



Challenging Landscape of International Logistics Coordination

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Abstract

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| Report/Thesis Title Challenging Landscape of International Logistics Coordination |
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| <p>Efficient international logistics coordination is crucial for businesses operating in today's globalized markets. This thesis delves into the complexities of logistics coordination activities, examining key concepts, challenges, and potential solutions.</p> <p>The introduction lays the groundwork by providing a background to the topic, elucidating key concepts, articulating the research question, and delineating the scope of the study.</p> <p>The theoretical background offers an overview of international logistics, focusing on risk management, export, and import processes, and the major modes of transportation. Understanding these fundamentals is essential for grasping the intricacies of logistics coordination.</p> <p>The research methods section elucidates the chosen methodologies, including qualitative research and desktop studies, and presents the findings derived from these approaches. These findings encompass an overview of both core and supportive activities in logistics coordination, internal and external challenges, and recommended solutions.</p> <p>The recommended solutions section proposes strategies to address the identified challenges through interviewing field professionals, emphasizing the role of Information and Communication Technology (ICT), internal organizational communication, supply chain orientation, and customs procedures.</p> <p>In conclusion, this thesis summarizes the key insights gained from thesis research and offers recommendations for further research in the field of supply chain and logistics.</p> |
| Key words Logistics coordination, international logistics, import, export, transport, organizational communication, customs, supply chain. |

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1 Introduction

This is a research-based type of a bachelor's degree for the Degree Program in International Business in the major of supply chain management. In this chapter, readers can explore contents such as the background of the topic, key concepts, research question, demarcation, and benefits regarding to this thesis accompanied by detailed figures. Background to the topic

1.1 Background to the topic

Quality of international logistic coordination can greatly affect the efficiency of the exportation of its goods. Thus, this thesis aims to discuss the challenges in international logistic coordination. The thesis will discuss the key concepts of international logistics and logistic coordination. Afterwards, the research question along with descriptions of the research methods will be presented. There are interviews conducted to further investigate relevant logistic coordination situations from the professionals who have been working as logistic coordinators. With their insights, analysis can be carried out in this thesis.

1.2 Key concepts

International Logistic includes all related activities involved to move raw materials, final products and information from one place to another across borders. It requires efficient and effective modes of transport both by land and sea. (Tongzon 2022, 1.) International logistics brings great economic benefits as well as risks and challenges, which will be further explained in the following chapters. Modes of different transportation will be discussed as well as the role of ICT in international logistics.

Logistics Coordination is a set of activities carried out in companies to ensure final deliveries to end customers. A logistic coordinator is a professional who oversees all aspects of shipping and delivery. Depending on the complexity of a company's international logistic needs and operations, logistic coordination consists of many different tasks such as coordinating and monitoring shipments, preparing all shipping documents, and internal communications between different

departments in a company. (Workable 2023.)



Figure 1: Key concepts relations chart

1.3 Research question

This thesis aims to provide insights on what challenges there are in logistic coordination and what are the recommended solutions there are for these challenges. The following are the research question and supportive investigative questions:

Research question: What are the challenges and solutions for international logistic coordination?

IQ 1. What is the role of logistics coordination in a company?

IQ 2. What are the logistic coordination challenges?

IQ 3. What are the solutions for the logistics coordination challenges?

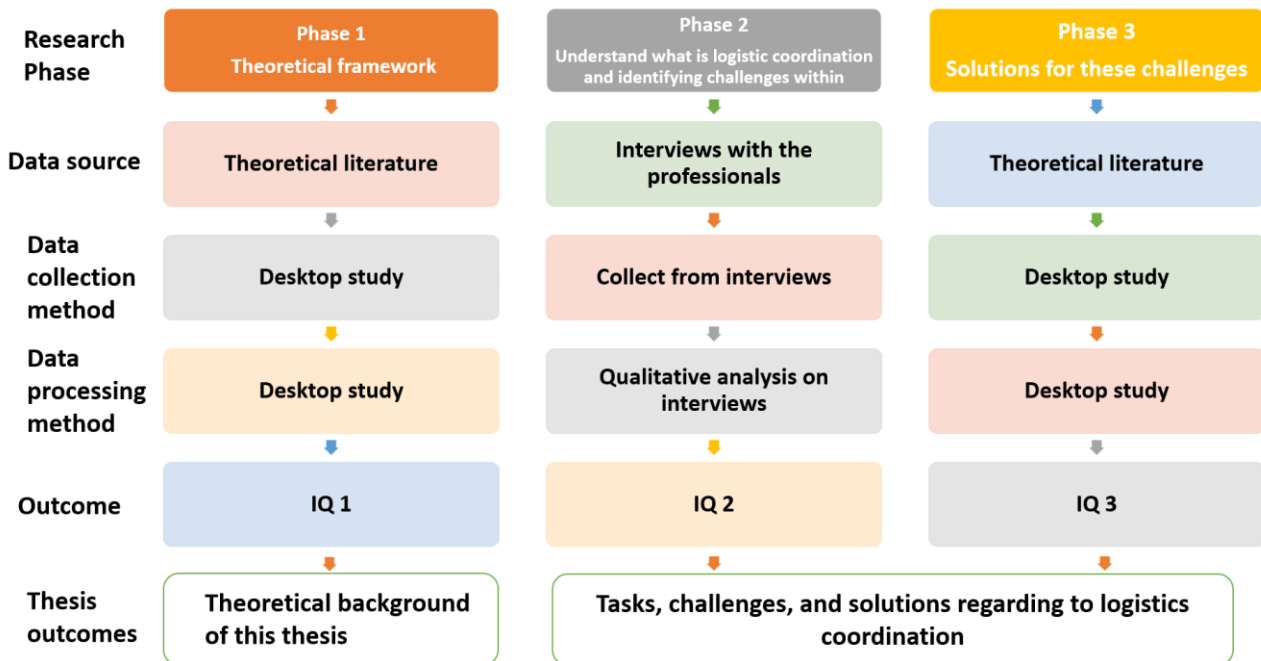


Figure 2: Overview thesis structure

The research phases in this thesis were divided into 3 phases: phase 1, phase 2, and phase 3.

In phase 1, the goal was to create a theoretical framework that would later justify the argument made and support further understanding of both the challenges and the solutions for international logistic coordination. The data source of this phase was through reading theoretical literature. The outcome for phase 1 was to answer IQ 1, which was to understand the role of logistics coordination in a company.

In phase 2, the goal was to identify challenges within international logistic coordination. The data source of this phase was interviews conducted with professionals. The outcome for phase 2 was to answer IQ 2, which was to understand what the logistic coordination challenges are. In order to outline a comprehensive understanding of challenges within logistics coordination, interviews conducted helped the author first to build further knowledge on what tasks are included in logistics coordination. Then, with further questions in interviews, challenges within the process of logistics coordination were documented in phase 2.

In phase 3, the goal was to formulate a set of solutions for the challenges identified in phase 2. The data source of this phase was through reading theoretical literature. The outcome for phase 3 was to answer IQ 3, which was to provide solutions for the logistics coordination challenges.

1.4 Demarcation

This thesis focuses on identifying challenges within international logistics coordination and provides recommendations on the solutions to the challenges.

In this thesis, international logistics overview provides aspects of risks, processes and documentation, and three major modes of transportation in this topic. This part of the thesis aims to build the

background of international logistics, while providing useful insights to understand the relationship between international logistics and international logistics coordination.

Thus, this thesis, when discussing international logistics, details of transportation are excluded since the target is to construct an understanding of logistics itself rather than the practical aspects of transportation.

Modes of transportation include only sea, road, and air transport to provide summarized information of these three kinds of main international transportation modes. Additionally, since this thesis aims to address the challenges within international logistics coordination, insights from the logistics coordinators were used to construct the international logistics overview.

This section connects significantly with the research findings and recommendations made to address the challenges collected via interviews.

1.5 Benefits

For international logistic coordinators, this thesis provided a clear description of possible tasks and responsibilities to help them boost their understanding of the nature of their position. They could also benefit from implementing the solutions listed in the thesis to help build a smoother working experience in their workplace.

For the author of this thesis, this thesis provided an opportunity to combine past relevant work experiences as a logistics coordinator with theoretical understanding in a critical manner. Academic writing also assists the author to excel in future possible research activities.

For the logistics managers organizing logistics activities with organizations, this thesis provides a clear framework of international logistics coordination which can further assist them when organizing logistics coordinative activities.

For people who are freshly starting their career as a logistics coordinator, this thesis provides clear information on the role and tasks which can further prepare them in the starting point of their career.

2 Theoretical Background

In the following subchapters, the thesis will present main theoretical themes that will help one understand what risks there are in international logistics and what role does a logistics coordinator play in a company.

2.1 International logistics overview

The objective of international logistics is to bring the finished products to the final consumption point across the national borders. Through different modes of transportation, flow of information and documentation, goods are to be delivered and transported beyond the borders. (Tongzon 2022, 1.)

Nowadays, most logistics activities are of global scales including 2 or more countries. There has been a trend pushing logistics into an internationalization or globalization according to the factors listed below (Tongzon 2022, 6.):

- High growth of product and technology development driven production and distribution
- Outsourcing various parts of organizational operations such as HR and IT, etc.
- Growth of SEMs that leads to high demand for the service of third-party logistics service providers (3PLs).

2.1.1 Risk in international logistics

With benefits brought from globalization logistics, nonetheless, there are risks and challenges. These can be further categorized into the following types (Tongzon 2022, 10-15.):

Geography-related risks indicate long distance and lack of accessibility to markets. In general, the longer the distance between the origin to the destination, the greater the transit time and risks for damages and losses will be. These costs will be passed on to the final customer via increased logistics prices. Countries like Australia faces disadvantage of the lack of accessibility to markets when logistics distances are often greater. Double-landlocked countries, like Uzbekistan, also suffer from the same risk while logistics routes have to pass through 2 or more countries before reaching their imports. (Tongzon 2022, 10.)

Infrastructure-related risks indicate the quality of transportation infrastructure and information technology in globalized logistics markets. Lack of adequate transportation infrastructures networks has been found to be the major reason for high logistics costs. For example, the lack of load and air transportation network has been a major reason for the high logistics costs in Indonesia (Carana Corporation 2004). Jacoby and Hodge (2008) said that through investments in freight

transportation infrastructure, the direct transportation costs could be reduced by 10 percent and bring improvements to supply chain that help companies deducting their operational costs by 1 percent. However, large scale of investment in logistics infrastructure often are challenged by the complexity of the process of decision-making and the growing size of constructs and funds needed. (Tongzon 2022, 11.)

Regulatory and institutional risk can also influence the efficiency and quality of international logistics. When regulations are implemented less efficiently, the logistics costs and time are to increase of complying to all laws and regulations imposed in international logistics operation. (OECD 2016.)

Political uncertainty and supply chain disruption also play a part of influencing international logistics. For instance, the Covid-19 pandemic disrupted not only the supply chain in China, but globally affected the international logistics chain. The restrictive measures applied in China by its government had a further impact on other countries since China has been the major source of exports in component globally. (Tongzon 2022, 14.)

Other than these above-mentioned risks, research conducted in the School of Economics and management Chang An University in China concluded other indicators for possible international logistics risks. (Yan 2022.)

Through the research conducted (Yan 2022, 2644.), the logistics risk in international logistics stemmed from trade objects, logistics services providers, freight services providers, environment, and external causes. The main indicators of these causes are as the following:

Logistics information risk refers to the lag, faulty information gathered in the process of international logistics. The further indicators of this type of risk include availability of logistics information and logistics information security. (Yan 2022, 2645.)

Logistics timeliness risk refers to transportation delay caused by customs processes, distribution, and other transportation reasons. Further indicators of this type of risk include order processing efficiency, transportation efficiency, customs clearance efficiency, transfer efficiency, and trading partners' credit. (Yan 2022, 2646.)

Logistics loss risk refers to goods being damaged or the shortage of goods. Further indicators of this type of risk include characteristics of goods, and logistics operation. (Yan 2022, 2646.)

Logistics cost risk refers to the rising costs of logistics. Further indicators of this type of risk include economic status, logistics complexity, and other reasons contributing to the increasing costs of logistics. (Yan 2022, 2646.)

Environmental risk refers to the pollution produced in the process of international logistics. Further indicators of this type of risk include characteristics of goods, trading partners' credit, natural environment, and logistics operation. (Yan 2022, 2646.)

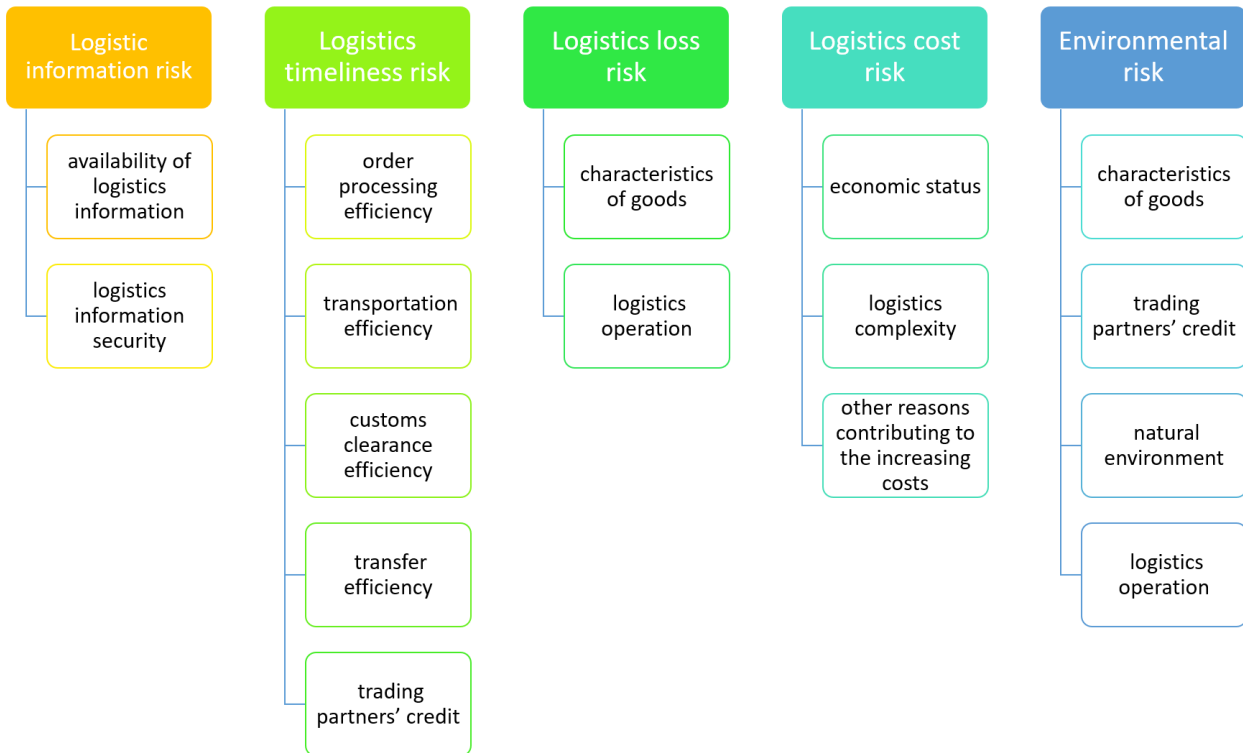


Figure 3. International logistics risks and indicators based on the research in Chang An University

After a comprehensive understanding of what kinds of purposes and risks there are in international logistics, one may wonder as to what role a logistics coordinator has in a company.

With the author's own experiences as one logistics coordinator, the purposes for logistics coordinating in a company are as the following:

Firstly, a logistics coordinator is in charge of processing all imports and exports shipments from and to the company. In this sense, a logistics coordinator needs to have the knowledge and ability to prepare all shipping documents and other related documents. Additionally, communication with logistics services provider are of great importance during the shipping process.

Secondly, a logistics coordinator also functions as a bridge between the sales team and the end customers. In other words, a logistics coordinator needs to have the ability to communicate within

the company as well as with the clients. Moreover, ensuring orders and shipments information correctly inputting into company's operational systems is a great part of a logistics coordinator's role.

Lastly, a logistics coordinator is expected to be aware of international logistics risks such as mentioned above when it comes to arranging shipments. A logistics coordinator should function as a gateway between the company and these risks. Some risks such as the logistics information risk can be reduced with the help of modern ERP (enterprise resource planning) systems or other technology supporting a company's operations. However, when it comes to risks such as environmental risks of logistics pollution to the environment, it still depends on the overall company's ethics and policy to deter or reduce it.

It is worth noting that the role of a logistics coordinator may differ from companies to companies depending on the industry, scale, and operational structures.

2.1.2 Process and documentation in exports shipments

This subchapter focuses on introducing the processes and needed documentation for exports logistics. (Tongzon 2022, 50.)

After the terms of shipment are agreed on the sales contract and signed, the seller (the exporter) has the obligation to deliver goods to the buyer (the importer). The process of exporting goods is to be determined with shipping terms such as Incoterms. In general, an exporting process is consistent with the following (Tongzon 2022, 50.):

- The exporter manages the shipment directly or contracts a third-party logistic service provider agent.
- Pack, label, mark the shipment according to the shipping standard.
- Prepare shipping documents and forward them to the importer in the situation needed.

The incoterms are issued by the International Chamber of Commerce. They define the responsibilities of both buyers and sellers when it comes to the sales of goods in an international setting. As for The Incoterms 2020, there are a set of 11 individual rules recognized worldwide. (International Trade Administration.) It is of crucial importance that when scheduling a shipment, the agreed Incoterms are confirmed by logistics services providers and all documents are prepared accordingly.

Regardless of what shipping terms agreed among both parties, there are certain shipping documentations to be prepared for the authorities of the countries involved as the following:

Bill of lading is a document that allows the buyer (the importer) to claim the ownership of the goods. In other words, the bill of lading is proof of the contract of carriage. In the case of air

transport, bill of lading is referred to as the “air waybill” and issued by the airline. In the case of maritime transport, it is called the “ocean bill of lading” issued via shipping lines. The bill of lading must accompany the goods to be shipped and be signed by the representative of the carrier, shipper, and the receiver. (Tongzon 2022, 51.)

Commercial invoice is a legal shipping document. It is issued by the seller (the exporter) to the buyer (the importer) containing information such as the type and the value of the goods sold. In other words, this is a proof of sales between the parties and is used vis the customs when determining custom duties. (Tongzon 2022, 53-54.)

Certificate of origin is a document that certifies the country’s origin of the goods being imported. It is used to determine the duties to be applied, especially for the countries with free trade agreements established. (Tongzon 2022, 55.)

Packing list is a list of articles prepared by the seller (the exporter) with detailed information of the shipments such as the quantity, description, and the weight of the goods. (Tongzon 2022, 56.)



Figure 4. Process and documentation in export shipments

2.1.3 Process and documentation in imports shipments

The import process starts as soon as the goods arrive at the port of destination. The process of import includes the following (Tongzon 2022, 57.):

- Unloading of the cargo and transporting the goods to the customs bonded warehouse.
- Consignee provides the required documentation and clears the goods with customs.
- The goods id released to the consignee’s location.

To ensure an efficient process of importation, the consignee may be required to prepare the following documents:

Arrival notice is issued by the carrier to the consignee to inform the arrival of the goods for pickups. (Tongzon 2022, 58.)

Bill of lading in the case of import process, is a document for the consignee to claim the ownership of the goods. The seller must send a copy of this document to the consignee after receiving it from the carrier. The consignee then must submit the bill of lading to the carrier at the port of destination required for the clearance of the customs. (Tongzon 2022, 58.)

Commercial Invoice from the seller is to be also included to the documentations submitted to the customs to assess the duties of the imported goods. (Tongzon 2022, 58.)

Customs declaration is a document to be filled out by the buyer (the importer) with details regarding the goods imported such as country of origin, description of the goods, values, and quantities. (Tongzon 2022, 58.)

Carrier certificate functions as a confirmation to the customs regarding the details of the shipment. This document is also confirmation of whose ownership of the goods should be. (Tongzon 2022, 58.)

Freight release is to be presented with the bill of lading to the customs for the release of the cargo. This document is issued by the carrier or its agent. With this release order, the consignee can clear the cargo with customs and make delivery of the goods from the port of destination. (Tongzon 2022, 58.)

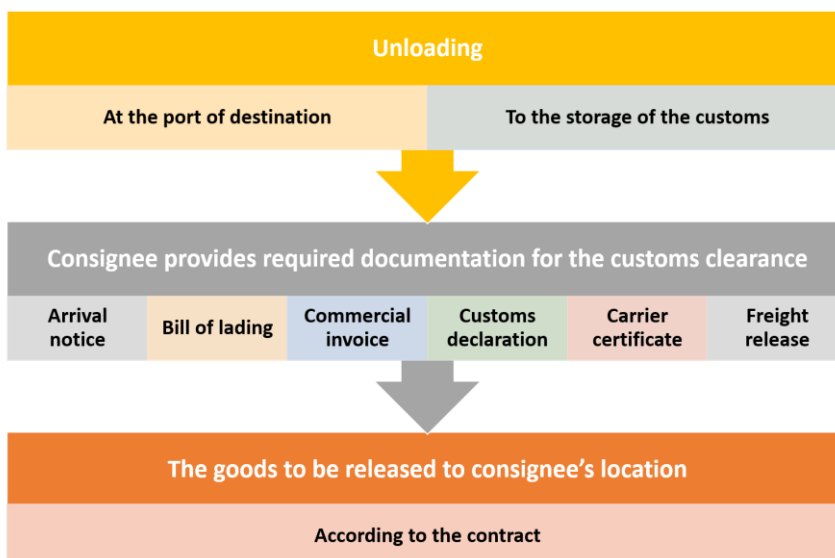


Figure 5. Process and documentation in import shipments

2.2 Major modes of transport in international logistics

The aim of this section is to introduce 3 major modes of transportation in international logistics.

2.2.1 Maritime transportation in international logistics

It was estimated that maritime transport shipping was accounted for close to 90 percent of world goods transportation at the cheapest costs and less manpower. (IMO 2017.) Thus, it is apparent to see that maritime transportation is the most significant mode of transportation in the world of international logistics. (Tongzon 2022, 91.)

The benefit of using maritime transport comes from the efficiency of moving bulky and low valued goods over long distances. For instance, countries who rely heavily to primary goods exports often transport goods such as raw materials, agricultural goods, and minerals. (Tongzon 2022, 91.)

Maritime transportation can be further classified via the cargoes carried as the following:

Bulk cargo category includes liquid bulk and dry bulk. Liquid bulk goods often are materials such as petroleum, molasses, and vegetable oil. Dry bulk goods often are, for example, grains, sand, and scrap metal. (Tongzon 2022, 96.)

General cargo category includes containerized, break-bulk, and neobulk. Containerized cargo often carry containers that can be roll-on and roll-off (RORO) the vessels or containers that needs to be lift-on and lift-off (LOLO) via cranes. Break-bulk items are refer to the goods that are not containerized but break into smaller units such as into sacks and pallets. Neobulk goods refers to lumber, paper, steel or automobiles. (Tongzon 2022, 96.)

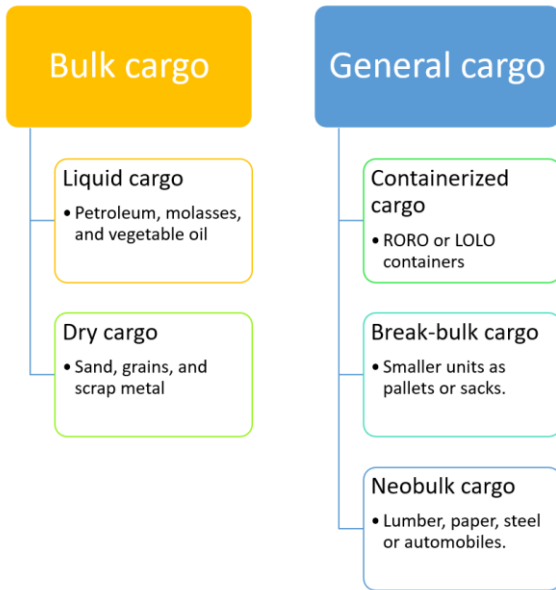


Figure 6. Categories of maritime transport cargoes

Vessels used in maritime transport can also be further categorized into the following:

Private fleets refer to the vessels owned and operated by the owner's business operation. For instance, the vessels owned by oil companies like Shell are solely operated for the transportation of their oil via the company itself. (Tongzon 2022, 96.)

Tramp refers to the vessels that offer for leasing per shipment or for a specific period of timeframe. The costs and the leasing timeframe are to be negotiated between the vessel shipowner and the charterer. (Tongzon 2022, 96.)

Liner refers to the vessel owned or leased by the ship operator. Compared with tramp vessels, whose rates can be negotiated depending on the market conditions and requirements, Liner vessels' rates, schedules, and routes are often fixed. (Tongzon 2022, 97.)

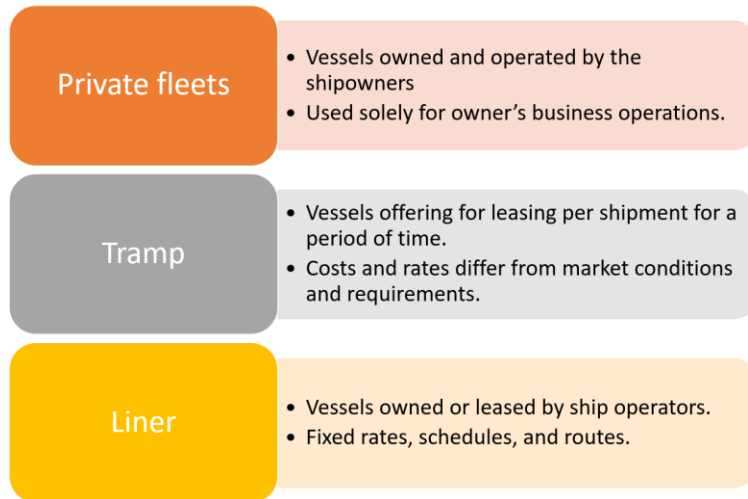


Figure 7. Categories of maritime transport vessels

2.2.2 Road transportation in international logistics

For countries with no direct access to the sea, road transport plays a crucial role in international logistics. (Tongzon 2022, 140.)

There are benefits of road transport. Firstly, road transport has high flexibility for shippers and logistics services providers since the routes and timing can be easily adjusted compared to other modes of transport. Secondly, door-to-door service also reduces the costs of cartage, loading or unloading situations in road transport. Thirdly, it has a speed advantage when delivering goods in a short distance. Lastly, it is a suitable alternative for railway transport in areas that don't have railway or air transport services. (Tongzon 2022, 141.)

Even with the above-mentioned advantages, road transport still has its limitations. Such as the small and limited loading space for small quantities of goods which can be not cost-efficient for long distances. (Tongzon 2022, 141.)

There are two major modes of truck carriers in road transport, less than truck load (LTL) and truck load (TL). Less than truck load refers to the truck carriers that offer freight services to more than one shipper in a single journey. In other words, the truck carries shipments from multiple shippers to fill the entire truck capacity. On the other hand, truck load carriers carry and deliver freight for just one single shipper. (Tongzon 2022, 141.)

Due to the difference in loading, the rates in these two modes of road transportation can differ. For instance, the start-up costs for LTL are significantly higher than TL since the operational costs for several shippers in one shipment are higher than dealing with just one single shipper. (Tongzon 2022, 142.)

2.2.3 Air transportation in international logistics

Air transport accounts for only 2% of the merchandise trading, but accounts for more than 40% in turns of values. Air transport is good for its speed. Even for landlock countries, which do not have direct access to seas can benefit from speedy characteristics of air transport. Perishable goods or goods with shorter shelf-life also can utilize air transport to achieve on-time delivery. There are two major players in the air transportation field. (Tongzon 2022, 122.)

Airline carriers can be further categorized into two categories as the passenger-cargo and the charter- cargo. The latter focuses on the movement of goods while passenger-cargo provides capacity in the belly fold of an aircraft for freight service while maintaining capacity for travelers. (Tongzon 2022, 123.)

Air transport intermediaries can be also further categorized into two categories as the air freight integrator and the specialized operator. The former provides comprehensive logistics services such as door-to-door delivery to cater to their customers' needs. Companies like DHL, FedEx, and UPS fall into this category. The latter are often used when goods exceed common cargo capabilities such as heavy loads. (Tongzon 2022, 123.)

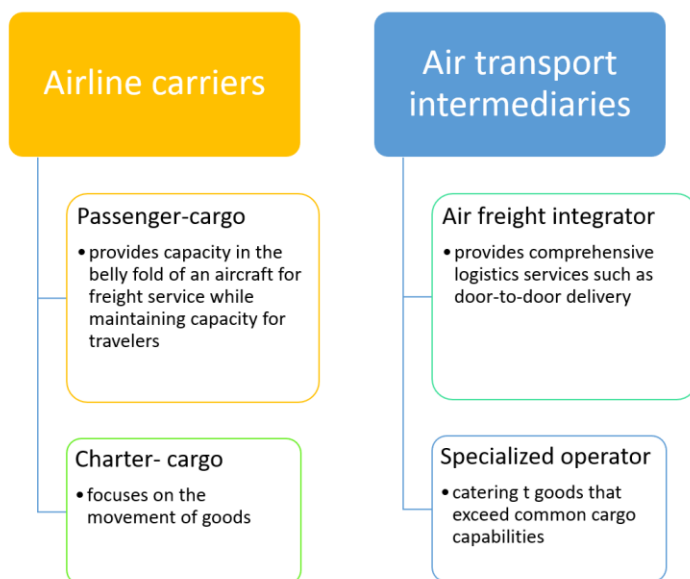


Figure 8. Categories of air transport players

These above-mentioned modes of transportation in international logistics are the backbone of understanding as to how logistics coordination pumps goods through international supply chain.

3 Research Methods

The purpose of this chapter is to describe what are the research methods used in this thesis and the outcomes of the research. Readers can expect to understand research design, research methods, and the research findings.

3.1 Research design

The following figure describes the process of the research. Detailed description of phases 1, 2, and 3 can be found in chapter 1. (see 1.3.) As stated in this figure, the sources of information for this thesis stemmed from textbooks, and interviews with professionals. The description of how the data were collected during different phase of the research can be found in chapter 3.2 along with data analysis methods.

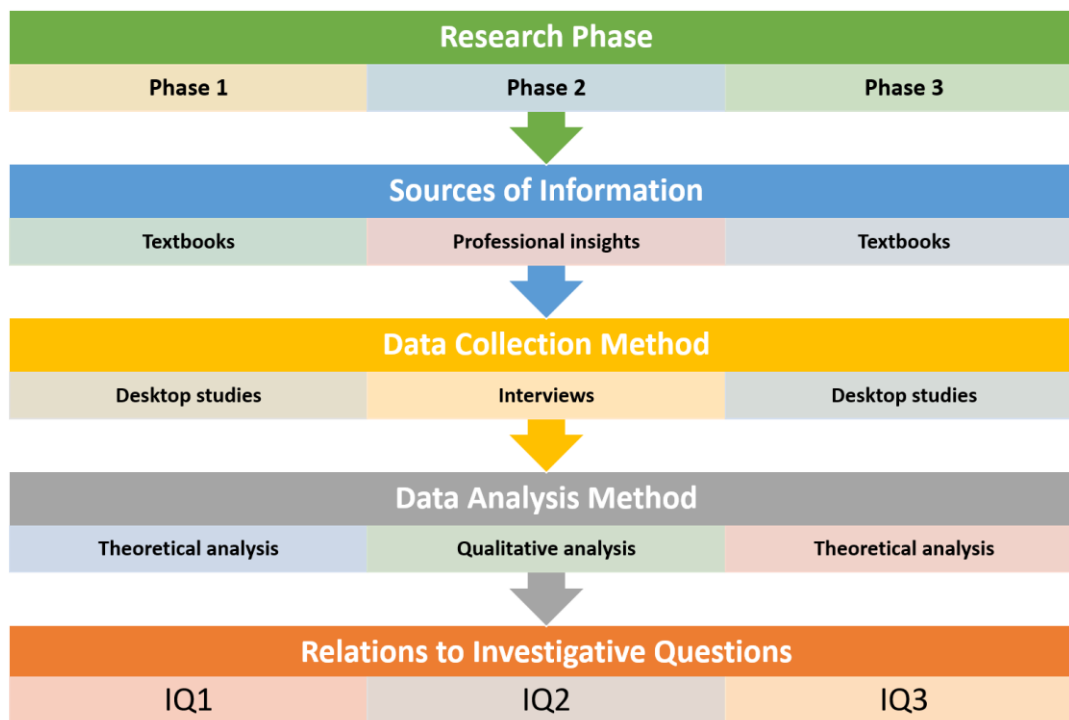


Figure 9. Research design

3.2 Qualitative research method and data analysis

In this chapter, the qualitative research methodology and the sources of data used in this thesis are discussed. Readers can expect to understand how the qualitative research was carried out and what data were gathered through interviews and desktop study by the author.

The research approach for this thesis was through qualitative approach, which by Miles & Huberman (1994, 6) was “the perception of respondents in the context of their setting, through a process

of attentiveness and empathetic understanding". For this reason, interviews were conducted to gather qualitative data from the interviewees.

One of the main aims for the thesis was to understand what logistics coordination is and what challenges are there in the process. A qualitative approach with interviews allowed the author to build structured insights directly from professional logistics coordinators. In this method, the author was able to obtain first-hand information that can better assist the author document about what is logistics coordinating and what are the challenges within from the people who work as logistics coordinator. This was the reason for the author to approach this thesis research with the qualitative method via interviews.

The interviews were conducted with the 3 professionals who had worked as logistics coordinators. The aim for these interviews was to construct the theoretical background regarding logistics coordination and challenges through professionals with real work-related experiences.

All the interviews conducted were in face-to-face meetings so the author would have opportunities to gather as much insight as possible during the interviews. The duration of these interviews range from 1 hour to 1 hour and 30 minutes, depending on the speed of speech of interviewees and how much information they were willing to give to the author during the interview. The time when these interviews were conducted was during September 2023.

Backgrounds of these 3 interviewees are as the following:

Interviewee A was a logistics coordinator who had worked in the manufacturing industry for 10 years. Interviewee B was a logistics coordinator who had worked in the same industry as Interviewee A for 3 months as a trainee. Interviewee C was a logistics coordinator who had worked in the energy industry for 6 months.

Their competence and experience as logistics coordinators were the key reasons for the author to pick them as subjects for thesis interviews. The following figure depicts the relations between thesis IQs with interviews questions asked during the interviews.



Figure 10. The relationship between IQs and interviews.

Investigative question 1 (IQ 1) and 2 (IQ 2) are as the following:

IQ 1. What is the role of logistics coordination in a company?

IQ 2. What are the logistic coordination challenges?

During the interview, Interviewees were asked questions related to their core and supportive duties as logistics coordinators. Their responses were to build an understand of what logistics coordination is and used to IQ 1. (see 3.4.2& 3.4.3)

Interviewees were also asked questions related to internal and external factors that might contribute to logistics coordination challenges. Their responses on this matter were documented as a part of the research findings (see 3.4.4& 3.4.5) as to answer IQ 2.

In order to collect relevant data from the interviewees, interview questions were divided into 4 themes as the following.

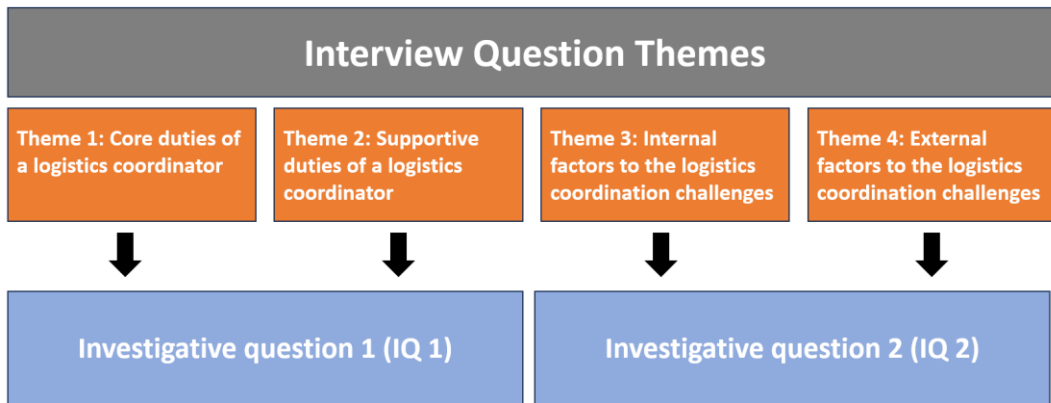


Figure 11. Interview question themes related to IQ 1 and IQ2.

3.3 Desktop studies research method and data analysis

On the other hand, the author also conducted desktop studies in the effort to build an even more comprehensive view on international logistics and major modes of transportation in international logistics (see 2.1 & 2.2). Desktop studies also supported the research carried out to bring forth solutions (see 3.5) for mentioned challenges by the interviewees.

For the theoretical background and the research findings, desktop study was carried out and contributed with outcomes depicted such as the following:

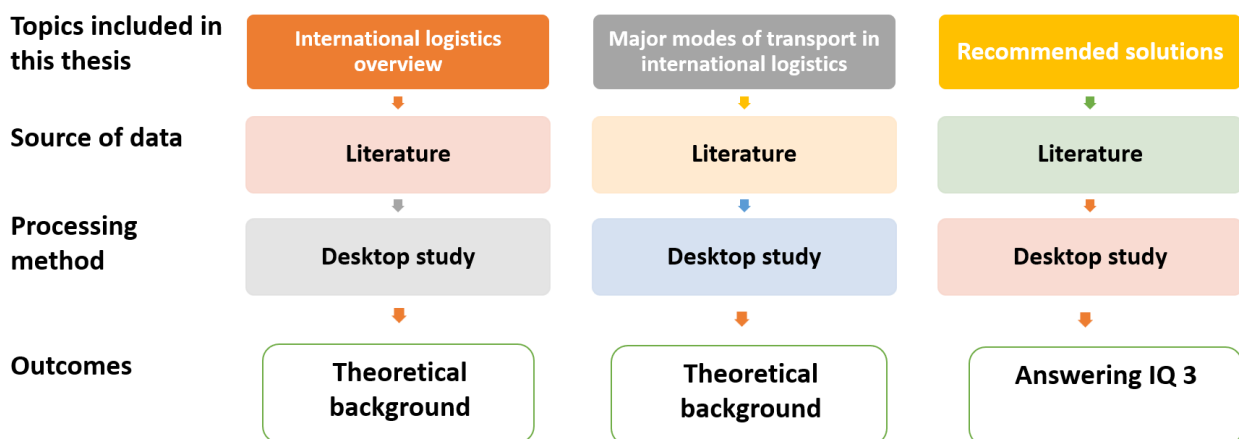


Figure 12. Desktop study's contribution to the thesis.

Through desktop study, the thesis provides a more comprehensive view of international logistics and also possible solutions for logistics coordination challenges.

3.4 Research findings

In this chapter along with these subchapters document the outcomes of the research done within this thesis. In chapter 3.4.2 and 3.4.3, core and supportive activities within international logistics coordination are documented. In chapter 3.4.4 and 3.4.5, internal and external factors account for international logistics coordination challenges are documented. In chapter 3.5, recommendations of the solutions to the above-mentioned challenges are documented.

3.4.1 Overview of logistics coordination

The author conducted three interviews with professionals who had experience as logistics coordinators. Their insights are being used to structure the fundamental understanding of logistics coordination and challenges faced as a logistics coordinator. In chapter 2.3, their answers are being used to construct logistics coordination activities to provide a theoretical background of what logistics coordination is.

3.4.2 Core logistics coordination activities

This part of the research findings is the outcome of qualitative interviews. When being asked about the core duties related to logistics activities within their positions as logistics coordinators, the tasks could be categorized as the following:

Shipment Management: this includes collecting shipments information, booking shipments, and monitoring shipments.

When collecting information for a shipment, a logistic coordinator must gather all needed logistics information such as delivery address, shipping contents, contact information of the recipient, and other contractual information such as the agreed Incoterm. The more accurate the information collected at this stage, the more likely the shipment will be delivered with no delay.

Tools to help a logistic coordinator efficiently gather all mentioned information include emails, and internal ERP systems. The figure below demonstrates the process relation in this stage of work.

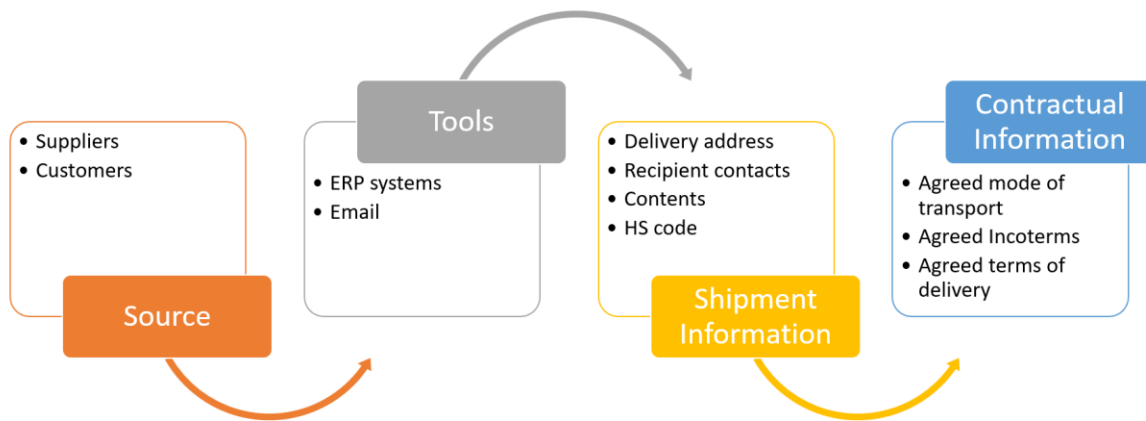


Figure 13. Overview of collection of shipment information

Next stage after collecting all needed shipment information, a logistics coordinator can start booking a shipment. This stage of work includes preparing commercial invoices, other customs related paper, and contacting logistics services providers. If there should be regulated dangerous goods involved in the shipment, extra documents such as Dangerous Goods Declaration should be included, and the logistics services providers should be well informed.

Shipment labelling is a crucial part when booking a shipment. Shipping labels and other required labels for dangerous goods shipment should be well attached to the parcel. It is the responsibility of the logistics coordinator to ensure the accuracy of the shipping contents and labelling before logistics services provider picks up the shipment. Tools for these tasks are email and logistics services provider's websites. The figure below demonstrates the process relation in this stage of work.

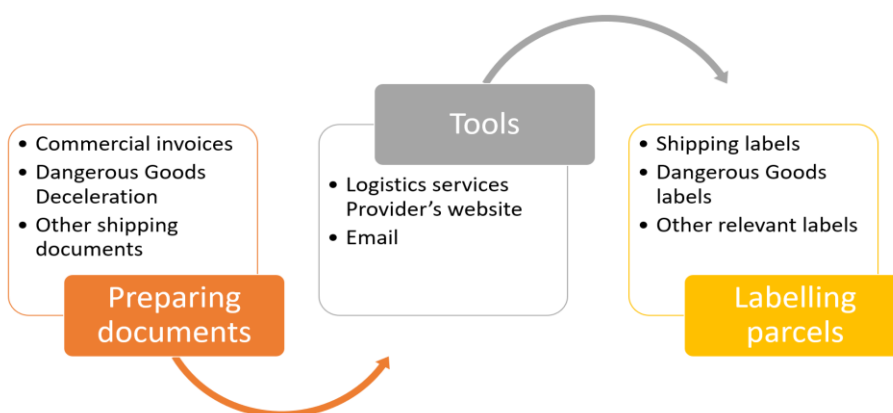


Figure 14. Overview of booking a shipment

The last stage of shipment management is monitoring shipment. This includes tracking the status of shipment, informing recipients of incoming shipment, and handling rising logistics problems such as delay, loss of shipment, and lack of customs information. Tools for these tasks include email and logistics services provider's websites. The figure below demonstrates the process relation in this stage of work.

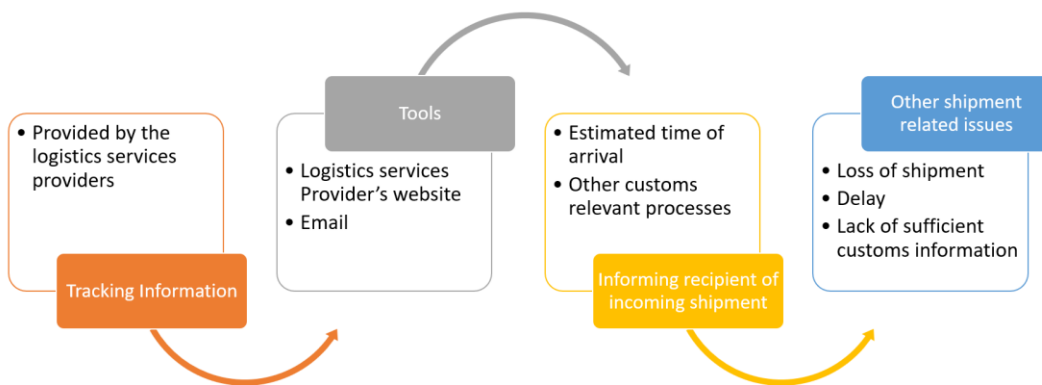


Figure 15. Overview of monitoring a shipment

Shipment records management: this includes recording each shipment's information for future references for customer services and warehouse management as well as evaluation of logistics services provider's service quality.

A comprehensive shipment record may include the following:

- Recipient Information: such as name, contact information, delivery addressed.
- Shipping content: description of goods or product number, weights, and costs.
- Logistics services provider information: logistics company used, and quality of service.
- Shipping Date
- Estimated time of arrival
- Actual arrival Date

It is of critical importance to keep a well-maintained shipment record since often there are needs to trace a particular shipment when there are issues such as damages or loss of shipment. This record can also function as a note for the warehouse management to keep tabs on the volume of shipments and further support the procurement department to schedule supplies.

3.4.3 Supportive Logistics Coordination Activities

This part of the research findings is the outcome of qualitative interviews. Through interviews with professionals, some stated that there were often supportive tasks they perform as logistics coordinators. The nature of supportive tasks can be to support other departments such as the accounting department or the sales team. The contents of supportive tasks can vary from company to company since different organizations function with their own unique structures. These activities can be further categorized in the following:

Invoice Management: this includes creating invoices, sending credit notes, and monitoring payments.

When an order confirmation has been confirmed by both the sales team and the customer, the logistic coordinator can proceed to create a downpayment invoice to the customer. By monitoring payments, the logistics coordinator can notify the production and procurement department when to start producing orders and orders from suppliers. Credits notes are created to correct wrongly sent invoices.

Tools for this stage of work are email, Netvisor, and ERP systems. The figure below demonstrates the process relation in this stage of work.

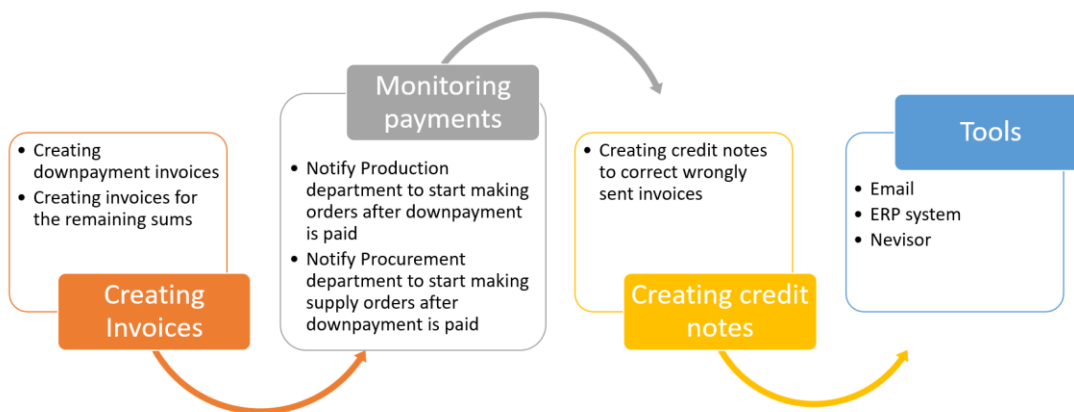


Figure 16. Overview of invoice management

Supportive sales activities: this includes arranging order preview meetings, inputting sales orders into ERP systems, and sending sales order confirmations.

When the sales team successfully transforms a lead into an order, the logistics coordinator can arrange an order preview meeting inviting the sales, production and procurement team, and other parties of interests to discuss how to fulfill the sales order.

In some situations, when the sales team are preoccupied, logistics coordinators are to inputting sales order into ERP systems and send sales order confirmations to clients. Tools used to perform these tasks include email, ERP system, and internal communication tools. The figure below demonstrates the process relation in this stage of work.



Figure 17. Overview of supportive sales activities

It is important to note that most of the supportive tasks assigned to logistics coordinators are cross-functional. Supportive tasks performed by logistic coordinators are to support other departments within the organization instead of replacing them. By keeping clear work division and responsibility, an organization can function effectively with less risks of inefficiency of overlooking or overlapping within the organization.

One of the interviewees shared a clear description of the tasks as a logistics coordinator working in the recreational sector of maritime industry. Appendix 2 (see appendices) demonstrates the process of logistics coordination.

To sum up, a logistics coordinator's tasks can be divided into core and supportive tasks. To success in this position, one must equipped with logistics knowledge and industry related knowledge

3.4.4 Internal actors for international logistics coordination challenges

This part of the research findings is the outcome of qualitative interviews. This subchapter listed down internal factors that posed challenges to logistics coordination gathered and categorized from the 3 interviewees.

Lack of effective internal communication between departments in the company is a very common problem within logistics coordination.

Different departments often gather together in meetings to talk about monthly or weekly orders; however, the lack of communication after meetings still creates a breakage of information.

Interviewee A gave an example during the interview. In this interviewee's experience, the sales team failed to inform right VAT number to him, and this resulted in the wrong calculation of the invoiced amount. *"All could have been avoided if we could talk through details beforehand."* he said during the interview. When being asked further regarding to what could have been the reasons behind the lack of communications, interviewee A gave a major reason he observed over the years working as a logistics coordinator as *"Lack of understanding in different departments' needs for information."*

"For example, sales team does not know the importance of VAT information and the differences between VAT imposed on companies or individuals." he said. VAT percentages are different when it comes to the nature of the client. The VAT percentage for a Swedish company as the client is 0% while for a Swedish individual is 25%.

"The sales teams might already made a deal with the wrong invoice amount with the client. If we (the company) needed to inform the client after agreement that the previously agreed prices are not applicable, the client would feel lied to" said interviewee A.

Interviewee B shared an example with the same struggle. *"In every meeting, I always need to ask them (the sales team) to give me recipient's contact information. They never seemed to understand why I'd need them because they don't know the process of my work."*

From these 2 examples, the inefficiency of requiring needed information can not only damage the trust from clients but also create obstacles for logistics coordinators.

Incohesive data sharing within the company often slows down logistics operation efficiency.

All three interviewees brought up the difficulties of collecting needed information for booking shipments. When being asked the reasons behind such obstacles, Interviewee C said, *"Sometimes it felt like 80% of my job was to locate where the sales team burry client's address and phone number."* He then further explained the reason for this situation was that different departments were used to using different CRM or other software to store information and this had caused blind-spot and internal information breakages.

Table 1. Overview of internal factors contributing to logistics coordination challenges.

Internal Factors Contributing to Logistics Coordination Challenges

1. Lack of effective internal communication between departments in the company
2. Lack of understanding in different departments' needs for information
3. Incohesive data sharing within the company

3.4.5 External factors contributing to logistics coordination challenges

This part of the research findings is the outcome of qualitative interviews. This subchapter listed external factors that posed challenges to logistics coordination based on the interviews.

The complex nature of triangle shipments poses extra risks for logistics coordination.

The triangle shipment is where the sender, seller, and the recipient are in different places, often in different countries. This type of shipment is often confined by geographic and time zone differences. Information within the three parties is often disturbed by this confidence. For example, the necessary customs information can be delayed due to time differences between the sender and the shipment organizer.

Professional B gave a real triangle shipment example to highlight the risks and difficulties as the following:

Company Y (the seller) where interviewee B worked as a logistics coordinator contracted supplier A (the sender) to organize a shipment directly to client A (the recipient). In this case, all three parties were in different countries, thus this was a complex triangle shipment.

However, due to the time difference, supplier A couldn't inform interviewee B in time of extra needed customs clearance process that client A needed to prepare in advance. The goods were held up at the port and there were storage fees and the risk of a fine from client A's country importation regulations.

This case of triangle shipment illustrated the nature of this kind of shipment often posed complexity to logistics coordination. When being asked if there were method to ensure smooth information timely shared between the sender, the seller, and the recipient, interview B emphasized that most companies would not have time and resources to establish a case-by-case communication channel. *"Most of the companies like supplier A deals with hundreds of export cases a day, they would not have time to spend on one singular case like ours, so that was why they fail to inform us in time (of the customs clearance details)"* said interviewee B.

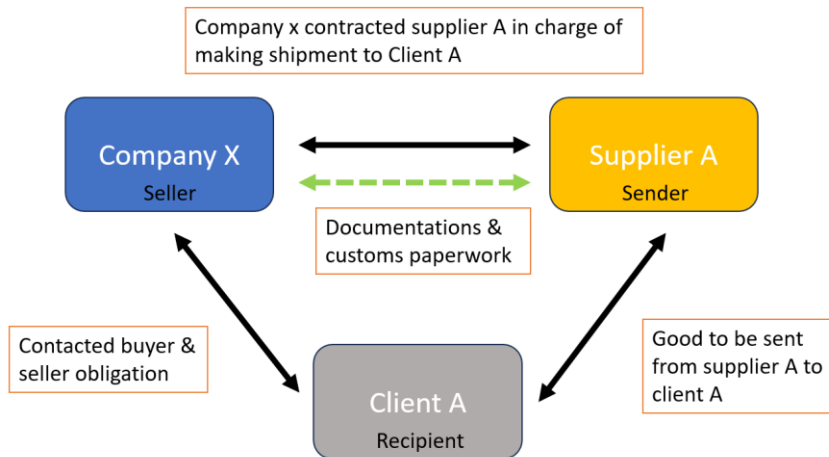


Figure 18. Relation chart of the triangle shipment example by interviewee B

Complexity of foreign customs bureaucracy

Customs bureaucracy can be also a challenging factor when it comes to logistics coordination. Interviewee A gave an example of his own experience dealing with complex customs issue as the following:

Company X once was sending goods to client B locating in Turkey. The shipment was to be organized by company X (by interviewee A) and the goods were to be picked up from supplier B in Germany. The German customs officers were not satisfied with the HS code provided in the commercial invoices and thus delayed the export from the Germany customs. *"Sometimes, you just don't know what can go wrong in the German customs. I gave them the HS code supplier B informed me, but they were not satisfied with it"* said interviewee A.

To resolve this unforeseen issue, interview B had written an email to supplier B and asked for a stamped document declaring the HS code was provided directly from the manufacture of the goods (supplier B) in German. After forwarding this document to the German customs officials, the goods were released from the customs but was already delayed for 3 days. Unpredictable foreign customs bureaucracy can be one of the reasons for shipment delays.

Table 2. Overview of internal factors contributing to logistics coordination challenges.

External Factors Contributing to Logistics Coordination Challenges

1. The complex nature of triangle shipments

2. Complexity of foreign customs bureaucracy

To sum up, both internal and external factors that contribute to international logistics coordination challenges pose threats to damage the efficiency of shipments. To further investigate the solutions improving logistics coordination in organizations, chapter 3.3 provides recommendations based on research materials.

3.5 Recommended Solutions

This thesis aims to provide recommendations after identifying challenges in international logistics coordination. The following subchapters focus on providing researched solutions author collected from different materials. This part of the research findings is carried out via the author's desktop studies.

3.5.1 The role of ICT in international logistics

One of the challenges brought up by the professionals interviewed was the incoherent information sharing within the company. (see chapter 3.4.4). To better understand the importance of internal data sharing in an organization, this subchapter provides insights on the role of ICT in international logistics.

According to Tongzon (2022), ICT enables accurate and relevant information to be shared timely within internal collaboration in a firm. While the Enterprise Resource System (ERP) provides benefits for internal collaboration, Decision support system (DSS) gives advantage for the external collaboration within the logistics operations. (Tongzon 2022, 225.)

Enterprise resource planning is nowadays widely applied in business processes to ensure a systematic integration of back-office functions in term of technology, services and human resources. (Tongzon 2022, 225.) It goes without saying that when coordination international logistics activities, ERP system should be applied to carry out logistics processes with an integrated manner. The following figure illustrates an example of ERP system application process in international logistics.

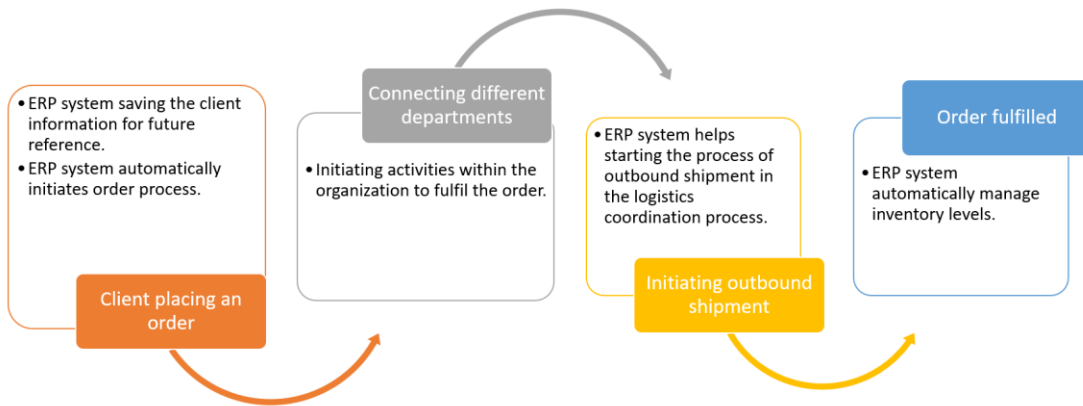


Figure 19. Example of ERP system application process assisting logistics coordination

When customers or clients place an order, ERP system enables the content of the order and the information of the client to be processed and saved automatically. This accelerates the speed of order processing with fewer errors, and thus, reduced the order cycle time. Since the ERP system connects different departments involved in an order fulfillment cycle such as the production and accounting parts of the company, the rest of the logistics coordination activities such as billing, updating inventory, initiating outbound shipments will be automatically processed within the system. (Tongzon 2022, 225.) This can be a possible solution to build a more cohesive internal information sharing system, which would ease the internal challenge professional logistics coordinators face at their workplace.

Decision support system aims to combine information internally and externally to assist logistics coordinators or logistics managers making decisions benefitting to the organization. (Tongzon 2022, 226.) The following figure illustrates how the system can be beneficial to logistics coordination.

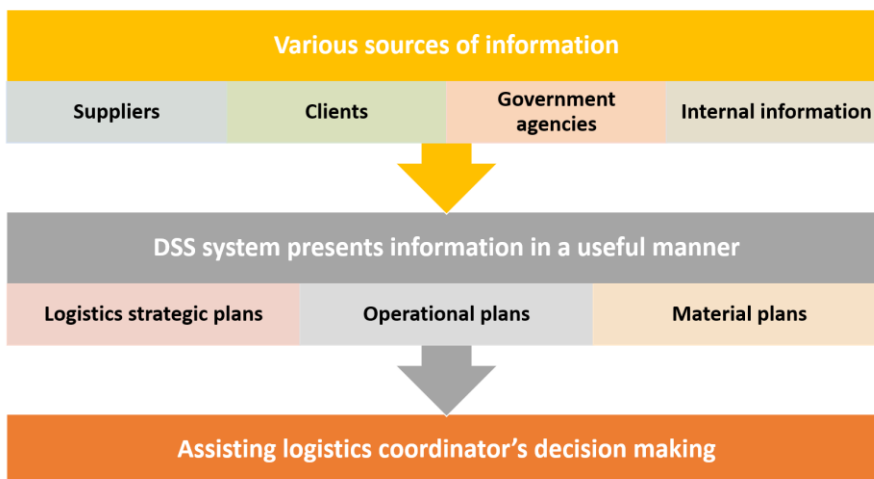


Figure 20. Example of ERP system application process assisting logistics coordination

DSS system can gather information from various sources such as from the government agencies, suppliers, and internal databases in order to produce useful information to the logistics decision makers. (Tongzon 2022, 226.)

To sum up, ICT implementations can improve the efficiency of logistics coordination in organizations. It is crucial for organizations to put resources and focuses on not only production related activities, but also value-adding supportive activities such as logistics.

3.5.2 Effective internal organizational communication

To avoid ineffective internal organizational communication, one must understand how to manage communication within an organization. Thus, this subchapter will introduce 3 major factors that affect organizational communication to bring insights on constructing a more effective communication channel.

Organizational structure stands for the formal reporting chains within an organization. In other words, the organization structure is a factor that gives one an idea of how management and communication should flow within the organization. In general, there are two types of organizational structures. One is vertical and the other is horizontal. (Men & Bowen 2017, 97.)

Vertical, also known as the centralized organizational structure, often can be perceived as a tall and sharp triangle-shaped chain of command. Decision making and control are executed from the top tier down. In this type of structure, clear levels of hierarchy can be expected to make standard operational procedure in place. For instance, a proposal shall require multiple signatures from different levels of authority before it's officially approved. (Men & Bowen 2017, 98-99.)

Formalization stems from vertical organizational structures which implies an official channel of internal communication. (Mintzberg 1983). The direction of the flow of internal communication mostly goes from the top tier to the bottom and spreads among peers. However, in spite of its efficiency in internal communications, tight control and centralized decision-making can often bring frustration to the bottom tier of the stakeholders. Therefore, to ensure effective top to bottom communication, supportive tools such as anonymous internal feedback program or staff forums for questions to CEO should be held to take input from other stakeholders into account. (Men & Bowen 2017, 99.)

Horizontal organizational structure or decentralized organizational structure is on the other hand, a flatter and shorter triangle-shaped of the chain of command. In this type of organizational structure, each stakeholder shares similar power of authority with fewer standards of procedure in place. The

direction of communication flow often comes from both top-down and bottom-up. Innovation and cross-department efforts can be seen while routine procedures for approval are either lacking or done in a more flexible manner. Decentralized organizational structure gives employees more freedom on decision-makings, which in return sparks more innovation and agile organizational operations. However, this can be the source of ambiguous responsibility distribution among roles results in less efficient internal communication. (Men & Bowen 2017, 100.)

The second factor that influences organizational communication is organizational culture. **Organizational culture** affects the effectiveness, performance, satisfaction, and retention of employees. With an impactful organizational culture, it can also bring competitive benefits to the organization. (Men & Bowen 2017, 103.)

Authoritarian organizational culture is built around the idea of authority and hierarchy. In this type of culture, an organization is centred towards command, control, and formalized policies. There are benefits coming from this form of organizational culture, such as excellence on managing larger scale organizations with recognizable standards. With its efficiency in standardization of internal policies, one can expect the organization to be predictable and stable. However, such characteristics come with the price of lacking resistance to change and slow when evolving. Authoritarian organizational culture highlights stability instead of open communication within the organization. Employees who are not involved in the top tier hierarchy may feel discouraged, undervalued, or disconnected in the internal communication process. (Men & Bowen 2017, 104.)

Participative organizational culture values across-organizational participation. This type of culture encourages employees to give novel, innovative, and collaborative inputs. The most common industries with participative organizational culture installed are the ones with highly skilled or educated workers. When compared with authoritarian organizational culture, participative organizational culture offers the competitive advantage in flexibility and innovation. However, since there are no clear boundaries of hierarchy in internal communication, with high volume of communication, participative organizational culture may bring ambiguity and overlapping on role responsibilities. (Men & Bowen 2017, 106.)

As the last of the three factors influencing internal organizational communication, **management style** comes with two theories developed by McGregor (1960), which explain how management should be conducted in an organization. These theories are Theory X and Theory Y.

Theory X proposes that management should control employees with the assumption that they either don't want to work or not enjoy working. Under this assumption, Theory X suggests that management should established centralized power over employees. On the other hand, Theory Y

proposes that employees would accomplish more at work with the help of management. Theory Y incentivizes and encourages a greater level of decision-making from employees. (Men & Bowen 2017, 109-110.)

If one takes a closer look at these three above-mentioned factors, similarities can be observed. Vertical organizational structure, authoritarian culture, and Theory X all focus on a more centralized, standardized, hierocratic communication style. Horizontal organizational structure, participative culture, and Theory Y, on the other hand, focus on a more decentralized, anti-hierarchic, and flexible communicational style. Both categories share similar pros and cons in internal communication within an organization, one should find balance in between to build an effective internal communication environment.

Table 3. Overview of the characteristics and similarities of the three internal organization communication factors.

| Factors Influencing Internal Organizational Communication | | | | | |
|---|--|--|--|--|--|
| Organizational Structure | | Organizational Culture | | Management Style | |
| Vertical Structure | Horizontal Structure | Authoritarian Culture | Participative Culture | Theory X | Theory Y |
| Hierocratic Centralized Standardized | Anti- hierocratic Decentralized Flexible | Authority-focused Formalized Standardized | Innovative Decentralized Flexible | Centralized power management | Incentivized and encouraging management |
| More efficient, but slow to evolve. | More agile, but lack of clarity in role responsibilities. | More efficient, but slow to evolve. | More agile, but lack of clarity in role responsibilities. | More efficient, but slow to evolve. | More agile, but lack of clarity in role responsibilities. |

To sum up, lack of effective and efficient communication within the organization poses challenges for logistics coordinators. It is of crucial importance for the organization to navigate these above mentioned factors influencing organizational communication and set up policies that will facilitate a better communication.

3.5.3 Establishing effective supply chain orientation

The supply chain includes all players who fulfill the needs of customers. In other words, related activities such as product development, production, finance, distribution, and marketing can be a part of a supply chain. With this being said, when improving supply chain effectiveness and efficiency from an international logistics point of view, one must take the whole chain of players into account.

This brings the importance of establishing an effective supply chain orientation. (Tongzon 2022, 257.)

Vertical integration is among the two suggested methods to achieve supply chain orientation by Tongzon (2022), which highlights the collaboration within the organization itself through various of channels in its supply chain. For instance, UPS owns and operates its own delivery vehicles, along with the information and communication channels. This vertical integration in UPS's operation allows it to fully control key operating stages in its supply chain. Additionally, this comes with other advantages such as ease of investing in its own infrastructures, and a less complex operation since it would not need to outsource key operations to a third party. (Tongzon 2022, 258.) This strategy can be considered as a possible solution for companies that often orchestra a triangle shipment (see table x) since vertical integration gives full control of the entire logistic activities internally. However, vertical integration can come with high and expensive expanses in capital and human resources. Thus, small or startup companies may not be able to benefit from this kind of supply chain orientation. (Tongzon 2022, 258.)

The other method to establish a supply chain orientation is through voluntary coordination across different organizations in the supply chain. This method can be challenging since different organizations have their own goals and interests, which can make cooperation difficult when each party chases after their own maximum of gain. (Tongzon 2022, 258.) Thus, in order for different organizations to collaborate in logistics side of the supply chain orientation, there should be common benefits so to push each party to commit in capital investments, information exchange, and operational cooperation. (Panayides and Song 2008.)

To sum up, having a fitting supply chain orientation can help enhancing the efficiency of logistics coordination within an organization.

3.5.4 Customs responsibilities and customs procedure

With globalization, the data, document, information, and pressure on customs authorities have been increased. Managing the increased volume of customs work is often complex when there are multiple trading policies. Thus, modernization of customs administration must take place. (Truel 2010, 21.)

Four main areas are covered by customs administration duties as the following:

Revenue collection is traditionally the core purpose of customs function and responsibility. The importance to a country depends on the share of customs duties in its national income. (Truel 2010, 22.) For example, representing by regions of the world, Europe's contribution of customs to

tax revenue in 2022 was 10%, while the percentage of customs to tax revenue in West and Central Africa was 34%. (WCO 2022.) From international logistics' point of view, revenue collection and customs duties can be one of the decisive factors and risks international logistics coordination must face.

Regulatory compliance is the responsibility of customs to enforce customs laws and related regulations. In developed countries, customs duties have been reduced by the establishment of multiple trade treaties and agreements. The regulatory compliance ensures that customs authorities concentrate their effort on giving entitled trading benefits or duty reduction to those countries with signed trading agreements. (Truel 2010, 22.)

Trade facilitation is the major player determining the efficiency of exchange of goods in international trading. Customs authorities are at the heart of all trade flow, thus, their operations can either be an obstacle or a steppingstone to international goods exchange. With this characteristic of customs in mind, businesses always tend to avoid entering markets that come with complex and inefficient customs operation. Thus, enhanced trade facilitations can be seen as a competitive advantage. (Truel 2010, 22.) Furthermore from the perspective of international logistics coordination, how smooth and efficient the trade facilitation can be in the transit and destination countries determine the overall speed of shipment and the accuracy of estimated date of arrival.

Security of global safety of supply chain has been challenged by events that heavily influenced the world. For instance, 911, Covid-19, and terrorism activities have been pushing customs authorities into enhancing customs security. (Truel 2010, 22.)

Customs authority's operation affects the efficiency of international logistics coordination activities. However, it is often difficult for logistics coordinators to influence customs authority. In other words, international logistics coordinators often find themselves in a passive position when it comes to dealing with delays caused by customs authorities. This does not mean that international logistics coordinators should give up optimizing customs declaration process from their end of the work. When it comes to customs procedures for traders to clear goods, understanding customs' perspective and principles can be an advantage of the coordinators to provide accurate and sufficient information and documentation to ensure a smooth customs declaration.

Customs procedures depend on the trader's preferred treatment of goods. For instance, home use, commercial use, gift or export for an exhibition are assigned with different customs procedures. (Truel 2010, 81.) For international logistics coordinators, marking the goods with right exporting or importing purposed accurately and provide all needed customs documents can potentially shorten the administrative time required at the customs.

Customs duties are measured and collected via tariffs. (Truel 2010, 85.) Understanding the collection and types of duties and tariffs for imported or exported goods can help international logistics coordinators calculate and inform the end customers accordingly.

It is of crucial importance that logistics coordinators can understand the requirements of customs authorities and provide required information and documentation truthfully, timely, and accurately. In this manner, international logistics coordinator can fulfill their responsibilities to their best ability to reduce delays and obstacles that comes with customs operations.

4 Conclusion

This chapter draws summary of the research outcome and reflection on learning from the author. Figures were used to visualize the structure of different parts of the thesis that supported concepts building and research outcomes.

The aim for the thesis was fulfilled by the research outcomes. The role of international logistics coordinator was explained and discussed in the thesis and their challenges were indicated and solutions were researched and given.

4.1 Key summary

Through theoretical background building and textbooks reading, risks in international logistics were established along with processes and documentation accompanied import and export shipments, and 3 major modes of transportation in international logistics. Readers may find themselves getting familiar with these concepts before the thesis further explains the role of responsibilities for a logistics coordinator.

Miles & Huberman (1994, 6) stated that to obtain a attentive and empathetic understanding, one must gather the content that is of the perception of respondents. For this reason, the author successfully conducted qualitative research via interviews to understand what the tasks are carried out by logistics coordinators and the struggles as well as the challenges a logistics coordinator may face. Furthermore, internal and external factors contributing to these challenges were identified with qualitative research via interviews with professionals.

As for the recommended solutions for the mentioned challenges were given after desktop studying and categorized. This thesis successfully serves its purpose for the reader to understand what logistics coordination is, what are the challenges within, and what are the solutions for the challenges.

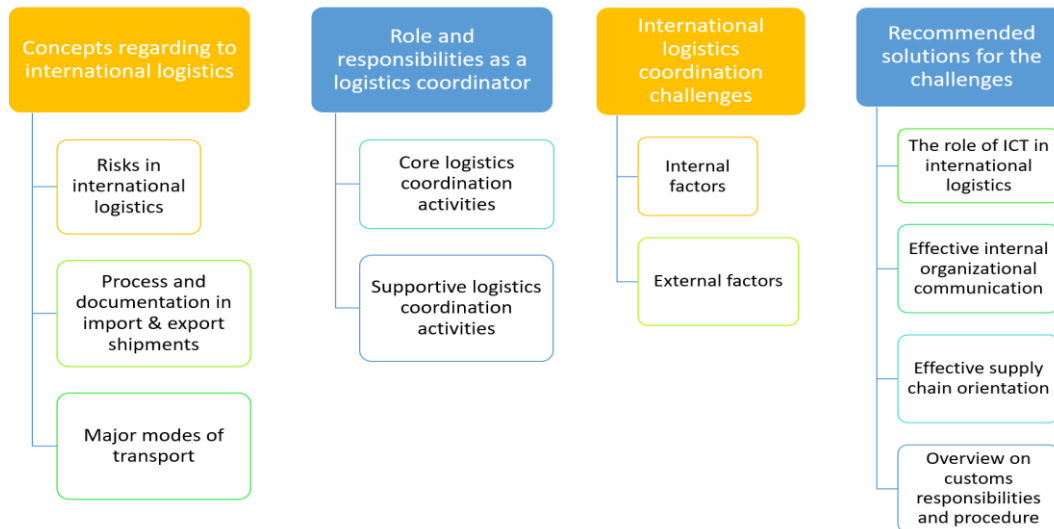


Figure 21. Overview of key summary

4.2 Further research recommendation

There are a few aspects worth further exploring as listed and explained in the following:

Firstly, a research of logistics coordination in a particular market such as in Finland can be a thesis topic worthy of establishing. In this thesis, country specifics were not included in the research since the aim was merely to discuss roles and responsibilities for a logistics coordinator in general. However, given the increases in global trading, the role of international logistics has become crucial and a factor in competitive advantages. Thus, research on a specific market and strategy can be of high value to provide stakeholders with direction for logistics improvement.

Secondly, this thesis provides detailed information on processes such as import, export, and customs. Therefore, with these outcomes as the foundation, research aiming to understand the digitalization in supply chain information system can be of good value in this increasingly digitalized business field.

Lastly, this thesis discussed effective organizational communication within the organization itself aiming for a more effective communication to enhance efficiency. Research done to understand further in this topic will be of good value since effective communication is the foundation of building a cooperative and healthy organization.

4.3 Learning reflection

Writing this thesis provided the author a great opportunity to reflect on one's own learning and growth during the research period.

The author improved in 3 major aspects as the following:

Firstly, the author improved in academic writing. From forming structured research to documenting outcomes in an academic manner, thesis writing process had given the author a practical experience in sharpening the skill of critical thinking.

Secondly, the author used this opportunity to further understand the logistics part of supply chain management. The scope of the thesis helped the author to concentrate on particular topics and build professional knowledge through desktop studying and interviewing industry professionals. This learning process crucially widens the author's perspective on international logistics coordination and opened possibilities for a career path in logistics field.

Lastly, the author used this opportunity to build discipline on time management, along with skills such as problem solving and adaptability. Through out thesis writing period, challenges had arisen, and the author was asked to address unexpected findings. These experiences enriched the author's ability to fix problems within a given timeframe in a critical and academic manner.



Figure 22. Summary of author's learning reflection.

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Appendices

Appendix 1. Interview Questions

The interview aims to answer IQ1 and IQ2 of this thesis. There are 2 themes for the interview questions per IQ as the following:

Background Information on the interviewees

1. How long have you been working as a logistic coordinator?
2. What Industry do you work in as a logistic coordinator?

IQ 1. What is the role of logistic coordination in a company?

Theme 1: Core duties of a logistic coordinator.

Q1: What are the core duties you perform as a logistic coordinator?

Q2: What kinds of tools support you to perform these duties?

Theme 2: Supportive duties of a logistic coordinator.

Q3: What are the supportive duties you perform as a logistic coordinator?

Q4: What kinds of tools support you to perform these duties?

Q5: How are these duties in relation to other departments within the company?

IQ 2. What are the logistic coordination challenges?

Theme 3: Internal factors to the challenges.

Q6: Can you describe some of the key internal factors within the company that can impact its logistic operations?

Q7: What are the internal channels to resolve these challenges?

Q8: How do you reckon that Finnish working culture plays a role in these challenges?

Q9: How do you reckon that the organizational structure of a company influences its ability to address logistic challenges?

Q10: How does miscommunication or lack of information sharing within your organization affect logistics coordination at your position?

Theme 4: External factors to the challenges.

Q11: What are the external factors beyond the company that contribute to a logistic coordination challenge?

Q12: What are the channels to resolve these challenges?

Q13: How do you reckon that suppliers or other external entities in the logistics processes influence a company's logistic strategies?

Appendix 2. Flow chart of logistics coordination from interviewee's description

