

**RELATIONSHIP BETWEEN INCOTERMS CHOICES, SELECTION  
FACTORS AND EXPORT PERFORMANCE: A CASE OF  
MANUFACTURING COMPANIES IN MALAYSIA**



**LEONG YING SZU**

**UUM**  
**Universiti Utara Malaysia**

**MASTER OF SCIENCE**

**UNIVERSITI UTARA MALAYSIA**

**2014**

**RELATIONSHIP BETWEEN INCOTERMS CHOICES, SELECTION  
FACTORS AND EXPORT PERFORMANCE: A CASE OF  
MANUFACTURING COMPANIES IN MALAYSIA**

**By**



**LEONG YING SZU**

**UUM**  
**Universiti Utara Malaysia**

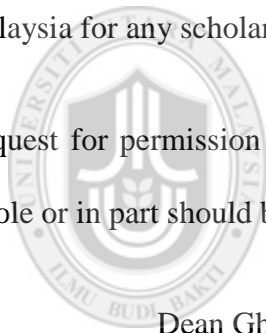
**A Research Paper Submitted to College of Law, Government and International  
Studies, Universiti Utara Malaysia in partial fulfillment of the requirements for  
the degree of Master of Science (International Business)**

**December 2014**

## **PERMISSION TO USE**

In presenting this research paper in fulfillment of the requirements for a postgraduate degree from Universiti Utara Malaysia, I agree that the University Library make a freely available for inspection. I further agree that permission for copying of this thesis in any manner either in whole or in part, for scholarly purpose may be granted by my supervisor or in her absence, by the Dean, Ghazali Shafie Graduate School of Government, College of Law, Government and International Studies (COLGIS). It is understood that any copying or publication or use of this thesis or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to Universiti Utara Malaysia for any scholarly use which may be made of any material from this thesis.

Request for permission to copy or to make other use of materials in this thesis in whole or in part should be addressed to:



**UUM**  
**Universiti Utara Malaysia**

Dean Ghazali Shafie Graduate School of Government  
UUM College of Law, Government and International Studies  
Universiti Utara Malaysia  
06010 UUM Sintok  
Kedah Darul Aman

## ABSTRACT

The present study has three major objectives: (1) To determine the most frequently used Incoterms 2010 among manufacturers in Malaysia. (2) To identify the factors that influence the Incoterms selection by the manufacturers. (3) To examine the relationship between the selection factors, Incoterms choice and export performance. This study is a quantitative research and was conducted in Malaysia and the sample was selected from the Federation of Malaysian Manufacturers (FMM). A total of 335 questionnaires were distributed and 60 questionnaires were returned with complete answer. The valid response is 17.91%. The collected data was analyzed through reliability analysis, which is Cronbach's Alpha, descriptive analysis and correlation analysis. EXPERF tools developed by Zou in 1998 uses three dimensions to evaluate the export performance, which is through financial performance, strategic performance and export performance which is a perceived performance. The results showed that (1) FOB is the most frequently used Incoterms in Malaysia. (2) There are factors influencing the Incoterms selection including new added factors. (3) There are significant relationships between selection factors with Incoterms selection, and selection factors with export performance. In conclusion, this study focuses on factors influencing the choices of Incoterms and its impact on the export performance. The possible neglected factors such as intangible units, employee behaviours, conducted study overseas and et cetera.

*Keywords:* Incoterms 2010, International Trade Terms, Export Performance, Incoterms Selection, Logistics, Supply Chain Management

## ABSTRAK

Kajian ini mempunyai tiga objektif utama: (1) Untuk menentukan Incoterms 2010 yang paling kerap digunakan di kalangan pengeluar di Malaysia. (2) Untuk mengenal pasti factor-faktor yang mempengaruhi pemilihan Incoterms oleh pengeluar. (3) Untuk mengkaji hubungan antara faktor-faktor pemilihan, pilihan Incoterms dan prestasi eksport. Kajian ini merupakan kajian kuantitatif dan telah dijalankan di Malaysia dan sampel dipilih daripada Persekutuan Pekilang-Pekilang Malaysia (FMM). Sebanyak 335 soal selidik telah diedarkan dan 60 soal selidik telah dikembalikan dengan jawapan lengkap. Sah soal selidik yang didapati adalah 17.91%. Data yang diperolehi dianalisis melalui analisis kebolehpercayaan, iaitu Alpha Cronbach ini, analisis deskriptif dan analisis korelasi. Alat EXPERF dikemukakan oleh Zou pada tahun 1998 menggunakan tiga dimensi untuk menilai prestasi eksport, iaitu melalui prestasi kewangan, prestasi strategik dan prestasi eksport yang merupakan prestasi yang dilihat. Hasil kajian menunjukkan bahawa (1) FOB adalah Incoterms paling kerap digunakan di Malaysia. (2) Terdapat faktor-faktor yang mempengaruhi pemilihan Incoterms termasuk faktor baru ditambah. (3) Terdapat hubungan yang signifikan antara faktor-faktor pemilihan dengan pilihan Incoterms, dan faktor-faktor pemilihan dengan prestasi eksport. Kesimpulannya, kajian ini memberi tumpuan kepada faktor-faktor yang mempengaruhi pilihan Incoterms dan kesannya terhadap prestasi eksport. Faktor-faktor yang mungkin diabaikan seperti unit tidak ketara, tingkah laku pekerja, menjalankan kajian di luar negara dan lain-lain.

*Kata Kunci:* Incoterms 2010, Terma Perdagangan Antarabangsa, Prestasi Syarikat, Pemilihan Incoterms, Logistik, Pengurusan Rantaian Bekalan

## ACKNOWLEDGEMENT

I would like to express my sincere gratitude and appreciation to my supervisor (Dr. Sabariah Yaakub), for her guidance in conducting the research project and completion of my MSc studies. Her resourcefulness and decisive character ensured that my research was in the correct path. Furthermore, I would like to thank my friends who provided their invaluable assistance during the course of the research project. Finally, I feel grateful to my parents and my family for their love, support and continuous encouragement throughout my studies.



## TABLE OF CONTENTS

	<b>Page</b>
<b>TITLE PAGE</b>	<b>i</b>
<b>PERMISSION TO USE</b>	<b>ii</b>
<b>ABSTRACT</b>	<b>iii</b>
<b>ABSTRAK</b>	<b>iv</b>
<b>ACKNOWLEDGEMENT</b>	<b>v</b>
<b>TABLE OF CONTENTS</b>	<b>vi</b>
<b>LIST OF TABLES</b>	<b>x</b>
<b>LIST OF ABBREVIATIONS</b>	<b>xii</b>
<b>CHAPTER 1 – INTRODUCTION</b>	
1.1 Background of the Study	1
1.2 Problem Statement	3
1.3 Research Objectives	5
1.4 Research Questions	6
1.5 Significance of Study	6
1.6 Scope of Study	7
1.7 Organization of Study	7
<b>CHAPTER 2 – LITERATURE REVIEW</b>	
2.0 Introduction	9
2.1 Incoterms	9
2.2 Incoterms selection factors	17

2.2.1 Incoterms Used Frequently	20
2.2.2 Knowledge of Incoterms	20
2.2.3 Importance Accorded to Incoterms	20
2.2.4 Selection of Incoterms by the Manufacturers	20
2.2.5 International Experience	21
2.2.6 Shipment Values	21
2.2.7 Practices of the Organization	22
2.2.8 Financial Resources of the Organization	22
2.2.9 Negotiation Power of the Client	22
2.2.10 Mode of Transportation	22
2.2.11 Client's Characteristics	23
2.2.12 Country Risk	23
2.2.13 Competitive Intensity	24
2.2.14 Regulations of Destination Country	24
2.2.15 Environmental Factors	24
2.2.16 Process to claim Insurance	25
2.2.17 Complexity of Documentation	25
2.2.18 Time Constraint	26
2.2.19 Regulations of Exporting Country	26
2.3 Export Performance	27
2.4 The Research Framework	28
2.5 Development of Hypothesis	29

## **CHAPTER 3 – RESEARCH DESIGN AND METHODOLOGY**



3.0 Introduction	32
3.1 Research Design	32
3.2 Population and sample	33
3.2.1 Population	33
3.2.2 Sample	33
3.3 Research Instrument	35
3.4 Reliability and Validity	37
3.5 Data Collection	37
3.6 Data Analysis	38
3.7 Summary	39
<b>CHAPTER 4 – RESULTS AND FINDINGS</b>	
4.0 Introduction	40
4.1 Reliability	40
4.2 Background of Respondent	42
4.3 Correlation Analysis	48
4.4 Hypothesis Testing Results	58
4.5 Summary	62
<b>CHAPTER 5 – CONCLUSION AND RECOMMENDATIONS</b>	
5.0 Introduction	66
5.1 Conclusions	66
5.2 Limitations and Future Research Direction	68
<b>REFERENCES</b>	70

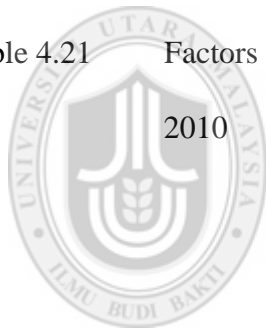
## **APPENDICES**

Appendix A: Research Questionnaire	73
Appendix B: Industries Group of Respondents	81
Appendix C: Background of Respondents	82
Appendix D: Incoterms Choice Among Manufacturers	91
Appendix E: Factors that Influence Respondents in Choosing the Incoterms 2010	92
Appendix F: Impacts of Incoterms 2010 on Export Performance	94
Appendix G: Correlation Analysis for General Factors and Company Performances	97
Appendix H: Correlation Analysis for Factors and Company Performances	98
Appendix I: Correlation Analysis for all Factors and Performances	101
Appendix J: Correlation Analysis for Incoterms Choice and Company Performances	101
Appendix K: Correlation Analysis for all Performances and Incoterms	103
Appendix L: Correlation Analysis for General Factors and Incoterms Choice	103
Appendix M: Correlation Analysis for the Factors and Incoterms Choice	105
Appendix N: Correlation Analysis for all Factors and Incoterms	107
<b>FIGURE</b>	
Figure 1            Theoretical Framework	29

## LIST OF TABLES

Table		Page
Table 2.0	Overview of Incoterms	12
Table 2.1	Grouping of obligations under 10 headings	17
Table 2.2	Formal Statement of the Hypotheses	18
Table 2.3	The EXPERF tool for evaluating export performance	27
Table 3.0	Sample Size for a Given Population Size	34
Table 3.1	Questionnaire Description	36
Table 4.0	Reliability Statistics for Incoterms, Factors and Export Performance	41
Table 4.1	Reliability Statistics for New Variables	41
Table 4.2	Reliability Statistics for Domestic Performance	41
Table 4.3	Current Working Position of Respondents	43
Table 4.4	Role of Repondents	44
Table 4.5	Main Activity in Company of Repondents	45
Table 4.6	Experience of Repondents	45
Table 4.7	Mode of Transportation	46
Table 4.8	Type of Industry for the Respondents	47
Table 4.9	Correlation Coefficient of General Factors and Company Performance	48
Table 4.10	Correlation Coefficient of Factors and Company Performance	49
Table 4.11	Correlation Coefficient of all Factors and Performances	51
Table 4.12	Correlation Coefficient of Incoterms Choice and Company Performance	52

Table 4.13	Correlation Coefficient of all Performances and Incoterms	53
Table 4.14	Correlation Coefficient of General Factors and Incoterms Choice	53
Table 4.15	Correlation Coefficient of Factors and Incoterms Choice	55
Table 4.16	Correlation Coefficient of all Factors and Incoterms	58
Table 4.17	Sub-Hypothesis Testing Results	58
Table 4.18	Main Hypothesis Results	61
Table 4.19	Incoterms Choice among Manufacturers	63
Table 4.20	General Factors that Influence Respondents in Choosing the Incoterms 2010	63
Table 4.21	Factors that Influence Respondents in Choosing the Incoterms 2010	64



## LIST OF ABBREVIATIONS

<b>3PL</b>	Third Party Logistics
<b>CFR</b>	Cost and Freight
<b>CIF</b>	Cost, Insurance and Freight
<b>CIP</b>	Carriage and Insurance Paid To
<b>CPT</b>	Carriage Paid To
<b>CSCMP</b>	Council of Supply Chain Management Professionals
<b>DAP</b>	Delivered at Place
<b>DAT</b>	Delivered at Terminals
<b>DDP</b>	Delivered Duty Paid
<b>EXW</b>	Ex Works
<b>FAS</b>	Free Alongside
<b>FCA</b>	Free Carrier
<b>FMM</b>	Federation of Malaysian Manufacturers
<b>FOB</b>	Free On Board
<b>ICC</b>	International Chamber of Commerce
<b>Incoterms</b>	International Commercial Terms
<b>SPSS</b>	Social Packages for Social Science
<b>THC</b>	Terminal Handling Charge

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

The role of global logistics as a common key terms of international and domestic trade has become prominent in the modern era of globalisation. Manufacturers are concerned about the effectiveness of supply chain, and main players within the supply chain are applying a certain code of conduct in their daily business practices. Regardless of domestic or international trade, supply chain is the procurement of goods or provides services in businesses that go through a series of processes to reach the buyer from the seller.

The Incoterms rules are standard trade terms used in international and domestic sales contracts to allocate certain costs and risks between the seller and the buyer (ICC, 2013, p. 4). On a wider concept, global supply chain, which is a further step that crosses the border, in every part of the world to conduct their international businesses. International business literally means that businesses that across countries where the businessman uses every conceivable means to gain the core target which are profiting through the international transaction.

To conduct the business, especially cross-border business, it is impossible for the manufacturers to perform their business activities without a set of standard operating procedure. International Chamber of Commerce (ICC) stated that by choosing an Incoterms rule, the parties allocate transport costs and risks as well as

the the responsibility for insurance and custom formalities between seller and buyer(2013, p.4). Cost consciousness of traders will maximize their potential benefit by considering the costs and risks in every way before conducting a business and maximizing the obligations between the buyer and the seller.

To fulfil this, starting from the point of delivery to point of destination, they will choose the best methods in each stage or level that best fulfil their needs in terms of their expectation or risks that endeavor to avoid. Regardless which delivery routes or means of transportation that are chosen, the cost of the transportation and the associated charges will be incurred, documentation required for the delivery process and international transaction, and preliminary permit for export and import licenses, which is export license and import license, and other relevant documents for the goods successfully delivered at the destination, are needed to be considered in advance before starting the business transaction.

To conduct this common business practice and to secure the transaction, it is essential to have an overview about the responsibility and obligations of the seller and the buyer in the supply chain. An internationally accepted commercial term, Incoterms, which was developed and published by the ICC in Paris, is being commonly applied.

Obligations, responsibility and relationships between buyer and seller are underpinned by the Incoterms 2010. Misconception is common in Incoterms's rules from A to Z, point of delivered to the point of destination. Therefore, an overview of the eleven Incoterms 2010 has been provided in this research. This study provided a

better and clearer view for the buyer and the seller to choose the Incoterms 2010 accordingly and appropriately based on the factors that Hien et al. has been identified on his research of Business Environment Factors, Incoterms Selection and Export Performance in 2009 and has been modified in this research. This study focused on Incoterms selection which based on the factors and its impacts on the export performance.

## **1.2 Problem Statement**

The revised Incoterms are simpler and more understandable, however, it still lacks of a clearer view. By referring to Hien et al. (2009), Jacquet (2000) suggest that Incoterms are still relatively unknown and should highlights the connection between Incoterms selection and export performance. The buyer or the seller can make their decision with a clearer view based on the latest Incoterms at a first glance and in the first place with the factors that need to be considered listed out. There were tons of opinions, perception, views in either positive or negative manner about the Incoterms 2010. Although manufacturers find that Incoterms 2010 had improved as compared with previous version, decision maker still cannot make their decision in a swiftly manner due to the hidden traps or intrigue that Incoterms contain. Disputes and losses can be easily provoked with misuse of the Incoterms. We should always keep in mind that in order to be widely applicable and easily understood, Incoterms rules need to be general expressions and clear wordings (ICC, 2013, p. 3).



This research focuses on the relationship between the decision making on the Incoterms 2010, the driving factor and the impact on export performance. According to Hien et al. (2009, p.66), there are absence of studies related to why Incoterms has been adopted differently based on the situation and its effects.

What are the factors that be considered with regards to Incoterms before the international transaction even started? Is it just used repeatedly or random picked based on situation or circumstances. What are the impacts on their export performance based on the Incoterms that they were chosen.

The concept and framework in this study are adopted from Hien et al. (2009) research where they pointed out that their research are limited by a certain number of elements were as follows:

Firstly, their study mainly focused on the exporter's perspective, however, an importer's perspective which is equivalent importance in the global view has been neglected. In this research, exporter and importer views are considered. Furthermore, views of logistics service providers has been added in this research, as mentioned in the Press Releases (2010), a logistics party provider that with better knowledge can ensure the international transactions more secure.

Secondly, the research is encouraged due to the low number of publications on the exporter perspective on the Incoterms selection, business environment factor and export performance. The authors also have suggested that different country' perceptions of the rules and their interpretation can be considered as another element in future research.

### 1.3 Research Objectives

The main purpose of this research is to determine the degree of dependency and accuracy of the manufacturers making their decision with the Incoterms. Existing framework of Incoterms, manufacturers found that it is difficult to make their decision even though the International Chamber of Commerce (ICC) revised a number of times on the Incoterms just to make it easier for the traders to choose the most suitable Incoterms. There are certain questions sent to ICC by export trade professionals over the decades have revealed areas of unnecessary ambiguity (ICC, 2013, pg. 3). In this research paper, previous theoretical framework has been modified and justified so that it will be clearer and understandable for the manufacturers in every corner of the world despite of the obstacles of language, cultural differences, legislations and et cetera.

Being modified with the previous theoretical framework by Hien et al. (2009), three new elements of factors to be considered while choosing Incoterms have been added in new framework in this study. With the framework, we have found out the Incoterms that are mostly used, the factors that have been considered the most in the first place when making Incoterms choices, and the relationship between the selection factors, Incoterm choice and the export performance. Therefore, the objectives in this research are as follows:

1. To determine the most frequently used Incoterms among manufacturers in Malaysia.
2. To identify the factors that influence the Incoterms selection.

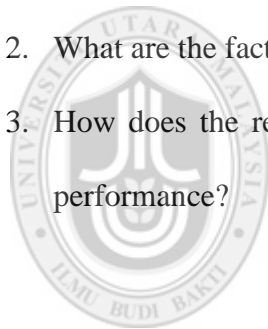
3. To examine the relationship between the selection factor, Incoterms choice and the export performance.

#### **1.4 Research Questions**

The main questions of this study is about how manufacturers choose the Incoterms. How are they going to choose these tricky commercial terms which will indirectly affect their revenue?

The research questions are as follows:

1. What are the most frequently used Incoterms among manufacturers in Malaysia?
2. What are the factors that are affecting the Incoterms selection?
3. How does the relationship between factors, Incoterms selection and export performance?



**UUM**  
Universiti Utara Malaysia

#### **1.5 Significance of Study**

This research is significant in terms of contributing new factors that manufacturers need to consider when about to choose their Incoterms. Based on the particular situations and circumstances, they will need to consider and choose the Incoterms repeatedly and frequently, and thus enabling them to be aware of the impact that will lead to their export performance.

This research has been conducted to observe the relationship of factors that have been chosen by manufacturer on the Incoterms 2010 and understand its impact on export performance. It is essential for the traders among the manufacturers to understand the relationship between the selection factors and Incoterms choices to

facilitate the business transaction and interactions which lead to improve their performance.

There are common issues of misuse Incoterms that should be eliminated and have a new framework as proposed in this research to rectify the misuse situation to a better situation. Misuses of Incoterms it is not only about losing profits, but might lead juridical dispute that beyond their capabilities to resolve easily. Even though significant changes of Incoterms that revised on 2010 did improve the situation, but some underlying problems remain.

### **1.6 Scope of Study**

The scope of this research are cover the Malaysian manufacturers who are using Incoterm. The respondents in this research are the manufacturers registered in the Federation of Malaysian Manufacturers. This study will determine the most frequently used Incoterms among manufacturers in Malaysia, identify the factors that affect the Incoterms selection and examine the relationship between the selection factor, Incoterms and the export performance. Data that obtained from collecting by questionnaire are be tested for the reliability, correlation and hence the results are interpreted to examine the relationship between the Incoterms selection and the export performance.

### **1.7 Organization of Study**

At the beginning of this chapter, an overview of the research are illustrated. The outline, background of the study, purpose, significance of the study definition of the

key terms are clearly defined in Chapter One.

In the next chapter, the history of the Incoterms are discussed to provide an understanding how this commercial terms were gradually developed in the now internationally recognized terms. Chapter Two are discussed the significant changes of latest revision Incoterms 2010 from the former Incoterms 2000. How the selection of Incoterms lead to the changes of export performance. Research framework are discussed in this chapter and gap from the previous study with this research is pointed out in Chapter Two. The relationships of the independent and dependent variables are examined.

In Chapter Three, a methodology will be discussed, how the research design and the research plan initiated from the start. Which population is considered to collect the data, and which techniques are applicable for this research? After the process of data collection, which software, mathematical analysis, or statistical techniques will be applied to analyze and test the validity and reliability of the data? The results of the analysis are presented and discussed in Chapter Four. Recommendation for future research and limitations of this research are presented in Chapter Five.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Introduction

The literature review is to review the previous studies related to this research. Variables in previous research are reviewed and new variables are defined in this section.

#### 2.1 Incoterms

Business transaction will start from the point of origin to the point of consumption and it is associated with the word “supply chain” and “logistics”. According to David and Stewart (2010) Council of Supply Chain Management Professionals (CSCMP) stated the definition of supply chain management as:

*“Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities.”*

There are numerous parties involved in the supply chain such as manufacturers, suppliers, intermediaries, service providers and the end consumer. Activities may be conducted domestically or internationally. When the deliveries are

made across the border, it will be known as “international supply chain” and “international logistics”, logistics play a major role in the supply chain. International logistics as defined by David and Stewart (2010):

*“International logistics is the process of planning, implementing and controlling the flow and storage of goods, services, and related information from a point of origin to a point of consumption located in a different country.”*

Therefore, for business transaction that are beyond the boundaries, Incoterms which consist of a set of rule and obligations that both buyer and seller will obey to conduct their business successfully are commonly applied.

Incoterms which are published by the ICC has been updated regularly. It is not an international law or convention that mandate trader to use the Incoterms. As we know the Incoterms is called as the delivery term, so it is a standard rule that is widely used in logistics and supply chain. However, international transaction that involved a number of middle parties is encouraged to minimize the risks or losses during the transaction (Bergami, 2006). It is a set of rules to guide manufacturers to choose the most suitable Incoterms that will simplify their negotiation process to define their responsibilities and duties for each party.

In 1920, ICC already engaged in the study of the trade terms, and published the trade terms on 1923 and 1928, however, for the first version of Incoterms is about 1936 (Ramberg, 2008). Since 1936 first published of Incoterms, Incoterms has

revised periodically update the Incoterms on 1953, 1967, 1976, 1980, 1990, 2000 and now the latest version is Incoterms 2010 (ICC, 2013, pg. 6). The mission of Incoterms is to regulate and interpret the Incoterms to become highly generalizable. Incoterms are used to ease the complex and redundant procedures of issuing the sales contract for delivery procedures, transfer of risks, and expenses when delivering the goods. Incoterms constitute the terms with three-word acronym for the commercial terms, where each of them represents a type of delivery terms, to avoid ambiguous situation when applying the responsibilities of the particular parties (Caruntu & Lapadusi, 2010).

Incoterms 2010 has eliminated four Incoterms DAF, DES, DDU replaced with DAP, DAT replaced the term DEQ and have grouped the latest eleven Incoterms into two groups, any mode of transportation and sea and inland waterway transport as in the Table 2.0. Moreover, the transfer risk under the terms of FOB, CIF and CFR has been changed from goods passed the ship's rail to place the goods on board of vessel (Bergami, 2010, Paliu-Popa, 2012).

There are other alternative set of delivery terms which has same abbreviations as Incoterms but with completely different meanings. These terms are a USA law, unlike Incoterms, was promulgated by The Revised American Foreign trade Definitions (RAFTD) in 1941, but has been removed from USA legislation in 2004 (Bergami, 2012).

To apply Incoterms, buyer and seller have to insert the Incoterms that they have mutually agreed on their sales contract. Incoterms act as a common language,



however the existence of misinterpretation is inevitable due to different background among the traders and lack of expertise knowledge during the process of Incoterms selection.

Any disputes incurred with the commercial terms will bring to the International Court of Arbitration. Incoterms is not the international laws or convention, buyer or seller will use at their convenience as it is not a default or compulsory commercial terms. Differences of the eleven Incoterms 2010 from Incoterms 2000 is included structural and conceptual changes. Reasons that drive ICC to revise the Incoterms 2000 include the first argument of the borderless EU countries. With these, Incoterms 2000 delivery terms have changed to Incoterms 2010 with international and domestic delivery terms. Second argument relates to the fast developing area with the use of information technology. Last but not least argument is that there were plenty of Incoterms that left behind and not applied by the traders in their business transaction (Dugan & Talmaciu, 2012).

Table 2.0: Overview of Incoterms

<b>Delivery Term</b>	<b>Acronym</b>	<b>Overview</b>
1. Mode of Transport: Any modes of transport		
Ex Works	EXW	<p>Seller's Responsibilities: Until the seller's factory gate.</p> <p>Buyer's Responsibilities: Start from the seller's factory gate.</p> <p>Transportation: Buyer arranges transportation.</p> <p>Custom Clearance: Seller's prepared necessary export documents for buyer to clear for the goods to export and</p>

		import.  Insurance: Purchased by the buyer.
Carriage Paid To	CPT	Seller's Responsibilities: Until the named destination.  Buyer's Responsibilities: Start from the goods delivered by the carrier.  Transportation: Seller arranges transportation to the named destination.  Custom Clearance: Seller's have responsibilities to clear the goods for export.  Insurance: Purchased by the buyer.
Carriage Insurance Paid	CIP	Seller's Responsibilities: Until the named destination.  Buyer's Responsibilities: Start from the goods delivered by the carrier.  Transportation: Seller arranges transportation to the named destination.  Custom Clearance: Seller's have responsibilities to clear the goods for export.  Insurance: Purchased by the seller at the minimum cover (Institute Cargo Clause C) (Andersson, A., Incoterms 2010, Herre, J., Lecture-notes no. 20, 2010-10-06).
Delivered at Terminal	DAT	Seller's Responsibilities: Until the terminal, which can be any place, such as, a quay, container yard, warehouse, transport hub.  Buyer's Responsibilities: Start from the goods delivered and unloading the goods by the carrier at the terminal.  Transportation: Seller arranges transportation to the terminal.  Custom Clearance: Seller's clear the goods for export only.  Insurance: Purchased by the buyer.
Delivered at Place	DAP	Seller's Responsibilities: Until the place, which can be any place.  Buyer's Responsibilities: Start from the goods delivered by

		<p>the carrier.</p> <p>Transportation: Seller arranges transportation to the named place.</p> <p>Custom Clearance: Seller's clear the goods for export only.</p> <p>Insurance: Purchased by the buyer.</p>
Delivered Duty Paid	DDP	<p>Seller's Responsibilities: Until the place, which can be any place.</p> <p>Buyer's Responsibilities: Start from the goods delivered and unloading by the carrier at the specified place.</p> <p>Transportation: Seller arranges transportation to the specified place.</p> <p>Custom Clearance: Seller's clear the goods for export, import and pay for export and import duty. Import license have to obtained itself or provided by buyer.</p> <p>Insurance: Purchased by the buyer.</p>
Free Carrier	FCA	<p>Seller's Responsibilities: Until the place, which can be any place.</p> <p>Buyer's Responsibilities: Start from the goods delivered to the carrier.</p> <p>Transportation: Seller arranges transportation to the place of the nominated carrier by the buyer, if the named place is a seller's factory, then seller is responsible for loading, but if the delivery at another place, then the seller is not responsible for unloading.</p> <p>Custom Clearance: Seller's clear the goods for export.</p> <p>Insurance: Purchased by the buyer.</p>
2. Mode of Transport: For sea and inland waterway transport only		
Cost and Freight	CFR	<p>Seller's Responsibilities: Until the goods delivered at the named port of destination.</p> <p>Buyer's Responsibilities: Start from the goods delivered at the named port of destination.</p> <p>Transportation: Seller arranges transportation to the named</p>

		<p>port of destination.</p> <p>Custom Clearance: Seller's clear the goods for export.</p> <p>Insurance: Purchased by the buyer.</p>
Cost, Insurance, Freight	CIF	<p>Seller's Responsibilities: Until the goods delivered at the named port of destination.</p> <p>Buyer's Responsibilities: Start from the goods delivered at the named port of destination.</p> <p>Transportation: Seller arranges transportation to the named port of destination.</p> <p>Custom Clearance: Seller's clear the goods for export.</p> <p>Insurance: Purchased by the seller at the minimum cover (Institute Cargo Clause C) (Herre, J., Lecture-notes no. 20, 2010-10-06).</p>
Free Alongside Ship	FAS	<p>Seller's Responsibilities: Until the goods placed alongside of the ship.</p> <p>Buyer's Responsibilities: Start from the goods placed alongside of the ship.</p> <p>Transportation: Seller arranges transportation until the goods placed alongside of the ship.</p> <p>Custom Clearance: Seller's clear the goods for export.</p> <p>Insurance: Purchased by the buyer.</p>
Free On Board	FOB	<p>Seller's Responsibilities: Until the goods placed on board of the vessel at the port of departure.</p> <p>Buyer's Responsibilities: Start from the goods placed on board of the vessel at the port of departure.</p> <p>Transportation: Seller arranges transportation until the goods placed on board of the vessel at the port of departure.</p> <p>Custom Clearance: Seller's clear the goods for export.</p> <p>Insurance: Purchased by the buyer.</p>

Source: Paliu-Popa (2012)

According to ICC, among the latest Incoterms 2010, EXW, seller has the least responsibilities or obligations while the DDP, the seller has the greatest responsibilities or obligations. There are total 4 terms which are E-group, F-group, C-group and D-group.

Seller in the E-group makes the goods ready on its own premises and its responsibilities or obligations only liable in the origin destination. There is only item in group E which is EXW (Ex Works).

Seller in the F-group, delivers the goods to the carrier or named place that is indicated by the buyer. The buyer will contract and pay for the carriage. This group consists of FCA (Free Carrier), FAS (Free Alongside Ship) and FOB (Free On Board).

In C-group, seller will contract and pay for the carriage and even for the insurance fees as per buyer requested. This group is represented by CPT (Carriage Paid To), CIP (Carriage and Insurance Paid To), CFR (Cost and Freight) and CIF (Cost Insurance and Freight).

The last group of D, sellers responsible for all the costs, risks and obligations to deliver the goods to the destination indicated by the buyer, and even the duties and taxes as per requested by the buyer. This group is including DAT (Delivered At Terminal), DAP (Delivered at Place), DDP (Delivered Duty Paid).

## 2.2 Incoterms Selection Factors

Refer to the Table 2.1 as below, International Chamber of Commerce 2013 (ICC) stated the responsibility and obligations which buyer and seller have to take care of. It clearly stated that the buyer and seller obligations, there are different responsibilities for exporter, seller and importer, buyer. After considering their situations, they will choose the Incoterms that are most suitable to their shipment. Even seller dedicated for an Incoterms, but they have to consider buyer Incoterms selection, mediated and finalize an Incoterms that are mutually agreed.

Table 2.1: Grouping of obligations under 10 headings

<b>Seller's Obligations</b>	<b>Buyer's Obligations</b>
<b>A1</b> Provision of goods in conformity with the contract	<b>B1</b> Payment of the price
<b>A2</b> Licences, authorizations, security clearances and other formalities	<b>B2</b> Licences, authorizations, security clearances and other formalities
<b>A3</b> Contracts of carriage and insurance	<b>B3</b> Contracts of carriage and insurance
<b>A4</b> Delivery	<b>B4</b> Taking delivery
<b>A5</b> Transfer of risks	<b>B5</b> Transfer of risks
<b>A6</b> Allocation of costs	<b>B6</b> Allocation of costs
<b>A7</b> Notices to the buyer	<b>B7</b> Notices to the seller
<b>A8</b> Delivery document	<b>B8</b> Proof of delivery
<b>A9</b> Checking-packaging-marking	<b>B9</b> Inspection of goods
<b>A10</b> Assistance with information and related costs	<b>B10</b> Assistance with information and related costs

Source: International Chamber of Commerce (ICC) 2013

To make decisions with the Incoterms, one should have an overview of the whole process and related to the parties involving such as traders, authorities, and government. Exporters have to think about the main players and the middle parties that are involved in the supply chain, the governments, traders, ports, logistics

service providers and et cetera. The goal of this research is to present the theory of Incoterms selection in a simple, easily understandable manner, and also the important aspects of the Incoterms. Thus the properties of the Incoterms will be determined. What are the frequent factor selections on the Incoterms.

Based on the guidance by ICC, Hien et al. (2009) identified the main factors that will take into consideration when deciding for the Incoterms 2010. The factors that are taken into considerations on the research were as follows:

1. Incoterms used frequently
2. Knowledge of Incoterms
3. The importance accorded to Incoterms
4. Choose own Incoterms without through service providers
5. International experience
6. Shipment value
7. Habits and practices of the organization
8. Financial resources of the organization
9. Negotiating power of the client
10. Chosen mode of transportation
11. Client characteristics
12. Country risk
13. Competitive Intensity
14. Regulations of the destination country
15. Environmental factors

Source: Hien et al. (2009)

The hypotheses which are based on Hien et al. (2009) are as follows:

Table 2.2: Formal Statement of the Hypotheses

<b>Hypothesis</b>	<b>Statement</b>
H1	Companies that use Incoterms more frequently have a better export performance.

H2	Companies with a greater knowledge of Incoterms have a better export performance.
H3	Companies that accord more importance to Incoterms have a better export performance.
H4	Companies that chose their own Incoterms have a better export performance than those that leave Incoterms choice to a third party.
H5	Companies that take their international experience and that of their managers into consideration when selecting Incoterms have a better export performance than those that do not.
H6	Companies that take shipment value into consideration when selecting Incoterms have a better export performance than those that do not.
H7	Companies that base their choice of Incoterms on customary practice rather than environmental analysis have a worse export performance than those that take the pertinent environmental factors into account.
H8	Companies that take their financial resources (working capital) into consideration when selecting Incoterms have a better export performance than those that do not.
H9	Companies that take client negotiating power into consideration when selecting Incoterms have a better export performance than those that do not.
H10	Companies that take the chosen mode of transportation into consideration when selecting Incoterms have a better export performance than those that do not.
H11	Companies that their client's characteristics into consideration when selecting Incoterms have a better export performance than those that do not.
H12	Companies that take the risks inherent to the destination country into consideration when selecting Incoterms have a better export performance than those that do not.
H13	Companies that take the competitive intensity in the destination country into consideration when selecting Incoterms have a better export performance than those that do not.
H14	Companies that take the regulations of the destination country into consideration when selecting Incoterms have a better export performance than those that do not.
H15	Companies that take pertinent environmental factors into consideration when selecting Incoterms have a better export performance than those that do not.

Source: Hien et al. (2009)

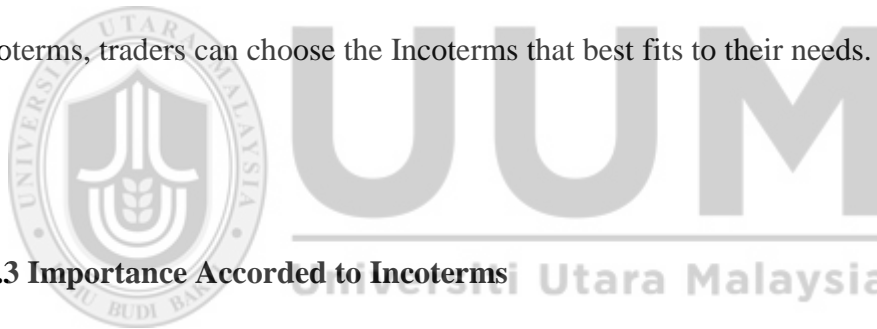


### **2.2.1 Incoterms Used Frequently**

The Incoterms that are chosen frequently by the company once used it and business transaction has been conducted successfully and satisfied, Incoterms that have been chosen will be used frequently for the similar situations and circumstances.

### **2.2.2 Knowledge of Incoterms**

Without the knowledge of Incoterms, there are high probabilities of misuse of Incoterms among the Incoterms users. With having general knowledge of each Incoterms, traders can choose the Incoterms that best fits to their needs.



### **2.2.3 Importance Accorded to Incoterms**

Exporters or importers will consider different factors when choosing the Incoterms. They need to categorize and classified which the factors are the most importance and choose the Incoterms that is accorded to.

### **2.2.4 Selection of Incoterms by the manufacturers**

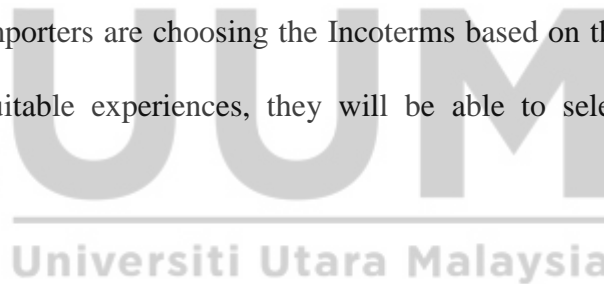
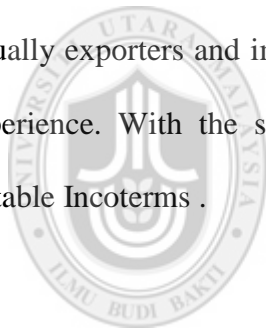
There are advantages and disadvantages choosing the Incoterms on their own among the manufacturers or leave the choices to be made by their service providers.

Advantages are it may reduce risks of misuse the Incoterms and let the expertise to choose the right Incoterms. Disadvantages are service providers may not understand the real need and situations that which is the right Incoterms.

As for the hypotheses by Hien et al. (2009) are the factors for Incoterms selection that authors want to prove for and analyze the impact that lead to the export performance.

### **2.2.5 International Experience**

Usually exporters and importers are choosing the Incoterms based on their previous experience. With the suitable experiences, they will be able to select the most suitable Incoterms .



### **2.2.6 Shipment Value**

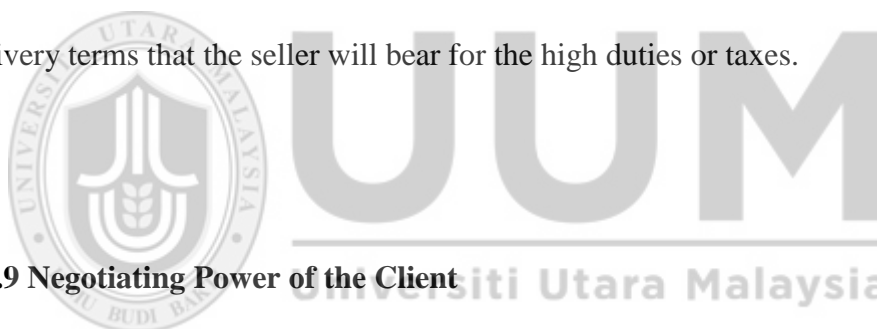
For high shipment value, exporters and importers might take more precautions to secure the cargo. For example, buyers might handle for the insurance issues to fully insure the cargo.

### **2.2.7 Practices of the Organization**

To play safe, traders might choose the Incoterms based on the habits and practices of the organization which is the customary practice that the company has been practiced.

### **2.2.8 Financial Resources of the Organization**

Financial resources are one of the factors that exporters and importers have to consider with. For example, for the items that is having import duties or taxes, and shipment values are high, the buyer may consider for the Delivered Duty Paid (DDP) delivery terms that the seller will bear for the high duties or taxes.



### **2.2.9 Negotiating Power of the Client**

It is inevitable that the customer or buyer has the rights to influence the choices of the Incoterms. The opinion of the clients to the seller usually will be adopted by the seller so as to facilitate the buyer needs.

### **2.2.10 Mode of Transportation**

A business transaction considers to be successful or unsuccessful is mainly depends on the delivery process with its transportation modes. The mode of the transportation constitutes the large portion of the cost in the entire business transaction. An expensive mode of transport will increase the costing of the business and related transfer cost. Delivery times are an essential element that will lead to longer or shorter time to complete the business that mutually agreed between the buyer and seller. Furthermore the inherent risks during the transportation not to be neglected. Any incident that occurred especially with the expensive mode of transportation may incur higher costs to redeliver to the customer all over again.

#### **2.2.11 Client Characteristics**

Client characteristics are an important element to be considered to let customers feel convenient and comfortable to conduct the business with the traders. Customers always have to be placed in the top priority to maintain and sustain the business relationship. Exporters and importers may endeavor to make the decision that caters the customer needs without affecting their profitability.

#### **2.2.12 Country Risk**

A situation which is tense and turbulent is considering the risks that inherent in the destination country. A deep consideration must be taken by the exporters and

importers on the entire supply chain processes to eliminate the risks that might lose the whole game.

### **2.2.13 Competitive Intensity**

Competitive intensity as discussed by the Michael Porter in his diamond model for national competitive advantage. There are a number of cost-factors which will affect the competitiveness and rivalry in the industry. With more firm competing in the industry, it leads to intense competition. The price for the goods will be affected, lower costs, improve quality and services (Porter, 1990) hence gain lower profit, for example FOB should be chosen to maintain competitive advantage. The customer may search for the carrier contract that can save their cost at the destination country.



UUM  
Universiti Utara Malaysia

### **2.2.14 Regulations of the Destination Country**

Regulations of the destination country need to be considered of if Incoterms user is using the arrival terms which is in D-group, such as DDP. Exporters for using DDP delivery terms, it is the services of door-to-door. Exporters will need to know whether import licences, duties and taxes needed while importing at the destination country. Clearance process and regulations might be different from one country to another country. Precautions step needs to be taken to eliminate the barriers.

### **2.2.15 Environmental Factors**

The changing nature of weather, particularly natural disaster, human being is hardly to predict for it. With the rapid technological and innovation development, most of the natural disaster can be predicted and losses can be reduced tremendously. Exporters and importers will consider the environmental factors to reduce the risks of damage and losses.

There are few factors have been added and modified from the previous framework. The new factors are as follows:

#### **2.2.16 Process to Claim the Insurance**

The majority of the shipment will be insured to better secure the goods to avoid suffered the potential losses or damages. It will provide protection and transfer the risk to an insurance company in exchange that buyer pay as premium. However, the process of claiming insurance is tedious. Usually it will be the buyer or destination side to claim the insurance that is now entitled to the goods and is not the seller or origin side which is the ones who buy insurance. So buyer need to be considered these factors and should buy the insurance themselves to better secure their benefits and get a maximum cover, not minimum cover that usually the seller will buy for the insurance.

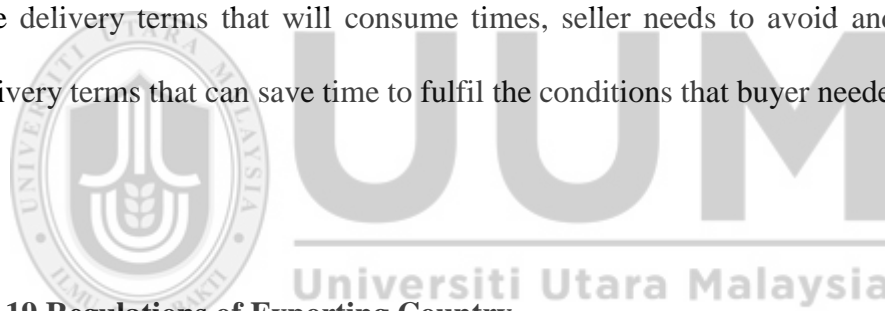
#### **2.2.17 Complexity of Documentation**

When considering the factors of complexity of documentation, for instance, in the DDP delivery terms, the level of complexity of documentations is high. To save time and costs, and need to assure that all documentation that is needed is able to provide it, Incoterms users need to consider for these factors.

### **2.2.18 Time Constraint**

Time is another important factor when considering for the Incoterms. When the customer is insisting for the short lead time and needs the cargo as short as possible.

The delivery terms that will consume times, seller needs to avoid and choose the delivery terms that can save time to fulfil the conditions that buyer needed.



### **2.2.19 Regulations of Exporting Country**

Apart from the regulations of importing country is a factor, regulations of the exporting country is another factor need to be considered. It is because some of the products are prohibited to export to another country, but just allow for national trade.

Another reason is some of the products might need export license and Incoterms users need to be aware about.

## 2.3 Export Performance

Hien et al. (2009) analyze the factors that affect Incoterms selection and its impact on export performance.

In 2009, according to Nicholas Hien, Gilbert Laporte and Jacques Roy, according to their research showed that the third financial indicator is the export profitability, the more subjective indicators are the last two indicators which are the manager satisfaction with export performance based on the degree of satisfaction of the manager to evaluate the export performance and the manager perceptions of export performance.

The Incoterms that are selected shall affect the export performance of the export. The performance difficulties or growth will measure by the indicators. In the Zou (1998) research, a tool is proposed which is the EXPERF scale. There are three groups being categorized for the performance measurement, which are the financial performance, strategic performance and satisfaction with the export activities.

Table 2.3: The EXPERF tool for evaluating export performance

Type	Export Activities
FP - Financial Performance	FP 1: were profitable
	FP 2: generated a high volume of sales
	FP 3: grew rapidly
SP - Strategic Performance	SP 1: increases our competitiveness
	SP 2: reinforce our strategic position
	SP 3: increase our market share
ES - Satisfaction with	ES 1: Export Activities have proved satisfactory



Export Activities	ES 2: Export activities have been successful
	ES 3: Export activities have satisfied our expectations

Source: Hien et al. (2009)

Zou established Experf scale in 1998 stated that uses three dimensions to measure export performance. Financial performance is through the indicators such as export sales, export sales growth, and export profits with the approach of financial measures. Strategic performance is considers the strategic goals that firm aim to meet through exporting with the indicators of market share, strategic presence and competitive position. Perceived performance is considers the perceptual and attitudinal measures of export performance for being satisfied with exporting operations.

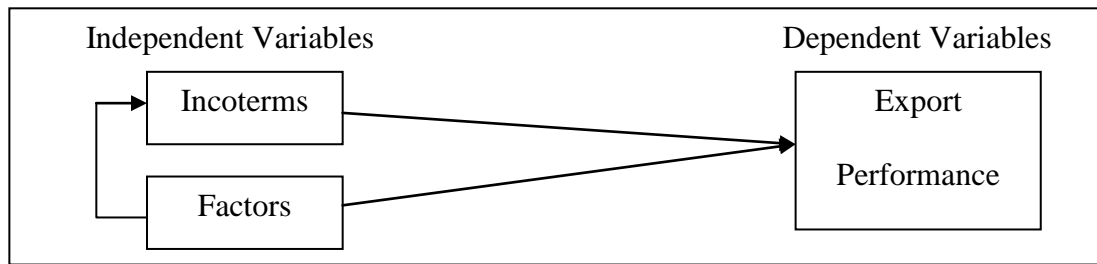


## 2.4 The Research Framework

Based on the review of literature, Figure 1 presents the theoretical framework of this study. Physical movement of the goods is associated with a series of process with all sorts of players involved in the supply chain, between the carrier and the seller and buyer. So, how are the exporters make their significant decision with the selection of Incoterms? And, how the Incoterms selection leads to the impact of the export performance?

The theoretical framework is proposed as follows:

Figure 1: Theoretical Framework



## 2.5 Development of Hypothesis

The hypothesis of Hien et al. (2009) are being adapted and modified with the variables in this research. New elements have been added to this research where some areas have been overlooked by the exporters and the researcher.

There are new elements have been added in the hypothesis. Process to claim for the cargo damages or lost should be considered by the traders. For example, CIF terms to be considered, insurance purchased by the seller with the minimum cover (Institute Cargo Clause C) do not guarantee and secure the shipments. Besides, seller does not have the obligations to help buyer claim for the compensation.

Complexity of the documentation is another issue to be considered. If the seller sells for the EXW, Exworks, redundant and complicated process to get the export license and other related documents can be eliminated.

The time constraint is another important factor to be considered. If the buyer is needed the cargo urgently, however, the cargo needs to apply import license with the process redundantly. It will be better for the seller to offer DDP, Delivered Duty Paid to ease the burden of their customer facing.

Not only regulation of the importing country need to be aware, regulations of the exporting country is another essential element as a selection of Incoterms need both parties mutually agree, both elements need to be considered.

The hypothesis is a formulated statement that is going to test. The proposed hypotheses that are adopted from the previous study and developed in this study are as below:

H1: Selection factors have a significant relationship with Incoterms selection.

H2: Selection factors have a significant relationship with export performance.

H3: Incoterms choice have a significant relationship with the export performance.

The selection factors in the hypothesis are as follows:

1. Incoterms used frequently
2. Knowledge of Incoterms
3. The importance accorded to Incoterms
4. Choose own Incoterms without through service providers
5. International experience
6. Shipment value
7. Habits and practices of the organization
8. Financial resources of the organization
9. Negotiating power of the client
10. Chosen mode of transportation
11. Client characteristics
12. Country risk
13. Competitive intensity
14. Regulations of the destination country
15. Environmental factors
16. Process to claim for the insurance
17. Complexity of documentation
18. Time constraint
19. Regulations of the exporting country

The Incoterms in the hypothesis are as follows:

1. EXW
2. CPT
3. CIP
4. DAT
5. DAP
6. DDP
7. FCA
8. CFR
9. CIF
10. FAS
11. FOB

The export performance in the hypothesis are as follows:

1. Financial performance were profitable.
2. Financial performance generated a high volume of sales.
3. Financial performance grew rapidly.
4. Strategic performance increase competitiveness.
5. Strategic performance reinforce strategic position.
6. Strategic performance increase market share.
7. Export activities have proved satisfactory.
8. Export activities has been successful.
9. Export activities have satisfied our expectation.



Universiti Utara Malaysia

## CHAPTER 3

### RESEARCH DESIGN AND METHODOLOGY

#### 3.0 Introduction

This chapter will discuss about the research methodology used in this research. By referring Uma Sekaran, representative sample is established with the chosen population of study from Federation of Malaysian Manufacturers (FMM). Data collected from the sample have been analyzed with SPSS and interpreted accordingly with the reliability test and correlation analysis. Then, at the end of this chapter, the summary of methodology will be discussed.

#### 3.1 Research Design

Research designs provide an overall guidance for the researcher to have a better view to conduct the research and analyze the data. Research need to be properly designed in an organize and systematic way in order to conduct the research smoothly and effectively.

This study is to examine the relationship between factors considered in choosing Incoterms, Incoterms selection and export performance among manufacturers. Data were obtained by distributing questionnaires to the participants that are selected. There is no exception for conducting reliability analysis for the data to show that the data obtained are reliable in Chapter Four. Then in Chapter Four, correlation analysis has been conducted to examine the relationships between the

factors considered in choosing Incoterms, selection of Incoterms and export performance. Furthermore, the background of the respondents shall be further discussed in Chapter Four.

## **3.2 Population and Sample**

### **3.2.1 Population**

For cross-sectional study, first of all population size is needed to establish the representative sample size for this research. Population have been identified through FMM that published the manufacturers directory according to their sector. A total of 2517 manufacturers are published and included in the FMM.

The industry group in FMM is according to product manufactured and International Standard Industrial Classification (ISIC) codes. The participants that are included in this study are included rubber and plastics industry, wood industry, metal industry, textile industry, chemical industry and et cetera. For a full description of these industries have to refer to Appendix B.

### **3.2.2 Sample**

Sample size is obtained from a given population size adopted according to the Uma Sekaran as shown as belows:

Table 3.0: Sample Size for a Given Population

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note: *N* = population size and *S* = sample size

Source: Sekaran, U. (2003).

As referring above, to conduct for the research, a sample size of 335 is required for a given population of 2517. After sample size is obtained,

nonprobability sampling was used in this study and convenient sampling is chosen for which easily accessible to the respondents.

### **3.3 Research Instrument**

For the sampling sections, nonprobability design will be chosen, so that every element has the responses quickly and economically. Data collection in this research mainly depends on the questionnaire which distribute to the respondents among the manufacturers which are the exporters.

Before data collection started, a request letter has been sent to administrator officer to get the certification letter to certify that those questionnaires is dedicated for the research purpose. A certification letter is attached to the questionnaires to reassure respondents that their response shall be kept in confidential and will not be revealed for other purposes other than academic purpose. The research topic is introduced in the cover letter to provide a better view and understanding for the respondents. The questionnaire is a main technique to gather information in this research and is distributed via email. A total of 335 questionnaires have been distributed. There were 259 questionnaires failed to receive back from respondents. Rate of response is about 22.69% or a total of 76 questionnaires were received but there were 16 questionnaires answered incompletely. Therefore, a valid of response rate is only 17.91% or which were 60 questionnaires have been returned and answer completely



There are five sections in the questionnaire. Section A consist of six questions asking about the demographic profile of the respondents, ten questions regarding business profiles, which constitutes the section B, three questions of selection factors on Incoterms in section C and D. One question of company's performances in section E. The measure used in the questionnaire is adopted from the previous study which is by Hien et al. (2009).

Table 3.1 presents summary of the measures used in the questionnaires. Each section has been elaborated and explained as follows:

Table 3.1: Questionnaire Description

Section	Description
A	<p>Section A consists of the respondent's demographic profile</p> <ul style="list-style-type: none"> <li>• Gender</li> <li>• Age</li> <li>• Length of employment</li> <li>• Level of position</li> <li>• Length in the position</li> <li>• Length in the industry</li> </ul> <p>There are total six questions.</p>
B	<p>Section B contains the business profile of the respondent's company</p> <ul style="list-style-type: none"> <li>• Size and type of the company</li> <li>• Role of the company in the industry</li> <li>• Main activity of the company</li> <li>• Job description in the company</li> <li>• Mode of transportation applied by the company</li> <li>• Business area</li> <li>• Do company consider the Incoterms 2010</li> <li>• Do Incoterms 2010 consider for every shipment</li> <li>• Are the respondent is the decision maker for Incoterms</li> </ul>

	<ul style="list-style-type: none"> <li>• Industry group of the company</li> </ul> <p>There are total ten questions.</p>
C	Section C is related to the independent variables which is the Incoterms. It is using the five points Likert scale, ranging from 1 (Almost never) to 5 (Very often) to choose for the 11 subquestions of the Incoterms version 2010.
D	Section D which is another independent variable, selection factors. It is using the five points Likert scale, ranging from 1 (Almost never) to 5 (Very often) to choose the factors to consider when selecting the Incoterms. There are total two questions. First questions contain eight subquestions for an overview of the selection factors and second questions consist of 19 subquestions to measure the selection factors.
E	Section E is using the EXPERF tool to evaluate the dependent variables, export performance. The tool has been modified and adapted by adding one question related to domestic activities to learn the respondent's domestic activities apart from the export activities. There are total four questions in this section with four subquestions.

### 3.4 Reliability and Validity

Data have been analyzed by using SPSS software version 19 and conduct the univariate and multivariate analysis. Reliability analysis Cronbach's Alpha has been conducted to show the reliability of the data. As the Spearman correlation analysis has been chosen to test the relationship of dependent variables and independent variables. Data that obtained have conducted a series of statistical analysis then with analytical thinking to interpret the result.

### 3.5 Data Collection

The time horizon of this research were cross sectional. Questionnaire and interviews

only were conducted once at a time and were not conduct another time with the same sample. The study involved with the quantitative approach and techniques. The data will be collected through questionnaire via email and two weeks were given to the respondents to complete the questionnaire.

Emails can extend geographically for the involving respondents, saving time and cost. Questionnaires were distributed via the email to the reputable organization as well.

### **3.6 Data Analysis**

Analysis of reliability and correlation were performed. Results that are obtained have been analyzed through the analysis and interpreted accordingly with refer to the research objectives, results were discussed in chapter four. Reliability and validity of the result need to be verified to prove that the result is reliable, while correlation analysis needs to be conducted at the same time. Correlation analysis provided the information to identify whether there are an existing relationship between the dependent and independent variables. The strength of the relationship between the different independent variables and dependent variables, has significant effects on the outcome and this is the important outcome for the researcher to seek after in the study.

### 3.7 Summary

In this chapter mainly discussing about the research design, research methodology used in this study start from the respondent criteria, development of questionnaires, data collection, to analyze data and interpret the result accordingly. From properly constructed research design, targeted the population and establish the representative sample, using the research instruments to collect the data.

This chapter explains briefly about the analysis that were chosen to test for the hypothesis developed in this study and examine the relationships of the independent and dependent variables where the results and the finding shall be discussed in the next chapter.



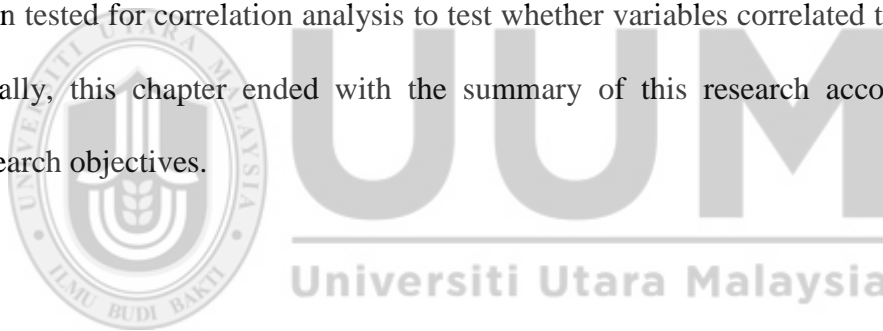
**UUM**  
Universiti Utara Malaysia

## CHAPTER 4

### RESULTS AND DATA ANALYSIS

#### 4.0 Introduction

This chapter discusses and presents the findings of this research. First of all, analysis focused on the data reliability of the data that have obtained. Reliability analysis has been conducted to test data that obtained are reliable. Next, descriptive analysis conducted for screening the background of the respondents. Statistics result were reported and attached in this chapter for a clearer view of the results. Then, data have been tested for correlation analysis to test whether variables correlated to each other. Finally, this chapter ended with the summary of this research according to the research objectives.



#### 4.1 Reliability

Reliability analysis need to be conducted before any evaluation of the data is being analyzed. Cronbach's test which is used to evaluate the reliability of the data, the cutoff value is 0.70 to show that the data is reliable. (Hien et. al., 2009)

Refer to Table 4.0 which presents the reliability statistics for Incoterms, factors, and export performance. So the Cronbach's Alpha of Incoterms (0.840), factors (0.896 and 0.954) and export performance (0.828, 0.843, 0.950) that have

been obtained which is more than 0.70 showed that the data are reliable based on the test.

Table 4.0: Reliability Statistics for Incoterms, Factors and Export Performance

<b>Construct</b>	<b>Cronbach's Alpha</b>	<b>Number of Items</b>
Incoterms Choices	0.840	11
General Factors	0.896	8
Factors	0.954	19
Financial Performance	0.828	3
Strategic Performance	0.843	3
Export Activities	0.950	3

Table 4.1: Reliability Statistics for New Variables

<b>Construct</b>	<b>Cronbach's Alpha if item deleted</b>
Process to claim the insurance	0.950
Complexity of documentation	0.949
Time Constraint	0.951
Regulation of the exporting country	0.952

Cronbach's Alpha of the new variables as shown as above Table 4.1 have obtained value more than 0.70 showed that the data are reliable based on the test.

Table 4.2: Reliability Statistics for Domestic Performance

<b>Construct</b>	<b>Cronbach's Alpha</b>	<b>Number of Items</b>
Domestic Activities	0.180	3

Referring to the Experf tools that used by Hien et al. (2009). It is without testing for the satisfaction on Domestic Activities. However, this study has added a respondents view on the domestic activities in the questionnaire. It is due to Incoterms can be used for international and domestic trade, therefore, this section should be added just to learn for the satisfaction of respondents on domestic activities. However, based on the value of Cronbach's Alpha which is 0.180 showed that the data is not reliable, this may due to respondents more involved in export activities compared to domestic activities.

#### **4.2 Background of Respondent**

There is a total of 335 questionnaire has been distributed, the usable results of the respondents were only total of 60 questionnaires out of 335 questionnaires.

Of the 60 participants, there are total 60 respondents, 39 with 65.00% were female and 21 with 35.00% were male. Most of the respondents were between the age of 21-30 years old (43.30%) and the age 31 to 40 years old (41.70%) is the second largest range of age of the respondents. As for the age of 41 and above years old is only 15.00%. 6 years and below are the largest for length of employment which is 32 with 53.30%. 6-20 years old, 43.30% is the second largest range of age of the respondents. As for the age of 20 years and above is only 3.30%.

Table 4.3: Current Working Position of Respondents

<b>Current Position</b>	<b>Frequency</b>	<b>Percentage</b>
Manager	17	28.30
Executive	13	21.70
Assistant Manager	9	15.00
Others	9	15.00
Senior Manager	5	8.30
Senior Executive	5	8.30
Director	2	3.30
Total	60	100.00

As shown in the Table 4.3, from the 60 participants, there are total 60 respondents, with 17 or 28.30% were most is in a managerial position, second largest 13 with 21.70% were executive level. The third largest were 9 of the assistant manager with 15.00%. The following is 9 with 15% in others position. The fifth largest is senior manager and senior executive which has same responds rate, which is 5 (8.30%). The smallest number is with director position which is only 2 with 3.3%. With most of the respondents from managerial position, results were more reliable and representable.

From the results that obtained in this research, 6 years and below with 41, 68.30% were the longest years in their current working position, 6-20 years is 19 with 31.70% were the second longest and there are none in 20 years and above. Apart from that, 6-20 years is the longest years of respondents works in their current relevant industry which is 28 with 46.70%. 6 years and below 45.00% is the second longest year for the respondents. As for the age of 20 years and above is only 5 (8.30%). Most of the respondents are from a big company that is 43 (71.70%), 12 of them are from small company, 20.0%. Smaller portion is coming from other type of



company, 5 with 8.30%. The majority of the respondents are from a private company that is 53 with 88.30%, 7 of them are from listed company, 11.70%.

Table 4.4: Role of Respondents

<b>Role</b>	<b>Frequency</b>	<b>Percentage</b>
Exporter	35	25
Manufacturer	33	23.57
Domestic Supplier	19	13.57
Foreign Supplier	18	12.86
Importer	18	12.86
Service Providers	9	6.43
Shipping Liner	5	3.57
Others	3	2.14
Total	140	100.00

There is the possibility that respondents have multiple role in their company. The majority of the respondents as an exporter which is 35 with 25.00%. Next is the role as manufacturer 33 with 23.57%, then is the domestic supplier 19 (13.57%). Role as the foreign supplier and importer is the same which is 18, 12.86%. The following role is as a service providers which have 9 with 6.43%. There are less respondents as a shipping liner and as other roles, which is 5 (3.57%) and 3 (2.14%).

Besides that, if refer to the Table 4.5, there are the possibilities that respondents have multiple activities in their company. Majority that the main activity of the respondents is manufacturing, which are a total of 37 with 50.68%. Next activity for logistics is 16 with 21.92%, then is the trading activity which is 11 (15.07%). The following activity for service providers is 7, 9.59%. There are fewer respondents involved in other activity for only 2 respondents with 2.74%.

Table 4.5: Main Activity in Company of Respondents

<b>Main Activity</b>	<b>Frequency</b>	<b>Percentage</b>
Manufacturing	37	50.68
Logistics	16	21.92
Trading	11	15.07
Service Providers	7	9.59
Others	2	2.74
Total	73	100.00

Table 4.6: Experience of Respondents

<b>Experience</b>	<b>Frequency</b>	<b>Percentage</b>
Preparing delivery documents	38	15.26
Making a decision on mode of transport	37	14.86
Checking delivery costs	37	14.86
Liaise with carrier	36	14.46
Issuing sales contract or purchase order	32	12.85
Clarence cargo with customs	22	8.84
Checking-packaging-marking	20	8.03
Insurance arrangement	15	6.02
Liaise with bank	9	3.61
Others	3	1.21
Total	249	100.00

Nowadays, it is common for the respondents have multi-task jobs. Majority of the respondents have experience for preparing delivery documents which is 38 with 15.26%. Respondents have 14.86% (37) for making a decision on mode of transport and checking delivery costs. The following will be involved for liaise with carrier, issuing sales contract or purchase order, clearance cargo with customs, checking-packaging-marking, insurance arrangement and liaise with banks.

Table 4.7: Mode of Transportation

<b>Mode of Transportation</b>	<b>Frequency</b>	<b>Percentage</b>
By ocean	55	43.65
By land	37	29.37
By air	27	21.42
By rail	7	5.56
Others	0	0.00
Total	126	100.00

Choosing mode of transportation is an important decision making as it is a cost-related factors and will affected lead-time of the goods. Based on different situation, traders will choose the mode of transportation according to their circumstances. The majority of traders have chosen their cargo delivered by ocean, which is 55 (43.65%), then is by land 37 with 29.37%. Next is by air which is 21.42% (27) and there is only 7 respondents, 5.56% used rail transportation to deliver their goods.

Beside that, most of the business conducted by the respondents internationally by 30.32% and is within non-EU countries with 27.13%. There are 25.00% and 17.55% for business conducted in EU countries and domestics respectively.

To learn the respondents whether have used the latest Incoterms 2010, questions have been set for respondents. The results that obtained most of them is not sure have they using the latest Incoterms, it is 29 with 48.30%. 19 (31.70%) confirmed by using Incoterms 2010, while 12 (20.00%) is not using the Incoterms 2010.

With 75.00% (45) of the respondents consider Incoterms for every shipment or business that they have conducted, while 21.70% (13) not sure of it and 2 (3.30%) not sure of it. While most of the respondents are not a decision maker, 34 (56.70%), only 12 (20.00%) are as a decision maker. Some of them, not sure are they decision maker with 14 (23.30%).

The majority of the respondents are coming from service companies with 20.69% (18). With 19.54% (17) have come from the wood industry. 59.68% of the respondents come of various kinds of the industry with minority percentage. This will ensure the data that obtained are coming from various type industries to avoid any bias that might occur.



Table 4.8: Type of Industry for the Respondents

Type of Industry	Frequency	Percentage
Service Companies	18	20.69
Wood products, furniture and paper products	17	19.54
Others	8	9.20
Rubber and Plastics Products	6	6.90
Chemicals and Chemicals Products	5	5.75
Foodstuffs	5	5.75
Agricultural Products	4	4.60
Electronic related products	4	4.60
Industrial machinery and equipment	3	3.45
Pharmaceuticals/Drugs	3	3.45
Energy and Utilities	3	3.45
Metals and Mining	3	3.45
Mineral and Fertilizers	2	2.29
Automotive	2	2.29
Computer hardware and software	2	2.29
Construction	1	1.15
Livestock	1	1.15
Textiles	0	0.00
Total	87	100.00

### 4.3 Correlation Analysis

This section were tested the selection factors, Incoterms and export performance, whether correlated to each other.

Table 4.9: Correlation Coefficient of General Factors and Company Performances

Spearman Correlation	GR	TC	TI	II	BI	FI	ERI	PT
FPWP	.450**	.397* *	.243	.187	.167	.330**	.238	.416**
FPHVS	.287*	.219	.086	.058	.103	.330*	.114	.313*
FPGR	.436**	.316*	.267*	.089	.166	.346**	.093	.279*
SPC	.182	.136	.071	.079	.250	.217	.341**	.430**
SPSP	.045	-.007	-.042	.026	.167	.183	.303*	.355**
SPMS	.112	.232	.185	.086	.346**	.309*	.339**	.502**
EAPS	.235	.132	.187	.141	.126	.235	.180	.189
EAS	.229	.143	.198	.122	.104	.169	.133	.136
EAE	.307*	.285*	.253	.152	.129	.194	.073	.147
**correlation is significant at the 0.01 level (2-tailed)								
*correlation is significant at the 0.05 level (2-tailed)								

Note:

General Factors Items: GR= Government regulation, TC = Tariff classification, TI = Transport issue, II = Insurance issue, BI = Bank issue, FI = Freight issue, ERI = Exchange Rate issue, PT = Payment Terms

Company Performances Items: FPWP = Financial Performances were profitable, FPHVS = Financial Performances generated a high volume of sales, FPGR = Financial Performances grew rapidly, SPC = Strategic Performance increase our competitiveness, SPSP = Strategic Performance reinforce our strategic position, SPMS = Strategic Performance increase our market share, EAPS = Export activities have proved satisfactory, EAS = Export activities has been successful, EAE = Export activities have satisfied our expectation

Correlation analysis is performed between the general factors and company performance and the results showed as above.

Firstly, for the financial performance in export performance showed that there are significant relationships with the general factors, where the highest correlated value is  $r=0.45$  significant at  $p<0.01$ , which is between the financial performance were profitable when consider the general factors of government issues.

Secondly, the strategic performance showed that most of the result has no significant relationships with the general factors. However, the highest correlated value which is  $r=0.50$  significant at  $p<0.01$ , showed that there are significant relationships between the strategic performance increase our market share and payment terms.

Thirdly, the export performance showed that there is no significant relationship with the general factors which the highest correlated value is only  $r=0.307$  significant at  $p<0.05$ , which is between the export activities have satisfied our expectations and the general factors of government regulations.

Table 4.10: Correlation Coefficient of Factors and Company Performances

Spearman Correlation	FPWP	FPHV S	FPGR	SPC	SPSP	SPMS	EAPS	EAS	EAE
EX	.375**	.267*	.436**	.121	.025	.186	.122	.117	.201
SV	.224	0.90	.130	.327*	.331**	.403**	.195	.156	.076
HPO	.277*	0.16	.276*	.107	.009	.133	.116	.145	.164

FRO	.185	0.87	.245	.131	.152	.214	.241	.218	.224
CNP	.384**	.274*	.447**	.324*	.247	.288*	.272*	.307*	.408*
MT	.371**	.274*	.342**	.085	.020	.127	.243	.230	.132
CC	.322*	.211	.430*	.226	.168	.191	.273*	.339**	.258*
CR	.162	.223	.284*	.301*	.339*	.276*	.307*	.347**	.111
CI	.175	0.111	.300*	.388**	.377**	.397**	.263*	.278*	.220
RDC	.420**	0.38	.448*	.252	.217	.160	.298*	.374**	.235
EF	.309*	0.313*	.302*	.395**	.276*	.216	.243	.245	.227
PCI	.301*	0.175	.388**	.345**	.247	.252	.294*	.352**	.420*
CD	.403**	0.221	.441**	.315*	.296*	.270*	.413**	.412**	.297*
TC	.231	0.316*	.296*	.383*	.387**	.362**	.240	.225	.113
REC	.356**	0.12	.395**	.261*	.188	.160	.161	.216	.235
IAI	.264*	0.21	.273*	.401**	.353**	.336**	.261*	.246	.262*
FUI	.233	0.145	.229	.372**	.286*	.334**	.188	.171	.191
KI	.338**	0.145	.327*	.254*	.122	.198	.192	.179	.178
CIWSP	.327*	0.150	.203	.289*	.146	.178	.301*	.286*	.254*
**correlation is significant at the 0.01 level (2-tailed)									
*correlation is significant at the 0.05 level (2-tailed)									

Note:

Company Performances Items: FPWP = Financial Performances were profitable, FPHVS = Financial Performances generated a high volume of sales, FPGR = Financial Performances grew rapidly, SPC = Strategic Performance increase our competitiveness, SPSP = Strategic Performance reinforce our strategic position, SPMS = Strategic Performance increase our market share, EAPS = Export activities have proved satisfactory, EAS = Export activities has been successful, EAE = Export activities have satisfied our expectation

Factors Items: EX = Experience, SV = Shipment value, HPO = Habits and practices of the organization, FRO = Financial resources of the organization, CNP = Client negotiating power, MT = Mode of Transportation, CC = Client's characteristics, CR = Country Risk, CI = Competitive Intensity, RDC = Regulations of destinations country, EF = Environmental Factors, PCI = Process to claim for the insurance, CD = Complexity of documentation, TC = Time Constraint, REC = Regulations of exporting country, IAI = Importance accorded to Incoterms, FUI = Frequent Used Incoterms, KI = Knowledge about Incoterms, CIWSP = Choose own Incoterms without through service providers

Correlation analysis between the factors and company performance are shown as above. For the financial performance, there are significant relationships. The highest correlated value is between financial performance grew rapidly and factor of regulation of the destination country, where  $r=0.45$  which is significant at  $p<0.01$  showed that there are a significant relationship between them. While other significant relationship is with client negotiating power where  $r=0.45$  and  $p<0.01$ . While there have no significant relationships between strategic performance and company performances with the factors that have considered when choosing Incoterms.

Table 4.11: Correlation Coefficient of all Factors and Performances

Spearman Correlation	Factors
Performances	.476**
**correlation is significant at the 0.01 level (2-tailed)	



All the factors are transformed and combined, correlation analysis between all the factors and performances are shown as above. In conclusion, there are significant relationship between factors and performances.

Table 4.12: Correlation Coefficient of Incoterms Choice and Company Performances

Spearm an Correlation	EXW	FCA	CPT	CI P	DA T	DAP	DDP	FAS	FOB	CFR	CIF
FP WP	.255*	.161	.243	.287*	.143	.059	.093	.193	.310*	.170	.163
FPH VS	.259*	.282*	.136	.167	.002	.137	.060	.083	.350**	.241	.160
FPG R	.294*	.335**	.328*	.367*	.055	.135	.240	.155	.327*	.308*	.202
SPC	.292*	.326*	.208	.308*	.293*	.316*	.259*	.209	.092	-.006	-.090
SPS P	.136	.245	.048	.161	.204	.202	-.003	.128	.094	-.051	-.059
SP MS	.084	.197	.038	.135	.148	.171	.124	.068	.097	.146	.216
EAP S	.143	.326*	.231	.339*	.234	.208	.150	.306*	.231	.059	.126
EAS	.154	.321*	.207	.344*	.231	.179	.145	.217	.180	.058	.114
EA E	.315*	.329*	.245	.347*	.180	.228	.228	.189	.191	.065	.051
**correlation is significant at the 0.01 level (2-tailed)											
*correlation is significant at the 0.05 level (2-tailed)											

Note:

Company Performances Items: FPWP = Financial Performances were profitable, FPHVS = Financial Performances generated a high volume of sales, FPGR = Financial Performances grew rapidly, SPC = Strategic Performance increase our competitiveness, SPSP = Strategic Performance reinforce our strategic position, SPMS = Strategic Performance increase our market share, EAPS = Export activities have proved satisfactory, EAS = Export activities has been successful, EAE = Export activities have satisfied our expectation

As shown in Table 4.12, there are no significant relationships between the Incoterms Choices and the company performances.

The correlation analysis between general factors and Incoterm choices are shown as belows of Table 4.13.

Table 4.13: Correlation Coefficient of all Performances and Incoterms

Spearman Correlation	Performances
Incoterms	.382**
**correlation is significant at the 0.01 level (2-tailed)	

Correlation analysis between all the performances and Incoterms are shown as above. In conclusion, there are no significant relationship between performances and Incoterms.

Table 4.14: Correlation Coefficient of General Factors and Incoterms Choice

Spearman Correlation	EXW	FCA	CPT	CIP	DAT	DAP	DDP	FAS	FOB	CFR	CIF
GR	.571	.215	.445	.42	.081	-.016	.441	.198	.454	.405	.403

	**		**	8**			**		**	**	**
TC	.592 **	.105	.362 **	.349 **	.008	-.072	.380 **	.047	.427 **	.434 **	.448 **
TI	.470 **	.100	.358 **	.386 **	.089	.102	.414 **	.022	.397 **	.445 **	.659 **
II	.134	.012	.260 *	.351 **	.151	.127	.230	.142	.237	.363 **	.332 **
BI	-.043	.135	.183	.244	.261 *	.248	.180	.273 *	.093	.222	.065
FI	.131	.100	.284 *	.361 **	.034	.119	.303 *	.032	.418 **	.452 **	.531 **
ERI	-.089	.104	.125	.241	.336 **	.140	.080	.287 *	.028	.171	.058
PT	.076	.157	.187	.257 *	.140	.142	.098	.166	.164	.392 **	.304 *
**correlation is significant at the 0.01 level (2-tailed)											
*correlation is significant at the 0.05 level (2-tailed)											

Note:

General Factors Items: GR= Government regulation, TC = Tariff classification, TI = Transport issue, II = Insurance issue, BI = Bank issue, FI = Freight issue, ERI = Exchange Rate issue, PT = Payment Terms

There are strong correlated relationship for Incoterm EXW, with general factors of government relationship  $r=0.57$ , tariff classification  $r=0.59$  and transport issues  $r=0.47$  with both significant at  $p<0.01$ .

There is a significant relationship between delivery terms CPT with government regulations where  $r=0.45$  and  $p<0.01$ , and delivery terms FOB ( $r=0.45$ ,  $p<0.01$ ). Beside that, Incoterm CFR with transport issues ( $r=0.45$  and  $p<0.01$ ) and freight issues ( $r=0.45$  and  $p<0.01$ ) shows a significant relationship as well. In addition, there is a significant relationship between delivery terms CIF with transport issue ( $r=0.66$ ,  $p<0.01$ ), freight issue ( $r=0.53$ ,  $p<0.01$ ) and tariff classification ( $r=0.45$ ,  $p<0.01$ ).

There are no significant relationship in delivery terms of FCA, CIP, DAT, DAP, DDP, FAS with general factors.

Table 4.15: Correlation Coefficient of Factors and Incoterms Choice

Spearman Correlation	EXW	FCA	CPT	CIP	DAT	DAP	DDP	FAS	FOB	CFR	CIF
EX	.406**	.104	.466**	.458**	-.061	-.120	.351**	.066	.398**	.567**	.491**
SV	-.032	.045	.232	.310*	.227	.205	.134	.288*	.084	.416**	.211
HPO	.416**	.151	.231	.316*	-.034	0.42	.431**	.047	.501**	.593**	.602**
FRO	.199	-.106	.168	.247	.003	-.046	.283*	.071	.283*	.292*	.260*
CNP	.573**	.234	.343**	.353**	.101	.051	.397**	.035	.374**	.244	.294
MT	.289*	.047	.381**	.395**	.024	-.029	.359	.090	.374	.374	.514**
CC	.371**	.349**	.322*	.461**	.285*	.235	.444**	.229	.427**	.388**	.483**
CR	.175	.369**	.186	.294*	.431**	.292*	.308*	.354**	.168	.126	.213
CI	.135	.262*	.372**	.452**	.431**	.308*	.325*	.437**	.107	.188	.028
RDC	.261*	.308*	.272*	.399**	.242	-.010	.279*	.221	.420**	.358**	.407**
EF	.236	.252	.466**	.538**	.351**	.182	.408**	.453**	.038	.197	.066
PCI	.341**	.317*	.531	.620**	.288*	.184	.497**	.401*	.193	.373**	.200
CD	.206	.247	.465**	.584**	.307*	.195	.406**	.384**	.328*	.379**	.334**
TC	.035	.224	.385**	.460**	.424**	.360**	.309*	.435**	.231	.187	.131
REC	.447**	.273*	.265*	.348**	.206	.002	.348**	.184	.436**	.425**	.422**
IAI	.022	.344**	.266*	.374**	.566**	.514**	.279*	.472**	.114	.065	.097
FUI	.090	.377**	.258*	.372**	.360**	.431**	.315*	.395**	.160	.260*	.241
KI	-.007	.321	.405	.452	.322	.309	.292	.435	.269	.263	.319

		*	**	**	*	*	*	**	*	*	*
CIWS P	.046	.363 **	.550 **	.597 **	.484 **	.328 *	.323 *	.571 **	.046	.170	.002
**correlation is significant at the 0.01 level (2-tailed)											
*correlation is significant at the 0.05 level (2-tailed)											

Note:

Factors Items: EX = Experience, SV = Shipment value, HPO = Habits and practices of the organization, FRO = Financial resources of the organization, CNP = Client negotiating power, MT = Mode of Transportation, CC = Client's characteristics, CR = Country Risk, CI = Competitive Intensity, RDC = Regulations of destinations country, EF = Environmental Factors, PCI = Process to claim for the insurance, CD = Complexity of documentation, TC = Time Constraint, REC = Regulations of exporting country, IAI = Importance accorded to Incoterms, FUI = Frequent Used Incoterms, KI = Knowledge about Incoterms, CIWSP = Choose own Incoterms without through service providers

The correlation analysis between factors and the eleven Incoterm choices are shown as above Table 4.15.

For the terms of delivery, EXW has a significant relationship with the factors of client negotiation power, where  $r=0.57$  and  $p<0.01$  and the regulations of exporting country, where  $r=0.45$  and  $p<0.01$ . As for CPT terms has a strong relationship with environmental factors ( $r=0.47$ ,  $p<0.01$ ), factor of process to claim the insurance ( $r=0.53$ ,  $p<0.01$ ), complexity of documentation ( $r=0.47$ ,  $p<0.01$ ) and choose own Incoterms without through service providers factors ( $r=0.55$  and  $p<0.01$ ).

For the terms CIP has a significant relationship with factors of experience ( $r=0.46$ ), client's characteristics ( $r=0.46$ ), competitive intensity ( $r=0.45$ ),

environment factors ( $r=0.54$ ), process to claim for the insurance ( $r=0.62$ ), complexity of documentation ( $r=0.58$ ), time constrain ( $r=0.46$ ) and knowledge about Incoterms ( $r=0.45$ ) and choose own Incoterms without through service providers ( $r=0.6$ ) with  $p<0.01$ .

Another significant relationship is between DAT terms and factors of importance accorded to Incoterms ( $r=0.57$ ) and choose own Incoterms without through service providers factors ( $r=0.48$ ) at  $p<0.01$ .

There are significant relationship of  $r=0.51$  at  $p=0.01$  between DAP and factors of importance accorded to Incoterms. Besides that, there are significant relationship between FAS and environmental factors which is  $r=0.45$ , the importance accorded to Incoterms ( $r=0.47$ ) and choose own Incoterms without through service providers factors ( $r=0.57$ ) at  $p<0.01$ . Another significant relationship between delivery terms of FOB and practices of the organization ( $r=0.50$ ) at  $p=0.01$ .

Delivery terms of CFR show a significant relationship with factors of experience ( $r=0.57$ ) and the habits and practices of the organization ( $r=0.59$ ) at  $p=0.01$ . As for CIF terms shows a significant relationship with experience ( $r=0.49$ ), habits and practices of the organization ( $r=0.60$ ), mode of transportation ( $r=0.51$ ) and client's characteristics ( $r=0.48$ ) at  $p<0.01$ .

There is no significant relationship in delivery terms of the FCA, DDP with factors that considered by respondents when choosing Incoterms.

Table 4.16: Correlation Coefficient of all Factors and Incoterms

Spearman Correlation	Factors
Incoterms	.607**
**correlation is significant at the 0.01 level (2-tailed)	

Relationship between all the factors and Incoterms are significant with the results of 0.607, which is a strong relationship.

#### 4.4 Hypothesis Testing Results

Table 4.17: Sub-Hypothesis Testing Results

Hypothesis		Results
H1a-a-a	Companies that take the government regulation into consideration will influence the Incoterms selection to be EXW.	Accepted
H1a-a-c	Companies that take the government regulation into consideration will influence the Incoterms selection to be CPT.	Accepted
H1a-a-i	Companies that take the government regulation into consideration will influence the Incoterms selection to be FOB.	Accepted
H1a-b-a	Companies that take the tariff classification into consideration will influence the Incoterms selection to be EXW.	Accepted
H1a-b-d	Companies that take the tariff classification into consideration will influence the Incoterms selection to be CIP.	Accepted
H1a-b-k	Companies that take the tariff classification into consideration will influence the Incoterms selection to be CIF.	Accepted
H1a-c-a	Companies that take the transport issue into consideration will influence the Incoterms selection to be EXW.	Accepted
H1a-c-j	Companies that take the transport issue into consideration will influence the Incoterms selection to be CFR.	Accepted

H1a-c-k	Companies that take the transport issue into consideration will influence the Incoterms selection to be CIF.	Accepted
H1a-f-j	Companies that take the freight issue into consideration will influence the Incoterms selection to be CFR.	Accepted
H1a-f-k	Companies that take the freight issue into consideration will influence the Incoterms selection to be CIF.	Accepted
H1b-a-c	Companies that take the experience into consideration will influence the Incoterms selection to be CPT.	Accepted
H1b-a-d	Companies that take the experience into consideration will influence the Incoterms selection to be CIP.	Accepted
H1b-a-j	Companies that take the experience into consideration will influence the Incoterms selection to be CFR.	Accepted
H1b-a-k	Companies that take the experience into consideration will influence the Incoterms selection to be CIF.	Accepted
H1b-c-i	Companies that take the habits and practices of the organization into consideration will influence the Incoterms selection to be FOB.	Accepted
H1b-c-j	Companies that take the habits and practices of the organization into consideration will influence the Incoterms selection to be CFR.	Accepted
H1b-c-k	Companies that take the habits and practices of the organization into consideration will influence the Incoterms selection to be CIF.	Accepted
H1b-e-a	Companies that take the client negotiating power into consideration will influence the Incoterms selection to be EXW.	Accepted
H1b-f-k	Companies that take the mode of transportation into consideration will influence the Incoterms selection to be CIF.	Accepted
H1b-g-d	Companies that take the client's characteristics into consideration will influence the Incoterms selection to be CIP.	Accepted
H1b-g-k	Companies that take the client's characteristics into consideration will influence the Incoterms selection to be CIF.	Accepted
H1b-i-d	Companies that take the competitive intensity into consideration will influence the Incoterms selection to be CIP.	Accepted
H1b-k-c	Companies that take the environmental factors into consideration will influence the Incoterms selection to be CPT.	Accepted
H1b-k-d	Companies that take the environmental factors into consideration will influence the Incoterms selection to be CIP.	Accepted
H1b-k-h	Companies that take the environmental factors into	Accepted



	consideration will influence the Incoterms selection to be FAS.	
H1b-l-c	Companies that take the process to claim for the insurance into consideration will influence the Incoterms selection to be CPT.	Accepted
H1b-l-d	Companies that take the process to claim for the insurance into consideration will influence the Incoterms selection to be CIP.	Accepted
H1b-m-c	Companies that take the complexity of documentation into consideration will influence the Incoterms selection to be CPT.	Accepted
H1b-m-d	Companies that take the complexity of documentation into consideration will influence the Incoterms selection to be CIP.	Accepted
H1b-p-f	Companies that take the importance accorded to Incoterms into consideration will influence the Incoterms selection to be DAP.	Accepted
H1b-s-h	Companies that take the factors of choose own incoterms without through service providers into consideration will influence the Incoterms selection to be FAS.	Accepted
H1b-o-a	Companies that take the regulations of exporting country into consideration will influence the Incoterms selection to be EXW.	Accepted
H1b-p-e	Companies that take the importance accorded to Incoterms into consideration will influence the Incoterms selection to be DAT.	Accepted
H1b-p-h	Companies that take the importance accorded to Incoterms into consideration will influence the Incoterms selection to be FAS.	Accepted
H1b-r-d	Companies that take the knowledge about Incoterms into consideration will influence the Incoterms selection to be CIP.	Accepted
H1b-s-c	Companies that take the factors of choose own incoterms without through service providers into consideration will influence the Incoterms selection to be CPT.	Accepted
H1b-s-d	Companies that take the factors of choose own incoterms without through service providers into consideration will influence the Incoterms selection to be CIP.	Accepted
H1b-s-e	Companies that take the factors of choose own incoterms without through service providers into consideration will influence the Incoterms selection to be DAT.	Accepted
H2a-a-ai	Companies that take the government regulation into	Accepted

	consideration to choose the Incoterms, financial performance were profitable.	
H2b-e-aiii	Companies that take the client negotiating power into consideration to choose the Incoterms, financial performance grew rapidly.	Accepted
H2a-h-biii	Companies that take the payment term into consideration to choose the Incoterms, strategic performance increase our market share.	Accepted
H2b-j-aiii	Companies that take the regulations of destination country into consideration to choose the Incoterms, financial performance grew rapidly.	Accepted

Refer the above Table 4.17 showed that the results of the hypothesis that have been proposed in Chapter Two.

Table 4.18: Main Hypothesis Results

	<b>Hypothesis</b>	<b>Results</b>
H1	Companies that take the factors into consideration will influence the Incoterms selection.	Accepted
H2	Companies that take the factors into consideration to choose the Incoterms have a better export performance.	Accepted
H3	Incoterms that selected by the companies will influence the export performance.	Rejected

Refer to the results of correlation analysis showed that the hypothesis of H1 is accepted. All the factors have significant relationships with Incoterms except insurance issue, bank issue, exchange rate issue, payment terms, the financial resources of the organization, client's characteristics, competitive intensity, regulations of the destination country and frequent used Incoterms.

As for hypothesis H2, results has been accepted. According to hypothesis results of Hien et al. (2009), the factors of frequent used Incoterms, knowledge about Incoterms, Importance accorded Incoterms and respondents choose own Incoterms

have significant correlation with the export performance, however, based on this research, there are no significant relationships. In this study, the factors of government issues, payment term, client negotiating power and regulations in destination country have significant relationships with export performance.

There is only a factor of habits and practices of the organization showed that no significant relationship with Incoterms if according to hypothesis results of Hien et al. (2009). However, for hypothesis H3 in this research are being rejected means there are no significant relationships between the Incoterms and export performance.

#### 4.5 Summary

From the viewpoint of the respondents which is an Incoterms user, there are different factors that are influencing them to choose for the Incoterms. Reliable measures have been used and developed to identify the factors proposed and to investigate the performance of the company relating to the Incoterms chosen. However, based on the results that are obtained, those choices will directly affect their company or export performance.

Table 4.19: Incoterm Choice among Manufacturers

Incoterms choice	Mean
------------------	------

FOB (Free On Board)	3.88
CIF (Cost Insurance and Freight)	3.82
CFR (Cost and Freight)	3.65
EXW (Ex Works)	3.27
DDP (Delivered Duty Paid)	2.62
CIP (Carriage and Insurance Paid To)	2.32
DAP (Delivered at Place)	2.27
CPT (Carriage Paid To)	2.15
FCA (Free Carrier)	2.02
DAT(Delivered at Terminal )	1.75
FAS(Free Alongside Ship)	1.55

With the table shown as above, FOB with the average data of 3.88 which is the highest value indicated that FOB have been chosen most frequently by the respondents among manufacturers in Malaysia, following with the average data of CIF which is 3.82 while the lowest average data of 1.55 which is the FAS showed that this is delivery terms have been seldom chosen or never chosen by the Incoterm users.



**UUM**  
Universiti Utara Malaysia

Table 4.20: General Factors that Influence Respondents in Choosing the Incoterms 2010.

General Factors	Mean
Freight issue	3.62
Transport issue	3.53
Tariff classification	3.42
Government regulation	3.30
Payment Terms	3.27
Insurance issue	3.15
Exchange Rate issue	2.92
Bank issue	2.73

Table 4.21: Factors that Influence Respondents in Choosing the Incoterms 2010

Selection Factors	Mean
-------------------	------

Mode of Transportation	3.62
Habits and practices of the organization	3.57
Experience	3.50
Regulations of destinations country	3.42
Client negotiation power	3.27
Client's characteristics	3.25
Regulations of exporting country	3.23
Financial resources of the organization	3.20
Shipment value	3.15
Complexity of documentation	3.05
Knowledge about Incoterms	2.98
Country Risk	2.97
Time Constraint	2.95
Frequent Used Incoterms	2.93
Process to claim for the insurance	2.80
Importance accorded to Incoterms	2.72
Competitive Intensity	2.68
Environmental Factors	2.67
Choose own Incoterms without through service providers	2.55

From the table of 4.21, average data of 3.62 showed that the freight issue is the common issue that Incoterms users will considered of when select the Incoterms, while a data value of 2.73 showed that the bank issue is an uncommon issue that respondents will be considered of.

Mode of transportation with the highest average value of 3.62 showed that majority respondents considered this factor as their top priority when select Incoterms. Mean of 3.57 is the second highest showed that most of the respondents will choose Incoterms based on the customary practice in the company. The third highest is Incoterms users select Incoterms based on their experience with having the average value of 3.5. However, choose own Incoterms without through service

providers is the least considered factor when choosing Incoterms with the lowest average value of 2.55.



## CHAPTER 5

### CONCLUSION AND RECOMMENDATIONS

#### 5.0 Introduction

In this chapter will provide conclusions for this study. Apart from that, limitation of the study will be discussed and recommendations will be included for the purpose of future study.

#### 5.1 Conclusion

The primary objective of this research is to study the relationship of factors influencing Incoterms user and lead to their export performance. There are many factors driven the Incoterms user to choose the Incoterms that are more effective, able to remain their profit, consistently meet the lead times and optimizing their costs.

Refer the objectives in Chapter One as below:

1. To determine the most frequently used Incoterms among manufacturers in Malaysia.
2. To identify the factors that influence the Incoterms selection.
3. To examine the relationship between the selection factor, Incoterms choice and the export performance.

For objectives one if refer to the Table 4.16, FOB with the average data of 3.88 which is the highest value indicated that FOB have been chosen most frequently by the respondents among manufacturers in Malaysia.

For objectives two, with referring the table of 4.17, data showed that the freight issue is the common issue that Incoterms users will considered of when select the Incoterms, and the factor of mode of transportation showed that majority respondents considered this factor as their top priority when select Incoterms.

As for objective three, respondents by considering the factors while selecting the Incoterms, it will have an impact on company performance, which are financial performance, strategic performance, satisfaction of respondents on export activities. Based on the results obtained in Chapter Four, there are significant relationships between factors with Incoterms selection and export performance, but there is no significant relationship on export performance. There is a low relationships between them, it might due the root cause that respondents choose for the Incoterms is by considering the factors thus have an impact on the export performance but is not through Incoterms itself.

To date, there are limited studies related to environmental factors affecting Incoterms selection and export performance. There are multiple factors have been added in this study and proposed with a new and modified framework based on the previous study as to measuring export performance. The Incoterms that have been selected, it has direct or immediate effect on the export performance.

Moreover, the construct that have been tested as a reliable and valid measure



can serve as a foundation for future research. A validate and reliable measures will yield useful and valuable information for the trader to construct and improve their strategies when selecting the Incoterms and while negotiating with their customers.

Even though it might be problematic when applying the Incoterms due to the underlying pitfalls in the Incoterms, however, it is undeniable that it is also provides a better protection and greater bird-eye view for the traders to choose the appropriate terms which are more suitable and close to their situation.

## **5.2 Limitation and Future Research Direction**

Limitations of this research are this study founded with the majority of the exporters and importers among the manufacturer are considered and participated in this research. Other high level service providers and traders should be considered as well, such as the third party logistics and fourth party logistics. Customer and stakeholder perspective can be considered on the export performance. As different position even within the same company might have different point of views. Those findings on this research may provide another researcher with a different starting point and different setting on the variables to start for the research and examine their impact on the export performance.

It is recommended that this research to conduct overseas in countries which are not familiar using Incoterms such as Canada and other overseas countries which are more sophisticated Incoterms users than us to gather useful information. The possibility of cultural differences, geographical differences, legal circumstances

when conducts an overseas research, can lead to investigate the similarities and differences across the countries and cultures. Each country may have different and similar factors that affecting their choices when selecting the Incoterms.

There are still have potential and unobservable factors or variables that can be added in the framework and in this study such as some of the intangible units, the moods of the users when selecting the Incoterms. Human beings are unlike machine that can follow mechanism and repeatedly doing work flawlessly. They might be affected by their mood and situation when selecting the Incoterms. Different moods might have a different outcome, and this will have an impact on their export performance. Furthermore, there is a need for taking into consideration that impact of export performance might involve different possibilities and examining the relationships between those factors.

This present research is limited to using questionnaire as the main tools. In-depth study and interview should can be considered as research tools as well to avoid bias and misunderstanding when respondents answer for the questionnaires.

## REFERENCES

- Andersson, A. (2010). Incoterms 2010: An Essential Revision or a Pointless Custom? *Jonkoping International Business School*. Retrieved from <http://project.mmanagement6.com/download.php?id=11404>
- Bergami, R. (2006). The Link between Incoterms 2000 and Letter of Credit Document ation Requirement and Payment Risk. *School of Economics, Institute for Log istics and Supply Chain Management*.
- Bergami, R. (2012). Incoterms 2010: The Newest Revision of Delivery Terms. *Acia Univ. Bohem. Merid.* 15 (2), 33-40, ISSN: 1212-3285.
- Caruntu, C. & Lapadusi, M.L. (2010). Complex Issues regarding the Role and Importance of Internationally Codified Rules and Incoterms. *Economic Sciences Series, Vol I.XII No. 1/2010*.
- David, P. & Stewart, R. (2010). International Logistics: The Management of International Trade Operations (Third Edition). *Cengage Learning*.
- Dugan, S. & Talmaciu, I. (2012). Influence of the Changes Brought by Incoterms 2010 to International Trade. *“Ovidius” University Annals, Econo mic Sciences Series, Volume XII, Issue 1/2012*.
- Federation of Malaysian Manufacturers. (2013). Malaysian Industries 44<sup>th</sup> Edition: Globally Competitive Companies World-Class Products & Services. Federation of Malaysian Manufacturer, Malaysia.
- Fogarty, M. (2006). The Handbook of Logistics and Distribution Management. *Logistics & Transport Focus*, 8(10), 65.
- Gingerich, E.F.R. (2013). *Drafting the International Commerce Agreement*. Proceedings of 8th Annual London Business Research Conference Imperial College, London, UK, 8-9 July, 2013, ISBNL 978-1-922069-28-3.
- Hemmings, R. (2005). Is the Ship’s Rail Really Significant? *Nordic Journal of Commercial Law*, issue 2005 #2.
- Hien, N. & Laporte, G. & Roy, J. (2009). Business Environments Factors, Incoterms Selection and Export Performance. *Operations and Supp ly Chain Management*. Vol. 2, No. 2, May 2009, pp. 63-78. ISSN 1979-3561 | EISSN 1979-3871

- International Chamber of Commerce. (2013). *Incoterms 2010 Q&A: Questions and expert ICC guidance on the Incoterms 2010 rules*. ICC Services, Paris.
- Jacquet, L. (2000). Connaitre et employer les Incoterms. In *Incoterms 2000: Tous les mecanismes, MOCI*. Hors serie. 50 pages. Paris.
- Lucia Paliu – Popa. (2012). Development of the International Trade in Terms of Incoterms 2010 Rules. *Annals of ‘Dunarea de Jos’ University of Galati fasci cle 1. Economics and Applied Informatics. Years XVIII – no 1/2012, ISSN: 1584-0409.*
- Maja Zaman. (2004). The Role of Financial and Non-Financial Evaluation Measures in the Process of Management Control Over Foreign Subsidiaries-Empirical Evidence in Slovene Multinational Companies. *Management, Vol.9, 2004,2,pp.53-73*
- Mentzer, J.T. et. al. (2001). Defining Supply Chain Management. *Journal of Business Logistics, Vol.22, No.2.*
- Porter, M.E. (1990). The Competitive Advantage of Nations. (cover story). *Havard Business Review, 68(2), 73-93.*
- Ramberg, J. (2008). CISG and Incoterms 2000: in Connection with International Commercial Transactions. *Sharing International Commercial Law across National Boundaries.*
- Sekaran, U. (2003). *Research Methods for Business: A Skill Building Approach (4<sup>th</sup> ed.)*. New Jersey: John Wiley and Sons.
- Supply Chain Consortium. (2011). International Shipping and Incoterms: What the New International Freight Shipping Terms Mean to You. Retrieved from [www.supplychainconsortium.com](http://www.supplychainconsortium.com).
- Transplace Highlights Changes to Incoterms and its Effect on International Shippers. (2010). *Press Release*. Retrieved from <http://www.logisticsmatter.com/2010/12/16/transplace-highlights-changes-to-incoterms-and-its-effect-on-international-shippers-2/>
- UNDP Practice Series. (2008). Shipping and Incoterms: Practice Guide. Retrieved from [http://log.logcluster.org/response/transport/LOG-2-3TRANS PORT-UNDP- Shipping-Guide.pdf](http://log.logcluster.org/response/transport/LOG-2-3TRANS%20PORT-UNDP-Shipping-Guide.pdf)
- Zikmund, W. G. & Babin, B. J. & Carr, J. C. & Griffin, M. (2013). *Business Research Methods (9<sup>th</sup> edition)*. South-Western Cengage Learning.

Zou, S. & Taylor, C. & Osland, G. (1998). The EXPERF Scale: A Cross-national Generalized Export Performance Measure. *Journal of International Marketing* 6, pp.37.58.

