engineering, Chiangmai University*
239 TambonSuthep, HuayKaew Road, A.Muang, Chiangmai Province 50200

E-mail: poon@cmu.ac.th

ABSTRACT

Purpose: This research aims to propose the model of dynamic facility location problems for strategic planning of improving efficiency of the mining logistics support system.

Design/methodology/approach: This paper described a mathematical model developed for determining location of facility to the best solution with metaheuristic and this research scoped only resource transportation of maintenance department to pit mine.

Findings: The result searched the optimal solution for improving mining logistics support system efficiency that from the current solution was 29,983,644 Baht to optimal solution was 28,820,984 Baht or 3.87% of saving cost.

Research limitations/implications (if applicable): The findings are limited due to scope only dynamic facility location-allocation problems to make decision planning with metaheuristic. In the future we will compare efficiency between exact algorithms and metaheuristic and we will use optimal plan to evaluate real situation for improving efficiency of logistics support systems in Mae Moh Mine.

Originality/value: Transportation activity was waste activity by facility location problem that was appeared in logistics support system in mine context and we established strategic planning model to improve logistics support system efficiency with dynamic facility location problem for innovation and knowledge of logistics support system improvement.

Keywords: Dynamic facility location problem; Mining logistics support system; Metaheuristic; Electricity Generating Authority of Thailand Mae Moh Mine.

Paper type: Research Paper

FACTORS EFFECTING DECISION MAKING ON ELECTRONICS INDUSTRY SUPPLY CHAIN REDESIGN WITHIN ASEAN ECONOMIC COMMUNITY

***Sakgasem Ramingwong**, *Korrakot Yaibuethet Tippayawong,*
*Apichat Sopadang***

Faculty of Engineering, Chiang Mai University - THAILAND

**sakgasem@gmail.com*

ABSTRACT

Purpose: Upon the ASEAN Economic Community where labor, material, investment can freely flow within ASEAN countries, supply chain will be redesigned. Of interest is the electronic industry which is one of the key production industries of ASEAN countries. The research, developing model and questionnaire, focusing on identifying key factors that affect the decision making should the supply chain of electronic industry redesign. Further investigation is also conducted to reflect the industry supply chain redesign in terms of low-end and high-end perspectives.

Design/methodology/approach: Model and questionnaire development. Both are constructed of 8 factors (58 sub-factors) related to the redesign, i.e.,(1) labor, (2) supply, (3) logistics, (4) economics, (5) government, (6) infrastructure, (7) risk, and (8) location.

Findings: For both high-end and low-end electronic industries, labor, material and government are among the most significant factors. In low-end case, infrastructure is also of interest.

Originality/value: The study is based on real needs and requirement of electronic industry in AEC. Therefore, if any country should aim to induce investment, benefit from supply chain redesign, in the electronic industry, these sub-factors are area of the focus.

Keywords: electronic industry, AEC, decision making, supply chain redesign

Paper type: Research Paper

HALALAN TOYYIBAN SUPPLY CHAIN THENEW INSIGHTS IN SUSTAINABLE SUPPLY CHAIN MANAGEMENT

Emi Normalina Omar¹, Harlina Suzana Jaafar², Muhamad Rahimi Osman³, Nasruddin Faisal⁴,

^{1, 2, 3, 4}Malaysia Institute of Transport, Universiti Teknologi MARA, MALAYSIA

^{1, 2}Faculty of Business and Management, Universiti Teknologi MARA

³Academy of Contemporary Islamic Studies (ACIS),
Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA,
MALAYSIA

ABSTRACT

Purpose: In today's highly competitive world scenario, in order for logistics and supply chain firms to be successful, resilient and sustainable, *halalan-toyyiban* supply chain could be the new insight in assisting the firm. Hence, the purpose of this study is to provide a practical definition for developing an effective supply chain through *halalantoyyiban* processes and comparing the similarities and differences of the halal term.

Design/methodology/approach: The analysis is developed through literatures starting from the year 1990s till 2013 which emphasis on definition of supply chain, halal supply chain, halal food supply chain and *halalan-toyyiban* supply chain ; however due to the application of religious in the supply chain area is relatively new, the searching of materials goes beyond it.

Findings: The paper finds that this work yielded: a comparison of supply chain, halal supply chain, halal food supply chain and *halalan-toyyiban* supply chain definition. It provides clarification to the practitioners on the term of *halalan-toyyiban* supply chain.

Researchlimitations/implications (if applicable): Since there are not much academic journals in the area of *halalan-toyyiban* logistics and supply chain, therefore these concepts need to be explored further in other types of publications.

Originality/value: As the recent literatures concentrating on *halalan-toyyiban* and supply chain are limited, hence this paper contributes new insights and knowledge advancement in the logistics and supply chain area via expansion in the logistics and supply chain discipline.

Keywords: Supply chain, Halal supply chain, halal food supply chain and *halalan-toyyiban* supply chain

Paper type: Literature Review

IMPACT OF THE 2011 EAST JAPAN GREAT EARTHQUAKE ON THE JAPANESE AUTOMOBILE INDUSTRY

Kenji Ono

Disaster Prevention Research Institute, Kyoto University

ABSTRACT

Purpose: i) evaluating negative impacts on the supply and production chain of the automobile industry due to the east Japan great earthquake in a global context, ii) finding production and supply chain structures from the viewpoint of risk governance, and iii) discussing possible policy development for increasing resilience of supply chain of Japanese automobile industry.

Design/methodology/approach: Questionnaire surveys and statistical analysis.

Findings: i) some of characteristics of supply and production chains of automobile industry such as input-output coefficients between complete cars and major parts, and automobile components; ii) identified non-substitutable “key parts” for the automobile assembly lines, and iii) observed time lag of shutdowns between parts and components suppliers in Japan and the overseas automobile assembly lines due to the lead time of transportation.

Research limitations/implications: Importance of mathematical modelling and simulation techniques to test options for improving supply chain robustness, where major limitations include the poor availability of data and information of the production and supply chain structure of automobile industry.

Practical implications: Policy development for improving robustness of the supply and production chain such as further diversifying and visualizing supply sources, and increasing stockpile of the production resources

Originality/value: Leading to the possible major breakthrough in the area of strategic approach for improving automobile industry supply chains in the risk governance context. .

Keywords: Supply chain management, large scale disaster, risk governance

Paper type: Research paper

IMPLEMENTATION OF GOVERNMENTAL LOGISTICS POLICIES TO ENHANCE COMPETITIVENESS IN THAILAND'S INDUSTRIAL SECTOR

**Korrakot Yaibuathet Tippayawong*, Apichat Sopadang,
Sakgaseem Ramingwong**

*Department of Industrial Engineering, Faculty of Engineering, Chiang Mai University
Chiang Mai 50200, THAILAND. Email: korrakot@eng.cmu.ac.th*

ABSTARCT

Purpose: Thailand industrial sector is now facing intense logistics cost disadvantage, which is 14.3% per GDP. The Bureau of Logistics, Department of Primary Industrial and Mines, one of the major organizations who are responsible for national logistics cost reduction has introduced a number of policies to cut down industrial logistics cost. By funding a significant amount of budget regularly to industry, tangible results are achieved. This research paper aims to present the result from the “Northern Thailand Logistics Improvement Project”, which was supported by the Bureau of Logistics in 2012. This paper provides insight into the improvement of the logistics performance obtained from applying a variety of logistics techniques to the six highest exporter industries.

Design/methodology/approach: Twenty-five selected companies from Northern Thailand area have been evaluated using the industrial standard, Logistics Scorecard. Then, two improvement sub-projects were introduced to the company considering from the revealed weaknesses. Appropriated Logistics and Supply Chain management tools are subsequently suggested to the companies' improvement team to resolve existing problems.

Findings: It has been shown that the average score from Logistics Scorecard was increased from 2.57 to 3.15, where the highest increasing score belonged to the electrical and electronics industry. This resulted in a decline of the logistics cost in selected companies by more than 15% or in total about 2 million USD. Potentially, these players can be expected to decrease the logistically related costs by more than 14 million USD in five years when the suggested plans are successfully implemented.

Research limitations/ implications: The resulted presented here is from the “Northern Thailand Logistics Improvement Project” which is only one from 24 projects run by the Bureau of Logistics in 2012.

Originality/ value: Similar approach can be extended to potential companies in different area or industrial sector in order to reduce companies' logistics cost.

Keywords: Logistics Policy Implementation, Productivity improvement, Logistics Scorecard

Paper type: Research paper

IMPROVING THE VALUE OF THE INFORMATION SERVICE FLOW IN LOGISTICS PROCESS INTEGRATION

Kari Korpela*, **Sirpa Multaharju**, **Jukka Hallikas**
Lappeenranta University of Technology, School of Business
P.O. Box 20, FI-53851 Lappeenranta, Finland
Email: kari.korpela@lut.fi

ABSTRACT

Purpose: The products, components and raw material flow in the supply chain are traditionally studied in logistics research. In this study, we expand the research to cover processes parallel to the service flow and information flow. In this paper, we show how better integration and automation of information flows enhance the speed of processes and thus provide cost savings and other benefits for the organization.

Design/methodology/approach: In this study, we will i) structure the information model needed for logistics integration ii) design the structure of organizations and stakeholders for research to collect data and iii) analyse the value of information flows by using the Monte Carlo simulation method.

Findings: With the help of standardization experts we utilized the design of the core information model for logistics. We investigate the cost savings needed to change from manual to electronic and automated process management by using business executives and managers as a focus group. Finally, we build the Monte Carlo-based simulation model to discover and test the business model for B2B integration in SC logistics.

Practical implications: This study provides valuable knowledge for management to understand the value of logistics process integration by utilizing a proper information model for the mapping and automation of process flows.

Originality/value: In this study, we present a systematic analysis of the value of logistics process flows for B2B logistic integration.

Keywords: *Information logistics, B2B integration, process analysis, Monte Carlo simulation*

Paper type: Research paper

INFLUENCE OF CULTURE AND CULTURAL DIFFERENCES ON SUPPLY CHAIN RISKS

Sakgasit Ramingwong

*Department of Computer Engineering, Faculty of Engineering, Chiang Mai University,
Chiang Mai, Thailand*

ABSTRACT

Purpose: This paper aims to study relationships between risks in logistics and supply chain management and culture. Since logistics and supply chain usually involve international stakeholders, culture could inevitably influence all relevant activities. Culture is indeed a sensitive matter. Stakeholders from different culture could perceive one issue differently. Ignoring this connection can potentially damage the chain.

Design/methodology/approach: A number of recently published and frequently cited literature related to risk management in logistics and supply chain are reviewed in this paper. A collection of risks are retrieved from the review. These risks are later prioritized based on their citing frequency. Then, these selected risks are analyzed for their connection with Hofstede's theory of cultural dimensions.

Findings: Top ten most cited risks in logistics and supply chain management are extracted from literature. The findings suggest culture is not highly likely to influence them.

Practical Implications: The findings of this paper suggest that the mostly cited risks in logistics and supply chain management are unlikely to be influenced from risks. Therefore, their mitigation strategy should not be different in either multinational or local scenario.

Originality/value: This paper introduces an original method to analyze risks from cultural perspectives. It can be implemented in other relevant domains.

Keyword: Risk management, supply chain risks, supply chain management, culture

Paper type: Literature review

ISSUES AND CHALLENGES IN IMPLEMENTING HALAL LOGISTICS

Azlina Hj Muhammad

Malaysia Institute of Transport (MITRANS), Universiti Teknologi MARA

ABSTRACT

Purpose: This research paper will determine issues and challenges in implementing halal logistics; furthermore operators which provide halal logistics can share the issues and challenges and also try to share on how to overcome all of the issues in implementing halal logistics.

Design/methodology/approach: In this research, to determine any issues and challenges in implementing halal logistics, or the purpose of this research, and in order to achieve the objectives, data will be collected and will be used both primary and secondary data.

Findings: The findings in this research paper is issues and challenges which must be faced by logistics operators in providing the halal logistics services. Other than that through this research paper it will come out with the number of halal logistics operators in Malaysia.

Practical implications (if applicable): It is intended that the findings of this research project will expose the issues and challenges faced by logistics operators in implementing halal logistics services. Besides, operators also may try to overcome the issues so that they can provide the halal logistics services as the demand for halal product are increasing wildly. So by providing the halal logistics they can help to cater the demand of the halal market.

Originality/value: This research is focusing on the issues and challenges in implementing halal logistics, and as we know there is very limited research been done on the halal logistics. So this paper will come out with the issues and challenges. The finding of the research can be used by industry player, and also other researcher for future study.

Keywords: halal logistics, halal industry, halal products and services, logistics, issues and challenges,

Paper type: General review

Acknowledgement: The research work benefited from the inputs of many resourceful people especially the feedback of Dr. HarlinaSuzanaJaafar, Head of the Malaysia Research Centre for Supply Chain Excellence (MarCels), Assoc. Prof. SabariahMohamad, and Prof. Dato' Dr. TengkuJamalluddinTengku Mahmud Shah Al-Haj, both are Senior Fellow at MITRANS whom have provided valuable assistance to the writing and undertaking of the research summarised in this paper. The work is also not possible with the contributions from the industry members whom I worked closely prior to joining the academic institution.

MANAGING EFFECTIVE LOGISTICS AND SUPPLY CHAIN MANAGEMENT FOR THAILAND'S ONE TAMBON, ONE PRODUCT (OTOP)- A WAY TO CREATING SUSTAINABLE BUSINESS

Taweesak Theppitak
Faculty of Logistics, Burapha University

ABSTRACT

Purpose: The objective of the research is to examine issues how to apply logistics in functions for example purchase, production, warehouse and distribution. It also extends a knowledge body related to the status for adopting logistics strategies to OTOP entrepreneurs in Thailand.

Design/methodology/approach: A total of 240 questionnaires were distributed and 225 completed questionnaires were returned, generating a response rate of 94 percent. The hypothesis is statistically tested using SPSS version 11.0.5.

Findings: The results indicated that there are strong relationships between OTOP adoption in functions and enhancing their competitive advantage in term of cost reduction and service level improvement.

Research limitations/implications (if applicable): The implications reflect that encouraging and motivation adopting an effective logistics strategy in functions would offer opportunities, including creating sustainable competitive advantage.

Practical implications (if applicable): It would develop logistics knowledge and understanding to OTOP firms. The firms would seriously apply logistics strategy and management to their business activities.

Originality/value: The paper studies on how to create value-added by adopting logistics strategy and management to OTOP products in Thailand. It would sustainably enhance competitive advantage to OTOP firms.

Keywords: Logistics, OTOP, strategy, purchasing, operations, Thailand

Paper type: Research Paper

MANAGING LATERAL TRANSSHIPMENTS IN A SUPPLY CHAIN ENVIRONMENT

Dilupa Nakandala and Henry Lau

School of Business, University of Western Sydney, Locked Bag 1797, Penrith South DC, New South Wales, Australia 2751

ABSTRACT

Purpose: The decision support system developed in this study serves the inventory management of wholesaler operations in making decisions on whether to transship outstanding urgent retailer demands or backorder from suppliers in full.

Design/Methodology/Approach: By considering the uncertainty in demand, we model the total cost encountered by wholesalers, including purchasing, backordering and holding costs in the inventory replenishment process.

Findings: We find that the total cost function against the number of units transshipped has a linear relationship and presents a close estimation reflecting the cost variations.

Research Implications: This new approach does not undervalue previous scholarly work, it builds on it by proposing a more pragmatic decision model for supply chain environment in wholesaler system.

Practical Implications: The main advantage of this decision support system is the ease of application by wholesaler inventory management.

Originality: Our study considering a multi-location setting, develops decision rules for reactive lateral trans-shipments of urgent demands that cannot be satisfied from the stock on hand. Unlike previous models that are complex, highly mathematical and difficult to apply, this model provides a pragmatic and less complex method adoptable by ordinary logistics managers and requires input data that are accessible from the previous transaction records of an organisation.

Keywords: lateral transshipments, cost optimization, decision rules

Paper Type: Research Paper

NON-HIERARCHICAL CONNECTIONS IN A TRANSPORTATIONAL AHP MODEL

Szabolcs Duleba
College of Nyíregyháza

ABSTRACT

Purpose: The aim of this paper is to introduce an Analytic Hierarchy Process (AHP) model on a public transportation system. The original AHP model is amended by non-hierarchical connections of system elements, which can be considered as extra information for the final decision. The model has been tested on a Japanese city bus transportation system.

Design/methodology/approach: Basically AHP is applied as method, however Interpretive Structural Modelling (ISM) is also used and an algorithm is created for substituting Analytic Network Process (ANP).

Findings: The created model is applicable for complex transport system development decisions. ANP (which is recommended in MCDM literature for considering both hierarchical and non-hierarchical connections in a decision) could be substituted by an AHP-ISM approach, which is easier and more realistic to apply. Moreover, the connections of transport system elements are dominantly hierarchical, so AHP structure is advisable to keep; non-hierarchical linkages are just extra information for the decision.

Practical implications: The introduced model is applicable for real transport system development decision making.

Originality/value: The created model not only promotes the AHP idea by considering non-hierarchical linkages but also offers a more practical decision making procedure than ANP.

Keywords: public transport, AHP, ANP, ISM, MCDM

Paper type: Research paper

OPPORTUNITIES AND CHALLENGES OF LOGISTICS IN A HYPER-AGED SOCIETY

Jimyoung Lee

University of Marketing and Distribution Sciences

Jimyoung.Lee@red.umds.ac.jp

ABSTRACT

Purpose: The purpose of this paper is to identify the opportunities and challenges of logistics in a hyper-aged society from the perspective of last mile issue. As the number of retailers has been decreasing specifically in rural areas, older people appear to be in distress. The paper shows the possibilities of last mile logistics as business models.

Design/methodology/approach: Several practical cases in retail business to support older people were chosen with the aim to discuss last mile measurements of logistics.

Findings: The results indicate that last mile measurements of logistics will be widely used in a retail business in a hyper-aged society; specifically a mobile shop in a rural area and delivery service to older people. It is also implied that logistical volunteers and administration supports are strongly helpful in performing last mile logistics.

Research limitations/implications: The paper does not attempt to evaluate the financial profitability of last mile logistics but investigate several practical cases.

Practical implications: Retailers can take consideration of their new business in a senior niche market using last mile logistics.

Originality/value: The missions and last mile measurements of logistics in a hyper-aged society are discussed with several cases in Japan, which could be applied to other ageing countries.

Keywords: logistics, last-mile, hyper-aged society, mobile shops, home-delivery service

Paper type: Research paper

Acknowledgements

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OUTSOURCING IN HUMANITARIAN LOGISTICS IN THAILAND

Thomas E. Fernandez¹, Ruth Banomyong², Nanthi Sutthikarnnarunai¹

¹*University of the Thai Chamber of Commerce, Thailand*

²*Thammasat University, Thailand*

ABSTRACT

Purpose: Humanitarian relief organisations (HROs) may outsource their logistics needs to logistics service providers (LSPs). The purpose of this paper is to determine to what extent LSPs are used in humanitarian logistics in Thailand.

Design/methodology/approach: A literature research was conducted LSPs and commercial outsourcing of logistics services, and outsourcing as a strategy in humanitarian logistics. Logistics officers of HROs located in Bangkok, Thailand were interviewed about their usage of LSPs.

Findings: Of those HROs interviewed that have needs to transport or store goods in Thailand, some used their own vehicles for regular transportations, but all outsourced to commercial truckers for irregular transportations such as for donation goods or in emergency situation. Their decisions are based on financial reasons, or level of control. From initial observation it can be said that the criteria under which HROs outsource their logistics needs is not different from commercial companies.

Research limitations/implications: This research has been conducted with interviewees based in Thailand. Even though many HROs interviewed are international organizations, the findings may not be generalizable.

Originality/value: To our knowledge, no such research has ever been conducted in Thailand. It is an important research as part of the mapping of the role of commercial logistics providers in humanitarian logistics. A practical model has been developed to help understand the mechanism of the decision-making process, which can be used as a guideline for Thailand-based HROs and also logistics companies interested in providing services to them.

Paper type: Research paper

PERFORMANCE OF TRANSPORTATION SERVICE PROVIDER: A LITERATURE REVIEW

Hatairat Bandittayarak and Piyawat Chanintrakul
Faculty of Logistics, Burapha University, Chonburi, Thailand 20131

ABSTRACT

Purpose: This paper is to present a comprehensive review of the literature on factors influencing the operation performance of Transportation Service Providers (TSPs) (related to customers' perception and providers' perception during the period 1988-2012 and to propose a new conceptual framework of the performance of TSPs to measure the performance of TSPs.

Design/methodology/approach: Content analysis was employed in this paper to analyze and classify the articles. A systematic literature search was performed through electronic database including Emerald, Science Direct, Springer Link, and Pro Quest using three keywords:)a (performance,)b (performance measurement, and)c(outsourcing.

Findings: The information in performance of TSPs especially from the customer satisfaction point of view was summarized where the service effectiveness of TSPs consists of six sub-elements: reliability, responsiveness, flexibility, quality, delivery, and time and the operation efficiency indicators include two sub-elements: cost and assets.

Research limitations/implication: Only peer-reviewed international journals were chosen while any other forms of publication such as research working papers, conference papers, and dissertations had been excluded.

Originality/value: The result concludes with a presentation of a new framework to measure customer satisfaction for transportation service provider performance and further examines the impacts of transportation service providers' performance and competitive advantage.

Keywords: Literature Review, Performance, Performance Measurement, Outsourcing, Transportation Service Providers (TSPs), Service Effectiveness, Operation Efficiency, Customer Satisfaction.

Paper type: Literature Review

PORT POLICIES PROMOTED BY JAPANESE GOVERNMENT

Atsushi Kaji

Ports and Harbours Bureau Ministry of Land, Infrastructure, Transport and Tourism

ABSTRACT

Purpose: Japanese ports appear to be less attractive, compared to overseas ports in the drive towards larger vessels. If this situation persists, Japanese industries may be undermined by higher logistics cost for trades. Therefore, this trend has to be changed.

Design/methodology/approach: Several policies have already been implemented to achieve the purpose. Three of the policies will be introduced in this report. First, 'International Container Hub' policy aims at more frequent calls of long haul trunk line vessels via Japanese ports. Under this policy, terminals of the container hub ports will be upgraded, and container gathering (including transshipment cargos) system to these hubs be reinforced through specific supports. Secondly, 'International Bulk Hub' policy aims at enhancing international competitiveness of steel manufacturing, grain processing, and coal importing industries. This policy promotes transportation by larger sized vessels, which will lead to lower transportation cost and stable import of bulk cargo to Japan. Third, 'Neal Net; North East Asia Logistics Information Service Network', is a network by which we can share container logistics information. This system has been developed to ensure that the Japanese, Chinese and Korean cargo owners, logistics companies, etc. efficiently grasp the information on arrival and departure of containers and vessels.

Findings: These policies are in progress, but we hope that these policies will lead to Japanese competitive ports and industries.

Originality/value: These policies have been planned and promoted to achieve overall optimized transportation in Japan.

Keywords: port, container, bulk, logistics Information

Paper type: Research Paper

SUPPLY CHAIN NETWORK DESIGN UNDER RFID ADOPTION

Yu-Chung Tsao^{1,}, Chia-Hung Chen²*

¹*Department of Industrial Management, National Taiwan University of Science and Technology, Taipei, Taiwan; Email: yctsao@mail.ntust.edu.tw*

²*Department of Logistics Management, Shu-Te University, Kaohsiung, Taiwan*

ABSTRACT

Purpose: This study designs a supply chain network under RFID adoption. To maximize the total profit, the objective is to determine the following: 1) the locations of the distribution centers, 2) the allocation of retail stores to distribution centers, 3) the replenishment cycle time at distribution centers, and 4) whether the RFID is adopted or not.

Design/methodology/approach: This study develops a continuous approximation model and proposes an algorithm based on nonlinear optimization for solving this problem.

Findings: Numerical studies demonstrate the solution procedure. The results also show how the RFID adoption affects the supply chain network design.

Practical implications: This paper highlights the importance of RFID adoption in the supply network design problem and provides new management implications that can be used as a reference for business managers.

Originality/value: The study is the first one to incorporate the RFID adoption decision into the supply network design model and discuss the effects of RFID adoption on the supply network design.

Keywords: supply chain network design, RFID, location, allocation, inventory

Paper type: Research paper

ACKNOWLEDGEMENTS

This paper is supported by the National Science Council under grant NSC 102-2410-H-011-029-MY3.

TARGETING INDUSTRY FOR THAILAND EAST-WEST ECONOMIC CORRIDOR

Wapee Manopiniwes^{*1}, Sakgaseem Ramingwong², Varattaya Jangkrajarn³

¹Faculty of Science and Technology, Sophia University - JAPAN

²Faculty of Engineering, Chiang Mai University - THAILAND

³Faculty of Business Administration, Chiang Mai University - THAILAND

wapee.m@gmail.com

ABSTRACT

Purpose: Greater Mekong Subregion's East-West Economic Corridor is the physical logistics and investment linkage of Myanmar, Thailand, Lao PDR and Vietnam. Where Thailand is geographically located in the center and possesses high potential in terms of economic and industry, the research aims to identify the target industry for this regional development.

Design/methodology/approach: The identification criteria includes key production factors and national policy, with 3 constructing steps of selection, i.e., (i) Preliminary Screen - the industry database of Ministry of Industry to differentiate the strong and weak industry, (ii) Policy Screen - using national policies that related to industry development to screen out the off-focus industry and (iii) Industry Selection - using Multiple-Criterial Decision Making tools to select the overall strongest industry as the target industry.

Findings: The study leads to 2 targeting industries, i.e., foods and energy. In addition, other strong industries are also identified.

Originality/value: The findings lead to policy development of Thailand upon EWEC development as well as logistics infrastructure development to address the need of these industries.

Keywords: East-West Economic Corridor, industry selection

Paper type: Research Paper

THE ANALYSIS OF INFORMATION ARCHITECTURE MODEL OF TOURISM LOGISTICS WEBSITES

Lachana Ramingwong

Department of Computer Engineering, Faculty of Engineering, Chiang Mai University

ABSTRACT

Purpose: This paper analyse information architecture of top tourism logistics websites in order to develop the most efficient framework. In tourism industry, each web needs a different architecture to suit their users. The information architecture influences the performance of information flow. The efficient information flow can enrich information sharing across the supply chain. It is clear to see that the Information flow provides opportunities and challenges for the tourism industry. Information is often distributed via common tools include travel documents, television advertisements, online videos and websites. Among those tools, websites are the most common one.

Design/methodology/approach: In this paper, the top tourism website is analyzed based on the research methodology applied from SAM (Software Process Analysis Method) which is previously applied for the analysis of well-known software processes and e-commerce websites. Firstly, detailed information architecture of the websites is elaborated via elaboration process. Secondly, the main components of information architecture are discovered from the normalization process. Lastly, the abstract model of tourism website is generated.

Findings: This paper proposes conceptual model for building of tourism website based on their processes and elements.

Practical implications: The model obtained can be used as a recommended model for adopters. The models suggest key characteristics needed for a tourism website. As a result, design and development time as well as required labour are reduced. This further results in cost reduction and more customer satisfaction.

Originality/value: This paper applies an existing analysis method onto the domain of tourism logistics.

Keywords: Tourism website, Travel website, Tourism logistics, Tourism logistic supply chain, Information flow, Information system, Information architecture model

Paper type: Research Paper

THE CONCEPT OF HALAL LOGISTICS – AN INSIGHT

**Harlina Suzana Jaafar, Emi Normalina Omar, Muhamad Rahimi Osman,
NasruddinFaisol**

*Malaysia Institute of Transport, University Technology MARA, 40450 Shah Alam,
Malaysia*

*Faculty of Business and Management, University Technology MARA, 40450 Shah
Alam, Malaysia*

*Academy of Contemporary Islamic Studies, University Technology MARA, 40450
Shah Alam, Malaysia*

*Faculty of Architecture, Planning and Surveying, University Technology MARA,
40450 Shah Alam, Malaysia*

ABSTRACT

Purpose: The purpose of this study is to develop a conceptual framework and suggest the most feasible terminology for *halal* logistics. The issues and challenges will also be highlighted and discussed in providing a more concrete and focused concept of *halal* logistics.

Design/methodology/approach: This study will be based on a review of the existing literature on various perspectives of halal logistics.

Findings: This study found that majority of respondents was familiar with the term *halal* logistics, but not sure on the meanings and implementation. This study also suggests that the term *halalantoyyiban* supply chain would be the most feasible term due to several justifications.

Research limitations/implications (if applicable): This study contributes to the knowledge through the development of new theory in the logistics and supply chain discipline and thus recommends the most feasible term to be used based on the reviews and practitioners' view on *halal* logistics.

Practical implications (if applicable): The findings provide clarification to the practitioners on the term *halal* logistics and offer guidance on how it should be implemented.

Originality/value: Having considered that the concept of *halal* logistics is fairly new to the academia and industry practitioners, this study contributes to the knowledge through the provision of a new theory of *halal* logistics and the clarification of its concept.

Keywords: halalan-toyyiban, halal, logistics, supply chain,

Paper type: Literature review

THE CONCEPTUAL FRAMEWORK OF LEAN LOGISTICS IN MALAYSIA

Azlina Hj Muhammad

Malaysia Institute of Transport (MITRANS), Universiti Teknologi MARA
azlina59@salam.uitm.eu.my

ABSTRACT

Purpose: This paper will provide an overview of the conceptual framework of lean logistics concept in Malaysia with a view that logistics industry holds an increasingly dynamic and significant role in today's economy.

Design/methodology/approach: Through a preliminary literature review, this paper examine the factors that create a lean logistics company, and using examples, examine the application of these factors and attributes to logistics firms to improve process and provide high-quality of service level.

Findings: This paper represents the overview on conceptual framework of lean logistics in Malaysia and also represents the first application of lean logistics model to the logistics service industry in Malaysia.

Originality/value: This paper resulting the development of concepts that explains how lean logistics can provide a competitive advantage in today's changing business environment specifically addressing the logistics services providers.

Keywords: lean logistics, logistics, conceptual framework, logistics service industry

Paper type: Conceptual paper

Acknowledgement: The research work benefited from the inputs of many resourceful people especially the feedback of Dr. Harlina Suzana Jaafar, Head of the Malaysia Research Centre for Supply Chain Excellence (MarCels), Assoc. Prof. Sabariah Mohamad, and Prof. Dato' Dr. Tengku Jamalluddin Tengku Mahmud Shah Al-Haj, both are Senior Fellow at MITRANS whom have provided valuable assistance to the writing and undertaking of the research summarised in this paper. The work is also not possible with the contributions from the industry members whom I worked closely prior to joining the academic institution.

THE DELAY COST OF TRUCK AND FREIGHT PRICING PRACTICES

Areekamol Tor.Chaisuwan, Nakorn Indra-Payoong, Sarawut Jansuwan

Faculty of Logistics, Burapha University, Chonburi, Thailand 20131

E-mail: {areekamol, nakorn.ii }@gmail.com, sarawut371@hotmail.com

ABSTRACT

Purpose: This research analyses the pricing and delay cost of truck on the Interstate highway 15 (I-15) in Utah.

Design/methodology/approach: To perceive value of congestion for this research approximate 401 miles corridor are used to estimate value cost of delay. A practical framework uses the data source form Utah Department of Transportation (UDOT), Freight Analysis Framework version 3 (FAF³) and American Transportation Research Institute (ATRI) to estimate the delay cost of truck. Compared with Uship, the online shipping marketplace in the US, and the average truck operating costs per mile, the markup of freight price can implicitly be derived. The seasonal factor is also introduced to adjust a regular freight price, particularly during the winter season.

Findings: The empirical studies have indicated that a trucking company could lose a profit on the Washington-Box Elder route because a significant delay cost is imposed. On the Washington-Salt Lake City, Iron-Davis and Iron-Weber routes, a truck operator is taken an opportunity cost by cutting or providing limited services during the winter season.

Originality/value: The results of this study are primarily to support freight transport research and policies and to provide a more accurate cost of annual truck congestion for commercial vehicle operators on the interstate highways.

Keywords: delay cost of truck, Average Annual Daily Truck Traffic (AADTT), mark up pricing, delay time cost estimation, seasonal factor adjustment.

Paper type: Research paper

THE DEVELOPMENT OF REVERSE LOGISTICS PERFORMANCE ASSESSMENT TOOL

Rujirat Theantanu, Atita Kongkarattanak, Sathaporn Opananon
*International Business, Logistics and Transport,
Faculty of Commerce and Accountancy, Thammasat University
Paholyothin Rd., Klongluang, Patumtani 12121 Thailand
Tel 0-2696-5768 Fax 0-2696-5738 Email opasanon@tu.ac.th*

ABSTRACT

Purpose: This research aims at developing a practical and pertinent key performance measurement in reverse logistics that can reflect the efficiency level of each business activities the firm engages.

Design/methodology/approach: Intensive secondary data analysis on numerous past research papers was conducted to identify essential reverse logistics activities and associated key performance indicators (KPIs). A performance assessment framework was developed and evaluated by experts to enhance its completeness and correctness. Finally, the tool practicality was examined through a pilot test.

Findings: According to the literature review, the reverse logistics performance assessment must be composed of three measurement dimensions, including: (1) economical dimension; (2) customer satisfaction dimension; and (3) environmental dimension.

Practical implications: Reverse Logistics has gained more popularity recently due to its dual benefits. It is an environmental friendly activity that, by the same token, enhances company profitability. However, in order to achieve those ideal advantages, the firm must have managed the reverse logistics efficiently starting with a deep understanding on which efficiency degree the company is currently staying in terms of reverse logistics.

Originality/value: The proposed reverse logistics performance assessment tool can measure the true capability of the company in reverse logistics management by taking into accounts both qualitative and quantitative attributes.

Keywords: Reverse Logistics, Performance, Dimension, KPIs, Assessment

Paper type: Research Paper

THE EMPTY CONTAINER RELOCATION PROBLEM WITH FOLDABLE CONTAINERS ON COST SAVINGS FOR HINTERLAND TRANSPORT OF SEAPORTS

Koichi Shintani¹, Yoshiaki Ishihara², Rob Konings³ and Akio Imai⁴

¹ School of Marine Science and Technology, Tokai University

e-mail: shintani@tokai-u.jp

² Department of Information Science and Technology, Oshima National College of Maritime Technology

³ OTB Research Institute for the Built Environment, Delft University of Technology

⁴ Graduate School of Maritime Sciences, Kobe University

ABSTRACT

Purpose: Efficiently planning drayage operations for empty container relocation is an important task for transport companies since these operations constitute a considerable part of the cost of a container transport. This study analyses the impact that the use of foldable containers can be effective on cost savings in repositioning empty containers in the hinterland transport of seaports.

Design/methodology/approach: Using foldable containers that, for empty transfer, can be folded down and bundled to form a single container offers substantial cost savings for container drayage in the hinterland. We model empty container relocation by trucks as a vehicle routing problem with pickup and delivery to minimize the total costs of drayage. The model considers the integrated problem both of empty container relocation and vehicle routing. To obtain a small amount of computational time, this study proposes a heuristic to nearly optimize the solution of the problem by employing an ant colony algorithm (ACO).

Findings: Numerical experiments are carried out with realistic empty container repositioning scenarios that often arise due to imbalanced inbound and outbound flows in the hinterland. The study finds that foldable containers can significantly reduce the number of trips and trip length of truck haulage compared to standard containers, resulting in substantial cost savings.

Originality/value: This study examines the economic viability of foldable containers on empty container relocations with drayage operations in hinterland transport of seaports.

Keywords: Container transport, Empty container, Vehicle routing problem, Foldable container, Hinterland transport

Paper type: Research paper

THE IMPACT OF WEATHER CHANGES TO PEDESTRIAN RAIL COMMUTERS: AN OVERVIEW

Hasmi Mokhlas, Norlida Abdul Hamid

Faculty of Business Management, Universiti Teknologi MARA

Email: Hasmokh@melaka.uitm.edu.my, norlida054@salam.uitm.edu.my

ABSTRACT

Purpose: Residential site within 5 – 10 minutes walking distance from the rail station encourage higher pedestrian commuters to use the public transport. Studies have shown that the demand to use the rail system particularly for the rail pedestrian commuters were influenced not only by the physical environment of the walkways but also vulnerable to the changes in weather condition. The paper attempts to understand the impact of weather condition to the level of rail ridership. Secondly, the paper looks at the possible solutions to encourage rail pedestrian commuters to continue using the public transport even during high temperature and heavy rainfall.

Design/methodology/approach: The paper analyses the previous literatures which emphasis on the weather elements that affect walking for transport.

Findings: Findings from the literature demonstrated mix results due to different topography and location where the study were being carried out. Daily temperature and unpredictable rainfall affect the pedestrian rail commuters in their travel decision.

Research limitations/implications: Literatures have shown that weather changes influenced the level of walking. Yet, there is still scarce of data that associate weather effects with the demand for walking to the rail system.

Practical implication: The paper facilitates the transport policy maker and planners in understanding how weather elements influenced pedestrian to access transit station and the effect to rail ridership and public transport modal share.

Originality/value: This paper addresses the problems on the affect of weather to pedestrian rail commuters access public transport station experiencing hot and humid condition.

Keywords: Weather, pedestrian rail commuter

Paper type: Concept paper

THE MODAL-SHIFT IN JAPAN

Nobuhiro Ishida

Doshisha University, Kyoto, Japan

ABSTRACT

Purpose: We statistically analyze the recent trend of domestic freight transport and consider the possibilities of modal-shift in Japan.

Design/methodology/approach: We use the statistical methods to analyze the recent trend of domestic freight transport in Japan. And we analyze the advantages of each transport mode.

Findings: The necessity for modal-shift has been argued for long run in Japan. But it is making slow progress. The main reason is that the most of domestic freight in Japan are transported by roads. The share of road transport has been more than 90 percent for about thirty years. Recently, the problems about such freight transport structure are pointed out. They are the damages on environment, the transport in disaster, the efficient use of all modes as an overall freight transport systems. We statistically analyze the domestic freight transport structure in Japan, especially paying attention to the elasticity of transport demand for GDP and the transport share of modes. So we find out the advantages of each mode. And we point out the necessity for modal-shift and inter-modal transport in Japan.

Keywords: Domestic freight transport in Japan, Elasticity of transport demand for GDP, Shares of transport modes, Advantages of transport modes, Modal-shift, Inter-modal transport

Paper type: Empirical research

THE ROLE OF CAPABILITIES IN LOGISTICS SERVICE BUSINESS

Sirpa Multaharju, Jukka Hallikas

Lappeenranta University of Technology, School of Business

P.O. Box 20, FI-53851 Lappeenranta, Finland

Tel. +358 50 368 3328, email: sirpa.multaharju@lut.fi

ABSTRACT

Purpose: The purpose of this study is to give an initial overview for logistics capability of logistics service provider (LSP) and to analyze it against two business models, namely Third Party Logistics (3PL) and Fourth Party Logistics (4PL) as well as to address differences between them. The logistics capability is broadly examined within logistics user companies but no studies are found relating only the service capability of LSPs. Instead, their competitiveness as a whole are widely examined. The topic of this paper is interesting as the global competition of supply chains set continuously increasing requirements for logistics performance and logistics business.

Design/methodology/approach: The framework is based on the earlier literature on logistics capabilities of logistics user companies. On this framework was built a model for Analytic Hierarchy Process (AHP) and approved it within 3PL and 4PL contexts.

Findings: The case study and AHP analysis revealed that the overall LSP performance was fairly uniform but 3PL was somewhat better in Demand and Process capability categories whereas 4PL rose above 3PL in Information and Coordination capabilities.

Research limitations: Impacts of the other firm-specific capabilities on performance are excluded.

Practical implications: The results indicate that 3PL should develop their Information management and Coordination capabilities in order to become 4PL. Furthermore, the study can contribute to redesigning logistics business models.

Originality/value: The research like this has not been reported earlier. The study presents a new way to evaluate LSP performance.

Keywords: Logistics capability, logistics service provider, Analytic Hierarchy Process

Paper type: Research paper.

THE ROLE OF RESPONSIBLE BUYING PRACTICES IN SUPPLY RISK MANAGEMENT

*Jukka Hallikas^a, Anni-Kaisa Kähkönen^a, Katrina Lintukangas^a,
Pietro Evangelista^b*

^aLappeenranta University of Technology, School of Business, Lappeenranta, Finland

^bIRAT-CNR and Department of Industrial Engineering, University of Naples Federico II, Naples, Italy

Email: anni-kaisa.kahkonen@lut.fi

ABSTRACT

Purpose: Supply management is responsible for the management of the firm's supply network and risks arising from the global supply base. Thus, the importance of defined principles and practices related to sustainability and responsibility of purchasing are highly critical. Therefore, the aim of this paper is to discuss the role of responsible buying practices in firm's supply risk management.

Design/methodology/approach: The role of responsible buying practices in supply risk management is examined by utilizing a quantitative survey data collected from Finnish firms in 2013. The questionnaire was addressed to large Finnish companies and the emphasis was on the fields engaged in project business.

Findings: The results show that active responsible buying practices correlate positively with supply risk management. However, there are differences in terms of risk type. It seems that responsible buying practices impact mostly on the management of corporate social responsibility, third party and delivery risks. The lowest correlation between responsible buying and risks was country risk. Furthermore, it was found that country risk does not correlate with CSR risk and third-party risk and risks vary accordance the industry and nature of the business.

Practical implications: The results help managers to understand the connection between responsible buying and risk management and highlight the significance of determined buying practices and the compliance of those.

Originality/value: This study provides new empirical evidence and insights concerning both the risk management and sustainability in purchasing and supply management.

Keywords: Responsibility, Sustainability, Supply management, Risk management, Survey

Paper type: Research paper

USING ONLINE GEOCODING AND DIRECTIONS MAP SERVICES TO ENHANCE THE CAPABILITY OF ROUTE PLANNING AND MANAGEMENT SYSTEMS

Trasapong Thaiupathump, Rungchat Chompu-inwai
Faculty of Engineering, Chiang Mai University, Chiang Mai, Thailand
trasapong@eng.cmu.ac.th, rungchatc@hotmail.com

ABSTRACT

Purpose: Route planning for providing optimal transportation between offices and employees' residences for large organizations is a complex and challenging logistics problem when there are complex conditions and constraints involved. Effective route planning and management can help reducing operating costs. Typically, employees' address information, in most databases, is stored in the form of text. Route planning associated with geographical location data is; therefore, difficult to manage in such cases, plus it is difficult to generate clear, understandable results. If such text address data is converted into latitude-longitude coordinate data, the problem involving extensively uses of location data will be much more effective in finding and displaying results. The purposes of this study is to use online geocoding and directions map services to enhance the capability of route planning and management systems, and also study on accuracy and limitations of these services.

Design/methodology/approach: This paper describes the development of a web application, to be used to display spatial data for employee transportation route planning purposes, using employees' addresses across nine provinces in the central region of Thailand. Online map services in this study are in the processes of converting employees' address into a latitude-longitude format, to be used for the route planning algorithms, and in enhancing the effectiveness of the map displays and route information results.

Findings: The results illustrate the level of performance and accuracy of the online map services in study areas, and factors involved.

Originality/value: This paper is a case study of applying online geocoding and directions map services to enhance the capability of route planning and management systems.

Keywords: Route planning, route management, geographic information systems, online map services, geocoding

Paper type: Case Study

VULNERABILITY IN SUPPLY CHAIN RISK MANAGEMENT

*Jyri Vilko**, *Lauri Lättilä***

**School of Business, Lappeenranta University of Technology, Lappeenranta, Finland*

***School of Engineering and Technology Management, Lappeenranta University of Technology, Lappeenranta, Finland*

Email: jyri.vilko@lut.fi

ABSTRACT

Purpose: In current studies of supply chain risk management the analysis of vulnerability is still in its infancy. Although the issue is raised by a number of authors it is properly addressed by only few scholars in the current literature. This article addresses this gap by proposing the focus for assessing vulnerability with different focus according to the information available and supply chain design.

Design/methodology/approach: This research is based on an integrated literature review through which the relevant concepts are identified. In doing this, we constructively build causalities between key concepts surrounding supply chain vulnerability and formulate a mathematical model for supply chain vulnerability. Thereafter, discrete-event-simulation-method is illustrated in analysing supply chain vulnerability.

Findings: This study provides an important but little addressed viewpoint to the supply chain risk management literature by bringing new information about vulnerability: Firstly, the conducted literature revealed that the concept of vulnerability in the context of supply chain risk management has various definitions, from which a new definition is synthesised. Secondly, in analysing supply chain vulnerability the use of discrete-event-simulation is illustrated.

Research limitations/implications: The research is based on an integrated literature review which holds limitations. The presented framework and simulation models provide important information about the feasibility of simulation in analysing supply chain vulnerability.

Practical implications: By better understanding the vulnerability managers can base their decisions on more complete understand of the subject rather than intuition. By better focusing the vulnerability analysis based on information available the managers are able to carry out supply chain risk management more efficiently.

Originality/value: The presented viewpoint is a new one and enhances the current understanding of vulnerability for the supply chain risk management

Keywords: Vulnerability, supply chain risk management, exposure, simulation, complexity

Paper type: Research paper

Course Requirements >>>

Core Courses

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- DB 802 Advanced Economics (3 Credits)
- DB 803 Econometrics I (3 Credits)

Major Course: Accounting Series

4 Major Courses (12 Credits)

- DB 811 Research Methodology (3 Credits)
- DB 812 Empirical Capital Market Based Research in Accounting (3 Credits)
- DB 813 Judgment and Decision Making Research in Accounting (3 Credits)
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4 Major Courses (12 Credits)

- DB 821 Econometrics II (3 Credits)
- DB 822 Financial Economics (3 Credits)
- DB 823 Financial Theory (3 Credits)
- DB 824 Corporate Finance (3 Credits)

2 Elective Courses (6 Credits)

Selected from the other courses in Finance Series and/or courses approved by the Ph.D. Executive Committee

Major Course: Marketing Series

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- DB 833 Marketing Decisions Modeling (3 Credits)

2 Elective Courses (6 Credits)

Selected from the other courses in Marketing Series and/or courses approved by the Ph.D. Executive Committee

Admission Information >>>

Admission Criteria

Admission to the program will be based on the Admission Committee's careful evaluation of the applicant's qualifications.

Master's degree requirement

Applicant must hold a Master's degree in related field.

Interview

Applicant must show strong commitment, strong research capability, and ability to communicate in English.

Research Proposal

Only an applicant enrolling for plan I has to submit a research proposal in area of interest and the Ph.D. executive committee will consider and suggest the dissertation advisor who might be interested in the proposal.

Admission Requirements

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- 2) A GMAT score of 550 or GRE score of 1100 (verbal and quantitative parts) or SMART II score of 600 (minimum of 250 for each part) or satisfactory level score of Graduate Program Admission Test taken within 5 years on the application date.
- 3) Three letters of recommendation
- 4) A statement of intent to pursue a Ph.D. degree
- 5) The Research Proposal (for application to Plan I)

Tuition Fees and Expenses

Tuition and general fees are approximately 230,000 Baht per annum.

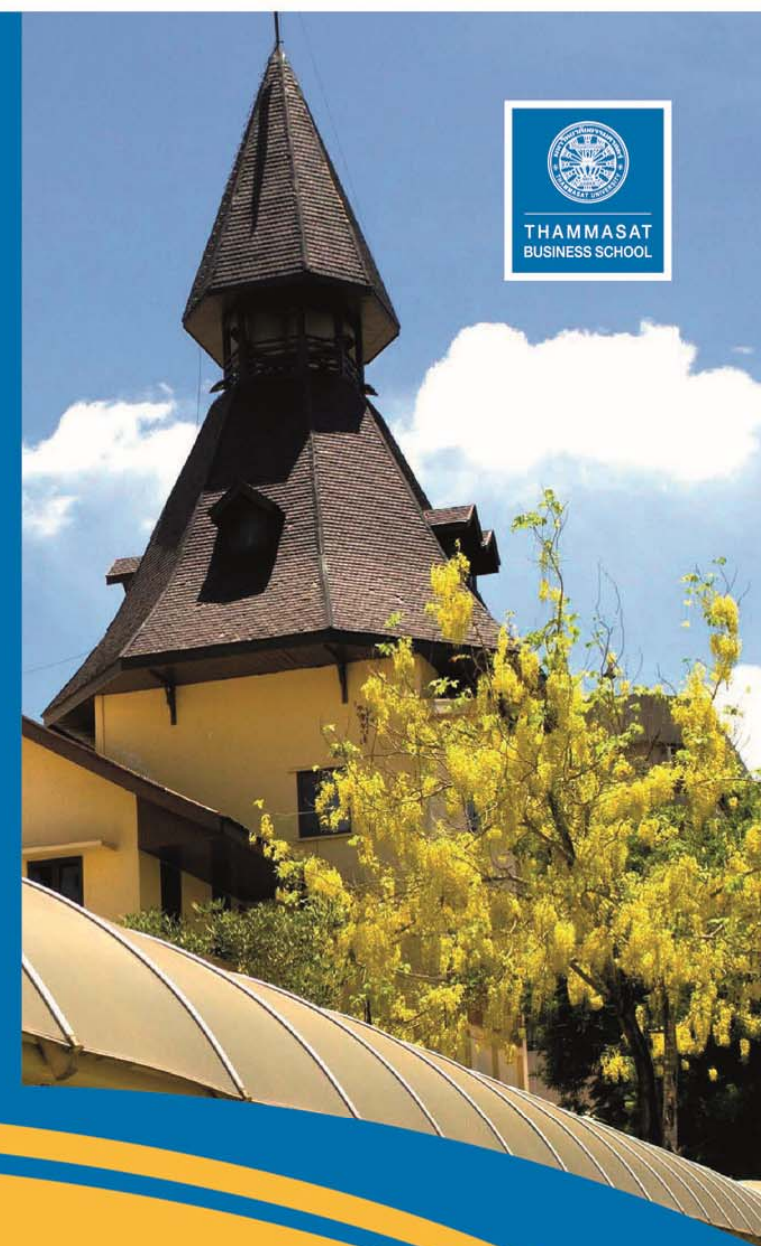
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**Master of Engineering (M.Eng.)
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(Bi-Lingual Program)

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Industrial Engineering Department Faculty
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88 Soi Bangna-Trad 30, Bangna-Trad, Bangna, Bangkok 10260

Thailand Tel : +662-398-9850 to 1 Fax : +662-398-9852