FACTORS INFLUENCING THE CHOICE OF INCOTERMS AMONG MALAYSIAN MANUFACTURERS

Sabariah Yaakub
Othman Yeop Abdullah Graduate School of Business
Universiti Utara Malaysia
y.sabariah@uum.edu.my

Leong Ying Szu
International Business Graduate
Universiti Utara Malaysia
kathrynlys@gmail.com

ABSTRACT

The International Commercial Terms (Incoterms), introduced and governed by International Chamber of Commerce (ICC) are standard trade terms used in international and domestic sales contract. The latest version, INCOTERMS 2010 states the obligations and responsibilities of importers and exporters regarding transport costs and risks as well as the responsibilities for insurance and customs formalities. This paper seeks to find out the most frequently used Incoterms and examine the factors that influence the choice of Incoterms among Malaysian manufacturers. Data was collected using survey methods and then analysed using univariate (descriptive) analysis. A total of 335 questionnaires were distributed to manufacturers in Malaysia using a sampling framework from the Federation of Malaysian Manufacturers (FMM). Of the 335 questionnaires distributed, 60 were returned yielding a response rate of 17.9%. Findings indicate that FOB (Free On Board) were the most frequently used Incoterms and that the factors that influence choice of Incoterms can be divided into two types: external environments and internal factors. Among the external environment, the strongest influence are freight issue, transport issue and tariff classification. For the internal environment, the strongest influence comes from mode of transportation, habits and practices of the organization and experience of the company. The main contribution of this study is towards narrowing the gap in knowledge regarding Incoterms as past research indicated that it is still relatively unknown and should highlight Incoterms selection, among others.

Field of Research: International Trade Terms, Incoterms, Logistics, Manufacturing, Malaysia.

1. Introduction

Global supply chains, a natural phenomenon mostly caused by globalization, consists of a network of suppliers, manufacturers, distribution centres, retailers and customers where raw materials are acquired, transformed and delivered (OECD, 2002). Therefore, international trade rules and sharing of responsibilities among members of the supply chain are important factors and there is a need to understand how it works and this is where Incoterms plays a significant role (Hien et al, 2009).

Incoterms, internationally recognised, are standard trade terms used worldwide in international and domestic contracts for the sale of goods (International Chamber of Commerce, 2017). For international transportation, Incoterms are used to establish the respective responsibilities of the exporters and importers. The selection of Incoterms is often viewed as a difficult decision because of the general lack of knowledge on the subject and because the choice of appropriate Incoterms tends to
be considered as a constraint rather than as an opportunity to improve the efficiency of an international deal. Incoterms are not very well known by the different actors along the supply chain including shippers and carriers (Hien et al., 2009) and it gets more complex especially when the delivery term is used in a contract for the international sale of goods and when the buyer and seller have their places of business in different countries (Johnson, 2014).

The main objective of this paper is to determine the most frequently used Incoterms and examine the factors that influences the choice of Incoterms among Malaysian manufacturers. This study would enhance knowledge and understanding of Incoterms, a topic that has until now been the subject of very few scientific publications (Hien et al., 2009; Rosal, 2016). Despite their strategic importance, Incoterms have been largely ignored and were still relatively unknown (Gooley, 2000, Jacquet, 2000). This study should strengthen the theoretical foundations essential to development of research in this area.

2. Incoterms

“Incoterms” or International Commercial Terms refers to a group of rules introduced by the International Chamber of Commerce (ICC) to define the responsibilities and tasks of buyers and sellers precisely, in a codified language, in the context of international trade (Jimenez, 1998; Chevalier, 2000; Gooley, 2000; Jacquet, 2000 as cited in Hien et al., 2009). The documents used in international trade contain delivery terms such as: “EXW supplier’s factory, Cape Town”; “FOB port of shipment, Shanghai”; “CIF port of destination, Rotterdam”; “DDP buyer’s plant, Chicago”; and each is a trade term that consists of no more than a few words, often accompanied only by a reference to some location. “Yet in those few words there is contained a vast wealth of information regarding how the parties to the transaction intend to allocate significant risks and responsibilities between them in connection with shipment, transportation, and delivery of the goods” (Johnson, 2014). Furthermore, they define the point of transfer for cost and risk associated with a shipment (for review see Siro, 1993; Legrand & Martini, 1999; Chevalier, 2000; ICC, 2017).

Incoterms address three fundamental questions: 1) Which tasks will be performed by the importer and exporter? 2) Which activities will be paid by the importer and exporter? and 3) When the transfer of responsibility for the goods will take place (David and Stewart, 2010; Jimenez, 1998). Incoterms, therefore, essentially allow several elements to be precisely defined: the seller’s delivery obligations, the risk transfer from the seller to the buyer, the distribution of costs between the two parties, and the responsibility for the transportation documents Chevalier (2000).

According to Holley & Haynes (2003), knowledge and understanding of Incoterms is vital in international trade. In the international context, delivery terms is particularly valuable, where the parties will encounter additional barriers to trade due to language differences, logistical challenges, varying business practices, and different legal systems (Johnson, 2014). Due to their widespread use, Incoterms have become more and more important (Freudmann (1999) to reduce the uncertainty due to the high degree of heterogeneity in international commercial practices by creating a common frame of reference for the signatories (Gooley, 2000). Appropriate use of delivery terms is desirable because it is efficient and facilitates exchange, which is ultimately a fundamental purpose of contract (Johnson, 2014) and provide a particularly useful structure during the negotiation phase, in that they save time and they tend to clarify the respective responsibilities of the two parties (Siro, 1993).

3. Presentation of the Eleven Incoterms

The list of Incoterms, last revised in 2010, currently includes 11 terms (see Table 1), expressed as acronyms, which are two distinct classes: 1) rules for any mode or modes of transport and 2) rules for sea and inland waterway transport (ICC, 2017). They are also sometimes called departure and arrival
Incoterms (DeBattista, 1995; Jimenez, 1998; Legrand & Martini, 1999; Ramberg, 1999; Chevalier, 2000 as cited in Hien et al., 2009).

Table 1: Presentation of the Eleven Incoterms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Complete Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXW</td>
<td>Ex Works</td>
</tr>
<tr>
<td>FCA</td>
<td>Free Carrier</td>
</tr>
<tr>
<td>CPT</td>
<td>Carriage Paid To</td>
</tr>
<tr>
<td>CIP</td>
<td>Carriage and Insurance Paid To</td>
</tr>
<tr>
<td>DAT</td>
<td>Delivered at Terminal</td>
</tr>
<tr>
<td>DAP</td>
<td>Delivered at Place</td>
</tr>
<tr>
<td>DDP</td>
<td>Delivered Duty Paid</td>
</tr>
<tr>
<td>FAS</td>
<td>Free Alongside Ship</td>
</tr>
<tr>
<td>FOB</td>
<td>Free On Board</td>
</tr>
<tr>
<td>CFR</td>
<td>Cost and Freight</td>
</tr>
<tr>
<td>CIF</td>
<td>Cost Insurance and Freight</td>
</tr>
</tbody>
</table>

4. Business Environment Factors

With the aim to maximize their profits while minimizing uncertainty and risks related to an international transaction, firms will select Incoterms that will contribute to achieving these aims. In order to select the most appropriate Incoterm for a given export or import situation, a company must clearly understand the business environment factors that affect this decision (Hien et al., 2009). The business environment, is defined as the set of forces to which the company must respond (for review see Lawrence & Lorsch, 1967; Anderson & Paine, 1975) or as the set of factors that tend to influence an organization (Dill, 1958; Aharoni et al., 1978 as cited in Hien et al., 2009).

The study of business environment is conducted to identify the set of relevant environmental factors for a specific context. Several authors (e.g., Luffman, 1996; Lynch, 1997; and Walsh, 2005 as cited in Hien et al., 2009) have used the PESTEL method to analyze the Political, Economic, Social, Technological, Environmental/Ecological and Legal characteristics of the environment in which a company operates (Sanchez & Heen, 1997). In the context related to the business environment factors impacting on Incoterm choices, there was a dearth of knowledge and Hien et al., (2009) have examined the literature in a related domain, the market entrance mode choice, which is similar to the Incoterm choice, in that such characteristics as international context or market knowledge are important in both domains.

Legrand & Martini (1999) proposed that Incoterm choice is influenced by a certain number of factors which are quite similar to those taken into consideration when deciding how to penetrate a foreign market where several factors are regularly mentioned. For example, as cited in Hien et al., (2009) a number of authors including Sanjeev & Sridhar (1992), Brouthers (1995), Tsé et al. (1997), Pan & Tsé (2000), Osland et al. (2001) and Rasheed (2005), have considered the risk inherent to the destination country as a fundamental factor in choosing the entrance mode.

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Size, resources or negotiating power of the company, the degree of competitiveness and the regulatory measures of the target market, the product characteristics, or the company’s international experience
and knowledge of the target market are also other factors that have been mentioned in literature, for example, the review work of Erramilli (1992) (as cited in Hien et al., 2009) and Mayrhofer (2002) has led to a classification of environmental factors relevant to the entrance mode choice. In an older literature, Duncan (1972) has identified several environmental factors using 19 semi-structured interviews with individuals from various hierarchical levels. Based on Duncan’s study and Hien et al.’s review of the literature, this study have utilised the list of their environmental factors that should be considered when choosing Incoterms.

5. Methodology

5.1 Sample and data collection method

A quantitative methodology using a survey was conducted to collect data. This study’s survey was designed and sent out for the purpose of finding out what is going on with regards to factors that lead to the selection of Incoterms and its effect on export performance. The research population for this study was the manufacturing companies in Malaysia with exporting activities. The Federation of Malaysian Manufacturers (FMM) directory yielded a listing of 2517 manufacturers and a sample size of 335 manufacturers was chosen in accordance with the guideline provided by Sekaran (2003).

5.2 Instrumentation

The main research instrument used in this study was a questionnaire. The questionnaire, designed to fulfil the research’s focus on incoterm selection and its influencing business environment factors consists of sections dealing with Incoterms chosen when exporting and selection factors. The questionnaire went through pilot testing and was subsequently modified which was then used to collect data.

6. Finding & Discussion

6.1 Reliability analysis

The Cronbach’s alpha coefficient value for all variables in the study revealed a range of coefficient value from .84 to .89 accordingly. The Incoterm choice variable had a high reliability coefficient of .84 and the variable of business environment factors had coefficient values of .89.

6.2 Descriptive statistics & analysis

A total of 335 questionnaires were distributed to manufacturers in Malaysia using a sampling framework from the Federation of Malaysian Manufacturers (FMM). Of the 335 questionnaires distributed, 60 were returned yielding a response rate of 17.9%. The first objective of the study is to determine which of the eleven Incoterms were most frequently used by the Malaysian manufacturers. Table 2 presents the findings of Incoterm choice among the manufacturers.
Table 2: Incoterms Choice of Malaysian Manufacturers

<table>
<thead>
<tr>
<th>Incoterms choice</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free On board (FOB)</td>
<td>3.88</td>
</tr>
<tr>
<td>Cost Insurance and Freight (CIF)</td>
<td>3.82</td>
</tr>
<tr>
<td>Cost and Freight (CFR)</td>
<td>3.65</td>
</tr>
<tr>
<td>Ex Works (EXW)</td>
<td>3.27</td>
</tr>
<tr>
<td>Delivered Duty Paid (DDP)</td>
<td>2.62</td>
</tr>
<tr>
<td>Carriage and Insurance Paid To (CIP)</td>
<td>2.32</td>
</tr>
<tr>
<td>Delivered At Place (DAP)</td>
<td>2.27</td>
</tr>
<tr>
<td>Carriage Paid To (CPT)</td>
<td>2.15</td>
</tr>
<tr>
<td>Free Carrier (FCA)</td>
<td>2.02</td>
</tr>
<tr>
<td>Delivered At Terminal (DAT)</td>
<td>1.75</td>
</tr>
<tr>
<td>Free Alongside Ship (FAS)</td>
<td>1.55</td>
</tr>
</tbody>
</table>

The result seems to suggest that the most frequently used Incoterms is Free On Board (FOB) which is an Incoterm that can be used for sea and inland waterway transport mode only. In this Incoterm, the seller’s (exporter) responsibility is until the goods are placed on board of the vessel at the port of departure which includes arranging for transportation until the goods are placed on board the vessel as well as clearing the goods for export with the Customs. Further from this point (port of departure), buyer’s responsibilities starts which includes purchasing the insurance, paying for freight, Customs and port dues as well arranging for inland transportation to buyer’s place. Hien et al., (2009) reported a similar finding where managers (of the exporting company) seem to favour the Incoterms FOB rather than DDP because when D terms (for example DDP, DAP and DAT) is chosen, it increases headaches associated with having total responsibility for the shipment.

Interestingly, the next two most favourite Incoterms choice are of the C terms (CIF and CFR). CIF and CFR, all terms that can only be used for sea and inland waterways, requires that seller (exporter) arranges the transportation and insurance including clearing the goods with customs until port of destination, as opposed to FOB where it is only until port of departure. This would suggest that the seller does use Incoterms as a tool for their marketing strategy to attract buyer by giving buyer extra service until the goods reaches port of destination as suggested in international logistics texts (see for example David and Stewart (2010). It would also suggest that sellers are willing to shoulder a bit more responsibilities than an F term would require, but, not to a point where they would have shoulder total responsibility for the shipment with D terms.

The second objective of the study is to examine the factors that influences Incoterms choice. The findings were divided into two types of factors: external environment and internal factors. Table 3 presents the finding of external factors that influences Incoterms choice by the Malaysian manufacturers.
Table 3: External Factors that Influences Incoterms Choice

<table>
<thead>
<tr>
<th>External Factors</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight Issue</td>
<td>3.62</td>
</tr>
<tr>
<td>Transport Issue</td>
<td>3.53</td>
</tr>
<tr>
<td>Tariff Classification</td>
<td>3.42</td>
</tr>
<tr>
<td>Government Regulation</td>
<td>3.30</td>
</tr>
<tr>
<td>Payment Terms</td>
<td>3.27</td>
</tr>
<tr>
<td>Insurance Issue</td>
<td>3.15</td>
</tr>
<tr>
<td>Exchange Rate Issue</td>
<td>2.92</td>
</tr>
<tr>
<td>Bank Issue</td>
<td>2.73</td>
</tr>
</tbody>
</table>

The findings indicate that the most influencing external factors are those that concerns freight issues. According to Ramberg (2011), “an international trade transaction requires not only a contract of sale but also additional contracts. In the first place, the goods will have to be moved from the seller’s location to the location selected by the buyer. Therefore, it is necessary to arrange and pay for their transport. This means that three parties are now involved: the seller, the buyer and the carrier. This can lead to complications. One of the main purposes of the Incoterms rules is to define the different roles of the parties in relation to the contract of carriage.” This would largely explain why freight issue would be the main external factor that manufacturers would consider when choosing an Incoterm because the correct Incoterm would then spell the obligations to pay for freight for both the seller and the buyer. It would also help to explain the next two most influential which are transport issue and tariff classification.

The second type of factors are the internal factors. Table 4 presents the findings of internal factors that influences Incoterms choice.

Table 4: Internal Factors that Influences Incoterms Choice

<table>
<thead>
<tr>
<th>Internal Factors</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode of Transportation</td>
<td>3.62</td>
</tr>
<tr>
<td>Habits and Practices of the Organization</td>
<td>3.57</td>
</tr>
<tr>
<td>Experience</td>
<td>3.50</td>
</tr>
<tr>
<td>Regulations of destination Country</td>
<td>3.42</td>
</tr>
<tr>
<td>Client Negotiating Power</td>
<td>3.27</td>
</tr>
<tr>
<td>Client’s Characteristics</td>
<td>3.25</td>
</tr>
</tbody>
</table>
Findings indicate that the most influencing internal factor is mode of transportation. It would seem that mode of transportation would determine the Incoterms chosen. This is quite logical as the Incoterms that can be used are divided into certain mode of transportation (see again Table 1: Presentation of the Eleven Incoterms). Clearly, which mode of transportation chosen plays a role in the consideration of environmental factors when selecting Incoterms and this also has a significant effect on overall export performance. This particularity can be partially explained by the preferences of export managers, who seem to favour the Incoterms FOB which is an Incoterm that belongs to the sea and inland waterway transport category.

The next two most influencing factors are habits and practices of the organization and experience of the managers. According to Hien et al., (2009), taking international experience into account when selecting Incoterms affects export performance, not the experience in itself. In fact, in their study, they found no significant correlation appears to exist between a company’s export history and the consideration of environmental factors, indicating that what is important is not the number of years of export experience, but rather the act of taking this experience into account when selecting Incoterms. Thus, regardless of the number of years of export performance, taking this experience into account is a pertinent environmental factor that is positively correlated with export performance. Interestingly, this is also in line with Johanson and Vahlne’s (1977) (as cited in Styles et al., (2008)) early theory of internationalisation posit that “a firm began exporting process by forming relationships that will deliver ‘experiential knowledge’ about a market and then commit resources in accordance with the degree of experiential knowledge it progressively gains through these relationships.”
8. Conclusion and Future Recommendation

The objective of this study was to find out the most frequently used INCOTERMS and examine the factors that influence the choice of INCOTERMS among Malaysian manufacturers. We have shown that the most frequently chosen Incoterms was of the F term which is FOB and the subsequent two most chosen are among the C terms (CIF and CFR). An important element of decision making in the field of international transportation, the choice of Incoterms appears to be also a key factor in the success of export activities.

In addition, we have shown the importance of approaching Incoterm selection systematically, considering the entire set of pertinent environmental factors jointly. Business environment factors, which we divided into external and internal factors indicate that externally, freight issue is the main factor considered when choosing an Incoterm while internally, mode of transport is the most influential. This leads us to conclude that companies that consider transport related factors when selecting Incoterms thus making Incoterms themselves—and by extension, Incoterm choice—a fundamental part of company strategy.

Our research was limited by a certain number of elements which should be explained in order to judge the true value of our results and there were also several constraints related to our methodology. Although our use of the FMM database on a data that come only from Malaysia, whose registration process is strictly a voluntary one, does not seem to have led to any major complications.

Finally, it would be beneficial to compare other countries’ practices, analysing the differences in the use of this tool, while also verifying whether or not a correlation exists between Incoterm selection and export performance. Research into the different countries’ perceptions of the rules and their interpretation of the different Incoterms, examining the impact of culture on Incoterm selection, could also prove quite interesting. Studying the cultural aspects of the questions surrounding Incoterm use would also allow the texts of the International Chamber of Commerce to be improved by standardizing the understanding and application of these reference documents throughout the world.

Acknowledgement

Not Applicable.

References


