

# ICLT 2019

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## GLOBAL SUPPLY CHAIN CHALLENGES FOR EMERGING ECONOMIES



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## INTRODUCTION

This is the 11<sup>th</sup> international conference organised by the Centre for Logistics Research at Thammasat Business School, Thammasat University and the Excellence Centre in Logistics and Supply Chain Management, Chiang Mai University. This is major event for researchers in transport, logistics, supply chain and value chain management especially in the Asia Pacific region. This year's event in Hanoi (Vietnam), is a continuation of past successful conferences held in Chiang Mai (Thailand), 2009; Queenstown (New Zealand), 2010; Malé (Maldives), 2011; Chiang Mai (Thailand), 2012; Kyoto (Japan), 2013; Kuala Lumpur (Malaysia), 2014; Lyon (France), 2015; Singapore, 2016; Bangkok (Thailand), 2017 and Okinawa (Japan), 2018. This year's event is held during November 14<sup>th</sup> to 16<sup>th</sup>, 2019 and is hosted by the Foreign Trade University based in Hanoi, Vietnam.

Under the theme of “**Global Supply Chain Challenges for Emerging Economics**”, the following topics were welcomed at the conference:

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

The conference best paper will be invited and considered for publication in the International Journal of Logistics Research and Applications.

## WELCOME ADDRESS FROM THE CONFERENCE CHAIRS

On behalf of the organizing committee, we would like to welcome all participants to the 9th International Conference on Logistics and Transport (ICLT2019). It has been 11 years since the first conference was hosted in Chiang Mai (Thailand) and this year we are in Hanoi, Vietnam. 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 to logistics and supply chain from an academic perspective. This year, we have 34 papers from 8 countries from Australia, Belgium, Finland, New Zealand, Singapore, Vietnam, United Kingdom, and Thailand.

The theme for this year's event is "Global Supply Chain Challenges For Emerging Economies". The trade war between the US and China has put a spotlight on key supply chain issues, especially for developing economies trying to integrate into the global value chain. These are exciting times for our research field as current best practices may become obsolete in the near future due to this new trade war.

We would like to sincerely thank all presenters, reviewers, our scientific committees, and keynote speakers for their appreciated contribution. We cannot forget the important contribution of our main sponsor, SeaOil (Public) Co. Ltd, who has supported us through the years. 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.



Ruth Banomyong  
ICLT General Chair



Apichat Sopadang  
ICLT General Chair

## **WELCOME ADDRESS FROM THE LOCAL CHAIRS**

We warmly welcome all of you to the 11th International Conference on Logistics and Transport (ICLT 2019) in Vietnam. Foreign Trade University (FTU) is indeed very honoured to host the ICLT this year. The 2019 conference's theme is "Global Supply Chain Challenges for Emerging Countries".

Emerging countries are commanding half the world population and increasing wealth. In the context of globalization, many emerging countries have more and more links to worldwide active supply chains and relied on the roles in global supply chain to drive growth. There is a growing realisation that worldwide production system has been shifted to emerging markets and these can substantially impact global supply chain for many years to come.

Today, the world has witnessed unpredictable and complex economic and political change which extremely powerful effects on the global supply chain. Within this context, emerging countries are considered to be most vulnerable to these risks. The intensifying trade war between the United State and China is an example. This war has changed a lot of global supply chain configuration, as well as business strategy orientation of global corporate sector. To address these challenges, each country tends to the suboptimal situation, shifting manufacturing onshore, thereby reducing the role of global supply chain.

The theme of this conference is indeed timely as emerging countries will continue to feature prominently in driving global economy in the future. We are delighted that there are many professionals from around the world at this conference to discuss the latest research results as well as challenges and opportunities of global supply chain for emerging countries. We do hope that ICLT 2019 will be a wonderful platform for inspiring international and interdisciplinary exchange in the filed of logistics and transport. And to our friends from overseas, we also hope that you will find some time from busy schedule of the conference to enjoy many beautiful sightseeing and unique culture of Vietnam.

We wish you a memorable experience at ICLT 2019!

Assoc.Prof. Dr. BUI Anh Tuan  
President of Foreign Trade University

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# A CONCEPTUAL FRAMEWORK TO EVALUATE THE ROLE OF DRY PORTS IN PORT HINTERLAND LOGISTICS PERFORMANCE

**Lam Canh NGUYEN<sup>1</sup> and Ruth BANOMYONG<sup>2</sup>**

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## ABSTRACT

**Purpose:** The paper aims at developing a conceptual framework to evaluate the role of dry ports in the port hinterland logistics performance.

**Design/methodology approach:** The criteria hierarchy for the assessment was developed based on an extensive literature review. The key performance dimensions are based on cost, time and reliability (Banomyong & Supatn, 2011).

**Findings:** In the light of port regionalization (Notteboom & Rodrigue, 2005), the evolution of dry ports plays a vital role in boosting the port-hinterland integration. Such inland nodes might be located in different locations within logistics chains to facilitate the movement of cargo between hinterland and seaports (Nguyen & Notteboom, 2016; Notteboom & Rodrigue, 2009; Roso et al., 2009).

There exist relationships between dry ports' characteristics and regional port hinterland settings. The role of dry ports in facilitating logistics performance depends on different characteristics, such as the size and performance of terminals and connection between dry ports and seaports.

**Research limitations/implications** (if applicable): This is just the first step of a broader study and therefore there is no empirical data to validate the conceptual framework being developed.

**Practical implications** (if applicable): The conceptual framework can be used as a guideline for policy makers to explore the role of dry ports within national logistics systems.

**Originality/value:** This proposed conceptual framework is a first attempt to assess the impact of dry ports on national logistics performance

**Keywords:** National logistics performance, dry ports, hinterland and ports

# AGRICULTURAL RESIDUAL BIOMASS SUPPLY ANALYSIS FOR PRODUCING ALTERNATIVE ENERGY GENERATION

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## ABSTRACT

**Purpose:** This research highlighted the importance of utilizing agricultural waste efficiently. Agricultural waste is one of the abundant resources which could be used to produce massive energy, however, they are not fully utilized in producing electricity, heat, or other form of energy. One of the most important reasons is the unavailable database of agricultural waste source and general market price.

**Design/methodology approach:** The database of ten potential agricultural wastes in Thailand were systematically collected in term of location and local price. Three maximum supply sources of each agriculture residue with total of 30 locations were proposed as one of the outcomes. After obtaining residue locations, the analysis of collection center was conducted based on waste amount, distance and price.

**Findings:** There were 30 points which are considered suitable for being agriculture waste collection center. For example, the center of rubber waste collection point is at Chaiya District, Surat Thani. The suitable consolidate cost of each waste is also proposed. Rubber waste is collected at 2,921 baht per ton including transportation cost to collecting point. However, the cost is subject to change depending on the amount of agriculture waste produced each year.

**Originality/value:** At present, there has been no collection of information on the production of agricultural residues and residues that have the potential to produce clear alternative energy. This includes the analysis of the cost for collecting and transporting in a way that is suitable for distribution to the point of alternative energy production, such as Inter Far East Energy Corporation Public Company Limited or Bua Sommai Biomass Company Limited, etc.

**Keywords:** Agricultural Residual, Center of Gravity Method, Load – Distance Technique, Cost Analysis

# AN ANALYSIS OF CHINA-PAKISTAN ECONOMIC CORRIDOR ROUTES IN PAKISTAN: MODAL CHOICE, COSTS AND SCHEDULES

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## **ABSTRACT**

**Purpose:** The China Pakistan Economic Corridor (CPEC) is a multi-billion-dollar economic project between Pakistan and China and is considered to be a vital part of China's One Belt One Road (OBOR) initiative. The corridor allows for direct access for China's trade to the Arabian Sea via a network of road, rail and air routes and ports across Pakistan. Since its inception, there has been a political and social debate about the distribution and prioritisation of investments across the three main CPEC routes, i.e. Eastern, Central, and Western corridors. There are also demands from the Khyber Pakhtunkhwa (KPK) provincial government for the inclusion of a 4th alternative route (Western Route 2) to ensure socio-economic gains are maximised for the northern regions. This research evaluates the overall competitiveness of the CPEC routes following the UNESCAP multimodal transport (MMT) Cost Model using distance, freight costs and transit times for the movement of 20 and 40 foot containers between Gwadar Port and the Khunjrab pass on the China-Pakistan border.

**Design/methodology approach:** A case study approach was taken, underpinned by a questionnaire-based survey of Pakistan-based Logistics Service Providers (LSPs), Road Hauliers, the National Highway Authority and Pakistan Railways. A number of CPEC routes are explored comparing unimodal (road only) with Multimodal (road - rail - road) alternatives.

**Findings:** The analysis reveals that an all road Eastern route is the most competitive while multimodal options on the Eastern and Central routes are also competitive as a secondary alternative for long haul transport depending on operational conditions and cargo volumes. Future research should focus on the identification of specific transport and logistics weaknesses, and the implementation of specific remedial measures which are aimed at the improvement of transport efficiency and, more generally, at international trade facilitation.

**Originality value:** The research explores route alternatives along the CPEC to provide a better understanding of the overall impact of their development.

**Keywords:** China Pakistan Economic Corridor, One Belt One Road, Unimodal, Multimodal, Pakistan

# AN ANALYSIS OF LOGISTICS COST DRIVERS IN THAILAND

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## ABSTRACT

**Purpose:** Logistics cost is an important indicator used in Thailand logistics development plan. In order to increase the country's national competitiveness, it is important to minimise national logistics cost. The purpose of this manuscript is twofold (1) identify and analyse Thailand logistics cost drivers and (2) propose to policy makers a guideline to reduce national logistics cost based on a cost structure approach.

**Design/methodology/approach:** A survey was conducted and 6,020 businesses covering all regions of Thailand responded. The developed questionnaire asked about firms' logistics cost structure. Cost drivers for each key logistics components, namely, transportation, warehousing, inventory holding and logistics administration cost, were identified. A comparative analysis of identified logistics cost drivers between business sectors was done.

**Findings:** Cost drivers for main business sectors in Thailand were identified. Insurance and tax were the main cost drivers for inventory holding cost in all sectors. For transportation, warehousing and logistics administration cost, cost drivers varied significantly between sectors.

**Research limitations/implications** (if applicable): The analysis of cost drivers did not considered the effect of firm size in each business sector. Future research should identify and compare cost drivers between small, medium and large firms.

**Practical implications** (if applicable): Policy-makers may employ this approach to identify and analyse national logistics cost. With information from secondary data source, insights obtained from the cost structure approach may help policy-makers in developing and planning strategies for reducing national logistics cost.

**Originality/value:** This manuscript propose an approach to analyse national logistics cost with the cost structured methodology.

**Keywords:** Cost structure, National logistics cost, cost driver, macro-logistics, logistics policy

# AN ASSESSMENT OF VIETNAM'S LOGISTICS PERFORMANCE

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## ABSTRACT

**Purpose:** The purpose of this paper is to analyse the logistics capability of firms in Vietnam by evaluating the performance of local logistics service providers and manufacturing firms.

**Design/ Methodology/ Approach:** The logistics performance is measured based on 3 performance dimensions (Banomyong *et al*, 2014): cost, time and reliability. The authors use data obtained on 58 manufacturing firms and 59 local logistics service providers in Vietnam.

**Findings:** Most manufacturing firms have not taken advantage of logistics outsourcing with only 43% firms outsourcing for access to international markets and 14.3% for the internal market. The rate of returned goods at manufacturing enterprises is also quite high with on average more than 10% products being returned. The demand forecast rate is around average (71.45%) and the percentage of goods delivered on time is just above the average (82.92%). For logistics service providers, the timely delivery rate is 83.5%. The main reason for inappropriate delivery is the weather, increasing costs, delays in customs clearance and collectors. Experienced workers are available in both manufacturing firms and logistics service providers. However, 15.8% do not have planning staff despite forecasting process being vital for the business. In comparison with LPI key dimensions, responding enterprises are more optimistic, especially in terms of infrastructure quality and shipping services. However, logistics performance assessments from both responding enterprises and World Bank show that Vietnamese logistics system still need to improve in many aspects.

**Originality/Value:** Proposed recommendations can be considered as reliable practical for both local authorities and enterprises in a joint effort for Vietnamese logistics system improvement.

**Research limitations:** First, limited number of responding firms. Second, potential selection bias among those who responded the survey. If the company responding to the survey and those not responding differ, the analysis would suffer from biases. Third is the variation in respondents. The questionnaire may have been completed by people at different positions in company surveyed, resulting in differences in respondents' perspectives.

# AN INTEGRATED QUOTATION PROCESS FRAMEWORK FOR THE ELECTRONIC MANUFACTURING SERVICES INDUSTRY

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## ABSTRACT

**Purpose:** The formulation of accurate, competitive and profitable quotations is a challenging task in the Electronics Manufacturing Services (EMS) industry. The purpose of this paper is to develop a systematic framework to manage responses to requests for quotations (RFQs).

**Design/methodology approach:** A case study was conducted on an EMS company that faces dissatisfaction among its business segments, in relation to the efficiency of the response process and quality of quotations. A global internal survey was used to identify key challenges, while frameworks to match the best solutions to these challenges were conceptualized from a literature review. Target Costing, Quality Function Deployment, Value Engineering and Value Stream Mapping were then incorporated into a proposed integrated quotation process.

**Findings:** Three embedded cases from the case company are presented to illustrate the application of the new framework. The first and second cases achieved potential savings of 17.3% and 18.2% respectively under the proposed integrated process, while the third case demonstrated a structured approach to improve interpretation of requirements from a new customer.

**Research limitations/implications:** This study is based on a single EMS provider headquartered in Asia and is focused on challenges that are process-driven rather than information technology (IT) driven.

**Originality/Value:** This study contributes to the literature by proposing an integrated process and framework for quotation management in the EMS industry, which has been shown to be effective in reducing in the number of re-quotes, increasing the quality of RFQ responses and improving customer satisfaction.

# ASSESSING THE MAGNITUDE OF DETOURS FACED BY CARGO FLIGHTS: AN EMPIRICAL ANALYSIS

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## ABSTRACT

**Purpose:** It has largely been assumed by both scholars and experts that planes fly the shortest route. However, due to natural, technical, geopolitical and social reasons, virtually no flight follow the shortest route (Dobruszkes, 2019). It has been estimated the average lengthening is 7.6 %, although under conservative hypotheses and with high standard deviation (Dobruszkes and Peeters, 2019). However, this assessment includes all available commercial flights, without any segmentation by airline, aircraft type or service type (such as cargo vs. passenger). Deeper analyses would thus be welcome. In this paper, we intend to focus on cargo flights only.

**Design/Methodology/Approach:** The analysis is based on a comparison between shortest-route distances and actual distances flown by commercial cargo flights in all over the world. The former is easy to compute from the latitude and longitude of origin and destination airports. The latter is computed in a Geographical Information System, based on a one-week set of radar traces bought from FlightRadar (which is a huge set of data).

**Findings:** The research is still ongoing.

**Originality/Value:** This paper will unveil whether cargo flights are more, or less, affected by detour than the average. This could be the case notably because the use (to some extent) of older planes involves lower ETOPS (Extended Operations) certification. Broadly thinking, it will also help to critically think about the concept of distance. It will also help to prevent scholars and experts to consider the shortest distance flown without any disclaimer.

**Research Implications:** Considering the existence of detours, the use of shortest-route distances to feed spatial interaction models, emission (or fuel burnt) assessments or airline rankings can only lead to biased outcomes, away from what happens into the real world.

# BLOCKCHAIN TECHNOLOGY FOR THE ASEAN SINGLE WINDOW

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## **Abstract**

**Purpose:** The ASEAN Single Window (ASW) is a network of National Single Windows (NSWs) of the 10 member countries of the Association of South-East Asian Nations (Soesastro, 2008). The NSWs are computer networks in each country that are interlinked. The system is currently in the implementation phase. Blockchain Technology (Nakamoto, 2008) is a technology in which data is not stored on central servers but at distributed nodes. The data becomes immutable and transparent.

Blockchain technology is being implemented in Supply Chains, and the purpose of this paper is to determine whether it would be beneficial to use Blockchain Technology for the ASEAN Single Window.

**Design/Methodology/Approach:** Topical literature review of academic journals, business literature and other publications will be used to create a conceptual framework, combining the concepts of the ASW with the concept of blockchain, followed by a critical evaluation.

**Findings:** The expected finding is that the advantages of using Blockchain Technology score higher than the disadvantages.

**Research limitations/Implications:** This research is conceptual and based on data publicly available. Furthermore, the implementation of the ASW is already under way, and it is beyond the scope of this paper to determine the implications of changing the technology at this stage.

**Practical implications:** Using Blockchain Technology could improve the ASW as a whole and be beneficial to all stakeholders.

**Originality/value:** To the best knowledge of the author, while cloud single windows have been described (Pugliatti, 2011), the idea of using Blockchain Technology for the ASEAN Single Window is new.

**Keywords:** Blockchain Technology, Supply Chain Management, ASEAN, ASEAN Single Window, ASW.

## E-CUSTOMS EFFICIENCY AND FIRM PERFORMANCE IN VIETNAM

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### ABSTRACT

**Purpose:** Paper suggests and empirically tests a conceptual model to investigate diffusion of innovation (DOI) theory and Hofstede's cultural dimensions on e-customs implementation in Vietnam to identify drivers and barriers influencing same and the influence of e-customs implementation on firm performance.

**Research Design/Methodology/Approach:** A literature review on DOI, culture and electronic customs informed a quantitative approach to propose the conceptual model and test extant theory. A total of 702 surveys were collected from Vietnamese customs officers in 5 cities and provinces. The data were analysed using structural equation modelling.

**Findings/Research and Practical Implications:** Findings identified relative advantage and national culture as key enablers while barriers include elements of ease of use and technical constraints. The findings also provide practical implications for organizations and validate the proposed conceptual model in the context of Vietnam.

**Originality/Value:** This study contributes by providing a synthesis and better understanding of e-customs implementation in emerging nations such as Vietnam having cultural differences compared to developed nations.

**Keywords:** E-government, e-customs, culture, diffusion of innovation (DOI) theory, firm performance, Vietnam

# EVALUATION OF FACTORS AFFECTING AIR CARGO TERMINAL OPERATIONAL PERFORMANCE

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## ABSTRACT

**Purpose:** The demand for world air cargo has come into an era of low growth. Forwarders can simply pinpoint the comparative strengths and weaknesses of the service factors that affect air cargo service choice. Their awareness toward airline's service factors differ, and these differences are the main factors that determine the choice and the competitiveness of specific airline. This paper, therefore, evaluate the significant factors affecting air cargo terminal operational performance in order to increase operational performance and customers' satisfaction.

**Design/methodology/approach:** The experts' interview is conducted to make the decision on the factor screening process. Later, to weight the air cargo operational performance, best-worst method is applying. The results will present the significant factors that affect to the performance.

**Findings:** The finding presented the significant factors that air cargo have to consider in order to attract the customers. The results showed that short-shipped cargo and cut of time are the most critical factors that air cargo operator has to improve. Besides, improving the operation for remaining the high percentage of service level would result in gaining more competitiveness over other potential competitors.

**Research limitations:** This paper only focus on airline which offer air cargo service. This will not include the freighter or charter flight.

**Originality value:** For the academic point of view, there are limited research focus on air cargo performance, most of research revolve around passenger side. Additionally, the contribution for business perspective is mainly subsidize to the air cargo operator development strategy and be the guideline for supporting the decision maker to improve their level of service.

**Keywords:** Air cargo terminal, factors and criteria, Best-Worst Method, MDCM

# EXPLORING CONSUMER LOYALTY BEHAVIOUR TOWARDS VIETNAMESE STRATEGIC RETAIL GROUPS

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## ABSTRACT

**Purpose:** This paper investigates consumer loyalty behaviour towards Vietnamese grocery retailers. The country's increased growth is rapidly changing consumer buying power, and hence expectations of product offerings and service as well as consumer loyalty behaviour are also changing. It is therefore timely to investigate these issues and how they may affect certain retail groups, e.g. supermarkets or 'mom and pop' stores and their respective strategies.

**Research Design/Methodology/Approach:** A literature review on customer loyalty behaviour and expectations and from inter alia Parasuraman, Zeithaml and Berry's service quality model paper informed this qualitative approach. Semi-structured interviews were conducted with retail experts and consumers to determine critical factors and gaps in consumer expectations and their loyalty behaviour to understand this phenomenon.

**Findings/Research and Practical Implications:** Findings revealed various gaps between consumer expectations/customer loyalty behaviour in Vietnam and the literature, identified five strategic grocery retail groups, and provided measures to test empirically in a subsequent quantitative study, following guidelines from Churchill. This paper contributes to our theoretical understanding of grocery retail in a rapidly changing emerging nation and provides guidance for the various retail groups to set-out their respective strategies and establish competitive advantage.

**Originality/Value:** This study contributes to the grocery retail and service debate, which has been widely researched in Europe and North America but is under-researched in emerging nations. Its value comes from using an interdisciplinary approach comprising retail logistics/supply chain and marketing and presenting perspectives from both retailer and consumer contexts.

# FACTORS AFFECTING THE ADOPTION OF TRANSPORTATION E-MARKETPLACES IN VIETNAM

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## ABSTRACT

**Purpose** – Transportation e-marketplaces (TEMs) stem from the fact that the current transportation market is unstable and non-transparent. The main purpose of TEMs is to bridge shippers and transport service providers (TSPs) together to facilitate the flows of goods, services and information. The implementation of TEMs has promised to lower transaction costs, provide greater visibility of freight movement, and reduce inefficiencies in the current transportation and logistical processes. Realizing the gap of research relating TEMs in Vietnam, the author conducts this research with the aim of deepening the knowledge about TEMs and investigating them from both the supply side (technology providers) and the demand side (shippers, TSPs) to give an overall picture of TEMs in Vietnam.

**Design/Methodology/Approach** – This research uses both deduction and induction approaches, survey strategy, and both quantitative and qualitative methods. Also, this research is based on a review of relevant literature, interviews with 9 TEM technology providers and 122 questionnaires of shippers and TSPs.

**Findings** – Out of 15 identified TEMs, 11 TEMs are still in operation, 1 TEM will be introduced in the future, and 3 TEMs have ceased to operate. The findings of this research bring to evidence the characteristics and performances of 9 examined TEMs. Additionally, some common difficulties faced by TEMs are lack of legal framework, misperception of people, limited resources, system development, concerns of people, and poor quality infrastructure in Vietnam. Furthermore, the findings underline that there are significant differences regarding firm's internal environment, firm's attitude towards TEMs, and firm's external environment between TEM adopters and TEM non-adopters.

**Originality/Value** – The analysis from the points of view of technology providers, shippers, and TSPs, who are directly involved in the TEM market can provide valuable information and pointers for policy makers. It also provides important insights into the operation of TEMs in Vietnam.

**Research implications** – The research has samples being limited to Vietnamese firms, therefore, the research findings might not be valid and suitable to other countries with different culture or industry structures. Another future research direction is to conduct a longitudinal study to examine respondents over time through pre-adoption, and post-adoption stages. A major area for investigation concerns technological issues of TEMs as further investigation is required to assess the solutions adopted by different TEMs and their effectiveness.

**Practical implications** – Most importantly, the government needs to enact law and regulations on TEM-related issues. Also, TEM technology provider should invest more on R&D (research and develop) activities to improve its product and it is essential that firms should be adequately organized in order to successfully adopt TEM.

**Keywords:** *Transportation, Transportation e-marketplace, Shipper, Transport service providers, Vietnam*

# HUMANITARIAN SUPPLY CHAINS: MANAGING RISKS IN DISASTER MANAGEMENT CYCLE

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## ABSTRACT

**Purpose:** Humanitarian logistics play an integral role in disaster relief operations and it is important that countries respond swiftly and effectively when disasters strike. The aim of humanitarian logistics is to provide critical relief supplies to alleviate human suffering and deprivation, and when a country is faced with a disaster, it is paramount for the country to provide aid effectively and efficiently. As with commercial business supply chains, there are also risks involved in humanitarian supply chains. While risks cannot be eliminated, it is possible to reduce risks of adverse impacts. By identifying potential risks in the Disaster Management Cycle (DMC), it aids relevant stakeholders in decision-making to achieve the managerial objectives of humanitarian logistics. This project aims to uncover the risks in DMC by comparing commercial business supply chains and humanitarian supply chains, and explore how these risks be effectively mitigated. The research questions in this study are: (1) What are the types of risks involved in the DMC? (2) How are the risks different from the risks involved in commercial business supply chains? (3) How can the risks in the DMC be effectively mitigated?

**Design/methodology approach:** A systematic review of the extant literature will be conducted to explore the concept of risk in humanitarian logistics and supply chains vices those encountered in the commercial supply chains. Primary and secondary data will be used to address the research questions. Primary data includes structured or semi-structured interviews with key players and stakeholders of humanitarian supply chains, while secondary data includes archival reports and publications.

**Findings:** A diagramming of the process maps will be used to understand the flow of a typical humanitarian supply chain, which can be used for the risks identification in the DMC. An impact analysis of the identified risks will be conducted to classify and assess the risks accordingly. After which, appropriate recommendations can then be made for each risk group in order to mitigate them effectively within the DMC.

**Practical limitations/implications:** The use of a recommended matrix for risk mitigation and prioritisation can help practitioners in the humanitarian context to make informed risk mitigation decisions in both the preventive and response phases.

**Originality/value:** This study will provide insight on risk mitigation and prioritisation in the DMC.

**Keywords:** Humanitarian Logistics, Supply Chain Management, Disaster Management Cycle, Risk Mitigation and Systematic Review

# IMPROVING LOGISTICS SERVICE QUALITY IN THAI RETAILING

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## **ABSTRACT**

**Purpose:** This paper discusses factors influencing logistics service quality (LSQ) in Thailand's retail sector. Previous work has investigated LSQ in Thailand however much of that work has focussed on logistics service providers, transportation modes and infrastructure. Little work has been conducted on other nodes across the supply chain, for example, manufacturers, wholesalers, storage providers and of course retailers and their tier 1 customers – consumers. Increasing consumer awareness and expectations and changes in the retail environment make it imperative for retailers and their various tier 1 and 2 suppliers to improve their goods and service propositions, both in-store and online, and LSQ plays an important role in that process.

**Research Design/Methodology/Approach:** This paper represents the first qualitative step of a large piece of research into Thai retail LSQ. Semi-structured interviews will be conducted with Thai retailers, their tier 1 suppliers and consumers in mid-2019 and early 2020 to determine critical factors and expectations/perceptions, using Parasuraman, Zeithaml and Berry's service quality model, to understand retail LSQ across these three tiers in Thailand. The final conference paper will consider the complete theory and methodology behind the study.

**Findings/Research and Practical Implications:** The findings will provide measures to test empirically in a subsequent quantitative study, following guidelines from Churchill. Findings from both studies will contribute to our theoretical understanding of consumer behaviour and preferences of retail LSQ in an increasingly multi-channel environment and provide guidance for suppliers and retailers to address these changing behaviour and preferences to meet consumer needs and establish competitive advantage.

**Originality/Value:** This study contributes to the retail LSQ debate, which has been widely researched in Europe and North America but is under-researched in emerging nations. Its value comes from using an interdisciplinary approach comprising logistics/supply chain and marketing and presenting perspectives from both supplier/retailer and consumer contexts.

# INVENTORY MANAGEMENT SYSTEM FOR A HIGH MIX, LOW VOLUME MANUFACTURING ENVIRONMENT

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## **ABSTRACT**

**Purpose:** In today's dynamic market conditions, manufacturers are expected to become more flexible and responsive in meeting demand for customised product specifications and quality requirements. Product mix is becoming more complex and diverse, driving more companies to operate in a high-mix low-volume (HMLV) manufacturing environment. To meet targeted service levels and buffer against uncertainties, manufacturers may commit excessive financial resources into holding excess inventory. This research focus on a real-life HMLV scenario faced a local company that is a provider of defence communication solutions that are fully optimized for individual customers. It offers a wide range of services, where it not only designs its own products, but also manufactures build-to-print microwave modules and components used in dedicated special areas such as intelligence, defence and satellite systems. The environment it operates in is HMLV in nature, where the products assembled may vary in lot sizes, production processes and applications. It can transform assembly lines and change product requirements in a matter of hours, causing its planners to face numerous challenges when planning for the facility's inventory.

**Design methodology/approach:** This study addresses problems such as excess inventory, stock outs and high inventory costs, by developing an optimal inventory management system for the company.

**Findings:** A root cause analysis was conducted using a Fishbone diagram. We worked backwards to amass all major and minor causes of high inventory costs, then determine what type of inventory cost they were contributing to. The costs associating with maintaining inventory were determined to be overstocking costs, shortage costs, order costs and storage costs. This exercise was important in pinpointing which aspect we can or want to work on in the subsequent analyses. Also, we developed a classification tool called the ABC-HML analysis to classify our inventory into nine different groups. It incorporated material attrition rates into the solution. The last objective is to evaluate at least two similar inventory management policies and compare its costs as an objective appraisal. We achieve this by using both the EOQ model and its modified version, the JOQ model, to determine an ideal order quantity that is meant to optimise holding and ordering costs.

**Research limitations/implications** (if applicable): The inventory consisted of items with independent or dependent demand. This limitation could be further research on by applying different inventory models on items with different demand type.

**Practical implications** (if applicable): The study has demonstrated that systematic approaches should be used in inventory planning because it can reduce costs and provide more certainty in an uncertain environment. The recommendation for the company is to use a more comprehensive inventory management system to determine when and how much to order. It should also make use of the proposed inventory classification tools such as the ABC-HML analysis detailed in this study to classify its inventory. It is an easy way to suss out the characteristics of its inventory so that inventory policies can be tweaked to enhance its application.

**Originality/value:** The research is undertaken at a company based in Singapore.

**Keywords:** Inventory Management, High-Mix Low-Volume, Joint order quantity, ABC analysis

# MANAGING THE TANGIBLE AND INTANGIBLE DIMENSIONS OF CUSTOMER VALUE: A SURVEY STUDY

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## ABSTRACT

**Purpose:** The concept of customer value is an important, yet little understood area within the literature on supply chain management. To bridge this gap, this study develops a measure for the tangible and intangible dimensions of customer value management, which relate to firm's abilities to identify, analyze, and manage value creation.

**Design/methodology/approach:** The study examines the extent of firms ability to manage the tangible and intangible customer benefits and costs that occur from acquiring and using the firms' products and services. The proposed measures are based on an integrated literature review, which is used to ground our survey instrument applied in an inter-industrial value network.

**Findings:** We propose a theory-driven measures for analyzing customer value in inter-industrial value networks. Based on a survey, we find the firms with high levels of customer-value-management capabilities are able to increase the tangible customer benefits, as well as to reduce the intangible customer costs. The study provides crucial information enabling the more efficient and effective ways of creating and protecting value of customers in networked value creation.

**Practical implications:** The study enhances understanding of the customer value creation and value vulnerability in inter-industrial value networks. As a result, it should be possible to improve existing measures and analyses of customer value, and improve understanding of the possibilities of customer engagement in additive manufacturing services.

**Originality/value:** The proposed measures of customer value in the inter-industrial value network context provides better understanding of the understanding of the phenomenon, and can also initiate further research in the field.

**Keywords:** Value vulnerability, risk management, customer value, business to business, survey.

# MODIFIED A WEIGHTED OVERALL VEHICLE EFFECTIVENESS MODEL

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## ABSTRACT

**Purpose:** Modified Overall Vehicle Effectiveness (MOVE) is a method of a measuring a single vehicle performance for road transport, which is developed to solve the “round-trip” problem from the Overall Vehicle Effectiveness (OVE). The goal is to improve the original MOVE to make it suit for each industry on its interested perspective. This paper proposed a newly calculating method with weight setting added on each calculation elements.

**Design/Methodology/Approach:** a literature review on OVE and MOVE were conducted to gain the information on data needed. Data were collected from Royal Project Foundation vehicle usage toward OVE and MOVE for each vehicle were then collected and analyzed.

**Finding:** a total of 3 weigh adding methods which are PEE, OWEE and System Reliability based were compared then suggested for the most suitable method selected. Vehicle Efficiency calculations namely: OVE, MOVE and weighted MOVE were also then calculated and discussed for the advantage/disadvantage for each method.

**Originality/Value:** a newly weight adding method were proposed to develop weighted Overall Vehicle Effectiveness based model in measuring the efficiency of road transport. In addition, the newly calculation methodology also apply and assess in the application of the selected cases.

**Keywords:** Modified Overall Vehicle Effectiveness, Overall Vehicle Effectiveness, Performance measurement, Transport

# MULTIPLE CRITERIA FOR TRANSPORTATION ROUTE SELECTION OF RESERVED COAL FOR MAE MOH POWER PLANT

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## **ABSTRACT**

**Purpose:** The purpose of this paper is to identify multiple criteria for selecting transportation route of inbound reserved coal to Mae Moh Power Plant, Lampang THAILAND.

**Design/methodology/approach:** This paper assembled multiple criteria from previous studies, and they were preliminary determined by Electricity Generating Authority of Thailand (EGAT) experts and stakeholders to identify liable criteria which affect the selection of reserved coal transportation route. By means of Analytical Hierarchy Process (AHP) method, the proposed approach is employed to define the important weights of criteria and calculate priorities from pairwise comparison approach.

**Findings:** According to the survey results which was agreed by EGAT experts, the most commonly mentioned main criteria for selection of transportation route are cost, time, reliability and environmental impact. However, another criterion such as geography, infrastructure, technology must also be considered.

**Research limitations/implications (if applicable):** This study identifies multiple criteria and suggests selection approach for only coal transportation route to Mae Moh Power Plant. Hence, the results may be difficult to apply to other organizations. However, the research method could be a guideline to evaluate the multiple criteria in other selection of transportation route.

**Originality/value:** In the future, the coal from Mae Moh mine will be decreased. EGAT required the alternative mine sources to supply the power plants. Thus, this research studies multiple criteria for selecting coal transportation route which considers community and environment aspect.

**Keywords:** Multiple Criteria Decision Making; Coal Transportation Route; Analytic Hierarchy Process; Reserved Coal

## ON CLUSTERING TECHNIQUE OF DELIVERY PATTERN FOR CLASSIFYING COURIER CUSTOMERS

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### ABSTRACT

**Purpose:** It is the aim of the study to classify courier customers based on their delivery pattern to understand customer behaviour and needs.

**Design/methodology/approach:** The transaction data is mined using K-mean clustering technique to classify customer delivery pattern based on 7 factors, i.e., Recency, Frequency, Monetary, Weight, Day, Number of Product Category and Number of Customer. The data is taken from case study courier company in Chiang Mai, Thailand.

**Findings:** Customers are classified as 5 clusters with different delivery patterns.

**Originality/value:** The study transforms traditional transaction data into useful information. The information can be used by decision maker if any measures shall be deployed to increase customer satisfaction.

**Keywords:** Clustering Technique, Delivery Pattern, Courier Customer

# RE-VISITING ASSUMPTIONS USED IN CALCULATING NATIONAL LOGISTICS COST: A THAI CASE STUDY

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## ABSTRACT

**Purpose:** National logistics cost is a key performance indicator for Thailand's Logistics Development Plan. Since 2000, the National Economic and Social Development Council (NESDC) has calculated the ratio of national logistics expenditures over gross domestic product (GDP) based on secondary data with a series of assumptions used in the calculation of national logistics cost. The purpose of this manuscript is to revisit these initial assumptions and update them for more precise logistics cost/GDP figures.

**Design/methodology/approach:** 6,000 Thai businesses nationwide were surveyed. Obtained data was used to estimate logistics-related costs. Short interviews with 30 large companies were further employed in order to obtain a proportion of logistics administration cost as a ratio of the overall administration cost. The obtained numbers were compared with the assumptions used by the NESDC. A comparative analysis was done and the assumptions used by NESDC were replaced to re-calculate national logistics cost.

**Findings:** The comparative results shows that transportation cost estimations by the NESDC versus that from the sample was not significantly different. However, the data related to warehousing cost was higher than that of NESDC as it includes in-house warehousing cost in the calculation. Inventory holding cost and logistics administration cost were lower than those of imputed by NESDC.

**Research limitations/implications (if applicable):** The respondents understanding of logistics administration cost is limited and often considered as general administration cost. Logistics administration cost were therefore estimated based on data provided by large firms' interviews.

**Practical implications (if applicable):** This manuscript provide steps for updating assumptions used in the estimation of Thailand's national logistics cost/GDP. These updated assumptions reflect better the country's current logistics context. It is important to have a more precise national logistics cost/GDP for monitoring the success of the national logistics development plan.

**Originality/value:** The manuscript proposes steps for verifying and revising the assumptions used in estimating national logistics cost.

**Keywords:** logistics cost, GDP, macro-logistics, national accounts

# RISK ASSESSMENT OF MODERN AGRICULTURE SUPPLY CHAIN FOR VEGETABLE

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## ABSTRACT

**Purpose:** The purpose of this paper is to identify meaning of modern agriculture supply chain including risk factors which effect operation of the supply chain to direct the appropriate mitigation approach for stakeholder.

**Design/methodology/approach:** This paper gathered risk factors from historical studies then the risks was screened by experts and stakeholders to select potential risk which can affect modern agriculture supply chain.

**Findings:** According to literature review of previous study, the result reveals that there are various type of modern agriculture supply chain and each type has divergence risks. Nevertheless, they are categorized to 4 main risk criteria; supply risk, demand risk, internal risk and external risk in modern agriculture supply chain meanwhile there are specific sub-criteria for each stakeholder owing to their roles and activities in supply chain.

**Research limitations implications:** This study identifies potential risks and suggests mitigation approach for only specific supply chain. Thus, the results may not apply to other organizations directly nevertheless research method could be as guideline plan to assess the risk in other supply chain.

**Originality/value:** The originality of the study is that agriculture supply chain, nowadays, has been transformed gradually when compare with traditional agriculture supply chain since technologies, customer behaviours, equality among stakeholders influence stakeholders characteristic and operation pattern to enhance competitiveness along with emphasizing on sustainable; social, economic and environment. Besides the sustainable, risk identification is one of pivot process to improve supply chain management effectively due to provide understanding and prioritizing of potential risks which can affect supply chain operation negatively thereby managers can institute effective mitigation plans especially in modern agriculture supply which is more vulnerable than further supply chain due to seasonality, supply spike, perishability.

**Keywords:** Modern agriculture, Risk assessment, Vegetable supply chain

# SOCIAL NETWORK ANALYSIS OF SUPPLY CHAIN AGILITY

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## ABSTRACT

**Purpose:** To explore the applicability of social network analysis for supply chain agility assessment. To investigate the relative agility across a range of indicators of different supply chains using appropriate social network analysis tools and techniques.

**Design/methodology/approach:** An empirical study of a rural New Zealand supply chain network was conducted. 50 firms were interviewed regarding their supply chains and in particular their agility attributes. In addition to the 50 central nodes 406 secondary nodes were identified as unique suppliers and customers resulting in 728 business ties. Two distinct supply chains were identified in the network, agricultural and tourism. UCINET software was then used to model the network to compare the agility of these two supply chains.

**Findings:** At the network level, the agriculture supply chain is generally more agile than the tourism supply chain. The focal businesses in the former benefit from greater flexibility, visibility, and faster responses. However, those in the latter have better integration which facilitates information sharing and synchronisation. Examination at the subgroup level once more identifies the agricultural supply chain as more agile, in this instance in regard to tight and close connections, cliques and k-plexes.

**Research limitations/implications:** The use of secondary nodes in the network analysis, as reported by the interviewees, may have undermined data accuracy. Social network analysis has a range of tools that can be used to model supply chain agility.

**Practical implications:** The agricultural supply chain outperformed the tourism supply chain across a range of agility measures. However, both had their relative strengths and could learn from one another to enhance their agility.

**Originality/value:** The study is novel in regard to the application of social network analysis to evaluate supply chain agility. As such it has added to the increasing body of knowledge in regard to the applicability of social network analysis to model supply chains.

**Keywords:** Agricultural supply chains, tourism supply chains, Supply chain modeling, New Zealand, Social network analysis, Supply chain agility

# SUPPLY CHAIN RESILIENCE MANAGEMENT IN DEVELOPING COUNTRY: A CASE STUDY OF THAI MANUFACTURERS

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## ABSTRACT

**Purpose** – This paper aims to identify the understanding about supply chain resilience management (SCRES) in developing country such as Thailand by applying some existing literature to this context. For instance, Christopher and Peck (2004); Fiksel (2006); Pettit et al. (2010); (Ponomarov and Holcomb, 2009) and so on. This study also explore how Thai Manufacturers apply SCRES in their process for improving better performance in supply chain and organization.

**Design/Methodology/Approach** – For this study, the methodology used was qualitative method that based on in-depth interview studies of practitioner's perspective about SCRES in Thailand. There were nine participants in this section such as practitioners from Electrical and Electronic industry, automotive industry and Freight Forwarders. Firstly, the participants were asked to explain about SCRES in their understanding and then the researcher explained SCRES from the existing literature. Secondly, there were some discussions about SCRES in their organizations and define which practices are SCRES in term of Thai practitioner's perspective.

**Findings** – In the case of Thai manufacturers, it can be seen that they do not understand what is SCRES from the existing literature; however, there are surprising that participants have some practices that related to resilient practices from the existing literature. Furthermore, it showed that organizations applied resilient practices based on their past experience and follow a huge organizations' practices in the supply chain. Thus, in this study, contingency theory helps to create a natural theoretical basis for explaining the circumstances under with SCRES involves.

**Originality/Value** – The results from this study provide an overview about understanding on SCRES from Thai Manufacturers which support organizations and Governance to support better performance in supply chain and also in organizational. This paper contributes to supply chain management literature by enhancing information about SCRES in developing countries, who provided products to developed countries around the world.

**Keywords:** supply chain resilience management, Thai manufacturers, organizational performance, supply chain performance

# SUPPLY CHAIN RESILIENCE SOCIAL NETWORK ANALYSIS

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## **ABSTRACT**

**Purpose:** To explore the applicability of social network analysis for supply chain resilience assessment. To investigate which social network analysis tools and techniques can be utilised to evaluate a range of supply chain resilience attributes.

**Design/methodology approach:** An empirical study of a rural New Zealand agricultural supply chain network was conducted. 39 firms were interviewed regarding their supply chains and in particular their resilience attributes. In addition to the 39 central nodes 283 secondary nodes were identified as unique suppliers and customers. UCINET software was then used to model the network from three levels; holistic network, group level cliques and individual nodes.

**Findings:** Social network analysis provided a comprehensive approach to model supply chain resilience. Interconnectedness, network structure and actor criticality can be modelled for five resilience attributes: adaptation, robustness, agility, visibility and anticipation.

**Research limitations/implications:** The range of tools that make up social network analysis have great potential to model complex adaptive systems such as supply chains. There is significant more scope to apply the tool to other settings and a range of supply chain problems.

**Practical implications:** Enhancing the resilience of supply chains can be initiated by evaluating the current status via social network analyses.

**Originality/value:** The study provides a map of which social analysis tools can be used to evaluate a range of supply chain resilience attribute. Thus the work has extended the study of supply chain resilience and the contexts in which social network analysis is applicable.

**Keywords:** Agricultural supply chains, Supply chain modeling, New Zealand, Social network analysis, Supply chain resilience

# SUPPLY CHAIN SENSING CAPABILITY IN AUSTRALIAN MANUFACTURING ORGANIZATIONS AND DYNAMIC CAPABILITIES

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## ABSTRACT

**Purpose:** The research advocates for a supply chain and supply chain management role in the further development of the dynamic capabilities of firms, and in the theoretical development of the dynamic capabilities view. This position is premised on the firm supply chain acting as a sensing mechanism for strategic threats and opportunities in the firm environment.

**Design/Methodology/Approach:** This research deploys a multiple case study research approach using mixed method data collection techniques including face to face interviews and questionnaire surveys which are analysed using the analytical software. The research deploys a mixed method approach (quantitative and qualitative); using (1) multiple case study and (2) surveys. Data collected for the multiple case study was analysed using NVivo 12 while data collected for the survey was analysed using SPSS and Mplus.

**Findings:** The research data collected and analysed provides preliminary empirical evidence which explain the underlying processes in main supply chain sensing for proactive identification of strategic opportunities and threats in the firm's business environment. Empirical case study evidence suggests that the key determinants of the supply chain sensing process include the nature and capability of the firm as regards its ability for (1) data generation (2) data vetting (3) data assessment and (4) data evaluation in order to improve firm sensing performance. The study further presents a preliminary model which illustrates and explains the structures, mechanisms, and processes by which firms can leverage their supply chains to maximum strategic advantage

**Originality/Value:** Much of the available academic literature on firm strategy and dynamic capabilities focus on firms as a single node in its business environment but this study investigates the firm within its supply chain network. While the strategic strategy literature focuses on 'seizing' and 'sensing' as a necessary firm capability for its competitive ability and survival, it has neglected the supply chain as a sensing mechanism and neglected to provide an explanation of the process of supply chain sensing.

# THE IMPACT OF OPERATIONAL AND SERVICE CONSOLIDATION ON SERVICE QUALITY AND CUSTOMER SATISFACTION IN CONTAINER SHIPPING

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*School of Business IT & Logistics, RMIT University, Australia*

## ABSTRACT

**Purpose:** The aim of this study is to examine how various aspects of operational and service consolidation in terms of Mergers and Acquisitions (M&A) and strategic alliance in container shipping lines affects their service quality and eventually customer satisfaction, upon which operational and management improvements are proposed accordingly.

**Design/methodology/approach:** This study employs the triangulation of methods, combining qualitative and quantitative methods as the research strategy. In the first phase, which is reported in this paper, based on the proposed conceptual model developed from the literature review, seven face-to-face in-depth interviews were conducted with five logistics service providers and two peak associations representing shippers as well as customs brokers and forwarders in Australia in which they were asked to elaborate on aspects of service quality of container shipping and how it is affected by shipping consolidation and its resulting impacts on customer satisfaction. In the second phase, a survey shall be conducted with different groups of participants who are customers of container shipping lines, including freight forwarders/logistics service providers and shippers in Australia.

**Findings:** Findings from the in-depth interviews reveal that the operational and service consolidation in container shipping may affect container shipping lines' service quality and customer satisfaction in several ways. Some aspects of their service quality relating to the service outcomes such as on-time delivery, cost, etc. may be enhanced while others regarding the service process experience may be negatively affected. These in turn create a mixed impact on customer satisfaction.

**Research limitations/implications:** As this is the 1<sup>st</sup> stage of a larger research, this study is constrained in its qualitative approach and small number of interviews. This however will be addressed in the subsequent survey. Findings from this research would help to shape more effective decisions relating to container shipping service quality and customer performance.

**Originality/value:** As there are not many studies carried out to examine the effects of shipping service consolidation on service quality and customer satisfaction, further exploration needs to be done so as to enhance knowledge in this industry. In this respect, this study is original as it is the first study conducted in Australia which is a shipper country and relies heavily on foreign shipping lines for their foreign trade.

**Keywords:** *container shipping, consolidation, strategic alliance, service quality, customer satisfaction.*

# THE INFLUENCE OF TRUST AND POWER TO COLLABORATION ON VIETNAM FRUITS & VEGETABLES SUPPLY CHAIN

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<sup>3</sup>Foreign Trade University

## ABSTRACT

**Purpose:** This paper's purpose is to examine the impacts of mutual trust and power on Supply Chain Collaboration. Three aspects that are important in the study of supply chain management and understand those impacts in accordance with the realistic situation of Vietnam's Fruits and Vegetables Export Market. Therefore, the authors would propose some recommendations to improve the collaboration especially in Vietnam export fruits and vegetables supply chain.

**Design/Methodology/Approach:** The authors used qualitative and quantitative method in this research. The qualitative approach comes up with metrics which are suitable to properly measure the different aspects of trust, power, collaboration and summarize those metrics in a survey. The quantitative approach uses the questionnaire to collect the data from a network of companies and cooperatives in Vietnam export fruits and vegetables supply chain and perform specific analysis to give out logical explanation about the correlations and impacts between the metrics for trust, power and collaboration.

**Findings:** The research is still ongoing.

**Originality/Value:** This paper will point out whether there is a considerable influence of trust and power on collaboration in the context of Vietnam Export Fruits and Vegetables Supply chain and the scope of those influence: Major or Minor? Positive or Negative? Or some unclear patterns that need further research to come?

**Keywords:** Vietnam export fruits and vegetables supply chain, trust, power, supply chain collaboration.

# THE ROLE OF MANUFACTURING STRATEGY IN WORKING CAPITAL MANAGEMENT

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<sup>1</sup>Department of Marketing and International Business, University of Turku, Turku, Finland

## STRATEGY

**Purpose:** The purpose of this paper is to provide evidence of how manufacturing strategy of the firm affects working capital management through the cash conversion cycle and its components. In addition, the influence of business cycle on working capital management in manufacturing firms employing different manufacturing strategies is analysed.

**Design/Methodology/Approach:** The research employs a longitudinal setup, using survey data from manufacturing industry in seven time points between 2006 and 2018. Descriptive statistics and regression analysis are used to identify connections between the employed manufacturing strategy and the cash conversion cycle.

**Findings:** Manufacturing strategy was found to be connected with working capital management, especially through days of payables outstanding and inventory days of supply. An interaction between the manufacturing strategy and the firms' position in the value chain was also found to be significant in determining the cash conversion cycle. Surprisingly, business cycle was found to influence all the firms on a similar way, regardless of the manufacturing strategy.

**Originality/Value:** This research contributes to the emerging literature on financial supply chain management by identifying links between the conventional manufacturing and supply chain practices and working capital management.

**Practical Implications:** The results of the research may be used in strategic decision making either by determining the optimal manufacturing strategy for the company considering the working capital management or by determining the capital management strategy, considering the manufacturing strategy of the firm.

# THE ROLE OF RELATIONSHIP IN INFORMATION SHARING AND COMMUNICATION BETWEEN ORGANIZATION: A CONCEPTUAL FRAMEWORK

*Minh Phuc Nguyen\* and Vinh Thai*

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## ABSTRACT

**Purpose:** This paper investigates the attributes of relationship as antecedents of information sharing and communication in inter-firm collaborative relationships and develops a conceptual framework depicting their roles in business partnership in Asian context. The study focuses on manufacturing firms in Asian countries

**Design/methodology approach:** A thorough review of extant literature was conducted to investigate the various attributes of relationship and their roles in information sharing and communication. Taking into account the difference of business culture in Asian countries, we contend that current models and frameworks examining information sharing and communication between collaborative organizations, which are mostly developed for developed economies, may not be totally applicable in the Asian business environment. The comprehensive literature review enabled us to develop a conceptual framework for investigating the roles of relationship attributes as antecedents of information sharing and communication in inter-firm collaborative relationship in the Asian context.

**Findings:** Based on social exchange theory, we identified from the literature various factors, such as trust, commitment, power, and reciprocity, as key attributes of relationship. They form the antecedents of inter-organizational information sharing and communication. Also doing business in Asian context, inter-firm relationships involve significant amount of personal and organizational interactions. We therefore proposed that both inter-personal and inter-organizational forms of trust would need to be considered in the process of sharing information and communicating between collaborative firms. Hypotheses on relationships between the various attributes, information sharing and communication were also put forward.

**Research limitations/implications:** This study is conceptual in nature and needs to be supported by empirical evidence. The proposed conceptual framework can be validated in future studies using quantitative research techniques. Also, this study focuses only on manufacturing industry in Asian countries. Future research can include other industries to enhance generalizability of the findings.

**Originality/value:** The paper establishes the connections from relationship factors to information sharing and communication between collaborative firms which have been researched individually or in group but not in a holistic manner. It therefore contributes to the understanding of the roles of relationship attributes in collaborative relationships. It also provides insights and guidance for practitioners in the manufacturing industry in Asian countries for the formation and development of information sharing and communication with business partnerships.

**Keywords:** information sharing, communication, relationship attributes, manufacturing industry, Asian countries.

# THE STUDY OF AIRPORT'S PASSENGER FLOW: CASE OF THAILAND

**Apichat Sopadang<sup>1</sup> and Tipavinee Suwanwong Rodbundith<sup>2</sup>**

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## **Abstract**

**Purpose:** Airports play a significant role in economic growth, connecting cities and nations. Numerous passengers travel through airports every day. With the growing number of passenger and new policy, there are several processes that are influenced by limited resources and infrastructure. These constraints can create significant bottlenecks, long passenger queues, congestion and delay. This paper, therefore, focuses upon passenger flow problems within the airport terminals in order to reduce the passenger waiting time and increase service level.

**Design/methodology/approach:** This paper introduce the framework to the passenger flow through the outbound processes of an airport. It aims to find methods that can be used to optimize airport operational performance in terms of passenger flow. This paper also include all activities taking place between curb-side and boarding. The case study of the Chiang Mai International airport, Thailand was analyzed.

**Findings:** The result shows that passenger security screening area through the outbound process is the critical one. This affect to airport operational performance and most importantly passenger's satisfaction.

**Originality/value:** This paper's focus is the development of improved bottleneck for airport in term of passenger flow. The main objective of this paper if to develop a generic framework that can accurately evaluate how an airport will perform. This paper, therefore, is to inform management and to help them make future investment decision that will affect the performance of the airport and customer's satisfaction.

**Keywords:** Airport terminal analysis, Passenger flow, Framework

# UNDERLYING SOCIETAL FACTORS AFFECTING URBAN FOOD SECURITY IN THE FOOD SUPPLY CHAIN

**Virva Tuomala and David B. Grant**

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## **ABSTRACT**

**Purpose:** This paper reports on an empirical study of societal factors that influence urban food security in the food supply chain in poor neighbourhoods. Urban dwellers are food buyers and thus the role of the food supply chain and grocery retail is paramount in terms of providing food security. This study approaches this issue from the perspective of the food retailers and social workers working with urban dwellers in the poor neighbourhoods to provide a holistic perspective of urban food security and supply chain nexus.

**Research Design/Methodology/Approach:** This study empirical study was conducted in one of the poorer neighbourhoods, known as a township, in the Western Cape, South Africa. Ten semi-structured interviews were conducted with food retailers and retail experts in the South African grocery market and social workers working in the township. Secondary data regarding the South African grocery market was also used to underpin the primary research.

**Findings/Research and Practical Implications:** The food supply chain treats food as a commodity and operates with a goal of making profits for companies involved along the chain. However, the retail outputs from this supply chain is the main source of nutrition for urban populations and has significant societal impact through this function. Food retail wields notable power throughout the supply chain and can therefore influence the societal repercussions of the food supply chain, i.e. access to nutritious food for poorer populations.

The Living Standards Measurement (LSM), a unique market research tool in South Africa, divides the demographic into ten segments, one being the lowest and ten the wealthiest. Township citizens are generally placed in LSM 1-4. Formal food retail outlets are clearly segmented towards certain LSMs. Limited buying power limits the selection of stores near townships, but there is an element of contradiction as the real buying power in terms of volume in South Africa is in the lower LSMs. Even so, there are eight times less grocery stores near townships compared to wealthier areas.

The dynamics of grocery shopping are thought to be similar throughout the LSMs, but this does not translate into practice. On the one hand, township dwellers buy a lot of the staples in bulk, but on the other purchase perishables in small quantities on a daily basis. Food retailers should be aware of these dynamics and their repercussions in larger societal structures to positively influence their societal impact.

**Originality/Value:** This study contributes to the urban food security, an under-researched topic, and food retail supply chain literature, highlighting the perspectives from both a disadvantaged community and the food retailers serving it.

# USING A TEXT-MINING APPROACH TO EXPLORE HUMANITARIAN LOGISTICS RESEARCH THEMES

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*<sup>2</sup>Department of International Business, Logistics and Transport, Thammasat Business School, Thammasat University, Thailand*

## **ABSTRACT**

**Purpose:** The purpose of this paper is to identify unobserved research patterns through text mining from a large set of research articles in peer-reviewed journals on Humanitarian Logistics made available online until the end of 2018.

**Design/methodology/approach:** A generative statistical method, called Latent Dirichlet Allocation (LDA), is applied on a dataset of articles published in the Humanitarian Logistics field. Titles, abstracts and keywords of articles were selected to represent the full contents of the article. The titles, abstracts and keywords are more focused than full texts and therefore more suitable for automated analysis.

**Findings:** As many as tens core research areas and twenty research trends have been revealed; and the identified research trends have been semantically mapped to be associated with core research areas.

**Research limitations/implications (if applicable):** The search was limited to peer-reviewed publications only. Book sections, conference proceedings, reports and practitioner journals were excluded from our selection.

**Practical implications (if applicable):** The patterns and trends identified through this research can help in finding the potential research areas.

**Originality/value:** This study summarises the research trends in Humanitarian Logistics based upon a corpus of articles.

**Keywords:** Humanitarian Logistics, Text Mining, Latent Dirichlet allocation, Topic modeling

## 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

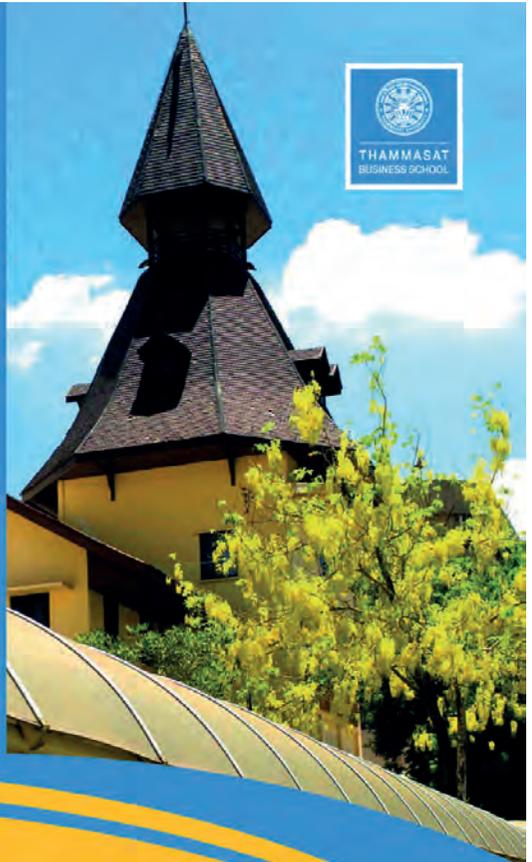
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Tuition and general fees are approximately 230,000 Baht per annum.



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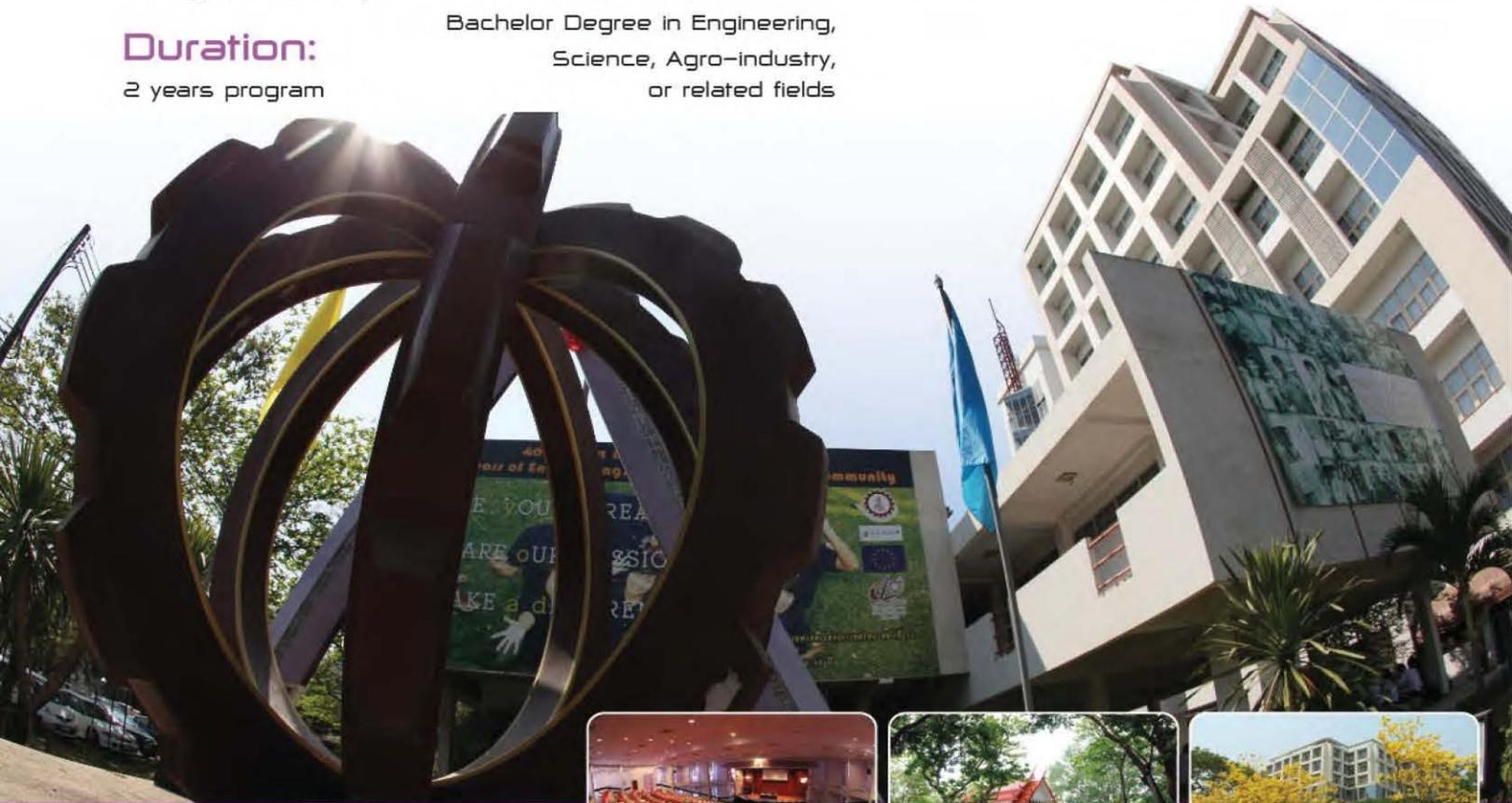
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It is a privilege to lead this institution and to call Foreign Trade University home. I invite you to join us and experience all we have to offer and share in our dreams for the future.

A handwritten signature in blue ink, appearing to read 'BA Tuan'.

Assoc. Prof. Dr. Bui Anh Tuan  
President

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