

**DETERMINANTS AND EFFECTS OF ELECTRONIC INTERMEDIARY USE
IN EXPORT MARKETING**

**By
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A dissertation submitted in partial fulfillment of
the requirements for the degree of

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To the Faculty of Washington State University:

The members of the Committee appointed to examine the dissertation of
HYUKSOO CHO find it satisfactory and recommend that it be accepted.

Chair

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DETERMINANTS AND EFFECTS OF ELECTRONIC INTERMEDIARY USE IN EXPORT MARKETING

Abstract

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With the development of electronic commerce, an alternative market intermediary called an electronic intermediary is emerging in international commerce. In export marketing, an electronic intermediary serves as a business-to-business (B2B) electronic marketplace, which allows trade parties achieve cost-efficient international trade. Previous studies have not paid adequate attention to the electronic intermediary. Instead, they have emphasized a direct Internet-based exchange, which was believed to decrease transaction costs. This dissertation suggests an electronic intermediary as a hybrid-exporting channel, combining a traditional intermediary and a direct Internet-based exchange. A direct Internet-based exchange is considered the most efficient exporting channel to reduce cost, but it involves high risk. A traditional intermediary may be an effective exporting channel to reduce risk, but it accompanies high cost such as commissions and agent fees. This dissertation suggests that an electronic intermediary is an alternative to balance between profit and risk. This dissertation examines determinants and effects of electronic intermediary use in export marketing. The results indicate that electronic intermediary use is influenced by some IT and marketing determinants. Electronic intermediary use also has a positive impact on export performance. Particularly, high entrepreneurial or low bureaucratic exporters may use an electronic intermediary more effectively in export marketing.

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CHAPTER ONE
INTRODUCTION
OVERVIEW

This dissertation investigates the use of an electronic intermediary in international commerce. Specifically, this dissertation aims to provide a comprehensive understanding of an electronic intermediary regarding the growth of electronic commerce in export marketing. An electronic intermediary is a typical form of electronic commerce. The popularity of electronic commerce allows market intermediaries to connect between manufacturers and customers around the world using advantage of a computer network's capacity to reduce transaction costs (Clark and Lee, 1999). As a result, electronic intermediaries are playing an important role in international commerce. This dissertation begins with an assessment of current electronic international commerce. Empirical studies were conducted to investigate determinants and effects of electronic intermediary use in export marketing. Small and medium exporters in the electronic industry were chosen in Korea and the U.S. to conduct those empirical studies. Primary users of export intermediaries are small and medium exporters; Korea and the U.S. are the world's leading exporters (Foreign Policy, 2003). Electronics is the biggest exporting industry in the U.S. and Korea. However, the U.S. is an industrialized, developed market, whereas Korea is a rapidly emerging market (Raymond et al., 2001). Export intermediaries have been successful in Korea, but not in the U.S. (Cho, 1987). Therefore, testing models used in from this dissertation with these two countries enabled us to assess their generalizability. In this chapter, the phenomenon of expanded electronic commerce in export marketing is described. The purpose, major research questions, and scope of study are then presented. Organization of the dissertation is also provided.

EXPANSION OF ELECTRONIC COMMERCE AND ITS EFFECTS ON EXPORT MARKETING

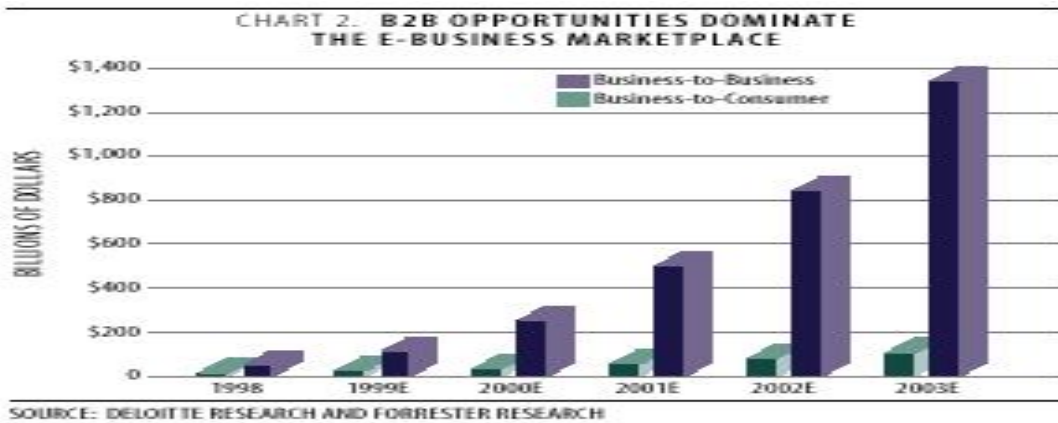
GROWTH OF ELECTRONIC COMMERCE

The growth of Internet users worldwide grows by 10 percent each month (Bartels, 2003). The Internet is often considered to be fundamentally changing the business paradigm (Prasad et al., 2001). In market transactions, the Internet has also become an important medium (Bailey and Bakos, 1997). A typical by-product of the Internet's development is electronic commerce, defined as "any transaction completed over a computer-mediated network that transfers ownership of, or rights to use, goods or services" (Atrostic et al., 2000, p. 2). Electronic commerce is a way of doing real-time business transactions via telecommunication networks, when the customer and the merchant are in different geographical places (Glossary of Telecommunication Terms, 1996). Also, electronic commerce is a commercial transaction with business partners, including buyers or sellers, over the net (Mahadevan, 2000). According to Palmer (1995), electronic commerce includes the support of markets, inter-firm coordination, and information exchange via electronic means. Electronic commerce is also a broad concept that includes virtual browsing of goods on sale, selection of goods to buy, and payment methods (Glossary of Telecommunication Terms, 1996).

Business-to-business electronic commerce via the Internet continues to grow (Bartels, 2003). According to the Boston Consulting Group, in a study conducted by Pastore (1999), one-fourth of all U.S. business-to-business purchasing could be done electronically. U.S. business-to-business electronic commerce will grow by 33 percent each year and reach \$2.8 trillion in transaction value between 1998 and 2003 (Pastore, 1999). Two major types of the electronic

commerce are Business-to-Business (B2B) and Business-to-Consumer (B2C). The figure below illustrates the rapid growth of electronic commerce in the U.S including B2B and B2C.

Figure 1.1 Sales amount of business-to-business and business-to-consumer



Source: Roddy (1999)

ELECTRONIC COMMERCE IN EXPORT MARKETING

Electronic commerce presents a wealth of opportunities to streamline international trade. Empirical data shows that the growth of electronic commerce has enlarged online exporting (Pastore, 1999). Zapf (2000) expects that global online exporting will reach US\$1.4 trillion in 2004. The table below illustrates the estimation of online exporting in the world for 2004. According to the empirical data, Western Europe, North America, and Asia-Pacific are expected to lead by \$692 billion, \$462 billion, and \$219 billion each in global online exports in 2004 (U.S. Department of Commerce, 2002; The Beacon Council, 2002; Paris, 2001).

Table 1.1 Estimated amount of world online exporting

<i>Region / Major country</i>	<i>Volume of online exporting (US \$ Billions)</i>
Western Europe / Germany	692 / 144
North America / U.S.	462 / 210
Asia-Pacific / Japan	219 / 57

Source: U.S. Department of Commerce (2002); The Beacon Council (2002); Paris (2001)

The ratio of electronic commerce used for exporting has continued to increase. Zapf (2000) predicted that 83 percent of electronic commerce in Canada, 53 percent of electronic commerce in the UK and Europe, 38 percent of electronic commerce in Asia and Pacific, and 10 percent of electronic commerce in the U.S. would be used for exports by 2003. In other words, electronic commerce has become an important medium for export marketing.

ELECTRONIC INTERMEDIARY IN EXPORT MARKETING

Despite little theoretical and empirical research, intermediaries have played a major role in export marketing (Trabold, 2002; Chalmin, 1987). Exporting is the most commonly used entry mode by small and medium-sized enterprises (SMEs) to enter the global market. However, SMEs typically lack the necessary resources to engage in a direct exporting. Intermediaries, connecting manufacturers of one country and customers of another country, have provided alternatives for SMEs to export (Lee and Danusutedjo, 2000). With the development of electronic commerce, an exporter could trade directly with foreign customers via online catalogs or Internet exchange at much lower transaction costs than incumbent distributors could match (Narayandas et al., 2002). With this expectation, many entrepreneurs deployed Internet-based businesses built on vendor-to-buyer auctions and catalog exchange, adopting a direct Internet-based exchange (Narayandas et al., 2002). If this argument had proved, intermediaries connecting between manufacturers and customers would have disappeared in electronic commerce. However, it is clear that something is wrong with the expectation. There are still various types of intermediaries, and they will not be easily displaced in electronic commerce. Moreover, an alternative market intermediary, called an electronic intermediary, is emerging in international electronic commerce.

There are diverse terms to refer to this relatively new form of export. “Cyber Trader,” “Virtual Exporter,” “E-Exporter,” and “Electronic Intermediary” are some names for the alternative market intermediary (Soon et al, 2002; Searing, 2001; Lee and Danusutedjo, 2000; Clark and Lee, 1999; Bailey and Bakos, 1997). Among these terms, “Electronic Intermediary” is the most frequently used. From the related literature, we define an electronic intermediary as an independent market intermediary serving as business-to-business (B2B) electronic marketplace in which qualified members simply post requests to buy or sell (Soon et al, 2002; Searing, 2001; Clark and Lee, 1999). Sales representatives of the electronic intermediary then search around the globe for companies to supply or purchase the posted products, matching between exporters and foreign customers (Clark and Lee, 1999). Previous literature has argued that as electronic commerce lowers the cost of market transactions, traditional roles for intermediaries will be eliminated (Bailey and Bakos, 1997). However, intermediaries are taking new roles in electronic commerce (Bailey and Bakos, 1997). An electronic intermediary increases efficiency for searching, bargaining, and monitoring in electronic commerce (Clark and Lee, 1999). As a consequence, trade parties may achieve cost-efficient market transactions via electronic intermediary use in export marketing.

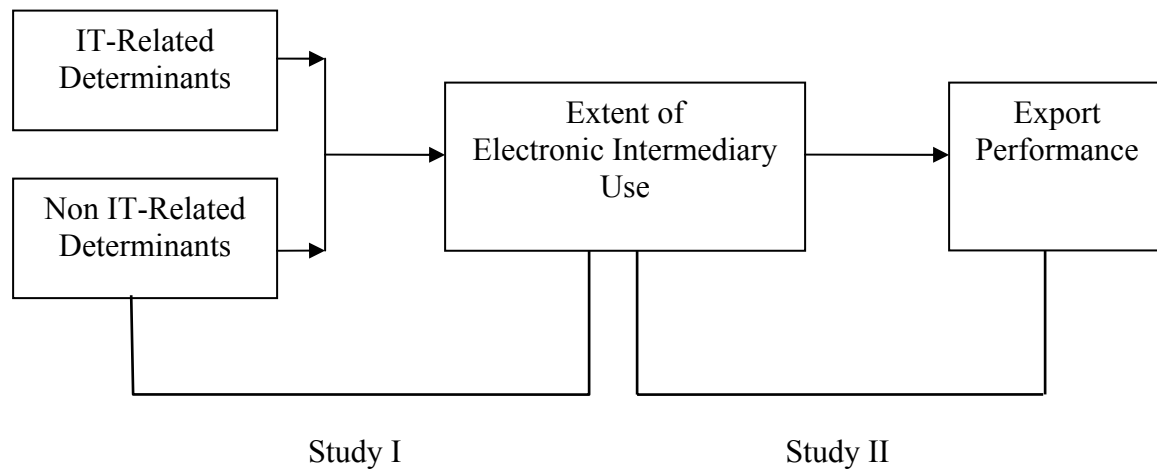
PURPOSE, MAJOR RESEARCH QUESTIONS, AND SCOPE OF STUDY

The emergence of an electronic intermediary is an outcome of the development of electronic commerce (Trabold, 2002; Chalmin, 1987). Considering its characteristics, an electronic intermediary is an appropriate market intermediary for small and medium exporters who lack the necessary knowledge and resources to engage in international commerce. This dissertation aims at better understanding an electronic intermediary in export marketing by

investigating determinants and effects of electronic intermediary use. Despite a short history, many exporters are using an electronic intermediary to penetrate the global market. The question then arises as to led them to use an electronic intermediary? Also, are exporters using an electronic intermediary better than those who don't? If so, why does this occur? To answer these questions, two empirical studies are conducted. The first empirical study investigated determinants of electronic intermediary use in export marketing from the resource-based view and transaction cost analysis (illustrated as Study I in Figure 1.2). The second empirical study investigated the relationships between electronic intermediary use and export performance from the transaction cost analysis (illustrated as Study II in Figure 1.3).

A fundamental motive for using an electronic intermediary is to reduce transaction costs, which is theorized from the transaction cost analysis. An electronic intermediary allows exporters to meet customer's need, increase customers' accessibility, and provide variety of their products or services, which correspond to the roles of a marketing strategy (Sarkar, Butler and Steinfield, 1995). According to the resource-based view, a marketing strategy is chosen depending on retained internal resources (Barney, 1991). The transaction cost analysis and resource-based view are thus appropriate theoretical backgrounds to explain determinants and effects of electronic intermediary use in export marketing. The figure below illustrates an overview of this dissertation.

Figure 1.2 Modeling electronic intermediary use in export marketing



ORGANIZATION OF THE DISSERTATION

This dissertation is organized as follows. Chapter One presents the general phenomenon of interest, purpose, research questions, scope of the study. Chapter Two discusses in detail the concept of an electronic intermediary in international commerce. Chapter Three empirically investigates determinants of electronic intermediary use in export marketing. Specifically, IT (information technology) and marketing determinants are tested in more detail. Chapter Four empirically examines the effects of electronic intermediary use on performance, focusing on the relationships between electronic intermediary use and transaction costs in the export marketing are focused. Theoretical foundations and research hypotheses are introduced. Research methods are then elaborated in Chapter Three and Four. Chapter Five concludes this dissertation with major theoretical and empirical findings. Theoretical and managerial implications, limitations, and suggestions for future research are also presented.

CHAPTER TWO
ELECTRONIC INTERMEDIARIES: RESEARCH AND PRACTICE OF
ELECTRONIC INTERMEDIARIES IN EXPORT MARKETING

INTRODUCTION

The Internet has become an important medium for business transactions (Bailey and Bakos, 1997). The Internet allows customers and manufacturers in different geographical places to conduct real-time market transactions. Furthermore, the Internet has motivated firms to participate in electronic commerce, because it can reduce costs in market transactions. Previous research on electronic commerce insisted that a direct exchange via the Internet might lower transaction costs incurred (Narayandas et al., 2002; Sarkar et al., 1995). In international commerce, an exporter in one country can theoretically trade directly with customers in other countries via its online catalogs or Internet exchange at a much lower transaction cost than incumbent distributors could match (Narayandas et al., 2002). If this were the case, market intermediaries who connect between manufacturers and customers would have disappeared. In electronic international commerce, however, there are still various market intermediaries.

Finding the ideal buyer or supplier in the electronic marketplace can be extremely time consuming and costly (Lee and Danusutedjo, 2000). Moreover, finding relevant sources in the “virtual jungle” is a hard challenge for non-experienced users (Ancel, 1999). Small and medium exporters usually do not have sufficient resources or experiences regarding foreign markets (Peng and Ilinitich, 1998). Small and medium exporters also face significant uncertainty in electronic international commerce.

With the development of electronic commerce, an alternative market intermediary called an electronic intermediary is appearing. An electronic intermediary shares many common

features with a traditional intermediary in export marketing. Few scholars have studied export intermediaries empirically and theoretically (Peng and Ilinitch, 1998). Moreover, the research has usually been limited to traditional export intermediaries originated in Japanese trading conglomerates. No one has taken any notice of the electronic intermediary, an alternative market intermediary in international commerce. This study aims to provide a better understanding of electronic intermediaries in export marketing, regarding channel type, role, service, fee, benefit, and cost. Also, this study compares an electronic intermediary with a traditional intermediary. The transaction cost analysis and resource-based view are used to provide theoretical implications for the electronic intermediary. An electronic intermediary may make market transactions easier and more efficient, which may decrease transaction costs. Also, using an electronic intermediary may play a role of a marketing strategy for exporters to penetrate the global market. Firm resources are usually strengths that firms can use to conceive of and implement their marketing strategies (Bharadwaj, 2000; Barney, 1991). Therefore, the transaction cost analysis and resource-based view may be appropriate for explaining theoretically the electronic intermediary in export marketing.

ELECTRONIC INTERMEDIARIES IN EXPORT MARKETING

ORIGIN OF EXPORT ORIENTED INTERMEDIARIES

Despite its importance, there has been little theoretical and empirical research about export intermediaries (Peng and Ilinitch, 1998; Leonidou and Katsikeas, 1996). Exporting is regarded as the most appropriate entry mode for small and medium-sized enterprises (SMEs) to penetrate the global market (Bowyer, 2002). A traditional export intermediary has been an efficient alternative to locate and negotiate with foreign customers for SMEs that have limited

resources and lack of knowledge regarding foreign markets as well as the perceived risk and uncertainty surrounding international sales (Trabold, 2002; Peng, 1998; Root, 1994; Ilinitich et al, 1993; Chalmin, 1987). A traditional export intermediary is defined as a specialist firm that functions as the export department of several manufactures in noncompetitive lines. Export intermediaries were originated in the largest Japanese trading conglomerates known as Sogo Shosha (Peng and Ilinitich, 1998). Sogo Shosha helped members of their respective industrial groups, known as the Keiretsu, penetrate foreign markets (Kotabe, 1984). By the early 1980s, export intermediaries handled approximately 50 percent of Japan's exports (Kotabe, 1984; Yoshihara, 1982). Throughout the 1970s and 1980s, many countries encouraged the development of local versions of Sogo Shosha (Peng and Ilinitich, 1998). Governments in several countries, including Korea, Taiwan, Thailand, Turkey, China, and the U.S., have used legislation to spur the development of indigenous export intermediaries (Peng and Ilinitich, 1998; Amine, 1987; Cho, 1987). However, the results of these government-supported export intermediary development efforts varied from country to country (Brewer, 1993). Export intermediaries in Korea and Turkey commanded 51 percent and 38 percent of their countries' total exports, respectively (Cho, 1987). However, in other countries, the results were not successful (Peng and Ilinitich, 1998). Recently, an alternative export intermediary, called an electronic intermediary, is emerging in international commerce. The popularity of electronic commerce allows market intermediaries to take advantage of a computer network's capacity, which decreases transaction costs (Clark and Lee, 1999).

EMERGENCE OF ELECTRONIC INTERMEDIARIES

An electronic intermediary in export marketing stems from a traditional export intermediary. The term “electronic intermediary” refers here to an independent market intermediary that serves as business-to-business (B2B) electronic marketplace (Martinsons, 2002; Soon et al, 2002; Searing, 2001; Clark and Lee, 1999). In the electronic intermediary, qualified members simply post requests to buy or sell, and the sales representatives then search around the globe for companies to supply or purchase the posted products, matching exporters and foreign customers (Clark and Lee, 1999). Electronic and traditional intermediaries share some common roles, such as cost reduction, aggregation, facilitation, and market information provision (Goldsby and Eckert, 2003; Narayandas et al., 2002; Soon et al., 2002). However, these two intermediaries differ in various aspects. Unlike a traditional intermediary, an electronic intermediary is based on the Internet and its graphical interface, the world wide web, which originates and accelerates electronic commerce (Prasad et al., 2001). The emergence of an electronic intermediary is thus an outcome of the development of electronic commerce (Trabold, 2002; Chalmin, 1987). Electronic commerce was predicted to have tremendous growth into the 21st century. In fact, electronic commerce has grown from US\$8 billion in 1997 to US\$327 billion in 2002 (Chrusciel, 2000). Given the projections that electronic commerce will grow astronomically, firms of all sizes must become proactive, not only in seeking out Internet opportunities, but also in determining ways to exploit this revenue-generating medium (Chrusciel, 2000). Previous research on electronic commerce has argued that companies would take advantage of direct electronic links, and, in the process, intermediaries would be eliminated (Bailey and Bakos, 1997; Sarkar et al., 1995). However, electronic commerce is a double-edged sword. On one hand, a direct Internet-based exchange may lower transaction costs (Narayandas

et al., 2002). For instance, an exporter trading directly with foreign customers via its online catalogs or Internet exchange can save cost regarding market approach, distribution, advertisement, and customer resources. On the other hand, an intermediary can make market transactions easier and more efficient, which also decreases transaction costs (Sarkar et al., 1995). For instance, an exporter having insufficient resources and experience regarding foreign markets can efficiently find the ideal buyer in electronic marketplaces, called the “virtual jungle,” via an electronic intermediary (Ancel, 1999). Also, the widely available information infrastructures of an electronic intermediary will reinforce the position of exporters in electronic international commerce (Sarkar et al, 1995).

In export marketing, an electronic intermediary serves a B2B electronic marketplace for exporters and buyers achieving cost-effective international trade through the Internet (Lee and Danusutedjo, 2000). The key examples of export-oriented electronic intermediaries for exporters include: www.ec21.com, www.ecplaza.net, www.globalsources.com, www.bestsme.com, www.alibaba.com, www.exporters.com.sg, wtexpo.com, and www.cometotrade.com. In the electronic intermediaries, exporters and foreign customers place bids and offers via terminals connected to the host computer of the intermediary, instead of coming to a physical market site (Clark and Lee, 1999). Many exporters rely on an electronic intermediary not simply to extend credit and fulfill smaller orders, but to generate demand for their products (Narayandas et al., 2002). Furthermore, electronic intermediary use can increase efficiency in searching, bargaining, and monitoring electronic international commerce (Clark and Lee, 1999). Therefore, the electronic intermediary is expected to bring significant changes in the economics of marketing channels and the structure of distribution in export marketing (Clark and Lee, 1999). Next, roles, benefits, and costs of electronic intermediaries are discussed in more detail.

ROLES OF ELECTRONIC INTERMEDIARIES

Connecting between Exporters and Foreign Customers. Electronic intermediaries play an important role in connecting between exporters and foreign customers effectively. An exporter of one country could trade efficiently with customers of other countries via an electronic intermediary at much lower transaction costs (Narayandas et al., 2002). Since they participate in transactions with different customers, different suppliers, and potentially in different industries, electronic intermediaries can analyze consumer preferences across products, suppliers, and industries (Bailey and Bakos, 1997).

Providing Market Information. An electronic intermediary assists exporters in identifying and taking full advantage of business opportunities (Lee and Danusutedjo, 2000). Through their global networks and drawing on their experience in carrying out international trade transactions, electronic intermediaries are able to gather and analyze information quickly and accurately (Lee and Danusutedjo, 2000). Moreover, electronic intermediaries provide updates on business trends, market conditions and individual commodities, and products (Chrusciel and Zahedi, 1999). Electronic intermediaries also provide advice on legal matters and local business customers to assist exporters in realizing the potential of their products (Clark and Lee, 1999).

Serving as an Electronic Marketplace. A traditional intermediary acts as a middleman. In contrast, an electronic intermediary provides an electronic marketplace of sources. An electronic intermediary serves as B2B electronic marketplace in which qualified members can post requests to buy or sell (Martinsons, 2002; Clark and Lee, 1999). An electronic intermediary provides the collection of many demands from buyers and many products from sellers effectively via the Internet (Chrusciel, 2000). The decision of channel type belongs to exporters. Exporters

can trade directly with foreign customers who are introduced by the electronic intermediary. Also, exporters who have insufficient resources and knowledge regarding the direct foreign exchange can trade indirectly with foreign customers via the electronic intermediary. Furthermore, exporters can introduce / identify uniqueness of services and products, provide detailed product specifications, and make available a forum for advertising and marketing new or existing products in the electronic marketplace (Chrusciel, 2000; Chrusciel and Zahedi, 1999; Bakos, 1991). Some electronic intermediaries provide a forum for multiple products, monitoring of transaction data, and promotion of new technology (Chrusciel, 2000).

BENEFITS OF ELECTRONIC INTERMEDIARIES

Accelerating the Internationalization of SMEs. An electronic intermediary is originated and developed from electronic commerce, which is the fastest growing facet of the Internet. An electronic intermediary is thus closely associated with the Internet. The Internet's provision of low-cost and efficient interconnectivity has had a dramatic influence on the way in which business is being conducted (Goldsby and Eckert, 2003). The Internet offers Small and Medium-Sized Enterprises (SMEs) a level playing field in relation to their larger competitors (Prasad et al, 2001). The Internet can reduce the traditional importance of scale economies, make global advertising more affordable, and extend SMEs' market reach globally (Prasad et al, 2001; Kotler, 2000; Quelch and Klein, 1996). The Internet also allows SMEs to communicate as widely with individuals or trading partners as any large competitors (Poon and Swatman, 1997). In other words, effective use of the Internet can provide even the smallest company with a low cost "gateway" to the global market (Stevenson and Hamill, 2002). The benefits of the Internet have something in common with those of an electronic intermediary. Over the last few years, the

majority of companies, including SMEs, have made significant progress in using Internet technology to support their international marketing activities. However, the majority of SME web sites are poorly designed, with weak content poor functionality and interactivity, and they provide no real value to new or potential customers (Stevenson and Hamill, 2002). In the case of electronic intermediaries, SMEs usually communicate with foreign customers via electronic intermediaries' websites. As a consequence, the internationalization of SMEs has been drastically accelerated since the advent of the electronic intermediary.

Reducing Transaction Costs. According to the literature, reduced transaction costs from easier and more efficient market transactions may be the typical benefit of an electronic intermediary (Narayandas et al., 2002). In export marketing, an electronic intermediary's functions that benefit buyers include assistance in search and evaluation, need assessment and product matching, risk reduction, and product distribution/delivery (Clark and Lee, 1999). Buyers execute transactions based on electronic information without inspecting products, thus encountering risks of uncertain product quality for the buyers (Clark and Lee, 1999). An electronic intermediary's functions that benefit exporters include creating and disseminating product information and creating product awareness, influencing consumer purchases, providing customer information, reducing exposure to risk, and reducing costs of distribution through transaction scale economies (Sarkar et al., 1995). According to Chrusciel (2000), an electronic intermediary helps exporters to avoid "deadweight" costs (lost cost due to unsuccessful searching). Economic efficiency is thus a major contribution of electronic intermediary use in export marketing (Prasad et al., 2001; Lee and Danusutedjo, 2000; Clark and Lee, 1999; Benjamin and Wigand, 1995).

Trading relationships formed by an electronic intermediary may imply a high degree of trust, which in turn may reduce transaction costs because expensive contractual or legal expenses to control opportunistic behaviors can be avoided (Sarkar et al., 1995; Zucker, 1986). Therefore, an electronic intermediary may prevent opportunistic behaviors and unfair trade practices by establishing policies and rules to build trust among market participants (Chrusciel, 2000; Clark and Lee, 1999). Two assumptions of the transaction cost analysis are opportunism and bounded rationality (Williamson, 1991). When an export-oriented electronic intermediary can deliver verified information and keep that information transparent to the players in the exchange, it becomes an opportunism-reducing influence (Goldsby and Eckert, 2003). In general, the information sharing capability of an electronic intermediary should greatly reduce the problem of bounded rationality (Goldsby and Eckert, 2003). In addition, elimination of geographical and social barriers may be an important benefit with the increase in productivity, efficiency, effectiveness, and the accuracy of electronic transactions (Soon et al., 2002; Bakos, 1997). However, there are some costs in using an electronic intermediary in export marketing.

COSTS OF ELECTRONIC INTERMEDIARIES

Lack of Credibility. Credibility is a very important factor in channel working relationships; in international commerce, credibility is especially important (Hessler, 1996). In an electronic international relationship, face-to-face communication is rare, which may induce a lack of credibility. As a consequence, exporters may be exposed to the opportunistic behaviors of foreign participants regarding electronic intermediary use (Bailey and Bakos, 1997). It is difficult for exporters to monitor or safeguard against opportunistic behaviors of foreign customers; therefore, much cost may be incurred to prevent the problem.

Unestablished Payment System. Payment is another concern in electronic intermediary use in export marketing. In the trading world, there are several types of payment terms, such as cash in advance, letter of credit (L/C), drafts, and open accounts (Lee and Danusutedjo, 2000). Among them, L/C is the most frequently used. In general, a traditional export intermediary offers full service to assist buyers and sellers regarding this payment issue. Opening an L/C through the Internet is already possible by connecting electronic intermediaries to banks that offer exporting services. Nevertheless, use of L/C is still limited and rare in an electronic intermediary due to cultural, practical, and technical limitations (Clark and Lee, 1999).

Other Costs. Exporters pay some commissions, such as transaction fees or membership fees for exporting via an electronic intermediary. As a result, exporters may lose part of their profit margins by using an electronic intermediary (Bailey and Bakos, 1997). Also, language and cultural barriers can further contribute to the cost of using an electronic intermediary in export marketing, because exporters usually bargain without assistance with unfamiliar foreign customers from different countries and cultures. The Table 2.1 summarizes the comprehensive characteristics of an electronic intermediary, compared to those of a traditional intermediary in export marketing.

Table 2.1 Comparison between traditional intermediary and electronic intermediary

	<i>Traditional intermediary</i>	<i>Electronic intermediary</i>
Channel type	Indirect distribution channel	Hybrid of indirect and direct distribution channels
Roles	A middleman linking exporters and customers	An electronic marketplace providing market information
Fees	Transaction fee	Transaction or membership fee
Benefits	<ul style="list-style-type: none"> ▪ Executing business for SMEs ▪ Economics of scale or scope ▪ Increased credibility ▪ A range of financing schemes 	<ul style="list-style-type: none"> ▪ Accelerating the internationalization of SMEs ▪ Reducing transaction costs ▪ Improved speed and flexibility ▪ Overcoming time, geographical, and social barriers ▪ Enhanced legitimacy (firms are feeling the need to use electronic intermediaries so they are not left behind) ▪ Making global advertising more affordable
Costs	<ul style="list-style-type: none"> ▪ Loss of control ▪ Loss of profit margins 	<ul style="list-style-type: none"> ▪ Lack of credibility ▪ Fraud in payment and shipping ▪ Language and cultural barriers ▪ Unestablished payment system

Previous studies of electronic commerce have not paid adequate attention to the role of the electronic intermediary. They emphasized a direct Internet-based exchange, expecting that market intermediaries would be substituted by a direct exchange in electronic commerce (Bailey and Bakos, 1997). However, various intermediaries are still playing an important role in the electronic commerce. In this study, we discuss an electronic intermediary in detail, regarding its roles, benefits, and costs. Despite few costs, the electronic intermediary will bring significant benefits to exporters in international commerce. In the next section, we provide theoretical explanations of electronic intermediary use in export marketing.

THEORETICAL EXPLANATIONS OF ELECTRONIC INTERMEDIARY USE

Previous research has given consideration to the question of why firms participate in electronic commerce. While few authors claim to base their works on specific theories, their thoughts are primarily embedded in the transaction cost analysis (Bailey and Bakos, 1997; Sarkar et al., 1995). The transaction cost analysis has often been used to justify direct Internet-based exchange, arguing that lower transaction costs are incurred (Bailey and Bakos, 1997). According to this argument, firms that take advantage of direct electronic links result in intermediaries being eliminated from electronic commerce (Bailey and Bakos, 1997; Sarkar et al., 1995). However, there are still various electronic market intermediaries. According to the literature, an electronic intermediary may make market transactions easier and more efficient (Sarkar et al., 1995). An electronic intermediary can help firms decrease coordination costs in finding the ideal business partner in electronic marketplaces. In other words, the transaction cost analysis can explain theoretically the use of an electronic intermediary, which is an indirect Internet-based exchange.

The resource-based view is another theoretical perspective to explain the electronic intermediary use. The resource-based view focuses on internal analysis, such as firm strengths and weaknesses from resources. The resource-based theorists argue that firm resources contribute to the choice of a marketing strategy (Barney, 1991). These resources are also strengths that firms can use to conceive of and implement their marketing strategies (Barney, 1991). Exporters can access efficiently broad customers around the world via electronic intermediaries. Exporters can provide various products or services to meet customers' needs. Furthermore, electronic intermediary use can be an effective means for small and medium

exporters to achieve competitive advantage in competing with their larger competitors (Stevenson and Hamill, 2002). The roles of electronic intermediaries correspond to those of a marketing strategy. Therefore, electronic intermediary use may be regarded as a marketing strategy for exporters to penetrate the global market. In sum, the resource-based view gives a systematic explanation for using an electronic intermediary in international commerce. Table 2.2 provides a summary of the resource-based view and transaction cost analysis regarding electronic intermediary use. Next, electronic intermediary use is discussed in more detail focused on these two complementary theories.

Table 2.2 Summary of the TCA and RBV regarding electronic intermediary use

	<i>Transaction Cost Analysis</i>	<i>Resource-Based View</i>
Motivations for electronic intermediary use	<ul style="list-style-type: none"> ▪ Exporters may be exposed to bounded rationality and opportunistic behaviors of foreign participants ▪ An electronic intermediary may decrease the problems of bounded rationality and opportunism regarding dimensions of transactions ▪ An electronic intermediary may make market transactions easier and more efficient 	<ul style="list-style-type: none"> ▪ Components of IT capability are considered heterogeneous firm resources ▪ IT and marketing resources may encourage exporters to use an electronic intermediary ▪ Electronic intermediary use can be regarded as a marketing strategy for exporters to achieve competitive advantage in the global market
Effects of electronic intermediary use	<ul style="list-style-type: none"> ▪ An electronic intermediary can allow exporters to reduce coordination costs in finding the ideal buyer ▪ An electronic intermediary may prevent opportunistic behaviors and unfair trade practices ▪ Exporters can decrease opportunistic behaviors via electronic intermediary use, reducing monitoring or safeguard costs 	<ul style="list-style-type: none"> ▪ Exporters' resources influence choice of marketing strategy, electronic intermediary use ▪ Exporters' resources can be used to conceive of and implement marketing strategy, electronic intermediary use ▪ Choice of appropriate IT and marketing resources may contribute to use effectively marketing strategy, electronic intermediary use

THE TRANSACTION COST ANALYSIS

The transaction cost analysis belongs to the “New Institutional Economics” paradigm, which has replaced traditional neoclassical economics that emphasized profit maximization.

While neoclassical economics views a firm strictly as a production function, the transaction cost analysis views the firm as a governance structure, focusing on efficiency (Rindfleisch and Heide, 1997). The initial movement of the transaction cost analysis is attributed to Coase (1937), who focused on macro aspects, stating that firms and markets are alternative governance structures that differ in their transaction costs. Since then, the transaction cost theorists have focused on micro aspects within firm boundaries more than within the market. Williamson (1991) suggests that transaction costs include both the direct costs of managing relationships and the possible opportunity costs of making inferior governance decisions. This study aims to investigate determinants and effects of electronic intermediary use at the firm level, thus corresponding to Williamson's approach regarding unit of analysis.

Williamson's micro framework rests on the interplay between two main assumptions of human behavior (bounded rationality and opportunism) and two key dimensions of transaction (asset specificity and uncertainty) (Williamson, 1991). Bounded rationality means that decision makers have constraints on their cognitive capabilities and limits on their rationality (Rindfleisch and Heide, 1997). These constraints become problematic in an uncertain environment (Williamson, 1991). Opportunism represents that decision makers may seek to serve their self-interest, and that it is difficult to know who is trustworthy and who is not. Most transaction cost theorists argue that lower transaction costs are incurred via a direct Internet-based exchange in electronic commerce (Bailey and Bakos, 1997; Sarkar et al., 1995). This study, then, suggests that a market intermediary also plays an important role to decrease transaction costs. Small and medium exporters do not have enough resources and experience regarding foreign markets; it is a challenge for them to find the ideal foreign customer in the "virtual jungle" (Ancel, 1999; Peng and Ilinitch, 1998). Therefore, they may face high coordination costs in electronic international

commerce (Sarkar et al., 1995). Participating parties may then exchange product or price information efficiently via an electronic intermediary. Furthermore, exporters can obtain an ongoing search for new potential customers in the electronic intermediary (Chrusciel, 2000). As a consequence, electronic intermediary use may help exporters decrease coordination costs in electronic international commerce. These arguments lead to the following proposition:

Proposition 1.1: The more efficient market transactions via electronic intermediary use, the lower coordination costs in export marketing.

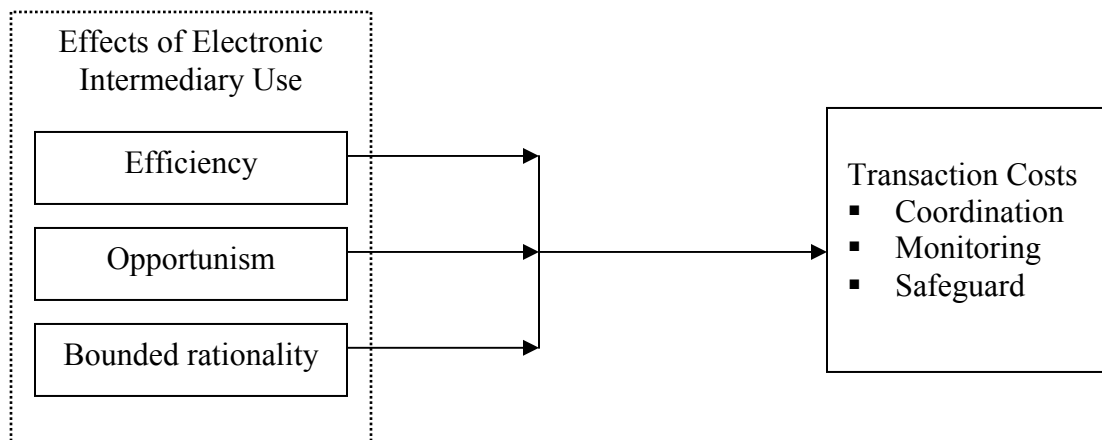
Exporters seldom talk to foreign customers face to face. From an exporter's point of view, it may be quite challenging to monitor or safeguard against opportunistic behaviors of foreign trade parties. An electronic intermediary provides the assurance of maintaining honesty, integrity, reliability, and legitimacy in the economic transaction (Chrusciel, 2000). An electronic intermediary may prevent opportunistic behaviors and unfair trade practices by establishing policies and rules to build trust among market participants (Chrusciel, 2000; Clark and Lee, 1999). Exporters can thus decrease costs for monitoring or safeguarding against opportunistic behaviors, which corresponds to the transaction cost analysis' concept. Therefore, assumptions and key concepts of the transaction cost analysis give a systematic explanation for using an electronic intermediary in electronic international commerce. Based on the theoretical reviews, this research thus proposes the following:

Proposition 1.2: The less opportunism via electronic intermediary use, the lower monitoring or safeguard costs in export marketing.

Proposition 1.3: The less bounded rationality via electronic intermediary use, the lower monitoring or safeguard costs in export marketing.

Figure 2.1 illustrates the conceptual relationships between electronic intermediary use and transaction costs regarding the transaction cost analysis. Drawing on the transaction cost analysis, we suggest that effects of electronic intermediary use may decrease three types of transaction costs: coordination costs, monitoring costs, and safeguard costs. Accordingly, we derive a research model [Figure 2.1].

Figure 2.1 Transaction costs in electronic intermediary use



THE RESOURCE-BASED VIEW

Internal analysis regarding strengths and weaknesses are fundamental to the resource-based view. This perspective is based on two assumptions. First, firms within an industry may be heterogeneous depending on their own resources. Second, the resources may not be perfectly mobile across firms (Barney, 1991). Resources are usually classified into three categories: physical capital, human capital, and organizational capital resources (Barney and Hesterly, 1996). The resources may be classified into tangible and intangible resources (Barney, 1991).

Resource-based theorists argue that firms enable themselves to improve their efficiency and effectiveness by using the resources (Peteraf, 1993; Barney, 1991). Concepts of the resource-based view may apply in explaining electronic intermediary use in international commerce. An electronic intermediary is a medium for exporters to participate in electronic international commerce formed in world wide web (Clark and Lee, 1999). Therefore, knowledge and experience about IT (Information Technology) are required for exporters to use an electronic intermediary effectively. Also, IT knowledge and experience may be considered unique firm resources that are valuable, rare, difficult to imitate, and non-substitutable by other competitors regarding the resource-based view (Barney and Hesterly, 1996). Electronic intermediary use can be a strategy for exporters, especially small and medium exporters, to export their products around the world. Resource-based theorists then argue that a firm's resources contribute to the choice of the firm's strategy (Grant, 1995). These arguments lead to the following propositions:

Proposition 2.1: IT knowledge is positively associated with electronic intermediary use in export marketing.

Proposition 2.2: IT experience is positively associated with electronic intermediary use in export marketing.

A certain level of foreign market knowledge and experience is also prerequisites to using an electronic intermediary effectively. A firm is said to have a competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitor (Peteraf, 1993). A firm is said to have a sustainable competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitor and when other firms are unable to duplicate the benefits of this

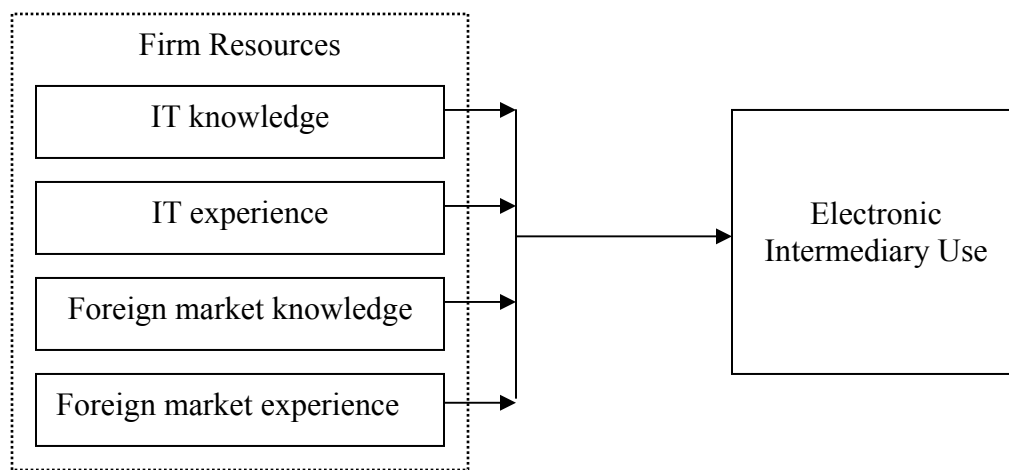
strategy (Peteraf, 1993). Resource-based theorists recommend that firms discover their own valuable, rare, and costly-to-imitate resources and utilize them in the market where the resources can be best exploited. They argue that a firm's marketing strategy is chosen regarding its internal resources (Barney, 1991). Furthermore, firm resources are strengths that firms can use to conceive of and implement their marketing strategies (Barney, 1991). An electronic intermediary can help exporters to provide various products or services efficiently and meet customers' needs effectively, which consist with the roles of marketing strategy (Stevenson and Hamill, 2002). Electronic intermediary use thus can be a marketing strategy for exporters to penetrate the global market. In sum, internal resources such as knowledge and experiences regarding foreign markets may influence whether to use a marketing strategy such as electronic intermediary use in export marketing. These arguments lead to the following propositions:

Proposition 2.3: Foreign market knowledge is positively associated with electronic intermediary use in export marketing.

Proposition 2.4: Foreign market experience is positively associated with electronic intermediary use in export marketing.

Figure 2.2 illustrates the conceptual relationships between firm resources and electronic intermediary use regarding the resource-based view. Drawing on the resource-based view, we suggest that resources that exporters possess can be used to conceive of and implement marketing strategy, electronic intermediary use. Accordingly, we derive a research model [Figure 2.2].

Figure 2.2 Firm resources in electronic intermediary use



THEORETICAL AND MANAGERIAL CONTRIBUTIONS

THEORETICAL CONTRIBUTIONS

An electronic intermediary is an alternative export-oriented market intermediary that serves as an electronic marketplace to connect exporters and foreign customers as well as provide market information. With the development electronic commerce, an electronic intermediary is playing an important role in export marketing. Nevertheless, no research makes an analysis in-depth of the electronic intermediary. This study provides important theoretical implications to the literature on the electronic intermediary in export marketing. This study uses the transaction cost analysis and resource-based view to explain the emergence and effects of an electronic intermediary. First, this study justifies the emergence of the electronic intermediary through the two theories. This study applies the transaction cost analysis to explain an indirect export intermediary unlike previous research that emphasized direct Internet-based exchange in electronic commerce. Specifically, this study shows how electronic intermediary use makes

market transactions easier and more efficient, which decreases coordination costs. The roles of electronic intermediary may encourage exporters to use it. The resource-based view is also used to justify the emergence of electronic intermediary. IT and marketing capabilities are regarded as heterogeneous firm resources, which influence whether to use a marketing strategy.

Electronic intermediary use can be considered an effective marketing strategy for exporters to participate in electronic international commerce. Particularly, an electronic intermediary helps small and medium exporters compete with their larger competitors in the global market.

Therefore, exporters' choice to use an electronic intermediary may depend on their own internal resources. Second, this study uses the transaction cost analysis to explain the effects of electronic intermediary use. The transaction cost analysis helps explain how electronic intermediaries prevent opportunistic behaviors and unfair trade practices. Also, the theory can justify how reduced monitoring or safeguard costs through reduced opportunism and bounded rationality make market transactions efficient. Reviewing the theoretical implications assists in understanding how an electronic intermediary may help exporters to penetrate the global market. This study is one of the first to provide the theoretical establishment of an electronic intermediary. It is hoped that this assessment of the domain of electronic intermediaries will provide a useful reference and further exploration of the topic. This study is a conceptual work. If this conceptual research can be proved by empirical works, the findings of this study will become even more influential.

MANAGERIAL CONTRIBUTIONS

This study is particularly significant for small and medium exporters who wish to enter into the global market. The development of electronic commerce allows exporters many

opportunities to trade directly with foreign customers. A direct Internet-based exchange was believed by many traders and researchers to be the most efficient exporting channel. However, this type of exchange involves high risk. It is extremely time consuming, risky, and costly for small and medium exporters to find the ideal customer in electronic international commerce due to their limited foreign market knowledge and experience. A traditional export intermediary may be an effective alternative for them to decrease these problems but it can involve high cost, such as commission and agent fees. This study indicates an electronic intermediary as a hybrid-exporting channel, combining a traditional intermediary and a direct Internet-based exchange. An electronic intermediary provides low-cost and efficient interconnectivity, balancing between risk and cost. Furthermore, an electronic intermediary can reduce the traditional importance of scale economies and make global advertising more affordable (Prasad et al, 2001). An electronic intermediary thus offers small and medium exporters a level playing field in relation to their larger competitors. As a consequence, the internationalization of small and medium businesses can be accelerated by use of an electronic intermediary. Since electronic commerce presents both opportunities and threats to exporters, they need to recognize how such opportunities and threats may affect their marketing and business practices. An electronic intermediary may be a realistic alternative to balance between the opportunities and the threats in international electronic commerce. We hope the findings of this study will help decision makers understand the effective strategy and exporting channel to penetrate the global market.

CONCLUSION

The advent of the Internet has generated significant interest in electronic commerce. Development of electronic commerce is expected to bring changes in the economics of marketing and distribution channels by creating a new generation of market intermediary called an electronic intermediary. This study highlights how an electronic intermediary will allow small and medium exporters to effectively participate in the global market. Drawing on the resource-based view and transaction cost analysis, we suggest that which resources may contribute exporters to use an electronic intermediary. Also, we discuss the effects of electronic intermediary use to decrease transaction costs. Accordingly, we derive two research models. In general, previous electronic commerce literature has insisted that a direct exchange via the Internet might lower transaction costs incurred. The literature, however, has neglected the role of a market intermediary in electronic international commerce. An electronic intermediary is expected to bring significant changes to the economics of marketing channels and the structure of distribution in export marketing. Particularly, this study provides theoretical justifications of the determinants and effects of an electronic intermediary. Knowing more about how electronic intermediaries can play an important role in international commerce will not only enhance the integration of major theories, but will also provide a firmer basis for our knowledge about the emerging intermediation in global trade.

CHAPTER THREE
DETERMINANTS OF ELECTRONIC INTERMEDIARY USE
IN EXPORT MARKETING

INTRODUCTION

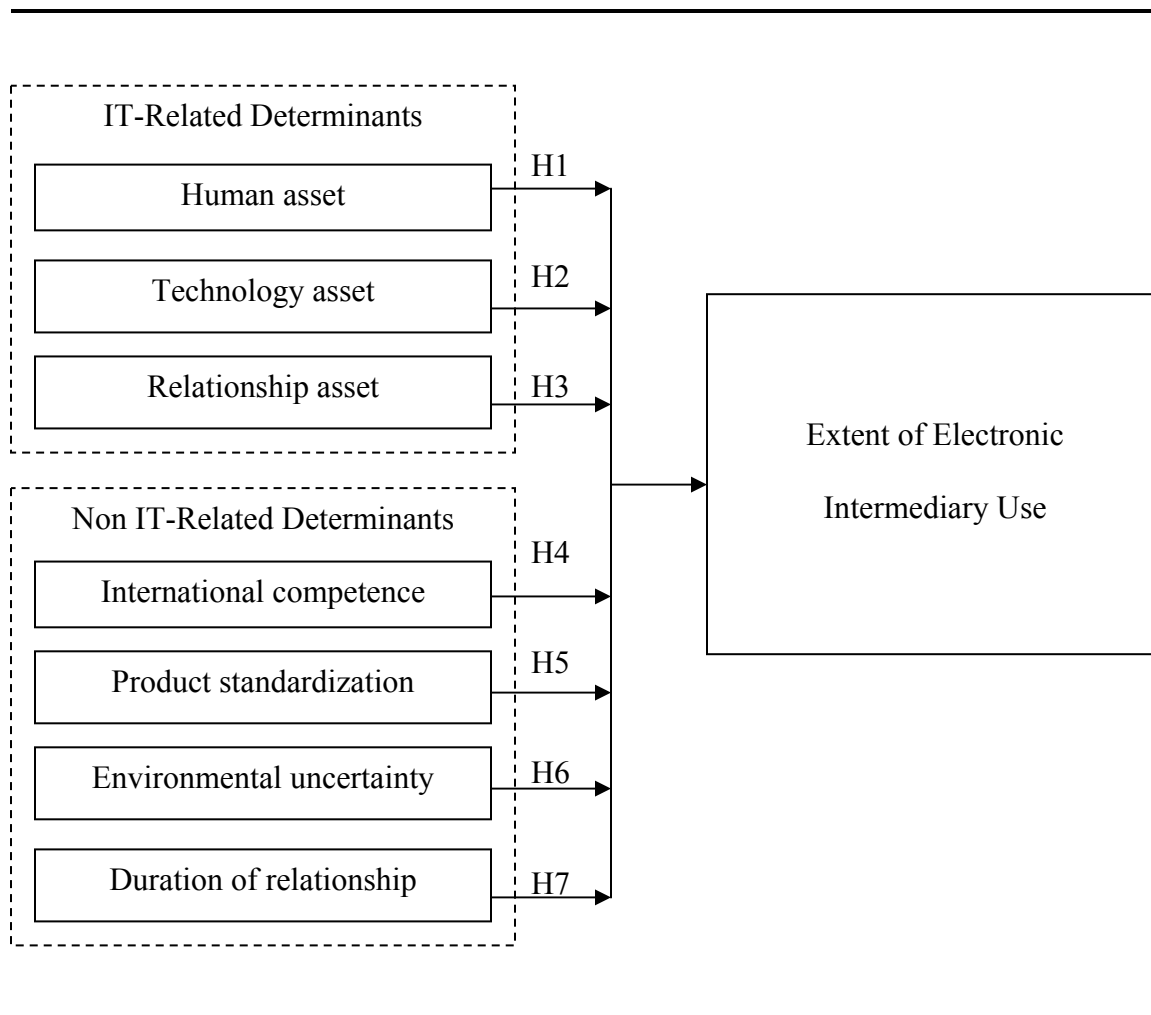
Electronic commerce has brought significant changes in the economics of marketing channels and the structure of distribution. As a whole, previous electronic commerce studies share a common feature. They emphasized a direct Internet-based exchange, arguing that lower transaction costs are incurred through direct exchange (Clark and Lee, 1999; Bailey and Bakos, 1997). Despite those arguments, market intermediaries still play an important role in electronic international commerce. Recently, an alternative market intermediary, the electronic intermediary, has emerged. An electronic intermediary refers to an independent market intermediary that serves as a business-to-business (B2B) electronic marketplace in which qualified members post requests to buy or sell; its sales representatives will search around the global for companies to supply or purchase the posted products (Martinsons, 2002; Clark and Lee, 1999). An electronic intermediary allows exporters to introduce their products and services more actively and effectively around the world (Liu et al., 2004; Martinsons, 2002; Prasad et al., 2001; Clark and Lee, 1999). This study aims at verifying factors that may influence exporters to use an electronic intermediary. Specifically, information technology (IT) and marketing determinants are examined, because a certain level of IT capability may be required for exporters to use an electronic intermediary. Also, electronic intermediary use may be considered a marketing strategy for exporters, especially small and medium exporters, to penetrate the global market.

The resource-based view has received much attention in electronic commerce literature. In the resourced-based view, firm resources are regarded as strengths that firms can use to conceive of and implement their strategies (Bharadwaj, 2000; Barney, 1991). The transaction cost analysis has also received greater attention in the electronic commerce literature. According to the transaction cost analysis, either a direct exchange based on the Internet or an indirect exchange based on an intermediary is supported from different standpoints (Sarkar et al., 1995). On one hand, a direct Internet-based exchange may lower transaction costs; exporters can decrease costs for distribution, advertisement, and customer resources via a direct trade with foreign customers (Narayandas et al., 2002). On the other hand, an intermediary can make the market transactions easier and more efficient, which also decrease transaction costs (Sarkar et al., 1995). An electronic intermediary may allow an exporter to find the ideal buyer efficiently in electronic marketplaces (Ancel, 1999). Also, widely available information infrastructures of an electronic intermediary can reinforce the position of exporters in electronic international commerce (Sarkar et al, 1995). This study is based on the second perceptive. Relying on the resource-based view and transaction cost analysis, we develop the theoretical links and then conduct empirical tests of associations between IT and marketing determinants and electronic intermediary use in export marketing. Marketing determinants are called non IT-related determinants to symmetrize with IT-related determinants in this study.

To increase generalizability, data were collected from two countries: Korea and the U.S. The U.S. and Korea are major world exporters (Foreign Policy, 2003). Also, both countries are leading world powers regarding IT capability (Foreign Policy, 2003). However, the U.S. and Korea have different market environments and organizational cultures (Hoskisson et al., 2000; Hasan and Ditsa, 1997). The specific research question is addressed: What determines the extent

of electronic intermediary use in export marketing? Figure 3.1 illustrates the relationships between IT-related and non IT-related determinants and electronic intermediary use in export marketing. As illustrated in Figure 3.1, seven factors are proposed to influence the extent of electronic intermediary use. The first three factors are IT-related determinants. The next three factors are marketing determinants that represent firm, product, and market characteristics. The last factor was found in interviews with managers.

Figure 3.1 Determinants of electronic intermediary use in export marketing



IT-RELATED DETERMINANTS

An electronic intermediary is a medium for exporters to participate in electronic international commerce formed in the Internet (Clark and Lee, 1999). Therefore, technological and managerial knowledge or skills about the Internet are required for exporters to use an electronic intermediary. Internet knowledge and skills are key components of IT (Information Technology) capability, which is defined as the ability to mobilize and deploy IT-based resources in combination or copresent with other resources and capabilities (Santhanam and Hartono, 2003; Bharadwaj, 2000; Ross et al., 1996). Exporters may compete on the basis of unique corporate resources that are valuable, rare, difficult to imitate and non-substitutable by other competitors in international commerce. Resource-based theorists, then, regard IT capability as a corporate resource that has significant effects on performance (Santhanam and Hartono, 2003; Barney, 1991). Various IT resources serve as potential sources of competitive advantage. IT literature classifies them as tangible resources (IT infrastructures) and intangible resources (IT knowledge and managerial skills) (Santhanam and Hartono, 2003; Bharadwaj, 2000). Specifically, human, technology and relationship assets are considered to be typical IT resources (Santhanam and Hartono, 2003; Bharadwaj, 2000; Ross et al., 1996). This study argues that IT resources may be related to use of an electronic intermediary, an alternative market intermediary in electronic international commerce. Next, the relationships between three IT resources and electronic intermediary use are investigated in more detail.

IT-RELATED HUMAN ASSET

Organizational human resources generally comprise the training, experience, relationships, and insights of its employees (Grant, 1995; Barney, 1991). The importance of

human resources has been discussed over a long period of time in various sectors. Successful companies in electronic commerce usually have employees who consistently solve business problems and address business opportunities through IT (Information Technology). The employees are here defined as IT-related human assets (Ross et al., 1996). Particularly, IT-related human assets who are trained to provide rapid solutions to the most pressing business needs accumulate firm-relevant IT knowledge and competence. A company possessing IT-related human assets effectively uses its staff's technical skills to build bridges between old systems and new ones, to deliver data across locations and applications, and to recognize opportunities to apply new technologies as they become available (Bharadwaj, 2000). IT-related human assets are usually measured by technical skills, business understanding, and a problem-solving orientation (Santhanam and Hartono, 2003; Ross et al., 1996).

An electronic intermediary is an alternative market intermediary serving as an electronic marketplace to connect exporters and foreign customers in electronic international commerce. A certain level of IT knowledge and skills is prerequisite for exporters to effectively use an electronic intermediary. IT-related human asset is a major component of a firm's IT knowledge and skills (Bharadwaj, 2000). Also, IT-related human asset is a valuable resource for exporters with regard to the resource-based view (Barney and Hesterly, 1996). Resource-based theorists argue that a firm's resource is a strength that the firm can use to conceive of and implement its strategies (Barney, 1991). An electronic intermediary allow exporters to meet customers' needs, increase customers' accessibility, and provide a variety of their products or services, which corresponds to the roles of a marketing strategy (Sarkar et al., 1995). Furthermore, an electronic intermediary can decrease the traditional importance of scale economies, make global advertising more affordable, and extend market reach globally (Prasad et al., 2001; Kotler, 2000; Quelch and

Klein, 1996). As a consequence, exporters, especially small and medium exporters, can achieve competitive advantage in competing with their larger competitors in international commerce. Therefore, use of an electronic intermediary can be a marketing strategy for exporters to penetrate the global market effectively (Bharadwaj, 2000; Porter, 1996; Sarkar et al., 1995). Here, this study expects to find a positive effect of IT-related human asset on electronic intermediary use.

However, there can be controversies about this effect (Rasheed and Geiger, 2001). Some researchers have pointed out that an advanced IT-related human asset may encourage exporters to adopt a direct Internet-based exchange due to the significant reduction of transaction costs (Narayandas et al., 2002; Sarkar et al., 1995; Malone et al., 1987). This study argues, on the contrary, that widely available IT-related human asset may promote the growth of an electronic intermediary, creating a new alternative market intermediary in electronic international commerce. The argument can be justified by the following reasons. First, electronic intermediary use may be inversely related to whether the exporting channel activity relies on specialized skills or technologies that are available within the exporter (Sarker et al., 1995). An exporter without specialized expertise to develop, maintain, and operate the rapidly developing electronic market technologies will rely on the electronic intermediary (Sarker et al., 1995). This argument is based on the assumption that the specialized expertise should be preserved (Tsang, 2000). Such a market mechanism, however, may not be easily applied to IT-related human asset, because exporters may not easily capture or own the value created by the asset (Rasheed and Geiger, 2001; McWilliams and Gray, 1994).

Small and medium exporters are primary users of export intermediaries (Peng and Ilinitch, 1998). Small and medium exporters who have limited resources and who lack knowledge

regarding foreign markets may perceive high risk and uncertainty surrounding their international sales (Peng and Ilinitich, 1998; Ilinitich et al., 1993). Previous research has usually emphasized a direct Internet-based exchange, which was believed to decrease transaction costs (Sarkar et al., 1995; Malone et al., 1987). However, several scholars doubt the cost reduction, stating that it is extremely time consuming and costly for exporters to find the ideal customers in the electronic international marketplace (Lee and Danusutedjo, 2000). An electronic intermediary may be an alternative market intermediary for exporters to avoid “deadweight” costs, which represent lost cost due to unsuccessful searching (Prasad et al., 2001; Chrusciel, 2000; Benjamin and Wigand, 1995). Therefore, exporters possessing a certain level of IT-related human assets may avoid trading directly with unknown foreign customers in electronic international commerce. Based on the literature review, this study therefore hypothesizes the following:

Hypothesis 1: There is a positive relationship between the level of IT-related human asset and the extent of electronic intermediary use in export marketing.

IT-RELATED TECHNOLOGY ASSET

Without a certain level of information technology (IT) capability, exporters are not likely to acclimate themselves to the electronic market environment. Another component of IT capability is IT-related technology asset, which is defined as sharable technical platforms and databases (Ross et al., 1996). IT-related technology asset is necessary for integrating systems and making IT application cost effective in operation and support (Ross et al., 1996). Electronic intermediaries provide an information infrastructure, by which exporters can realize commerce over electronic international networks. Information technology, such as standard interface, cost-effective inter-organizational networks and search techniques, is a substantial component for

using electronic intermediary services (Clark and Lee, 1999). IT-related technology asset thus can help exporters readily adjust themselves to electronic international commerce. Also, IT-related technology asset may awaken exporters to the importance of the electronic intermediary use in electronic international commerce. With regard to the resource-based view, IT-related technology asset is also a valuable firm resource. Resource-based theorists argue that firm resources contribute to the choice of a marketing strategy (Grant, 1995). As discussed earlier, electronic intermediary use may be a marketing strategy for exporters to penetrate the global market (Bharadwaj, 2000; Porter, 1996; Sarkar et al., 1995). As a consequence, exporters who retain a certain level of IT-related technology asset may develop a positive attitude toward use of an electronic intermediary.

However, information technology enables exporters to interact directly with foreign customers (Sarker et al., 1995). Rasheed and Geiger (2001) argue that electronic intermediary use in sales functions may be inversely related to investments in technological infrastructures. It may be argued that IT-related technology asset encourages exporters to adopt a direct Internet-based exchange rather than an electronic intermediary due to cost reduction (Narayandas et al., 2002; Sarkar et al., 1995). As mentioned earlier, exporters may not easily capture or own the value created by IT-related human asset, because this value is not preserved (Tsang, 2000). On the other hand, exporters may capture or own the value created by the IT-related technology asset, because it is more observable (Tsang, 2000). According to this argument, there may be a negative association between IT-related technology asset and electronic intermediary use. Nevertheless, an electronic intermediary could still be a good opportunity for exporters to reduce transaction costs in an electronic international marketplace described as a “virtual jungle,” in which finding the ideal customer is extremely time consuming (Ancel, 1999). Previous research

of electronic commerce emphasized a direct Internet-based exchange due to its role in reducing transaction costs (Narayandas et al., 2002). If this expectation were true, market intermediaries would have been replaced in electronic international commerce. However, there are still various market intermediaries that have not been displaced (Narayandas et al., 2002; Tsang, 2000). This study argues that reduced transaction costs due to electronic intermediary use are likely to overwhelm the efficiency of a direct Internet-based exchange in electronic international commerce. Based on the above arguments, this study therefore hypothesizes the following:

Hypothesis 2: There is a positive relationship between the level of IT-related technology asset and the extent of electronic intermediary use in export marketing.

IT-RELATED RELATIONSHIP ASSET

The other component of IT capability is IT-related relationship asset, defined as shared risk and responsibility (Ross et al., 1996). IT-related relationship asset represents an effective IT-business relationship led by a proactive CEO (Bharadwaj, 2000). Exporters possessing a valuable relationship between IT and business units may cope effectively with a new electronic environment. An electronic intermediary is alternative market intermediary in electronic international commerce serving as a B2B electronic marketplace and providing market information. Their IT relationship asset thus may influence exporters to adopt an electronic intermediary. An effective relationship between IT and the various business units within a firm may also be a valuable firm resource. Since resource-based theorists argue that firm resources contribute to the choice of a marketing strategy (Grant, 1995), and because electronic intermediary use, as discussed previously, may be an effective marketing strategy for exporters

to penetrate the global market. We may argue that exporters retaining a certain level of IT relationship asset may take up a positive attitude toward using an electronic intermediary.

On the other hand, a well-managed relationship between IT and business units may encourage exporters to adopt a direct Internet-based exchange rather an indirect market intermediary (Rasheed and Geiger, 2001). It has been argued that exporters without a specialized expertise to develop, maintain, and operate the rapidly developing electronic market technologies must rely on an electronic intermediary (Sarker et al., 1995). This argument is based on the assumption that the specialized expertise should be preserved (Tsang, 2000). However, relationship asset, like human asset, is an intangible resource. This market mechanism thus may not be easily applied to the IT-related relationship asset, because it may not be captured or owned (Rasheed and Geiger, 2001; Tsang, 2000; McWilliams and Gray, 1994). Furthermore, high risk and the uncertain environment of the electronic international marketplace forces small and medium businesses to use an electronic intermediary, because they have limited resources and knowledge regarding foreign markets. Based on the literature review, this study therefore hypothesizes the following:

Hypothesis 3: There is a positive relationship between the level of IT-related relationship asset and the extent of electronic intermediary use in export marketing.

NON IT-RELATED DETERMINANTS

The two most differentiated exporting channels are direct export and indirect export. In direct export, the manufacturer has nearly complete control over the activities needed to carry out all phases of marketing in foreign markets (Rialp et al., 2002). In indirect export, the manufacturer exerts little to no control over the marketing of the products (Rialp et al., 2002).

Indirect export is usually conducted by various market intermediaries such as commissioned agents, export management companies, and export trading companies (Lee and Danusutedjo, 2000; Perry, 1989; Amine et al., 1986). With the development of electronic commerce, an electronic intermediary is emerging as an alternative market intermediary in electronic international commerce. Exporters can efficiently meet customers' needs, increase customers' accessibility, and provide a variety of products or services via an electronic intermediary (Goldsby and Eckert, 2003; Prasad et al., 2001). Furthermore, the electronic intermediary offers small and medium exporters a level playing field to compete with their larger competitors in the global market (Prasad et al., 2001). The roles of an electronic intermediary correspond to those of a marketing strategy (Porter, 1996). This study thus argues the electronic intermediary use could be an effective marketing strategy for exporters in the global market. This section relates how marketing factors influence exporters to use an electronic intermediary in export marketing. To symmetrize with IT-related determinants, these marketing factors are called non IT-related determinants. Specifically, international competence, product standardization, and environmental uncertainty reflecting firm, product, and market characteristics are discussed with regard to use an electronic intermediary (Leonidou et al., 2002; Peng and Ilinitch, 1998; Cavusgil and Zou, 1994).

INTERNATIONAL COMPETENCE

Firms' capabilities and constraints profoundly influence their choice of marketing strategy and ability to execute the chosen strategy (Aaker, 1988; Porter, 1980). International competence is an ability that helps a firm identify idiosyncrasies such as international experience, foreign markets operated, resources for export development, and company reputation, and to

develop an appropriate marketing strategy and execute it effectively (Cavusgil and Zou, 1994). According to the resource-based view, idiosyncratic resources that create superior market position allow firms to generate sustainable competitive advantage (Hunt and Morgan, 1995; Barney, 1991). In international commerce, international competence is regarded as an idiosyncratic resource (Leonidou et al., 2002). International competence is usually measured by the following components: international experience, resources for export development, foreign markets operated, and company reputation (Leonidou et al., 2002; Cadogan et al., 2002; Zou and Cavusgil, 2002; Raymond et al., 2001; Cavusgil and Zou, 1994; Katsikeas, 1994).

In an electronic intermediary, exporters and buyers place bids and offers via terminals connected to the host computer of the intermediary, instead of coming to a physical market site (Clark and Lee, 1999). An electronic intermediary allows trade parties to achieve cost-efficient international trade (Soon et al., 2002; Bakos, 1991). Despite the benefits, many small and medium exporters stay away from electronic intermediary use, because they have limited resources and lack of knowledge regarding foreign markets (Peng and Ilinitich, 1998; Ilinitich et al., 1993). Exporters who possess a certain degree of international competence, however, may be more likely to use an electronic intermediary. For these exporters, the electronic intermediary use can be an effective marketing strategy for penetrating the global market (Chrusciel, 2000).

Based on the literature review, this study hypothesizes the following:

Hypothesis 4: There is a positive relationship between the level of international competence and the extent of electronic intermediary use in export marketing.

PRODUCT STANDARDIZATION

The literature argues that manufacturers' export channel choice is primarily driven by transaction cost considerations (Peng and Ilinitich, 1998; Karunaratna and Johnson, 1997; Majumdar and Ramaswamy, 1995). According to the transaction cost analysis, total costs of going-to-market are likely to be lower for the direct option when the transaction requires investments in unique assets for effectively serving the end customers, such as specialized sales force training and post-sale service requirements (Williamson, 1991). However, the indirect option may be more efficient for transactions that require investments only in nonspecific assets, such as an inventory of standard, commodity-type products (Anderson and Coughlan, 1987). According to the transaction cost analysis, monitoring and enforcement costs are comparatively low in industries where products are standardized, making indirect export an attractive option (Peng and Ilinitich, 1998). Product standardization refers to nonspecific, low-tech, undifferentiated, or standardized product characteristics (Trabold, 2002; Peng and Ilinitich, 1998). Therefore, it may be argued that the higher the product standardization, the more likely that a traditional export intermediary will be selected by a manufacturer (Trabold, 2002; Peng and Ilinitich, 1998).

Unlike a traditional intermediary, an electronic intermediary provides access 24 hours a day, 7 days a week, and 365 days a year (Chrusciel, 2000). The primary role of an electronic intermediary is to improve the chances for the best fit for exporters and foreign customers in electronic international commerce (Chrusciel, 2000). Through an electronic intermediary, exporters can make direct or indirect contact with foreign customers via homepages, email, or diverse electronic media, which are not as readily available through the traditional intermediaries. Moreover, exporters can introduce / identify the uniqueness of services and products, provide

detailed product specifications, and make available a forum for advertising and marketing new or existing products with an electronic intermediary (Chrusciel, 2000; Chrusciel and Zahedi, 1999; Bakos, 1991). An electronic intermediary also provides a forum for multiple products, monitors transaction data, and promotes newly tested technology (Chrusciel, 2000; Chrusciel and Zahedi, 1999). These unique roles may make an electronic intermediary more efficient and trustworthy, compared to a traditional intermediary. As a result, electronic intermediary use may be more appropriate for transactions including high-tech or differentiated products, which represent low product standardization. Based on the literature review, this study therefore hypothesizes the following:

Hypothesis 5: There is a negative relationship between the level of product standardization and the extent of electronic intermediary use in export marketing.

ENVIRONMENTAL UNCERTAINTY

Exporters face uncertainty when engaging in international commerce. Uncertainty is defined as an event that cannot be forecasted (Lorenzi, 1980). It is not merely change or the rate of change that causes uncertainty, but rather the unpredictability of change that affects the variables in critical dependent relationships (Lorenzi, 1980). The transaction cost analysis is usually used theoretically explain uncertainty. In international commerce, transaction cost theorists view uncertainty as arising from the difficulties associated with adapting to unfamiliar environments as well as monitoring the contractual performance of exchange partners (Goldsby and Eckert, 2003; Williamson, 1991). Uncertainty arising from adaptation is called environmental uncertainty, and uncertainty of the monitor is called behavioral uncertainty (Williamson, 1991). In international commerce, a serious barrier to effective exporting may be

uncertainty about foreign environment (Raven et al., 1994). Environmental uncertainty refers to unanticipated changes in circumstances surrounding an exchange within an unpredictable or complex environment (Rindfleisch and Heide, 1997; Noordewier et al., 1990). In general, environmental uncertainty is higher in international transactions than domestic transactions. Environmental uncertainty gives rise to several transaction costs such as communication, negotiation, coordination, and maladaptation costs (Rindfleisch and Heide, 1997). Transaction cost theorists argue that firms may respond to perceived uncertainties by avoiding them (Raven et al., 1994). An electronic intermediary could be an effective alternative for firms to avoid or reduce the uncertainties in international commerce, including those arising from geographical and social barriers in international commerce (Soon et al., 2002). Also, an electronic intermediary may provide protection against environmental heterogeneity, because it can accommodate dynamic change in international environment (Goldsby and Eckert, 2003; Chrusciel, 2000).

Exporters, especially small and medium exporters, are often exposed to opportunistic behaviors from foreign trading partners. Foreign customers and exporters enter into contracts with each other subject to potential opportunistic behaviors of trading counterparts; trading parties can conceal or distort information to their benefit and to the detriment of their trading partners (Clark and Lee, 1999). Separation of product flows from market transactions through online trading is likely to increase transaction risks and uncertainties for traders (Clark and Lee, 1999). An electronic intermediary may offer an effective alternative for exporters to decrease the problems of opportunism and bounded rationality in their exporting channel relationships. According to the transaction cost analysis, bounded rationality is the assumption that decision makers have constraints on their on their cognitive capabilities and limits on their rationality

(Rindfleisch and Heide, 1997). Opportunism is the assumption that decision makers may unscrupulously seek to serve their self-interest, and that it is difficult to know who is trustworthy and who is not (Barney, 1991). When an electronic intermediary can deliver verified information and keep that information transparent to the players in the exchange, the electronic intermediary becomes an opportunism-reducing influence (Goldsby and Eckert, 2003). Also, electronic intermediary use has high incentives to ensure that market transactions are completed due to their long-term participation in the market (Bailey and Bakos, 1997). Since the parties to a transaction may need to interact with the intermediary in the future even if they never do business with each other again, the intermediary may be in a better position to prevent opportunistic behavior compared to other market participants (Bailey and Bakos, 1997). As a result, electronic intermediary use could prevent opportunistic and unfair trade practices, mediate interests of sellers against interests of buyers, assure against transaction failures, and allow for the complete processing of the transaction. Based on the literature review, this study therefore hypothesizes the following:

Hypothesis 6: There is a positive relationship between the level of environmental uncertainty and the extent of electronic intermediary use in export marketing.

DURATION OF EXPORTER-CUSTOMER RELATIONSHIP

Direct Internet-based exchange has been believed to minimize transaction costs and maximize profit, although it may also involve high risk due to possible trade frauds. Using a traditional intermediary may be an alternative for risk reduction. However, exporters also lose some profit margins by using a traditional intermediary. This study aims at investigating an alternative exporting channel to balance profit and risk. According to the literature, an electronic

intermediary could be a good alternative market intermediary to accomplish the role in electronic international commerce. This study addresses how IT-related and marketing factors influence exporters to use an electronic intermediary. Through my in-depth interviews with managers, another determinant of electronic intermediary use was identified as the duration of an exporter's relationship with a continuous foreign customer.

According to the interviews, managers regarded an electronic intermediary as an efficient and relatively safe exporting channel to make a contact with a new foreign customer. However, as credibility accumulates, exporters may prefer using a direct Internet-based sale. In other words, the duration of an exporter's relationship with a foreign customer may play a role in the exporter-customer association (Bolton, 1998). Current customers are perceived as being less risky, more so in situations where there is greater uncertainty, as in an international electronic marketplace (Batt, 2000; Puto et al., 1985). Experience with current customers breeds trust (Dwyer et al., 1987). Therefore, a positive relationship between the duration of an exporter's relationship with a foreign customer and the development of trust between them could be expected (Doney and Cannon, 1997). In sum, an exporter may prefer using an electronic intermediary to begin a trade with unknown foreign customers, because a direct exchange with the customers usually involves high risk. However, an exporter may choose not to use the electronic intermediary to trade with confident foreign customers; instead, the exporter can trade directly with foreign customers via the Internet, which is believed the most efficient channel. Based on these arguments, this study therefore hypothesizes the following.

Hypothesis 7: There is a negative relationship between duration of exporter-customer relationship and the extent of electronic intermediary use in export marketing.

KOREA AND THE UNITED STATES AS SETTING FOR THE STUDY

SMALL AND MEDIUM EXPORTERS IN THE ELECTRONIC INDUSTRY

Cross-national researchers stress that metric equivalence of constructs and relationships among the constructs must be established to ensure generalizability (Calantone et al., 1997). To permit a meaningful empirical test of the models and its cross-national validity, data were collected from small and medium exporters in the electronic industry in Korea and the U.S. This cross-national research may provide an appropriate multinational test of the models (Granzin and Painter, 2001). Small and medium exporters are primary users of market intermediaries in international commerce due to their limited resources and knowledge regarding foreign markets (Peng and Ilinitich, 1998). The U.S. is the world's largest exporter. Korea currently stands as the 13th largest exporter in the world (Foreign Policy, 2003). Electronics is the biggest exporting industry in the U.S. and Korea (U.S. Department of Commerce, 2002; Korean National Statistical Office, 2003). Furthermore, electronic intermediary use is closely associated with IT capability. An electronic intermediary is an alternative market intermediary in electronic international commerce. With a certain level of IT capability, an exporter is more likely to acclimate itself to the electronic market environment. The exporter may then decide to try using an electronic intermediary. In country level analysis, Internet use may be a good indicator to show the IT capability of each country. Korea's global ranking in terms of Internet users is fifth in the world (Foreign Policy, 2003). The U.S. ranks first in the world (Foreign Policy, 2003). These facts may justify this sampling design: small and medium exporters in the electronic industry in Korea and the U.S.

INSTITUTIONAL INFLUENCE IN KOREA AND THE U.S.

There are some differences in market environment conditions in Korea and the U.S. The U.S., a world leader in most areas of business and industry, is an industrialized market (Raymond et al., 2001). In contrast, Korea is a rapidly emerging market (Raymond et al., 2001; U.S. Department of Commerce, 2002). Emerging markets are usually characterized by a rapid pace of economic development and policies favoring economic liberalization, as well as the adoption of a free-market system (Arnold and Quelch, 1998). Also, government and societal influences called institutional environments are stronger in emerging markets (Hoskisson et al., 2000). Institutional environments, which make up a large part of a firm's environment, include regulatory institution (i.e., laws), normative institution (i.e., professions), and cognitive institution (i.e., habitual actions) (Grewal and Dharwadkar, 2002). With the development of electronic commerce, an electronic intermediary becomes increasingly popular (Clark and Lee, 1999). Many firms are interested in the alternative market intermediary in electronic international commerce that is interposed between exporters and foreign customers to take advantages of a computer network's capability to reduce transaction costs (Clark and Lee, 1999; Sarkar et al., 1995). As a consequence, many exporters believe that an electronic intermediary can bring about significant changes in the economics of marketing channels and the structure of distribution in international commerce (Clark and Lee, 1999). Moreover, many exporters feel the need to use an electronic intermediary so they are not left behind (Goldsby and Eckert, 2003). In other words, electronic intermediary use is becoming a normative institution among exporters regarding the institutional perspective. Also, emerging markets such as Korea, Taiwan, Thailand, Turkey, and China have all used legislation to accelerate export, such as tax advantages to spur the development of indigenous export intermediaries (Cho, 1987; Amine, 1987). The Korean

government has enthusiastically supported the export business with its “export drive policy” (Raymond et al., 2001). An electronic intermediary used as an export oriented intermediary in international commerce thus may be considered a regulatory institution. A central tenet of the institutional perspective is that organizations sharing the same environment will employ similar practices and thus become isomorphic with each other (Hoskisson et al., 2000; Grewal and Dharwadkar, 2002). Adoption of these similar practices is explained by organizations’ conformity to institutional environments driven by legitimacy motives (DiMaggio and Powell, 1983). Also, organizations achieving isomorphism attain legitimacy in their environment. The attaining legitimacy increases organizational chances of survival and success, because it enhances external constituencies’ confidence in the viability of those organizations and reduces the uncertainty surrounding them (Kostova and Roth, 2002). Institutional environments of emerging markets are stronger than those of developed markets (Hoskisson et al., 2000). Therefore, Korean exporters, more so than U.S. exporters may be forced more to conform to normative as well as regulatory institutions, i.e., use of an electronic intermediary in international commerce.

ORGANIZATIONAL CULTURE IN KOREA AND THE U.S.

Cultural aspects are another variable to explain differences of exporters’ behavior to adopt an electronic intermediary between two countries. The U.S. represents more typical aspects of Western culture, while Korea is more representative of Asian or Eastern culture. The U.S is characterized by low power distance and low uncertainty avoidance. In contrast, Korea is characterized by high power distance and high uncertainty avoidance (Hofstede, 1980). In practice, national culture influences organizational culture, which refers to the pattern of shared

beliefs and values that helps individuals understand an organization and provides them with norms for behaviors (Deshpande and Farley, 1999). Entrepreneurial and bureaucratic cultures are representative organizational cultures (Deshpande and Farley, 1999). Entrepreneurial culture emphasizes innovations and risk taking, but bureaucratic culture is characterized by internal regulations and formal structures (Deshpande and Farley, 1999). Entrepreneurial and bureaucratic cultures are influenced by two dimensions of national culture: power distance and uncertainty avoidance. High power distance may imply the prevalence of relatively bureaucratic organizations, and low uncertainty avoidance may imply relatively entrepreneurial organizations (Deshpande and Farley, 1999). Therefore, Korean firms may be highly bureaucratic, but U.S. firms may be entrepreneurial regarding the characteristics of national culture. According to electronic commerce literature, corporate decisions pertaining to the use of technology or services rapidly gaining in popularity tend to be most affected by organizational culture, which is influenced by national culture. Higher bureaucratic or lower entrepreneurial corporations will be less likely to adopt the new technology or service (Hasan and Ditsa, 1997; Moorman, 1995). Korean firms, in contrast to U.S. firms, are considered higher bureaucratic or lower entrepreneurial corporations. Therefore, Korean firms may be less likely to adopt use of an electronic intermediary in export marketing.

Korean firms could gain a more positive attitude toward use of electronic intermediaries with regard to the institutional perspective. However, it is expected that U.S. firms may have a more positive attitude toward use of electronic intermediaries with regard to the organizational culture. This study uses nationality as a control variable (dummy coded) to compare exporters' behaviors to use of an electronic intermediary between Korea and the U.S. Institutional influences and cultural dimensions are then used to justify the differences between two countries.

RESEARCH METHOD

DATA COLLECTION

Data used for this study is retrieved from several exporter databases, which contain firm-level data on different industries and countries. Specific sampling frames are electronic intermediaries, including www.ecplaza.net, www.bestsme.com, www.ec21.com, www.myexports.com, www.globalsources.com, www.bestsme.com, www.alibaba.com, www.exporters.com.sg, wtexpo.com, and www.cometotrade.com. Questionnaires were sent to individuals listed as contact persons at each firm in the directory through electronic mail. There was an initial letter of introduction describing the study and asking for their cooperation in completing the questionnaire (Dillman, 2000). Approximately one week after the initial electronic mail, another electronic mail was sent to each respondent. Also, a few days later, a research team of eight undergraduate seniors (four Korean and four American students) made a follow-up telephone call. To improve response rates, the incentive of a lottery drawing for two one-day free stays at a famous resort in Korea, and three \$100 Amazon.com gift certificates in the U.S. were offered (Park, 1993).

This study determined sample size regarding population size (N), pretest mean (\bar{x}), and pretest standard deviation (S) (Churchill and Lacobucci, 2002). According to the managers, www.ecplaza.net and www.globalsources.com are the biggest electronic intermediaries in international commerce regarding the number of registered firms. From www.ecplaza.net and www.globalsources.com, population size (N=4375)¹ was calculated. Also, regarding pretest results, mean (\bar{x}) and standard deviation (S)² of the most conservative case were 3.71 and 1.86 each. This study uses 95% confidence level (Z=1.96) and 3% allowable tolerance of variation

¹ Total number of Korean and U.S. exporters in the electronic industry on the two websites

² Pretest results of descriptive statistics for each item

($W=0.03$). Therefore, sample size calculated is 120. Generally, a reasonably conservative estimate of response rate for a consumer mail survey is approximately 20 percent (Brady and Robertson, 2001). Based on the general response rate, this study uses a sample size 600, including 300 from Korea and 300 from the U.S. The questionnaire was originally written in English and translated into Korean by using the back translation method (Douglas and Craig, 1983).

MEASURES

In operationalizing the constructs used in this study, we used existing scales as well as multiple-item measures whenever possible. Three IT-related determinants (human asset, technology asset, and relationship asset) and four non IT-related determinants (international competence, product standardization, environmental uncertainty, and duration of exporter-customer relationship) are used as antecedent variables. Extent of electronic intermediary use in export marketing is used as an independent variable. To compare exporter in using an electronic intermediary between Korea and the U.S., nationality (dummy coded) is used as a control variable. Also, two other variables, institutional influence and organizational culture, are used to detect the differences between two countries. Following is a description of the scale used for each construct.

Extent of Electronic Intermediary Use. An electronic intermediary refers to a market intermediary serving as a business-to-business (B2B) electronic marketplace in which qualified members post requests to buy or sell; sales representatives search around the globe for companies to supply or purchase the posted products, matching between exporters and foreign customers (Clark and Lee, 1999). There are various functions of an export intermediary. Selling

in foreign market and assisting export procedures are the most important roles of an export intermediary (Goldsby and Eckert, 2003; Narayandas et al., 2002; Soon et al., 2002; Prasad et al., 2001; Kotler, 2000; Chrusciel, 2000; Clark and Lee, 1999). As noted previously, an electronic intermediary is considered an exporting channel and marketing strategy in international commerce. According to the literature, determinants to measure the extent of use of an exporting strategy are classified into input factors (i.e., used resources) and output factors (i.e., sales amount) (Julian, 2003). For this study, two questions were asked to measure the extent of electronic intermediary use in export marketing, such as “What percentage of your marketing budget is spent for using the electronic intermediaries for export assistance?” and “What percentage of your total export sales comes from using electronic intermediaries?” High percentage represents a greater extent of electronic intermediary use. Low percentage, on the contrary, represents a lesser extent of electronic intermediary use in export marketing.

IT-Related Human Asset. IT-related and non IT-related determinants of electronic intermediary use are examined as antecedent variables of this study. One IT-related determinant is human asset. IT-related human asset refers to an IT staff member who consistently solves business problems and addresses business opportunities through IT (Ross et al., 1996). Also, IT-related human asset applies the staff’s technical skills to build bridges between old systems and new ones, to deliver data across locations and applications, and to recognize opportunities to apply new technologies as they become available (Santhanam and Hartono, 2003; Bharadwaj, 2000). According to Ross et al. (1996), IT-related human asset should specify both breadth of required knowledge including technical, change management, and business knowledge and the pace at which new skills must be acquired. To measure IT-related human asset, respondents are asked to rate how much they agree or disagree (seven-scale) with three statements comprising

the above factors, such as “IT staff has technical capabilities that match the technology plan in carrying out our strategic purpose,” “IT staff is close enough to the business to understand and predict business problems,” and “IT staff is in the habit of learning.”

IT-Related Technology Asset. Technology asset is another IT-related determinant (Santhanam and Hartono, 2003; Bharadwaj, 2000). IT-related technology asset consists of sharable technical platforms and database (Ross et al., 1996). A valuable IT-related technology asset is essential for integrating systems and making IT application cost effective in operation and support (Ross et al., 1996). There are several factors to measure IT-related technology asset, including well-defined technology architecture and data and platform standards (Ross et al., 1996). To measure the IT-related technology asset, respondents are asked to rate how much they agree or disagree (seven-scale) with three statements comprising factors such as, “IT and business management have defined a clear technology plan based on strategic principle,” “IT and business management understand the costs of noncompliance with technology standards,” and “Data and information are available to decision makers when they need them.”

IT-Related Relationship Asset. The third IT-related determinant is relationship asset. IT-related relationship asset is defined as an effective relationship between an IT unit and business units within a firm (Ross et al., 1996). An effective relationship between the IT unit and business units is also a key determinant of IT capability (Ross et al., 1996; Santhanam and Hartono, 2003; Bharadwaj, 2000). The literature uses shared risk and responsibility between IT unit and business units to measure IT-related relationship asset (Ross et al., 1996). To measure the IT-related relationship asset, respondents are asked to rate how much they agree or disagree (seven-scale) with three statements comprising the shared risk and responsibility such as, “IT and business executives share a vision for how IT will support the business,” “IT and business

managers consult with each other regularly on business and technical decisions,” and “Most large IT projects have active business executive sponsorship and leadership.”

International Competence. As discussed earlier, electronic intermediary use may be regarded as a marketing strategy for exporters to penetrate the global market. Marketing determinants are thus examined as antecedent variables. This study refers to marketing determinants as non IT-related determinants to maintain consistency with IT-related determinants. One of non IT-related determinants is international competence. International competence is defined as an ability that enables a firm to identify idiosyncrasies, develop an appropriate marketing strategy, and execute it effectively in international commerce (Cavusgil and Zou, 1994). Competent firms know the subtle differences in environmental conditions, market channel, and the degree of competition, due to their international experience and resources (Douglas and Wind, 1987). International competence is measured by several factors including international experience, foreign markets operated, resources for export development, and company reputation (Cavusgil and Zou, 1994). International competence is measured by three items, such as “Our firm has relatively broad international experiences compared to those of our competitors,” “Amount of resources our firm has for export development is relatively large,” and “Number of foreign markets in which our firm has regular operations is relatively large compared to our competitors.” Respondents are asked to rate how much they agree or disagree (seven-scale) with the three statements.

Product Standardization. Product standardization is another non IT-related determinant. Product standardization refers to nonspecific, low tech, undifferentiated, or standardized product characteristics (Trabold, 2002; Peng and Ilinitich, 1998). The higher the standardization of the product, the more likely that a traditional export intermediary is selected by a manufacturer

(Trabold, 2002; Peng and Ilinitich, 1998). Adopted from Zou and Cavusgil (2002), respondents are asked how much they agree or disagree (seven-scale) with three statements assessing the degree to which a product is standardized across country markets: “Our firm adopts a standardized core product across all major markets in the world,” “The product designs we use in different country markets are very similar,” and “Our product is not culturally specific.”

Environmental Uncertainty. Environmental uncertainty is also considered a non IT-related determinant. Environmental uncertainty refers to unanticipated changes in circumstances surrounding an exchange within an unpredictable or complex environment (Rindfleisch and Heide, 1997; Noordewier, et al., 1990). In international commerce, transaction cost theorists view uncertainty as arising from the difficulties associated with adapting to unfamiliar environments as well as monitoring the contractual performance of exchange partners (Goldsby and Eckert, 2003; Williamson, 1991). This uncertainty arising from adaptation is called environmental uncertainty. Adopted from Lin and Germain (2003), respondents are asked how much they agree or disagree (seven-scale) with three statements assessing the degree of unforeseen shifts in market conditions: competitor behavior, sales forecast, and market environment. Statements were: “Our markets are usually unpredictable in terms of economic, political, and social environments,” “Competitor actions are difficult to predict,” and “Our sale forecasts are likely to be inaccurate.”

Duration of Exporter-Customer Relationship. In our interviews, a new determinant of electronic intermediary use was found. Managers insisted that the duration of their relationships with continuous foreign customers is associated with their decision to use an electronic intermediary. To measure the duration exporter-customer relationship, managers were asked, “What is the average duration of your relationships with foreign customers?”

Institutional Influence. This study analyzes data collected from Korea and the U.S. to permit a meaningful empirical test of the model and its cross-national validity. This study uses nationality (dummy coded) as a control variable to compare exporters' behaviors in using an electronic intermediary between Korea and the U.S. Two variables are used to detect the differences between two countries. One is institutional influence. Institution is the issue-specific set of regulatory, cognitive, and normative institutions in a given country, which Scott (1995) refers to as "pillars" (Kostova and Roth, 2002). Among them, this study focuses on influences from two institutions: regulatory and normative institutions. The regulatory institutions reflect the existing laws and rules in a particular national environment, and the normative institutions reflect the values, beliefs, norms, and assumptions about organizational nature and organizational behavior held by the industry in a given country (Kostova and Roth, 2002). To measure the influence from regulator institutions, managers were asked how much they agree or disagree (seven-scale) with two statements: "In this country, laws and rules in business are strictly enforced" and "There is a large number of regulatory bodies in this country, which promote exporting." Two other items were asked to measure the influence from normative institutions. Statements were: "There is a very strong message among companies in this country that you cannot stay in business nowadays if you do not participate in e-commerce" and "There is a lot of talk about exporting going on in the media in this country."

Organizational Culture. Organizational culture is another variable used to justify differences of exporters' behaviors in using an electronic intermediary between Korea and the U.S. Entrepreneurial and bureaucratic cultures are representative organizational cultures. Organizational culture is usually influenced by national culture. For example, high power distance leads to high bureaucratic culture. Low uncertainty leads to high entrepreneurial culture.

Degrees of innovation and risk taking were used to measure the entrepreneurial culture. Degrees of internal regulations and formal structures were used to measure the bureaucratic culture (Deshpande and Farley, 1999). To measure entrepreneurial organizational culture, respondent managers were asked how much they agree or disagree (seven-scale) with two statements, such as “My organization is a very dynamic place. People are willing to be an entrepreneur, and innovator, or a risk taker” and “My organization emphasizes growth and acquiring new resources. Readiness to meet new challenges is important.” To measure bureaucratic organizational culture, respondents were also asked how much they agree or disagree with two statements: “My organization is a very formalized and structural place. Established formal rules and policies generally govern what people do” and “My organization emphasizes permanence and stability. Loyalty and tradition are important.” Table 3.1 summarizes the operationalization of all constructs.

Table 3.1 Construct operationalization

<i>Variables</i>	<i>Operational definitions</i>	<i>Scale references</i>
<i><u>Independent variable</u></i>		
Electronic intermediary use	Percentage of marketing budget spent for using electronic intermediaries for export assistance and percentage of total export sales come from using electronic intermediaries	Goldsby and Eckert (2003); Narayandas et al. (2002); Prasad et al. (2001); Chrusciel (2000)
<i><u>Antecedent variables</u></i>		
IT-related human Asset	Both breadth of required knowledge including technical, change management, and business knowledge and the pace at which new skills must be acquired	Ross et al. (1996)
IT-related technology asset	Well-defined technology architecture and data and platform standards	Ross et al. (1996)
IT-related relationship asset	Shared risk and responsibility between IT unit and business units	Ross et al. (1996)
International competence	International experience, foreign markets operated, resources for export development and company reputation	Cavusgil and Zou (1994)
Product standardization	Degree to which a product is standardized across country markets	Zou and Cavusgil (2002)
Environmental uncertainty	Degree of unforeseen shifts in market conditions	Lin and Germain (2003); Celly and Frazier (1996)
Duration of exporter-customer relationship	Average period of relationships with foreign customer	[New scale]
<i><u>Control variables</u></i>		
Nationality	Dummy coded	Kim and Oh (2002)
Institutional influence	Influences from regulatory and normative institutions	Kostova and Roth (2002)
Organizational culture	Degrees of entrepreneurial and bureaucratic culture	Deshpande and Farley (1999)

MODEL SPECIFICATION

Ordinary least square (OLS) regression is utilized to test the seven hypotheses [see the Appendix C]. OLS regression uses linear combinations of independent variables to compute expected values of the dependent variable. The advantage of this statistical technique is that it answers the hypothesized questions in a direct manner, and it is a powerful approach for data analysis if there are no severe problems with the form of the data (namely, regression assumptions are not violated) (Neter et al, 1985). As noted previously, the independent variable is the extent of electronic export intermediary use, and antecedent variables are IT-related determinants (human asset, technology asset, and relationship assets) and non IT-related determinants (international competence, product standardization, environmental uncertainty, and duration of exporter-customer relationship). For a cross-country analysis using pooled data, this study also included nationality of the sample (Korea or the U.S.) as a control variable (Kim and Oh, 2002).

RESULTS AND DISCUSSION

Three hundreds questionnaires were sent to Korean exporters, and the other 300 questionnaires were sent to U.S. exporters. The electronic mailing yield 144 surveys from 600 Korean and U.S. exporters. A total of 144 competed surveys were returned (81 from Korea and 63 from the U.S.), and 123 were usable (74 from Korea and 49 from the U.S.). We discarded 21 surveys because of too many missing values. The overall response rate was 24% (27% from Korea and 21% from the U.S.). This response rate is quite satisfactory, given that average top-management survey response rates are in the range of 15%~20% (Menon et al., 1996).

NON-RESPONSE BIAS ANALYSIS

This study estimated a non-response bias to improve the reliability of the results. We divided the responses into early and late response groups regarding arrival dates of Korea and U.S. samples (Armstrong and Overton, 1977). Each group was composed of 10 responses in Korea and U.S. samples. Differences in the mean of response between early and late groups were compared along key constructs of the study, which is considered a valid test of non-response bias by previous studies (Wu et al., 2004). The means of the major constructs were compared in both groups in Korea and U.S. samples. As shown in Table 3.2, no significant differences were found. Therefore, this study can conclude that non-response bias is not involved in this study.

Table 3.2 Comparison of early and late responses

<i>Constructs</i>	<i>Korea sample:</i>		<i>U.S. sample:</i>	
	<i>T-test (T-value) (P-value)</i>	<i>Sign- test (W-value) (P-value)</i>	<i>T-test (T-value) (P-value)</i>	<i>Sign- test (W-value) (P-value)</i>
Electronic intermediary use	0.001 (0.999)	107.5 (0.878)	-0.01 (0.993)	103.0 (0.907)
IT-related relationship asset	0.18 (0.856)	95.5 (0.446)	1.35 (0.203)	94.0 (0.424)
International competence	-0.46 (0.652)	85.0 (0.141)	1.06 (0.305)	94.5 (0.443)

MEASURES VALIDATION

A Principal Component Analysis (PCA) was used to test the dimensional structure of the 18 items of IT and marketing determinants of electronic intermediary use (Fabrigar et al., 1999). An varimax (orthogonal) was used. The number of factors extracted was five, although we

expected six factors. Factor loadings of IT-related human asset are relatively low. Also, a factor loading of product standardization is low. Two possible answers may explain the problems.

First, exporters may not easily capture or own the value created by the human asset (Rasheed and Geiger, 2001; McWilliams and Gray, 1994). Second, several questionnaires were sent to marketing managers who may not grasp characteristics of products.

Table 3.3 Exploratory factor analysis results

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
	RA	IS	EU	TA	PS	HA
	Loadings	Loadings	Loadings	Loadings	Loadings	Loadings
³ Q4-1	0.659	0.108	0.095	0.421	0.17	0.094
Q4-2	0.667	0.322	0.03	0.097	0.166	0.406
Q4-3	0.625	0.284	0.059	0.224	0.26	0.195
Q5-1	0.418	0.349	0.212	0.683	0.053	0.074
C5-2	0.345	0.258	0.148	0.801	0.047	0.069
Q5-3	0.475	0.302	0.147	0.477	-0.097	0.388
Q6-1	0.849	0.181	0.071	0.23	-0.083	-0.05
Q6-2	0.818	0.228	0.105	0.16	-0.023	-0.073
Q6-3	0.838	0.248	0.094	0.079	-0.063	-0.01
Q7-1	0.395	0.756	0.081	0.102	-0.201	0.095
Q7-2	0.229	0.87	0.046	0.181	-0.006	0.05
Q7-3	0.312	0.824	-0.021	0.248	-0.039	0.001
Q8-1	-0.01	0.09	-0.146	-0.141	-0.914	-0.02
Q8-2	-0.065	0.073	-0.188	0.104	-0.82	-0.316
Q8-3	-0.006	-0.043	-0.244	-0.115	-0.393	-0.845
Q9-1	0.098	0.087	0.833	0.065	0.105	0.11
Q9-2	0.121	0.057	0.807	0.006	0.02	0.195
Q9-3	0.042	-0.062	0.802	0.254	0.249	-0.056
Eigenvalue	7.15576	2.53572	1.23879	1.07142	0.82111	0.68335
Percent of Variance	23.4	14.8	12.4	10.4	10.3	7.0

HA: IT-related human asset; **TA:** IT-related technology asset; **RA:** IT-related relationship asset; **IC:** International Competence; **PS** Product standardization; **EU:** Environmental uncertainty.

³ see the Appendix A and B

Therefore, it is required for future research to further examine the items to measure IT-related human asset. It is also recommended to send the questionnaire to only top-management.

The next step is to confirm the existing scales. Confirmatory Factor Analysis (CFA) is a more effective method for assessing unidimensionality than coefficient alpha and item-to-total correlation (Calantone and Zhao, 2001). The results from confirmatory factor analyses indicate that all factor loadings are greater than the 0.4 cutoff (Nunnally and Bernstein, 1994). The Cronbach alpha coefficients of all constructs reveal accepted reliability with all alphas greater than 0.7, the minimum level specified by Nunnally and Bernstein (1994). Overall, all measures demonstrate accepted validity and reliability (See Table 3.4 for details of Cronbach alpha and factor loadings of all constructs).

Table 3.4 Confirmatory factor analysis results and Cronbach alpha

<i>Items</i>	⁴ <i>Loadings</i>	<i>Cronbach alpha</i>	<i>Items</i>	<i>Loadings</i>	<i>Cronbach alpha</i>
HA1	0.764	0.82	TA1	0.840	0.87
HA2	0.846		TA2	0.904	
HA3	0.729		TA3	0.740	
RA1	0.896	0.91	IC1	0.797	0.88
RA2	0.884		IC2	0.831	
RA3	0.859		IC3	0.906	
PS1	0.743	0.78	EU1	0.763	0.84
PS2	0.969		EU2	0.776	
PC3	0.543		EU3	0.862	

HA: IT-related human asset; **TA:** IT-related technology asset; **RA:** IT-related relationship asset; **IC:** International Competence; **PS** Product standardization; **EU:** Environmental uncertainty

⁴ All loadings are significant (p<0.01)

REGRESSION RESULTS

Table 3.5 presents the correlation matrix for all variables included in the regression analysis. The correlation between IT-related human asset and IT-related relationship asset, and the correlation between IT-related human asset and IT-related technology asset are noticeably high. Also, the directions of relationships between IT / non IT-related determinants and the extent of electronic intermediary were consistent with our hypotheses.

Table 3.5 Correlation matrix

	<i>EI</i>	<i>HA</i>	<i>TA</i>	<i>RA</i>	<i>IC</i>	<i>PS</i>	<i>EU</i>
HA	0.52***						
TA	0.62***	0.66***					
RA	0.43***	0.70***	0.64***				
IC	0.56***	0.50***	0.61***	0.53***			
PS	-0.23**	-0.27**	-0.09	0.07	0.16*		
EU	0.37***	0.19**	0.28**	0.12	0.01	-0.38***	
DU	-0.59***	-0.40***	-0.52***	-0.35***	-0.39***	0.13	-0.30**

EI: Electronic intermediary use; **HA:** IT-related human asset; **TA:** IT-related technology asset; **RA:** IT-related relationship asset; **IC:** International Competence; **PS:** Product standardization; **EU:** Environmental uncertainty; **DU:** Duration of relationship
 * $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$

To further examine the severity of multicollinearity, variance inflation factors (VIFs) are reported. As shown in the second parentheses of Table 3.6, the VIFs of all constructs in the pooled sample are lower than 10, which indicate no severe multicollinearity problem (Mason and Perreault, 1991). Therefore, all multicollinearity is within the accepted limit and the effect of the correlated independent variables would not hamper the interpretability of the results. Residual

plots on the seven independent variables and the Kolmogorov-Smirnov test suggest homogeneous and normal error terms, which satisfy the regression assumptions. Table 3.6 shows the results of the regression analysis in detail.

Table 3.6 Results of OLS regression analysis

Dependent Variable: Electronic intermediary use

<i>Hypotheses</i>	<i>Independent variables</i>	<i>Pooled sample (n=123)</i>	<i>Korea (n=74)</i>	<i>U.S. (n=49)</i>
1	IT-related human asset	0.24** (0.09) (2.25)	0.23* (0.12) (2.20)	0.26* (0.14) (2.74)
2	IT-related technology asset	0.24** (0.10) (2.66)	0.25** (0.13) (2.70)	0.27* (0.15) (3.02)
3	IT-related relationship asset	0.001 (0.07) (1.34)	-0.04 (0.10) (1.59)	0.30 (0.10) (1.21)
4	International competence	0.20** (0.09) (2.06)	0.20* (0.12) (2.23)	0.21* (0.16) (2.82)
5	Product standardization	-0.10* (0.07) (1.36)	-0.16* (0.10) (1.58)	-0.05 (0.12) (1.84)
6	Environmental uncertainty	0.18** (0.07) (1.40)	0.16* (0.09) (1.38)	0.23* (0.13) (2.08)
7	Duration of relationship	-0.16** (0.09) (1.32)	-0.27** (0.08) (1.24)	0.04 (0.12) (1.75)
	R-squared	0.62	0.61	0.69
	F-statistic	25.71***	14.03***	12.59***

The coefficients are standardized; Standard errors are in the first parentheses; Variance inflation factors (VIFs) are in the second parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$

Hypothesis 1 suggests that the IT-related human asset is positively related to electronic intermediary use in export marketing. Coefficients for IT human asset in the pooled, Korea, and U.S. samples are positive (0.24, 0.23, 0.26), which supports Hypothesis 1. Coefficient for IT-related human asset and dummy variables (HA*D)⁵ is not 0 (-0.019), which indicates that two groups (Korean and U.S. exporters) have different levels of IT-related human asset. We thus can conclude that U.S. exporters who retain a certain degree of IT human asset are more likely to use an electronic intermediary than Korean exporters who retain a similar degree. Hypothesis 2 states that IT-related technology asset encourages exporters to use an electronic intermediary in international commerce. This hypothesis is supported by the coefficients of the pooled, Korea, and U.S. samples (0.24, 0.25, 0.27). Coefficient for IT-related technology asset and dummy variables (TA*D) is not 0 (-0.010). The results indicate that U.S. exporters are encouraged more by IT technology asset to use an electronic intermediary in export marketing.

Hypothesis 3 predicts a positive relationship between IT-related relationship asset and electronic intermediary use. Coefficients in the pooled and U.S. samples are positive (0.11, 0.31), but they are not statistically significant. Moreover, the coefficient for Korean exporters is negative (-0.04). Three possible answers may justify the regression results. Based on coefficient of the Korea sample, an advanced IT-related relationship asset may encourage exporters to adopt a direct Internet-based exchange due to the significant reduction of transaction costs (Narayandas et al., 2002; Sarkar et al., 1995). Second, exporters may not be aware of their IT-related relationship asset, an unobservable resource (Rasheed and Geiger, 2001). Also, with regard to coefficients of the pooled and U.S. samples, sampling error may be involved, because they are not statistically significant (Churchill and Lacobucci, 2002).

⁵ see the Appendix C

Hypothesis 4 indicates that international competence is positively related to electronic intermediary use in export marketing. Coefficients of the pooled, Korea, and U.S. samples are positive (0.20, 0.20, 0.21), which supports Hypothesis 4. Also, U.S. exporters who retain a certain degree of international competence may be more likely to use an electronic intermediary, because the coefficient of the U.S. sample is slightly higher than that of the Korea sample. Two groups (Korean and U.S. exporters) also have different levels of international competence, regarding coefficient of international competence and dummy variables (-0.040).

Hypothesis 5 indicates a negative relationship between product standardization and electronic intermediary use. Coefficients of the pooled, Korea, and U.S. samples (-0.10, -0.16, -0.05) support Hypothesis 5. However, the coefficient for U.S. exporters is not statistically significant. Hypothesis 5 is thus partially supported. Sampling error may explain the problem.

Hypothesis 6 predicts that environmental uncertainty is positively related to electronic intermediary use. Coefficients of the pooled, Korea, and U.S. samples are positive (0.18, 0.16, 0.23). The results indicate that U.S. exporters who are faced with environmental uncertainty are more likely to adopt an electronic intermediary, because the coefficient of the U.S. sample is stronger than that of Korea sample. Also, the two groups have different degrees of environmental uncertainty as shown by coefficient for environmental uncertainty and dummy variables (-0.071). Hypothesis 7 states that there is a negative relationship between electronic intermediary use and duration of exporter-foreign customer relationship. Coefficients of the pooled and Korea samples are negative (-0.16, -0.27), which support Hypothesis 7. However, the relationship is positive for U.S. exporters (0.04). The results indicate that duration of relationship may be not a matter for U.S. exporters who use an electronic intermediary. Hypothesis 7 is thus partially supported. Overall, hypotheses receive mixed support.

Hypotheses 1, 2, 4, and 6 are supported. Hypotheses 5 and 7 are partially supported, but Hypothesis 3 is not supported. Table 3.7 below summarizes the results for hypothesized relationships.

We expected that Korean exporters might have a more positive attitude toward use of an electronic intermediary regarding the institutional perspective. However, it was expected that U.S. exporters would be more likely to use an electronic intermediary regarding the organizational culture. Generally accepted assumptions for environment and culture at the country level cannot be consistent with those in the organizational level. Therefore, we cannot compare Korea and the U.S. regarding the results by mixing three constructs: nationality, institutional environment, and organizational culture. As an alternative, this study used nationality (dummy coded) as a control variable to compare the two countries. Institutional influence and organizational culture were then used to justify the comparison.

The two groups (Korean and U.S. exporters) are significantly different regarding institutional environments and organizational cultures. According to the result⁶, as expected previously, Korean exporters are faced with stronger regulatory and normative institutions than U.S. exporters. Also, Korean exporters have more bureaucratic and less entrepreneurial organizational culture. The regression results indicate that U.S. exporters are more likely to use an electronic intermediary than Korean exporters. Higher entrepreneurial or lower bureaucratic corporations may be more likely to adopt a new technology or service (Hasan and Ditsa, 1997; Moorman, 1995). An electronic intermediary is a new market intermediary in electronic international commerce serving as a B2B electronic marketplace. U.S. exporters were shown as more entrepreneurial than less bureaucratic. In sum, the regression results comparing the

⁶ Results of sign test (one-tail Mann-Whitney test)

behaviors of Korean and U.S. exporters using an electronic intermediary in export marketing can be justified by the organizational culture.

Table 3.7 Summary of results for hypothesized relationships

Dependent Variable: Electronic Intermediary Use

<i>Hypotheses</i>	<i>Independent variables</i>	<i>Predicted relationship</i>	<i>Pooled sample</i>	<i>Korea sample</i>	<i>U.S. sample</i>
H1	IT-Related human asset	Positive	Supported	Supported	Supported
H2	IT-related technology asset	Positive	Supported	Supported	Supported
H3	IT-related relationship asset	Positive	Not supported	Not supported	Not supported
H4	International competence	Positive	Supported	Supported	Supported
H5	Product standardization	Negative	Supported	Supported	Not supported
H6	Environmental uncertainty	Positive	Supported	Supported	Supported
H7	Duration of relationship	Negative	Supported	Supported	Not supported

CONTRIBUTIONS AND DIRECTIONS FOR FUTURE RESEARCH

THEORETICAL CONTRIBUTIONS

In exporting literature, there has been little theoretical and empirical research about an export intermediary despite its importance (Peng and Ilinitch, 1998; Leonidou and Katsikeas, 1996). In electronic commerce literature, previous researchers have paid attention to a direct Internet-based exchange, which was believed to be the most efficient exporting channel to

decrease transaction costs. Their thoughts were primarily embedded in the transaction cost analysis (Bailey and Bakos, 1997; Sarkar et al., 1995). This study uses the transaction cost analysis with the resource-based view for explaining an electronic intermediary, which is an indirect exporting channel as well as an alternative export-oriented market intermediary in electronic international commerce. Specifically, this study addresses theoretically and empirically what influences exporters to use an electronic intermediary. From the transaction cost perspective, we identify product standardization and environmental uncertainty as the determinants of electronic intermediary use. Three IT-related assets (i.e., human, technology, and relationship assets) and international competence are considered the determinants with regard to the resource-based view. Among them, IT-related relationship was not supported. Also, product standardization was partially supported by the regression results. Unobservable characteristic of human resource and sampling error may explain the problems. In sum, the transaction cost analysis and resource-based view make theoretical contributions to exploring IT and marketing determinants of electronic intermediary use. We hope this study can make international business researchers aware of the important role of an electronic intermediary in export marketing through the two theories.

MANAGERIAL CONTRIBUTIONS

No manager can afford to ignore the impact of the Internet on business. The Internet allows customers and exporters in different geographical places to do real-time market transactions in electronic international commerce. With the development of the Internet, the world market has become globalized. This study illustrates the significant role of an electronic intermediary, which may help exporters to penetrate the global market effectively. Since

electronic commerce comprises both benefits and costs to managers, they need to recognize how such opportunities and threats may affect their business practices. As many researchers have emphasized, the key benefit is to decrease transaction costs. However, finding the ideal buyer or supplier in electronic marketplaces can be extremely time consuming and costly (Lee and Danusutedjo, 2000). Small and medium exporters usually do not have sufficient resources or experience regarding foreign markets (Peng and Ilinitch, 1998). Therefore, finding relevant sources in the global electronic marketplace is a challenge for non-experienced users (Ancel, 1999). This study proposes the electronic intermediary as an effective alternative for small and medium exporters to decrease the costs of electronic commerce.

This study addresses several determinants of electronic intermediary use from transaction cost and resource-based perspectives. Specifically, the regression results show that human and technology assets are IT-related determinants of electronic intermediary use. International competence, product standardization, and environmental uncertainty are identified as marketing determinants of electronic intermediary use. This study aims at informing small and medium exporters of the importance of electronic intermediary use in international commerce. The findings have the potential to help decision makers understand the major internal and external forces affecting electronic intermediary use. Furthermore, this study shows an interrelation between electronic intermediary use and market environment and organizational culture. The results can show make exporters how their behavior to adopt an exporting channel is influenced by their organizational cultures (i.e., entrepreneurial and bureaucratic cultures) and institutional environments (i.e., regulatory and normative institutions).

DIRECTIONS FOR FUTURE RESEARCH

This study is among little empirical and theoretical literature on export intermediaries in electronic international commerce. Therefore, several limitations of this study should be addressed. First, there is a lack of clear distinction between an electronic intermediary and a traditional intermediary. Although the electronic intermediary is a newly emerging market intermediary in international commerce, many common roles, benefits, and costs are shared between an electronic intermediary and a traditional intermediary. This study has tried to make a clear distinction between them, but it may be oversimplified. A more systematic study to distinguish them is thus suggested for future research. Second, this study used an email survey to collect data. Most business managers suffer from a huge amount of junk email everyday. Many managers may have mistaken the questionnaire for a junk email. As a consequence, the response rate was relatively low. Therefore, compensating for the weak points in the email survey is recommended for future research. Another limitation in this study is that not all dimensions to determine electronic intermediary use were investigated; other important IT and marketing variables were not introduced. Inclusion of other variables may enhance our understanding of electronic intermediary use in export marketing. Finally, the generalizability of this study is restricted by the size and composition of the sample (Korean and U.S. exporters). Using electronic commerce is not limited to these two countries; managers around the world are participating in electronic international commerce. Therefore, it is recommended for future research to collect data from various countries to improve the generalizability.

CONCLUSION

Exporting is regarded as the most appropriate strategy for small and medium-sized enterprises (SMEs). However, some of SMEs stay away from exporting due to limited resources or lack of knowledge regarding foreign markets. An electronic intermediary can be an efficient alternative for them to locate and negotiate with foreign customers. Furthermore, electronic intermediary use allows SMEs to compete with their larger competitors in the global market. Despite the importance, there is inadequate theoretical and empirical research about electronic intermediaries in international commerce. This study is conducted with the objective of understanding what determines electronic intermediary use in export marketing. It contends that determinants regarding the transaction cost analysis and resource-based view are crucial for exporters' use of an electronic intermediary. The findings may be helpful for managers to understand a new exporting channel to penetrate the global market. This study is only the first step to explore the electronic intermediary, an alternative market intermediary in electronic international commerce. We expect that international business scholars will expand research on the determinants as well as the effects of electronic intermediary use.

CHAPTER FOUR

EFFECTS OF ELECTRONIC INTERMEDIARY USE ON EXPORT PERFORMANCE

INTRODUCTION

The Internet is changing the way companies all over the world do business, making it easier for them to buy and sell to each other. The Internet has motivated companies to participate in electronic commerce, because it may contribute to create a new revenue model for them. There is an interesting story. When Li Bo, a Chinese small enterpriser began producing memento buttons in 1998, he reckoned that his three-man operation would sell mostly to tourist-site operators nearby. In 2003, Mr. Li's company generated the equivalent of \$845,700 in revenue, and garnered half of its orders from people who learned about the company through a specific export-oriented market intermediary, Alibaba.com's Web site (Chen, 2004). With the development of the Internet, an alternative market intermediary, called electronic intermediary, is emerging in international commerce. Alibaba.com is the electronic intermediary used by Li Bo. An electronic intermediary refers to an independent market intermediary serving as a business-to-business (B2B) electronic marketplace in which qualified members post requests to buy or sell; its sales representatives then search around the globe for companies to supply or purchase the posted products, matching between exporters and foreign customers (Clark and Lee, 1999).

In export marketing, the electronic intermediary brings significant changes. Electronic intermediaries allow trade parties to achieve cost-efficient international trade. Export literature has not paid adequate attention to export intermediaries despite their importance. Electronic commerce studies have not realized the important role of a market intermediary. Instead, they have emphasized a direct Internet-based exchange, which until now was believed the most efficient transaction channel (Narayandas et al., 2002; Sarkar et al., 1995). An electronic

intermediary is an export-oriented market intermediary in electronic international commerce. This study aims at gaining a better understanding of the electronic intermediary in export marketing. Specifically, this study examines relationships between electronic intermediary use and export performance. This study focuses on transaction costs to investigate the effects of electronic intermediary use on export performance. Transaction cost is a prerequisite concept to study an electronic intermediary, because its primary role may be to decrease costs in market transactions. Also, transaction cost is a chief determinant of improved firm performance (Dietrich, 2003). Export sales and market share are other frequently used dimensions to determine export performance (Peng and York, 2001; Francis and Collins-Dodd, 2000; Zou et al., 1998; Cavusgil and Zou, 1994).

An electronic intermediary is viewed as a hybrid-exporting channel, combining a traditional intermediary and a direct Internet-based exchange. A direct Internet-based exchange has been considered as the most efficient exporting channel to reduce cost, but it involves high risk. Exporters who execute transactions based on electronic information cannot inspect products, which may lead to the risk of uncertain product qualities (Clark and Lee, 1999). Also, exporters may be exposed to opportunistic behaviors and unfair trade practices of market participants (Chrusciel, 2000; Clark and Lee, 1999). A traditional intermediary may be an effective exporting channel to reduce the risk, but this choice accompanies high costs such as commission and agent fees. An electronic intermediary may play the role of an alternative exporting channel that balances profit and risk.

Theoretically, the transaction cost analysis has been used for investigating the relationships between electronic intermediary use and export performance. The transaction cost analysis is the ideal theory to explain cost-efficient market transaction, which is a primary role of

electronic intermediaries. To permit a meaningful empirical test of the model and its cross-national validity, this study analyzes data collected in two different countries, Korea and the U.S. Korea and the U.S. are world leaders in both export and IT capability (Foreign Policy, 2003). However, the two countries have different market environments and organizational culture (Hoskisson et al., 2000; Peng and Ilinitch, 1998). Therefore, Korea and the U.S. may be appropriate sources for cross-national research to provide a multinational test of the models. To detect the differences between two countries, this study uses two variables: institutional influence and organizational culture. A specific research question is addressed: Does the extent of electronic intermediary use influence export performance?

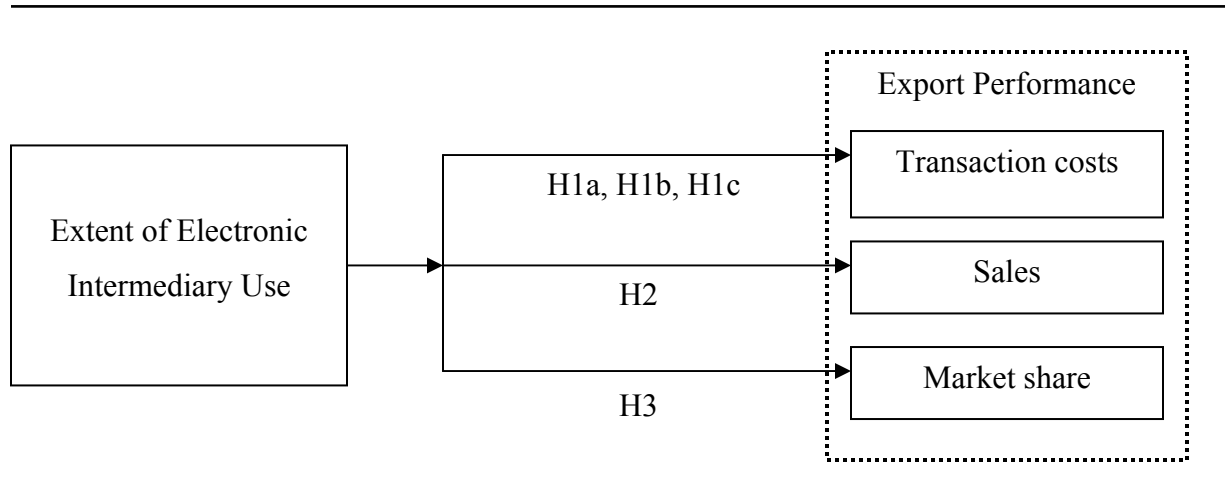
Next, this study explores the relationships between electronic intermediary use and export performance in more detail. Multiple facets of transaction costs, such as searching, bargaining, and monitoring costs, are first discussed. Other dimensions to measure export performance, such as export sales and market share, are then examined with regard to electronic intermediary use. Finally, the proposed research method is depicted with respect to sample, measures, and statistical techniques, followed by a report and discussion of empirical results. The study concludes with contributions and suggestions for future research.

EFFECTS OF ELECTRONIC INTERMEDIARY USE ON PERFORMANCE

Figure 4.1 illustrates the effects of electronic intermediary use on export performance. The model illustrates five hypotheses between electronic intermediary use and export performance. We explore export performance regarding three terms: transaction cost, export sales, and market share (Brouthers et al., 2003; Williamson, 1991). H1a, H1b, and H1c indicate the relationships between electronic intermediary use and three facets of transaction costs:

searching, bargaining, and monitoring costs. H2 and H3 examine the effects of electronic intermediary use on sales and market share in export marketing.

Figure 4.1 Effects of electronic intermediary use on export performance



An export intermediary is a specialist firm that functions as the export department of several manufactures in noncompetitive lines as a transaction channel for exporters (Trabold, 2002; Root, 1994; Chalmin, 1987). Despite scarce theoretical and empirical research, export intermediaries have played a major role in export marketing (Peng and Ilinitch, 1998; Leonidou and Katsikeas, 1996). An electronic intermediary is an alternative export-oriented market intermediary in electronic international commerce (Clark and Lee, 1999). An electronic intermediary allows exporters to enhance their access to decision-making information by exploiting the use of contemporary technology (Chrusciel, 2000). An electronic intermediary has various roles, benefits, and even costs. Roles identified by the literature include providing market information, connecting between exporters and foreign customers, and serving as an electronic marketplace (Chrusciel, 2000; Lee and Danusutedjo, 2000; Chrusciel and Zahedi,

1999; Bailey and Bakos, 1997). Also, an electronic intermediary provides many benefits, such as accelerating the internationalization of SMEs, making market transactions efficient, and overcoming time and geographical barriers (Goldsby and Eckert, 2003; Stevenson and Hamill, 2002; Prasad et al., 2001; Kotler, 2000). However, lack of credibility, unestablished payment systems, and language and cultural barriers are presented as costs of electronic intermediary use in the literature (Lee and Danusutedjo, 2000; Bailey and Bakos, 1997; Hessler, 1996). In the following sections, we discuss the effects of electronic intermediary use on three types of transaction costs (searching, bargaining, and monitoring costs) and other dimensions of export performance (sales and market share).

TRANSACTION COSTS IN ELECTRONIC INTERMEDIARY USE

The basic principle of the transaction cost analysis is that managers prefer conducting businesses in a way that minimizes their transaction costs (Liang and Huang, 1998). These costs are the expenditures associated with transaction processes such as searching, bargaining, and monitoring (Goldsby and Eckert, 2003; Dahlstrom and Nygaard, 1999). In export marketing, searching is a pre-agreement process. Searching involves significant costs, because finding the ideal customer or distributor in international commerce can be extremely time consuming and costly (Lee and Danusutedjo, 2000; Dahlstrom and Nygaard, 1999). The next transaction processes are bargaining and monitoring. These processes also involve various costs. Exporters are likely to choose a channel that has lower transaction costs if other costs are equal (Liang and Huang, 1998). From an exporter's point of view, there are difficulties in coordinating market transactions and safeguarding against opportunistic behaviors of trading partners. Small and medium exporters may face these risks more seriously. An electronic intermediary then can

decrease the problems by establishing trading policies and rules to build trust among market participants (Chrusciel, 2000; Clark and Lee, 1999).

Searching Costs and Electronic Intermediary Use. In international commerce, exporters often face substantial searching costs in order to obtain customer information. Searching cost refers to the cost associated with exploration for relevant product or service information (Liang and Huang, 1998). Searching cost is usually measured by the perceived cost incurred at the stage of finding relevant product or process information (Liang and Huang, 1998). Electronic commerce may facilitate the searching process, and the ability to gather large volumes of information in an efficient manner is a primary advantage offered by electronic commerce (Goldsby and Eckert, 2003). Electronic commerce also offers a low-cost method for searching for business partners. As a consequence, we have experienced a marvelous growth in electronic commerce (Goldsby and Eckert, 2003). However, it is still time consuming and costly for small and medium exporters to obtain ideal information on trading counterparts that best fit their preferences, even with electronic commerce (Clark and Lee, 1999).

Finding relevant sources in the “virtual jungle” is a challenge for small and medium exporters who do not have enough resources or experience regarding foreign markets (Ancel, 1999; Peng and Ilinitich, 1998). It is not easy for them to gather and analyze necessary information quickly and accurately. Also, they may not be able to efficiently analyze consumer preferences across various products, suppliers, industries, and countries (Bailey and Bakos, 1997). Therefore, they may face high coordination costs in electronic international commerce (Sarkar et al., 1995). An electronic intermediary may be an efficient alternative for reducing coordination costs arising from their limitations. An electronic intermediary allows the participating parties to exchange information about prices and product offerings very efficiently

(Bakos, 1997). Unlike traditional intermediaries playing the middleman, an electronic intermediary serves as an electronic marketplace of sources, providing various qualified offers to buy or sell around the world (Clark and Lee, 1999). Furthermore, an electronic intermediary provides an ongoing search for new potential customers (Chrusciel, 2000). Therefore, small and medium exporters may decrease their searching costs for customers, products, price, and other market information via electronic intermediary use (Mahadevan, 2000). These arguments lead to the following hypothesis:

Hypothesis 1a: The extent of electronic intermediary use is associated negatively with the exporter's searching costs.

Bargaining Costs and Electronic Intermediary Use. Once the preferred alternatives for customers or distributors have been selected, bargaining activity follows (Goldsby and Eckert, 2003; Clark and Lee, 1999). Bargaining cost is defined as the expense associated with negotiation between transacting parties (Dahlstrom and Nygaard, 1999). In particular, bargaining cost refers to the cost in connection with negotiation terms such as price, delivery, and time (Liang and Huang, 1998). The cost for closing the deal or securing the desired goods/services at acceptable terms is also included in the bargaining cost (Goldsby and Eckert, 2003). To measure the bargaining cost, perceived cost incurred at the stage of negotiating terms with business partners is often used (Liang and Huang, 1998).

It can be difficult for small and medium exporters to negotiate with unknown foreign parties, because they may not have enough information regarding foreign markets. A traditional export intermediary has been considered an efficient channel to locate and negotiate with foreign customers for small and medium exporters (Lee and Danusutedjo, 2000; Peng, 1998). Through

its global networks, and drawing on its experience in carrying out international trade transactions, a traditional export intermediary is able to gather and analyze information quickly and accurately (Lee and Danusutedjo, 2000). However, exporters cannot bargain directly with foreign customers over trade terms via a traditional export intermediary (Drennan, 2000). Intermediaries negotiate terms on behalf of exporters. Exporters might not access many sources for bargaining, such as product, price, and customer information without assistance. By exporting through a traditional export intermediary, the channel relationship is thus administered by intermediaries, rather than exporters.

Unlike a traditional export intermediary, an electronic intermediary offers tremendous potential for saving in the bargaining process (Goldsby and Eckert, 2003). Exporters can bargain directly or indirectly with foreign customers over trade terms via homepage, email, or diverse electronic media, which are not quite available in the traditional export intermediary (Chrusciel, 2000; Lee and Danusutedjo, 2000). Exporters can introduce uniqueness of services and products, provide detailed product specifications, and make available a forum for advertising and marketing products (Chrusciel, 2000; Chrusciel and Zahedi, 1999; Bakos, 1991). Exporters can thus access many offers around the world and choose the most efficient (Goldsby and Eckert, 2003). Furthermore, replacing or substituting a foreign partner or distributor is not difficult via an electronic intermediary, because exporters can access other potential alternatives. Bargaining power may belong to exporters who use electronic intermediaries. Greater bargaining power enables exporters to reject unfavorable terms and to negotiate better conditions. As a result, exporters may save bargaining costs via electronic intermediary use. Based on the literature review, this study thus hypothesizes the following:

Hypothesis 1b: The extent of electronic intermediary use is associated negatively with the exporter's bargaining costs.

Monitoring Costs and Electronic Intermediary Use. Another transaction cost factor, monitoring, is the posttransactional element associated with ensuring that product / service performance conforms to expectations (Goldsby and Eckert, 2003; Liang and Huang, 1998). Monitoring cost refers to the expense made to guarantee the fulfillment of contractual obligations, helping ensure that trading partners act in the best interest of the channel (Dahlstrom and Nygaard, 1999). In electronic commerce, the monitoring process makes the transaction through physical exchanges of goods and accompanied payments clear (Clark and Lee, 1999).

Advantages of electronic intermediary use include assurance of maintaining honesty, integrity, reliability, and legitimacy to the economic transaction (Chrusciel, 2000). Electronic intermediaries usually establish policies and rules to build trust among market participants, so that they can prevent opportunistic behaviors and unfair trade practices (Chrusciel, 2000; Clark and Lee, 1999). Furthermore, electronic intermediaries may deliver verified information and keep that information transparent to the players in the exchange (Goldsby and Eckert, 2003). As a result, electronic intermediaries may become an opportunism-reducing influence (Goldsby and Eckert, 2003). Another benefit of electronic intermediary use is that trade parties can share the latest information on product, price, and player (Goldsby and Eckert, 2003). The capability of electronic intermediaries should also greatly reduce the problem of bounded rationality. Several electronic intermediaries provide a forum for multiple products, monitor transaction data, and promote new technology (Chrusciel, 2000; Chrusciel and Zahedi, 1999; Bakos, 1991). The unique roles of electronic intermediaries may also prevent business partners from the

opportunistic behaviors. As a consequence, electronic intermediary use may help exporters decrease monitoring or safeguarding costs against the opportunistic behaviors in their exporting channel relationships. Based on the literature review, this study thus hypothesizes the following:

Hypothesis 1c: The extent of electronic intermediary use is associated negatively with the exporter's monitoring costs.

SALES AND MARKET SHARE IN ELECTRONIC INTERMEDIARY USE

Electronic intermediary use allows exporters to create and disseminate product information and product awareness, influence consumer purchases, and gather customer information (Sarkar et al., 1995). The roles of an electronic intermediary may correspond to those of a marketing strategy. In export marketing, performance then usually depends on how a strategy can be utilized for various exporting activities (Cavusgil and Zou, 1994; Aaby and Slater, 1989). Several factors have been used to measure export performance, such as export intensity, profitability, continuous export activity, strategic position, and global competitiveness (Zou et al., 1998). Among these factors, sales and market share are representative dimensions to determine export performance (Peng and York, 2001; Francis and Collins-Dodd, 2000; Zou et al., 1998). In other words, the most frequently used performance measures appear to be economic in nature (Cavusgil and Zou, 1994).

We earlier discussed how electronic intermediary use could decrease searching, bargaining, and monitoring costs. Transaction cost is an important term to measure general performance (Drennan, 2000). According to the literature, performance may include cost saving or increase revenue (Brouthers et al., 2003; Williamson, 1991). Firms in a way that cost-efficiency ensures that the desired performance is likely to be achieved (Drennan, 2000).

Transaction cost is thus a primary dimension to determine firm performance (Dietrich, 2003). This study applied the transaction cost to measure export performance. We have already discussed the relationship between electronic intermediary use and three types of transaction costs: searching, bargaining, and monitoring costs. The other determinants of export performance are sales and market share. Here, this study examines the impacts of electronic intermediary use on export sales and export market share.

Exporting may be the most commonly used entry mode for small and medium exporters. However, small and medium exporters typically lack the necessary resources to engage in direct exporting. A market intermediary, by connecting exporters of one country and customers of another country, has been an alternative (Lee and Danusutedjo, 2000). Many small and medium exporters have used a market intermediary to make their first export sale or to open new foreign markets. With the development of electronic commerce, an alternative market intermediary, the electronic intermediary, is emerging. Like traditional intermediaries, the electronic intermediary participates in various transactions with customers and suppliers in different countries and industries. Exporters can make sales around the world at much lower transaction costs via the electronic intermediary (Narayandas et al., 2002; Bailey and Bakos, 1997). Gathering and analyzing information quickly and accurately through their global networks and drawing on their experience are also important roles of electronic intermediaries (Lee and Danusutedjo, 2000). Furthermore, electronic intermediaries provide updates on business trends, market conditions, and individual commodities and products (Chrusciel and Zahedi, 1999). Exporters thus can realize various opportunities for exporting their products to new or potential foreign customers. Most of all, a primary role of electronic intermediaries is to serve as an electronic marketplace providing the collection of many demands from buyers and many products from sellers

effectively via the Internet (Chrusciel, 2000; Chrusciel and Zahedi, 1999). In the electronic marketplace, exporters can introduce or identify the uniqueness of their products and provide detailed product specifications, which are very effective means to make export sales to new or potential customers.

In general, it has been reckless for small and medium exporters to compete with conglomerates in international commerce. However, the emergence of electronic intermediaries could reduce the traditional importance of scale economies, which was the power of conglomerates. Furthermore, electronic intermediaries make global advertising more affordable, and small and medium exporters' market reach thus becomes more global (Prasad et al., 2001; Kotler, 2000; Quelch and Klein, 1996). Small and medium exporters can communicate widely with individuals or trading partners just as any large competitors are able to do via an electronic intermediary (Poon and Swatman, 1997). In other words, an electronic intermediary offers small and medium exporters a level playing field in relation to their larger competitors (Prasad et al., 2001). As a consequence, small and medium exporters can expand their market shares competing with their larger competitors.

An electronic intermediary is an effective alternative for small and medium exporters to decrease various risks in electronic international commerce. Exporters executing transactions based on electronic information without inspecting products may encounter risks of uncertain product quality (Clark and Lee, 1999). It is very risky for small and medium exporters to make export sales to unknown foreign customers, because they may not have enough resources or experience to verify them. An electronic intermediary can function to influence consumer purchases, providing customer information and reducing exposure to risk (Sarkar et al, 1995). An electronic intermediary may prevent opportunistic behaviors and unfair trade practices by

establishing policies and rules to build trust among market participants (Chrusciel, 2000; Clark and Lee, 1999). As a consequence, small and medium exporters can take various opportunities to export to unknown foreign customers via electronic intermediary use. Finally, the ability to lower transaction costs (searching, negotiating, and monitoring costs) has a positive impact on sales and market shares in export activities (Peng and York, 2001). As discussed earlier, electronic intermediary use could decrease transaction costs. Therefore, sales and market shares may be positively influenced by electronic intermediary use. Based on these arguments, this study thus hypothesizes the following:

Hypothesis 2: The extent of electronic intermediary use is associated positively with export sales.

Hypothesis 3: The extent of electronic intermediary use is associated positively with export market share.

KOREA AND THE UNITED STATES AS SETTING FOR THE STUDY

We present a conceptual model to show the effects of electronic intermediary use on export performance. To test the model, data are collected from small and medium exporters in the electronic industry in Korea and the U.S. Cross-national research can provide an appropriate multinational test of the model (Granzin and Painter, 2001). Generalizability is also ensured by comparing the results from two countries (Calantone et al., 1997). Korea and the U.S. have something in common. First, both countries are world leading exporters; the U.S. is the world's number one exporter, and Korea is the 13th largest exporter in the world (Foreign Policy, 2003). Second, electronics is the biggest exporting industry in both the U.S. and Korea. Third, the infrastructure for electronic commerce is well established in both countries. Technological and

managerial knowledge or skills about the Internet are required for exporters to use an electronic intermediary. Korea's global ranking regarding Internet users is then the fifth in the world, and the ranking of the U.S. is the first in the world (Foreign Policy, 2003). With these similarities, Korea and the U.S. have somewhat different market conditions.

The U.S. is a developed country, whereas Korea is a developing country. U.S. Department of Commerce (2002) identified Korea as one of the largest emerging markets on the basis of the economic opportunities in the region. Emerging markets are usually characterized by strong institutional environments, such as regulatory, normative, and cognitive institutions (Hoskisson et al, 2000). Second, export intermediaries have been very successful in Korea, but not in the U.S. During 1980, 51 percent of the country's total exports were performed by intermediaries in Korea (Cho, 1987). Furthermore, the Korean government has used legislation to spur the development of indigenous export intermediaries (Peng and Ilinitch, 1998; Amine, 1987; Cho, 1987). With the development of electronic commerce, use of an electronic intermediary is becoming increasingly popular (Clark and Lee, 1999). Many exporters believe that an electronic intermediary would bring about significant changes or the economics of marketing channels and the structure of distribution in international commerce (Clark and Lee, 1999). Moreover, many exporters feel the need to use an electronic intermediary so they are not left behind (Goldsby and Eckert, 2003). In sum, electronic intermediary use is becoming normative as well as regulatory institutions among exporters. Different market conditions may influence individual and organizational behaviors such that they have implications for business practices, which affect the level of performance (Dominguez and Sequeira, 1993). Institutional environments of emerging markets are stronger than those of developed markets (Hoskisson et al., 2000). Therefore, Korean exporters, rather than U.S. exporters, may be forced to conform to

use an electronic intermediary in export marketing. Institutional theorists argue that conformity to a regulatory or normative institution may lead to enhanced performance under strong institutional environments (Hoskisson et al., 2000).

Korea and the U.S. are also different with regard to organizational culture. Entrepreneurial and bureaucratic cultures are representative of organizational culture. Organizational culture is influenced by national culture such as uncertainty avoidance and power distance. For instance, high power distance leads to high bureaucratic culture. Also, low uncertainty leads to high entrepreneurial culture. Scores of power distance are 60 (Korea) and 40 (US). Scores of uncertainty avoidance are 85 (Korea) and 46 (US). In other words, Korean firms may be highly bureaucratic, but U.S. firms may be more entrepreneurial. According to electronic commerce literature, corporate decisions pertaining to the use of technology or service rapidly gaining in popularity tend to be most affected by organizational culture, which is influenced by national culture. Higher bureaucratic or lower entrepreneurial corporations will be less likely to adopt the new technology or service (Hasan and Ditsa, 1997; Moorman, 1995). Korean firms rather than U.S. firms are considered higher bureaucratic or lower entrepreneurial corporations. Therefore, U.S. exporters may be more likely to use an electronic intermediary in export marketing. Exporters with a positive attitude toward an electronic intermediary can use it more effectively. Considering the organizational culture, U.S. exporters may develop a more positive attitude to using an electronic intermediary. However, it is expected that Korean exporters may have a better understating of electronic intermediary use. This study uses nationality as a control variable (dummy coded) to compare exporters' behaviors to use of an electronic intermediary between Korea and the U.S. Institutional influences and organizational culture are then used to detect the differences between two countries.

RESEARCH METHOD

DATA COLLECTION

Since testing constructs in a single country has some limitations (i.e., generalizability), this study implements a cross-national research (Calantone and Zhao, 2001; Beamish, 1993). This study analyzes data collected from two different countries: Korea and the U.S. This study uses data retrieved from several exporter databases, which contain firm-level data on different industries and countries. Specific sampling frames are electronic intermediaries, including www.ecplaza.net, www.bestsme.com, www.ec21.com, www.myexports.com, www.globalsources.com, www.bestsme.com, www.alibaba.com, www.exporters.com.sg, wtexpo.com, and www.cometotrade.com. There was an initial letter of introduction describing the study and asking for their cooperation in completing the questionnaire (Dillman, 2000). Approximately one week after the initial electronic mail, another electronic mail was sent to each respondent. Also, few days later, a follow-up telephone call was placed by a research team (four Korean and four American undergraduate seniors). To increase the response rate, the incentive of a lottery drawing for two one-day free stays at a famous resort in Korea, and three \$100 Amazon.com gift certificates in the U.S. were offered (Park, 1993).

A great challenge in this study was the identification of exporters using an electronic intermediary. Through in-depth interviews, most managers pointed out www.ecplaza.net and www.globalsources.com as the world's largest electronic intermediaries with regard to the number of membership. The survey questions were piloted-tested on several exporters. This study determined sample size regarding population size (N), pretest mean (\bar{x}), and pretest standard deviation (S) (Churchill and Iacobucci, 2002). From www.ecplaza.net and

www.globalsources.com, population size ($N=4375$)⁷ was calculated. Also, in the pretest results, mean (\bar{x}) and standard deviation (S)⁸ of the most conservative case were 3.71 and 1.86 respectively. This study used 95% confidence level ($Z=1.96$) and 3% allowable tolerance of variation ($W=0.03$). Therefore, sample size calculated is 120 ($N=4375$, $S=1.86$, $\bar{x}=3.71$, $Z=1.96$, and $T(W \times \bar{x}) = 0.1113$). Generally, a reasonably conservative estimate of response rate for a consumer mail survey is approximately 20 percent (Brady and Robertson, 2001). Based on the general response rate, this study uses a sample size 600, including 300 from Korea and 300 from the U.S. The questionnaire was originally written in English and translated into Korean by using the back translation method (Douglas and Craig, 1983).

MEASURES

In this empirical study, an independent variable is extent of electronic intermediary use in export marketing. A dependent variable is export performance. This study focuses on three types of transaction costs, such as searching, bargaining, and monitoring costs to measure export performance. Other dimensions to determine export performance, such as sales and market share are also explored. To compare the effects of electronic intermediary use on export performance between Korea and the U.S., nationality (dummy coded) is used as a control variable. Also, two other variables, institutional influence and organizational culture, are used to justify the differences between two countries. Following is a description of the scale used for each construct.

Electronic Intermediary Use. An electronic intermediary refers to an electronic market intermediary serving as business-to-business (B2B) electronic marketplace in which qualified

⁷ Total number of Korean and U.S. exporters in the electronic industry on the two websites

⁸ Pretest results of descriptive statistics for each item

members simply post requests to buy or sell; its sales representatives search around the world for companies to supply or purchase the posted products, matching between exporters and foreign customers (Clark and Lee, 1999). The concept of electronic intermediary use was not measured by prior studies. Scholars however suggested several important functions of an export intermediary such as international market research, selecting overseas target markets, selling in foreign markets, international sales promotion, international advertising, providing international customer services, selecting and sharing wholesalers or retailers in foreign markets, shipping, and payment (Goldsby and Eckert, 2003; Narayandas et al., 2002; Soon et al., 2002; Prasad et al., 2001; Kotler, 2000; Chrusciel, 2000; Clark and Lee, 1999). As noted previously, an electronic intermediary may be considered an exporting channel and marketing strategy in international commerce. Determinants to measure the extent of use of an exporting strategy are usually classified into input factors (i.e., used resources) and output factors (i.e., sales amount) (Julian, 2003). Therefore, respondents were asked to measure the extent of electronic intermediary use in export marketing, such as “What percentage of your marketing budget is spent for using the electronic intermediaries for export assistance?” and “What percentage of your total export sales comes from using electronic intermediaries?” High percentage represents a greater extent of electronic intermediary use. Low percentage, on the contrary, represents a lesser extent of electronic intermediary use in export marketing.

Searching Cost. Searching is an important component of transaction process. Searching cost refers to the cost associated with exploration for relevant product or service information (Liang and Huang, 1998). Also, searching cost represents the perceived cost incurred at the stage of finding relevant product or process information, such as finding the source (Liang and Huang, 1998). We used three measurement items to represent searching cost. Specifically,

perceived ease of price search, perceived accuracy of search tools, and time per search task are used to measure the searching cost (Jiang, 2002). Therefore, respondents were asked to rate how much they agree or disagree (seven-scale) with three statements comprising the above factors, such as “Our firm can acquire easily relevant information regarding markets, prices, and consumer comments,” “Our search tools available online such as engines and browsers can make search process accurate and efficient,” and “Searching for the relevant information is not extremely time consuming and costly” (Jiang, 2002).

Bargaining Cost. Bargaining cost is the expense associated with negotiation between transacting parties (Dahlstrom and Nygaard, 1999). The costs associated with negotiation terms such as price, delivery, and time are included in the bargaining cost (Liang and Huang, 1998). Three factors are used to measure the bargaining cost such as effectiveness in negotiations, loss from inefficient negotiations, and cost from ill-preparation in negotiations (Dahlstrom and Nygaard, 1999). Specifically, respondents were asked to rate how much they agree or disagree (seven-scale) with three statements regarding the above factors. Statements were: “Our firm can negotiate effectively and systematically about order quantities, price, and delivery schedule,” “Trouble due to an inefficient negotiation when exporting will bring a significant loss,” and “Our firm and foreign customers or distributors are usually ill prepared in the negotiations so that decision processes can be inefficient” (Dahlstrom and Nygaard, 1999).

Monitoring Cost. Monitoring is the posttransactional element associated with ensuring that product / service performance conforms to expectations (Goldsby and Eckert, 2003; Liang and Huang, 1998). Monitoring cost refers to the expense made to guarantee the fulfillment of contractual obligation (Dahlstrom and Nygaard, 1999). Time for controlling quality and quantity of products exported, time for monitoring the customer satisfaction, and time for

guaranteeing the fulfillment of contractual obligation are used to measure the monitoring cost (Dahlstrom and Nygaard, 1999). Respondents were asked to rate how much they agree or disagree (seven-scale) with two statements regarding the factors: “Our firm uses much time to control quality and quantity of products exported,” “Our firms use much time to guarantee the fulfillment of contractual obligation,” and “Our firm uses much time to monitor the customer satisfaction” (Dahlstrom and Nygaard, 1999).

Export Sales and Market Share. According to the literature, sales and market shares are regarded as representative dimensions to measure export performance. Two-item scales were used to capture respondents’ relative evaluation of export sales and market share (scored from 1=much worse to 7=much better) with achievement of two export objectives (Cadogan et al., 2002; Cavusgil and Zou, 1994). The objectives include export sales volume and export market share compared to those of competitors in international commerce.

Institutional Influence. This study uses nationality (dummy coded) as a control variable to compare the effects of electronic intermediary use on export performance between Korea and the U.S. Two variables (institutional influence and organizational culture) are then used to detect the differences between two countries. Institution is the issue-specific set of regulatory, cognitive, and normative institutions in a given country (Kostova and Roth, 2002). This study focuses on regulatory and normative institutions. Regulatory institutions reflect the existing laws and rules in a particular national environment. To measure influences from regulatory institutions, respondents were asked how much they agree or disagree (seven-scale) with the two statements: “In this country, laws and rules in business are strictly enforced” and “There is a large number of regulatory bodies in this country, which promote exporting.” To measure normative institutions, managers were asked how much they agree or disagree with the two

statements: “There is a lot of talk about exporting going on in the media in this country” and “There is a very strong message among companies in this country that you cannot stay in business nowadays if you do not participate in e-commerce” (Kostova and Roth, 2002).

Organizational Culture. Entrepreneurial and bureaucratic cultures are representative organizational culture. Organizational culture is usually influenced by national culture. For instance, high power distance leads to high bureaucratic culture. Low uncertainty leads to high entrepreneurial culture. Degrees of innovation and risk taking were used to measure the entrepreneurial culture. Two questions: “My organization is a very dynamic place. People are willing to be an entrepreneur, and innovator, or a risk taker” and “My organization emphasizes growth and acquiring new resources. Readiness to meet new challenges is important” were used to measure entrepreneurial organizational culture. Degrees of internal regulations and formal structures were used to measure the bureaucratic culture (Deshpande and Farley, 1999). Respondents were asked how much they agree or disagree (seven-scale) with the two statements: “My organization is a very formalized and structural place. Established formal rules and policies generally govern what people do” and “My organization emphasizes permanence and stability. Royalty and tradition are important” (Deshpande and Farley, 1999). Table 4.1 summarizes the operationalization of all constructs.

Table 4.1 Construct operationalization

<i>Variables</i>	<i>Operational definitions</i>	<i>Scale references</i>
<i>Independent variable</i>		
Extent of electronic intermediary use	Ratio of electronic intermediary use for each marketing functions Percentage of marketing budget spent for using electronic intermediaries for export assistance Percentage of total export sales come from using electronic intermediaries	Goldsby and Eckert (2003); Narayandas et al. (2002); Prasad et al. (2001); Chrusciel (2000); Clark and Lee (1999)
<i>Dependent variable</i>		
Searching cost	Perceived ease of price search, perceived accuracy of search tools, and time per search task	Jiang (2002)
Bargaining cost	Effectiveness in negotiations, preparation for negotiations, and loss from inefficient negotiations	Dahlstrom and Nygaard (1999)
Monitoring cost	Time for controlling quality and quantity of products exported, time for monitoring the customer satisfaction, and time for guaranteeing the fulfillment of contractual obligation	Dahlstrom and Nygaard (1999)
Export sales	Sales growth over the past three years.	Peng and York, (2001); Zou et al. (1998)
Market share	Market share growth over the past three years	Peng and York, (2001); Zou et al. (1998)
<i>Control variable</i>		
Nationality	Dummy coded	Kim and Oh (2002)
Institutional influence	Influences from regulatory and normative institutions	Kostova and Roth (2002)
Organizational culture	Degrees of entrepreneurial and bureaucratic culture	Deshpande and Farley (1999)

MODEL SPECIFICATION

In this empirical study, ordinary least square (OLS) regression is utilized to test the hypotheses [see the Appendix C]. OLS regression can answer the hypothesized questions in a direct manner if there are no severe problems with regression assumptions (Neter et al., 1985). As discussed earlier, independent variable is the extent of electronic intermediary use in export marketing. Dependent variable is export performance. Three dimensions are used to measure export performance, such as transaction cost, export sales, and export market share. Transaction costs are subdivided into three types: searching, bargaining, and monitoring costs. For a cross-country analysis using the pooled data, this study includes nationality of the sample (Korea or the U.S.) as a control variable (Kim, and Oh, 2002).

RESULTS AND DISCUSSION

Three hundreds questionnaires were sent to Korean exporters, and the other 300 questionnaires were sent to U.S. exporters. Of the 600 questionnaires distributed, 144 were retrieved (81 from Korea and 63 from the U.S.). Among them, 123 were usable (74 from Korea and 49 from the U.S.). We discarded 21 surveys because of too many missing values. The overall response rate was 24% (27% from Korea and 21% from the U.S.). This response rate is quite satisfactory, given that average top-management survey response rates are in the range of 15%~20% (Menon et al., 1996).

NON-RESPONSE BIAS ANALYSIS

To assess possible nonresponse bias, we followed Armstrong and Overton's (1977) procedure. We divided the responses to compare early and late respondents. The early response group consisted of questionnaires received during the first two weeks. Questionnaires afterwards

were considered the late response group. Each group composed of 10 responses in Korea and U.S. samples. Differences in the mean of response between early and late groups were compared along key constructs of the study, which is considered a valid test of non-response bias by previous studies (Wu et al., 2004). The means of the major constructs were compared in both groups in Korea and U.S. samples. We used a t-test and sign-test under assumptions of equal and unequal group variances. As shown in Table 4.2, we found no significant between-group mean differences between the early and late respondent groups. Therefore, we conclude that nonresponse bias is not likely to be a problem in this study.

Table 4.2 Comparison of early and late responses

<i>Constructs</i>	<i>Korea sample:</i>		<i>U.S. sample:</i>	
	<i>T-test (T-value) (P-value)</i>	<i>Sign test (W-value) (P-value)</i>	<i>T-test (T-value) (P-value)</i>	<i>Sign test (W-value) (P-value)</i>
Electronic intermediary use	0.001 (0.999)	107.5 (0.878)	-0.01 (0.993)	103.0 (0.907)
Bargaining cost	0.65 (0.524)	122.5 (0.192)	-1.16 (0.261)	109.5 (0.759)
Market share	-1.23 (0.229)	98.0 (0.617)	1.25 (0.235)	117.0 (0.305)

MEASURES VALIDATION

We conducted factor analysis to determine the presence of covariance for the dimensions of each construct. Specifically, we used a principal component analysis and performed a varimax (orthogonal) rotation on the variables to isolate the underlying dimensions (Fabrigar et al., 1999). Three factors were isolated, each with an eigenvalue greater than 1.00. After we

examined factor loadings, we checked whether the factors are consistent with the variables. Loadings of three factors are enough high. Also, extracted factors are the same variables we intended. The next step is to confirm the existing scales. A confirmatory factor analysis (CFA) was used to test unidimensionality of the measures (Gerbing and Anderson, 1988). CFA was conducted by means of AMOS 4.01 (Arbuckle, 1999)

Table 4.3 Exploratory factor analysis results

	Factor 1	Factor 2	Factor 3
	MC	SC	BC
	Loadings	Loadings	Loadings
⁹ Q10-1	-0.121	0.62	-0.448
Q10-2	-0.261	0.865	-0.046
Q10-3	-0.11	0.855	-0.165
Q10-4	0.045	-0.32	0.778
C10-5	0.603	0.204	0.617
Q10-6	-0.073	-0.141	0.747
Q10-7	0.857	-0.198	0.037
Q10-8	0.855	-0.139	0.146
Q10-9	0.714	-0.322	-0.335
Eigenvalue	3.41819	1.7809	1.34274
Percent of Variance	27.1	24.3	21.2

SC: Searching cost; BC: Bargaining cost; MC: Monitoring cost

All factor loadings are greater than the 0.4 cutoff (Nunnally and Bernstein, 1994) and are statistically significant. The results indicate that all the items of each scale load highly and significantly on a single factor, which demonstrates the unidimensionality of the measures. With respect to the scale reliability, Cronbach alpha coefficients are greater than 0.7 (Nunnally and Bernstein, 1994). The scales of all measures seem to produce internally consistent results (See

⁹ see the Appendix A and B

Table 4.4 for details of Cronbach alpha and factor loadings of all constructs). Therefore, we deem that those measures are appropriate for further analysis due to the acceptable validity and reliability.

Table 4.4 Confirmatory factor analysis results and Cronbach alpha

<i>Items</i>	¹⁰ <i>Loadings</i>	<i>Cronbach alpha</i>
SC1	0.600	0.746
SC2	0.796	
SC3	0.871	
BC1	0.790	0.912
BC2	0.683	
BC3	0.787	
MC1	0.801	0.781
MC2	0.826	
MC3	0.682	

SC: Searching cost; **BC:** Bargaining cost; **MC:** Monitoring cost

REGRESSION RESULTS

Ordinary least square (OLS) regression is utilized to test the hypotheses. OLS regression uses linear combinations of independent variables to compute expected values of the dependent variable. Table 4.5 presents the correlation matrix for all variables included in the regression analysis. These correlations suggest that the items pool includes measures that are related for the most part. Specifically, the directions of relationships between electronic intermediary use and export performance are consistent with our hypotheses.

¹⁰ All loadings are significant ($p < 0.01$)

Table 4.5 Correlation matrix

	EI	SC	BC	MC	MG
SC	-0.44**				
BC	-0.53***	-0.36***			
MC	-0.49**	-0.35***	0.45***		
MG	0.31**	-0.28**	-0.45***	-0.03	
SG	0.27**	-0.27**	-0.53***	-0.06	0.88***

EI: Electronic intermediary use; **SC:** Searching cost; **BC:** Bargaining cost; **MC:** Monitoring cost; **MG:** Market share; **SG:** Export sales. The coefficients are standardized.

*p < 0.10,

** p < 0.05,

*** p < 0.001

Variance inflation factors (VIFs) are reported to examine the potential problems pertaining to multicollinearity. As shown in Table 4.6, all VIFs of constructs in the samples are lower than 10, which indicate no severe multicollinearity problem (Mason and Perreault, 1991). In other words, all multicollinearity is within the accepted limit and the effect of the correlated independent variables would not hamper the interpretability of the results. Results of normality and homogeneity satisfy the regression assumptions.

To test hypotheses, five OLS regression analyses were conducted. Three regression analyses were used to investigate the relationships between electronic intermediary use and three types of transaction costs. The other two regression analyses were used to investigate the effects of electronic intermediary use on export sales and market share. Table 4.6 shows the results of the five regression analyses in detail.

Table 4.6 Results of OLS regression analysis*Independent Variable: Electronic Intermediary Use*

<i>Hypotheses</i>	<i>Dependent Variables</i>	<i>Pooled sample (n=123)</i>	<i>Korea (n=74)</i>	<i>U.S. (n=49)</i>
1a	SC	-0.43*** (0.08) (2.52)	-0.27** (0.10) (1.00)	-0.67*** (0.11) (1.00)
1b	BC	-0.51*** (0.07) (2.52)	-0.36*** (0.08) (1.00)	-0.71*** (0.10) (1.00)
1c	MC	-0.36*** (0.08) (2.52)	-0.23** (0.11) (1.00)	-0.56*** (0.12) (1.00)
2	MG	0.39*** (0.08) (2.50)	0.38*** (0.10) (1.00)	0.41** (0.13) (1.00)
3	SG	0.39*** (0.08) (2.50)	0.38*** (0.11) (1.00)	0.40** (0.13) (1.00)

EI: Electronic intermediary use; **SC:** Searching cost; **BC:** Bargaining cost; **MC:** Monitoring cost; **MG:** Market share; **SG:** Export sales.

The coefficients are standardized; Standard errors are in the first parentheses;

Variance inflation factors (VIFs) are in the second parentheses.

* $p < .10$, ** $p < .05$, *** $p < .001$

Hypotheses 1a, 1b and 1c suggest that the extent of electronic intermediary use in export marketing is negatively related to three types of transaction costs: searching, bargaining, and monitoring costs. As shown in Table 4.6, coefficients for electronic intermediary use regarding searching cost are all negative, which supports Hypothesis 1a. Coefficient for electronic intermediary use and dummy variables (EI*D)¹¹ is not 0 (0.4053), which indicates that two groups (Korean and U.S. exporters) have different levels of electronic intermediary use with regard to searching cost. The coefficient for U.S. exporters (-0.67) is stronger than that of

¹¹ see the Appendix C

Korean exporters (-0.27). The results thus demonstrate that U.S. exporters who use an electronic intermediary are more likely to decrease searching cost than Korean exporters who also use it. Hypothesis 1b addresses that electronic intermediary use is negatively related to bargaining cost in export marketing. Coefficients for electronic intermediary use regarding bargaining cost in the pooled, Korea, and the U.S. samples are -0.51, -0.36, -0.71 respectively. Coefficient for electronic intermediary use and dummy variables is 0.327, which indicates that Korean and U.S. exporters have different degrees of electronic intermediary use with regard to bargaining cost. Therefore, we can conclude that U.S. exporters who use an electronic intermediary are more likely to decrease bargaining cost. Hypothesis 1c predicts a negative relationship between electronic intermediary use and monitoring cost in export marketing. Coefficient for electronic intermediary use and dummy variables is not 0 (0.326). Coefficients for the pooled, Korea, and the U.S. samples are -0.36, -0.23, -0.56 respectively. The results illustrate that electronic intermediary use may be more contributory for U.S. exporters to decrease monitoring cost. Hypotheses 2 and 3 explain the relationships between electronic intermediary use and other dimensions to measure export performance, such as export sales and market share. Positive coefficients for the pooled, Korea, and the U.S. samples support Hypotheses 2 and 3. Coefficients for electronic intermediary use regarding export sales and export market share are stronger in the U.S. sample than in the Korea sample. Also, coefficients for electronic intermediary use and dummy variables are not 0 (-0.164, -0.127). Therefore, as expected, U.S. exporters are more likely to improve sales and market share in export marketing via electronic intermediary use.

Korean exporters could gain a more positive attitude toward use of an electronic intermediary from the institutional perspective. However, it was expected that U.S. exporters

may have a more positive attitude toward using an electronic intermediary from the organizational culture. The positive attitude may lead to a better understanding of an electronic intermediary. Exporters to understand better an electronic intermediary may use it more effectively. The regression results show that U.S. exporters are more likely to improve export performance via electronic intermediary use. The two groups (Korean and U.S. exporters) are significantly different regarding organizational cultures. According to the result¹², as expected previously, U.S. exporters are more entrepreneurial and less bureaucratic. Higher entrepreneurial or lower bureaucratic corporations will be more likely to adopt the new technology or service (Hasan and Ditsa, 1997; Moorman, 1995). An electronic intermediary is a new market intermediary in electronic international commerce serving as a B2B electronic marketplace. In sum, the effects of electronic intermediary use on export performance are different between Korean and U.S. exporters. Based on the above arguments, organizational culture may justify the differences.

Table 4.7 Summary of results for hypothesized relationships

Independent Variable: Electronic Intermediary Use

<i>Hypotheses</i>	<i>Dependent Variables</i>	<i>Predicted Relationship</i>	<i>Pooled sample</i>	<i>Korea</i>	<i>U.S.</i>
H1a	Searching Cost	Negative	Supported	Supported	Supported
H1b	Bargaining Cost	Negative	Supported	Supported	Supported
H1c	Monitoring Cost	Negative	Supported	Supported	Supported
H2	Export Sales	Positive	Supported	Supported	Supported
H3	Market Share	Positive	Supported	Supported	Supported

¹² Results of sign-test (one-tail Mann-Whitney test)

CONTRIBUTIONS AND DIRECTIONS FOR FUTURE RESEARCH

THEORETICAL CONTRIBUTIONS

Many scholars have believed that a direct Internet-based exchange makes transaction costs much lower than incumbent distributors could match. If the expectations were true, market intermediaries would have disappeared in electronic commerce. However, there are still various market intermediaries. This study begins with that interesting phenomenon. With the development of Internet, an alternative market intermediary called an electronic intermediary is emerging in international commerce. Previous studies gave consideration to the question of why exporters participate in a direct Internet-based exchange. They argued a direct exchange via the Internet to be the most efficient exporting channel. Their arguments are primarily embedded in the transaction cost analysis (Bailey and Bakos, 1997; Sarkar et al, 1995). This study explores the theory in a different point of view. A direct Internet-based exchange may be considered the most efficient exporting channel, however, it involves high risk. A traditional intermediary may be an alternative but it accompanies high cost, such as commission and agent fees. This study suggests an electronic intermediary as a hybrid exporting channel to balance risk and profit. Relying on the transaction cost analysis, this study justifies how an electronic intermediary could improve export performance, such as decreasing transaction costs (searching, bargaining, and monitoring costs) and increasing sales and market share in export marketing. The effects of electronic intermediary use on export performance are hypothesized and empirically tested by this dissertation. We could perform these tests by applying the transaction cost analysis. We believe the transaction cost analysis is an appropriate theory to make academicians as well as practitioners aware of the important role of electronic intermediaries.

MANAGERIAL CONTRIBUTIONS

An electronic intermediary can be an efficient exporting channel to enter into the global market. Many exporters may believe that a direct Internet-based exchange is the most efficient channel. As argued previously, however, it can be risky, extremely time consuming, and costly for small and medium exporters to find the ideal customer in electronic international commerce, because they usually have limited knowledge and experience on foreign markets. An electronic intermediary can help them to decrease the problems. Furthermore, an electronic intermediary offers small and medium exporters a level playing field in relation to their larger competitors, providing low-cost and efficient interconnectivity (Prasad et al., 2001). Electronic intermediary use may improve export performance, which is empirically supported by this study. According to the findings, exporters may decrease transaction costs, such as searching, bargaining, and monitoring costs via electronic intermediary use. Positive impacts of electronic intermediary use on sales and market share in export marketing are also supported. Interestingly, this study found that the effects of electronic intermediary use on export performance are different in Korean and the U.S. U.S. exporters could achieve a better performance than Korean exporters via electronic intermediary use. Organizational culture may justify the differences. The findings indicate that high entrepreneurial or low bureaucratic organizations may use an electronic intermediary more effectively in export marketing. This study thus recommends that managers are required to consider their own organizational culture before adopting a specific exporting channel. In the current globalized market, it is necessary for all exporters to gain competitive advantages that strengthen their market position and ensure their long-term success. This study has tried to convince exporters of the importance of an electronic intermediary as an efficient exporting channel as well as an alternative market intermediary to achieve the competitive advantages.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

This study is among a very few empirical and theoretical studies on export-oriented market intermediaries in electronic international commerce. Therefore, the findings of this study must be viewed with few limitations. First, an electronic intermediary is usually confused with a traditional intermediary due to its short history. Also, electronic and traditional intermediaries share many common characteristics regarding roles, benefits, and costs. As a consequence, academicians as well as practitioners have difficulty distinguishing clearly between them. This study has tried to make a clear distinction, but it may be oversimplified. A more systematic study to distinguish them is thus suggested for future research. Second, survey design should be reconsidered in future research. This study used an email survey to collect data. However, the response rate was relatively low, because most business managers suffer from a huge amount of junk email everyday. Therefore, the questionnaire could be easily deleted by them. Generalizability may be another limitation of this study, because this study collects data from only two countries: Korea and the U.S.

There are some missing factors regarding electronic intermediary use. An electronic intermediary is an alternative exporting channel, therefore, a channel relationship among trade parties must be considered. Exporting literature has spent considerable effort investigating various aspects of the exporting channel relationship. Dependence and conflict are critical behavioral factors to decide relationship atmosphere in the exporting channel (Leonidou et al., 2002). Furthermore, dependence and conflict are closely relevant to the transaction cost analysis; high cost is required to monitor or safeguard against opportunistic behaviors of other channel members under high dependent and conflict channel relationships (Williamson, 1991; Anderson and Narus, 1990). Therefore, we think that moderating effects from dependence and

conflict on the relationships between electronic intermediary use and export performance could be an interesting topic for future research.

CONCLUSION

This study suggests an alternative market intermediary combining a traditional intermediary and a direct Internet-based exchange in electronic international commerce. This study shows how an electronic intermediary balances between profit and risk in export marketing. According to the regression results, exporters could improve their performance via electronic intermediary use. Particularly, they could decrease transaction costs and increase sales and market shares. Furthermore, the findings provide an important message to small and medium exporters on how they can compete with their larger competitors in the global market. From theoretical and practical perspectives, this study shows the important roles of an electronic intermediary. There is still little theoretical or empirical research about an export-oriented electronic intermediary. This study is only the first step to explore an electronic intermediary as an alternative exporting channel. It is hoped that this research inspires more theoretical or empirical studies on the impacts of an electronic intermediary.

CHAPTER FIVE

CONCLUSION

This dissertation is comprised of three essays regarding electronic intermediary use in export marketing. The first essay (Chapter Two) discusses the concept of the electronic intermediary in international commerce. The second essay (Chapter Three) investigates empirically the determinants of electronic intermediary use in export marketing. The third essay (Chapter Four) examines empirically the impacts of electronic intermediary use on export performance. The third essay focuses more on the relationships between electronic intermediary use and transaction costs in export marketing. While the first essay is a conceptual work to provide propositions and conceptual models, the second and third essays empirically test hypothesized relationships of the models. Table 5.1 summarizes the results of the two empirical studies. In the following pages, key features and major findings of each essay are presented.

The first essay aims at providing a better understanding of electronic intermediaries in international commerce, regarding channel type, role, benefit, and cost. Providing market information, connecting between exporters and foreign customers, and serving as an electronic marketplace are identified as the roles of electronic intermediary use. Accelerating the internationalization of small and medium exporters, making market transactions efficient, and overcoming time and geographical barriers are discussed as the benefits of electronic intermediary use, while lack of credibility, unestablished payment systems, and language and cultural barriers are presented as the costs of electronic intermediary use. Furthermore, the first essay compares an electronic intermediary with a traditional intermediary regarding two theoretical perspectives: the transaction cost analysis and resource-based view. The emergence and effects of electronic intermediary use are theoretically identified in the essay.

The second essay addresses factors that may influence exporters to use an electronic intermediary. The essay indicates various IT and marketing determinants. IT-related assets, such as human, technology, and relationship are discussed as prerequisite determinants for using an electronic intermediary effectively (Santhanam and Hartono, 2003; Bharadwaj, 2000). Relying on the resource-based view, three IT assets are considered as firm resources (Hesterly, 1996). The resource-based theorists argue that a firm's resource is a strength used to conceive of and implement its strategy (Barney, 1991). An electronic intermediary allows exporters to meet customers' needs, increase customers' accessibility, and provide a variety of products or services, which corresponds to the roles of a marketing strategy (Sarkar et al., 1995). This essay thus investigates three marketing determinants, including international competence, product standardization, and environmental uncertainty, as they relate to regarding electronic intermediary use.

Relying on the resource-based view, international competence is a firm resource to penetrate the global market. Exporters who possess a certain level of international competence may take up a positive attitude to the electronic intermediary use. Transaction cost theorists argue that electronic intermediary use may be a more efficient for transactions including high tech or differentiated products which represent low product standardization (Trabold, 2002). Also, an electronic intermediary can decrease uncertainties arising from geographical and social barriers in international commerce (Soon et al., 2002). Furthermore, an electronic intermediary may provide protection against environmental heterogeneity, because it can accommodate dynamic change in an international environment (Goldsby and Eckert, 2003; Chrusciel, 2000). The essay thus hypothesizes positive impacts of international commerce and environmental

uncertainty and the negative impact of product standardization on electronic intermediary use. Most of the hypotheses are supported.

The third essay investigates the effects of electronic intermediary use on export performance. The essay focuses on transaction costs to examine those effects. Other dimensions of export performance, such as sales and market share are also explored. Transaction costs are the expenditures associated with transaction processes such as searching, bargaining, and monitoring (Goldsby and Eckert, 2003; Dahlstrom and Nygaard, 1999). An electronic intermediary can help small and medium exporters to decrease the cost of searching for the relevant sources in the “virtual jungle” (Mahadevan, 2000). Replacing or substituting a foreign partner or distributor may not be difficult for an electronic intermediary, because exporters can access a multitude of potential alternatives. Bargaining power belongs to exporters in electronic intermediary use. Therefore, exporters may decrease bargaining costs, because the greater bargaining power enables them to reject unfavorable terms and to negotiate for better conditions. Furthermore, an electronic intermediary may prevent exporters from the opportunistic behaviors of foreign business partners, which can decrease monitoring costs in their exporting channel relationships (Dahlstrom and Nygaard, 1999). Finally, an electronic intermediary offers small and medium exporters a level playing field in relation to their larger competitors (Prasad et al., 2001). Therefore, small and medium exporters can expand their sales and market share when competing with their larger competitors.

This dissertation is among a very few empirical and theoretical studies of export intermediary use in electronic international commerce. The transaction cost analysis and resource-based view make theoretical contributions to the exploration of IT and marketing determinants of electronic intermediary use. Also, the two theories are used to justify the

impacts of electronic intermediary use on performance in export marketing. Furthermore, this study shows an interrelation between electronic intermediary use and organizational culture. The results can show exporters how their behavior in adopting an exporting channel is influenced by their own organizational culture. We believe that this dissertation could awaken international business scholars to the important role of an export-oriented electronic intermediary in international commerce. The findings have the potential to help decision makers understand the major forces regarding electronic intermediary use.

Table 5.1 Summary of results of two empirical studies

Study 1

<i>Independent variables</i>	<i>Dependent variable: Electronic intermediary use</i>
IT-Related Human Asset	Positive : Supported
IT-Related Technology Asset	Positive: Supported
IT-Related Relationship Asset	Positive: Not supported
International Competence	Positive: Supported
Product's Standardization	Negative: Partially supported
Environmental Uncertainty	Positive: Supported
Duration of Relationship	Negative: Partially supported

Study 2

<i>Dependent variables</i>	<i>Independent variable: Electronic intermediary use</i>
Searching cost	Negative: Supported
Bargaining cost	Negative: Supported
Monitoring cost	Negative: Supported
Export sales	Positive: Supported
Market share	Positive: Supported

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APPENDIX A
QUESTIONNAIRE

Ph.D. Dissertation Research Project

Thanks for your interest in this research, which is my Ph.D. dissertation at Washington State University. It examines the role of electronic intermediaries in international commerce. Your company has been identified by electronic intermediaries' websites in which the information of your firm and products are posted. Please complete the questionnaire and return to me as earliest you can. If another manager knows more about the export activities of your firm, please forward this survey to him or her to reply. All responses will be held confidential.

As an incentive, if you separately send your name, address, and phone number, you will be entered into a lottery for

Three \$100 Amazon.com gift certificates

If you wish to receive a summary report of all the firms surveyed, please mark "yes" below and I will be happy to provide you with the information. If you have any questions related to this survey, please contact me (Hyuksoo Cho) at 1-509-336-9508 (email: Hyuksoo@mail.wsu.edu), International Business Institute, College of Business and Economics, Washington State University, Pullman, WA 99164-4851.

Please mark "Yes," if you would like a copy of the results. I will be happy to mail it to you upon completion of the study.

Summary data desired? Yes No

SURVEY QUESTIONNAIRE

Please read the following definitions of terms as used in this study:

Traditional export intermediary is a middleman located in the exporting or importing country, who helps exporters find customers or make sale for them. Examples include commissioned agents, export management companies, and export trading companies.

Electronic export intermediary is an electronic marketplace of sources in which qualified members simply post requests to buy or sell and its sales representatives will search around the global for companies to supply or purchase the posted products. Examples include www.ec21.com, www.ecplaza.net, www.cometotrade.com, and www.globalsources.com.

Distinction between traditional intermediary and electronic intermediary:

If an intermediary’s main activity regarding sale volume is to provide an electronic marketplace of sources, it is an electronic export intermediary. Otherwise, it is a traditional export intermediary.

Q1. How many intermediaries do you use for exporting? _____
 How many of those intermediaries used are electronic intermediaries? _____

If you don’t use any electronic intermediary, skip to Question # 4 on next page.

Q2. How much of the following marketing functions are performed through each exporting channel in terms of percentage.

	Direct Sales	Traditional Intermediary	Electronic Intermediary	Total
Market research	_____ %	_____ %	_____ %	100 %
Product promotion	_____ %	_____ %	_____ %	100 %
Customer services	_____ %	_____ %	_____ %	100 %
Payment	_____ %	_____ %	_____ %	100 %

Q3. What percentage of your marketing budget is spent for using electronic intermediaries for export assistance? _____% of marketing budget.

Q4. The statements below relate to IT staffs within your firm. Please rate how much you agree or disagree with the statements.

	Strongly Disagree	Disagree	Some-what Disagree	Neutral	Some-what Agree	Agree	Strongly Agree
1) IT staff has technical capabilities that match the technology plan in carrying out our strategic purpose.	1	2	3	4	5	6	7
2) IT staff is close enough to the business to understand and predict business problems.	1	2	3	4	5	6	7
3) IT staff is in the habit of learning.	1	2	3	4	5	6	7

Q5. The statements below relate to IT-related technology within your firm. Please rate how much you agree or disagree with the statements.

	Strongly Disagree	Disagree	Some-what Disagree	Neutral	Some-what Agree	Agree	Strongly Agree
1) IT and business management have defined a clear technology plan based on strategic principle.	1	2	3	4	5	6	7
2) IT and business management understand the costs of noncompliance with technology standards.	1	2	3	4	5	6	7
3) Data and information are available to decision makers when they need them.	1	2	3	4	5	6	7

Q6. The statements below relate to the relationship between IT unit and business units within your firm. Please rate how much you agree or disagree with the statements.

	Strongly Disagree	Disagree	Some-what Disagree	Neutral	Some-what Agree	Agree	Strongly Agree
1) IT and business executives share a vision for how IT will support the business.	1	2	3	4	5	6	7
2) IT and business managers consult with each other regularly on business and technical decisions.	1	2	3	4	5	6	7
3) Most large IT projects have active business executive sponsorship and leadership.	1	2	3	4	5	6	7

Q7. The statements below relate to international competence of your firm. Please rate how much you agree or disagree with the statements.

	Strongly Disagree	Disagree	Some-what Disagree	Neutral	Some-what Agree	Agree	Strongly Agree
1) Our firm has relatively broad international experiences compared to those of our competitors.	1	2	3	4	5	6	7
2) Amount of resources our firm has for export development is relatively large.	1	2	3	4	5	6	7
3) Number of foreign markets in which our firm has regular operations is relatively large compared to our competitors.	1	2	3	4	5	6	7

Q8. The statements below relate to standardization of your major exports. Please rate how much you agree or disagree with the statements.

	Strongly Disagree	Disagree	Some-what Disagree	Neutral	Some-what Agree	Agree	Strongly Agree
1) Our firm adopts a standardized core product across all major markets in the world.	1	2	3	4	5	6	7
2) The product designs we use in different country markets are very similar.	1	2	3	4	5	6	7
3) Our product is not culturally specific.	1	2	3	4	5	6	7

Q9. The statements below relate to the environmental uncertainty in export marketing. Please rate how much you agree or disagree with the statements.

	Strongly Disagree	Disagree	Some-what Disagree	Neutral	Some-what Agree	Agree	Strongly Agree
1) Our markets are usually unpredictable in terms of economic, political, and social environments.	1	2	3	4	5	6	7
2) Competitor actions are difficult to predict.	1	2	3	4	5	6	7
3) Our sale forecasts are likely to be inaccurate.	1	2	3	4	5	6	7

Q10. The statements below relate to the transaction costs in export marketing. Please rate how much you agree or disagree with the statements.

	Strongly Disagree	Disagree	Some-what Disagree	Neutral	Some-what Agree	Agree	Strongly Agree
1) Our firm can acquire easily relevant information regarding markets, prices, and consumer comments.	1	2	3	4	5	6	7
2) Our search tools available online such as engines and browsers can make search process accurate and efficient.	1	2	3	4	5	6	7
3) Searching for the relevant information is not extremely time consuming and costly.	1	2	3	4	5	6	7
4) Our firm can negotiate effectively and systematically about order quantities, price, and delivery schedule.	1	2	3	4	5	6	7
5) Trouble due to an inefficient negotiation when exporting will bring a significant loss.	1	2	3	4	5	6	7
6) Our firm and foreign customers or distributors are usually ill prepared in the negotiations so that decision processes can be inefficient.	1	2	3	4	5	6	7
7) Our firm uses much time to control quality and quantity of products exported.	1	2	3	4	5	6	7
8) Our firms use much time to guarantee the fulfillment of contractual obligation.	1	2	3	4	5	6	7
9) Our firm uses much time to monitor the customer satisfaction.	1	2	3	4	5	6	7

Q11. The statements below relate to the dependence in export marketing. Please rate how much you agree or disagree with the statements.

	Strongly Disagree	Disagree	Some-what Disagree	Neutral	Some-what Agree	Agree	Strongly Agree
1) The continuation of a relationship with current customers is important to our company.	1	2	3	4	5	6	7
2) Termination of working relationship with current customers will bring a significant loss.	1	2	3	4	5	6	7
3) It is relatively hard to substitute current customers with others.	1	2	3	4	5	6	7

Q12. The statements below relate to the conflict in export marketing. Please rate how much you agree or disagree with the statements.

	Strongly Disagree	Disagree	Some-what Disagree	Neutral	Some-what Agree	Agree	Strongly Agree
1) Foreign customers come up with unreasonable demands, causing a lot of frustration.	1	2	3	4	5	6	7
2) There are significant arguments with foreign customers on issues concerning working relationship.	1	2	3	4	5	6	7
3) Working relationships with foreign customers are characterized by a high degree of conflict.	1	2	3	4	5	6	7

Q13. The statements below relate to the performance in export marketing. Please rate the performance over past three years comparing to those of your export competitors.

	Much worse		Average		Much better		
1) Market share growth over the past three years.	1	2	3	4	5	6	7
2) Sales growth over the past three years.	1	2	3	4	5	6	7

Q14. Please rate how much do you agree or disagree with the following statements in describing market environments in your country.

	Strongly Disagree	Disagree	Some-what Disagree	Neutral	Some-what Agree	Agree	Strongly Agree
1) In this country, laws and rules in business are strictly enforced.	1	2	3	4	5	6	7
2) There is a large number of regulatory bodies in this country, which promote exporting.	1	2	3	4	5	6	7
3) There is a lot of talk about exporting going on in the media in this country.	1	2	3	4	5	6	7
4) There is a very strong message among companies in this country that you cannot stay in business nowadays if you do not participate in e-commerce.	1	2	3	4	5	6	7

Q15. Please rate how much do you agree or disagree with the following statements depending on how similar the description is to your business.

	Strongly Disagree	Disagree	Some-what Disagree	Neutral	Some-what Agree	Agree	Strongly Agree
1) My organization is a very dynamic place. People are willing to be an entrepreneur, and innovator, or a risk taker.	1	2	3	4	5	6	7
2) My organization emphasizes growth and acquiring new resources. Readiness to meet new challenges is important.	1	2	3	4	5	6	7
3) My organization is a very formalized and structural place. Established formal rules and policies generally govern what people do.	1	2	3	4	5	6	7
4) My organization emphasizes permanence and stability. Royalty and tradition are important.	1	2	3	4	5	6	7

Q16. What is the average duration of your relationships with foreign customers?
 _____ years _____ months

Q17. What percentage of your company's total export sales comes from using electronic intermediaries? _____%

Q18. What are the main products / services of your company?

(a). _____

(b). _____

(c). _____

Q19. Please, describe general experience using electronic intermediary or other types of intermediary marketing services.

Thank you for your participation. Please return this complete questionnaire as soon as possible. If you would like a summary of the results of this survey, please check the box on the cover sheet. I would be happy to mail it to you upon completion of the study.

APPENDIX B
QUESTIONNAIRE (KOREAN VERSION)

박사학위 논문을 위한 설문조사

안녕하십니까. 저는 미국 워싱턴 주립대 (Washington State University) 국제경영학 (International Business) 박사과정에 재학중인 조혁수 입니다. 이 설문조사는 저의 박사학위 논문의 중요한 부분입니다. 이 설문조사는 인터넷 무역업에 대한 폭 넓은 이해를 목적으로 하고 있습니다. 귀사의 정보는 귀사께서 등록하신 인터넷 무역업체를 통해서 알게 되었습니다. 힘드시겠지만, 가능한 빨리 설문지에 답을 하신 후 되돌려 주시면 대단히 감사하겠습니다. 번역상 오류가 있을 수 있으므로, 영어로 된 설문지 원문도 첨부하겠습니다. 이 설문조사의 결과는 학위논문이외의 목적으로는 절대로 사용하지 않음을 알려 드립니다.

설문조사에 응하여 주신 감사로, 회신을 보내주신 분들 중 두 분께 대우 금강산 콘도 1박 숙박권을 보내드리겠습니다. 응모하시고 싶으신 분은 전화번호와 우편주소를 꼭 첨부해 주십시오.

만약 이 설문조사의 결과가 궁금하시거나 필요하시면 아래의 “예” 난에 표시하십시오. 또한 이 설문조사와 관련해서 궁금한 사항이 계시면 저에게 연락 주시면 감사하겠습니다.

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이 설문조사의 결과를 받아 보시기를 원하십니까?

예 아니요

설문조사서

다음은 이 설문조사와 관련한 용어들의 정의입니다.

전통적 무역업체: 수출국 혹은 수입국에 위치한 중간업자로서, 수출업자를 위한 해외고객 알선이나 판매대행을 목적으로 하는 업체입니다. 일명 오피상이나 종합상사가 이에 해당 됩니다.

인터넷 무역업체: 회원업체가 상품매도나 매수를 요청할 수 있는 일종의 사이버 공간을 제공하는 업체입니다. 인터넷 무역업체는 회원들이 요청한 매도 혹은 매수 주문을 사이버상에서 직접 연결시켜 주거나 아니면 업체들끼리 직접거래 할 수 있도록 사이버 장소를 제공합니다.

www.ec21.com, www.ecplaza.net, www.cometotrade.com, www.globalsources.com 등이 이에 해당됩니다.

Q1. 귀사는 몇 개의 무역 업체를 수출업무를 위해 이용하고 계십니까? _____
 이용하고 계시는 무역 업체 중, 몇 개가 인터넷 무역업체입니까? _____

만약 인터넷 무역업체를 이용하고 있지 않으시면, 다음 페이지 4 번 문항으로 가십시오

Q2. 아래의 수출업무와 관련한 활동들이 얼마만큼 주어진 수출 경로를 통해 이뤄지는지 분석해 주십시오.

	직접판매	전통적 무역업체	인터넷 무역업체	합계
해외시장 조사	_____ %	_____ %	_____ %	100 %
상품 광고	_____ %	_____ %	_____ %	100 %
고객 서비스	_____ %	_____ %	_____ %	100 %
대금지급	_____ %	_____ %	_____ %	100 %

Q3. 수출과 관련한 업무를 돕기 위해서, 귀사의 마케팅 예산 중 얼마만큼이 인터넷 무역업체를 이용하는데 쓰여졌습니까? _____ %의 마케팅 예산.

Q4. 아래의 문구들은 귀사의 IT 인력에 관련한 것입니다. 동의정도를 평가해 주십시오.

	강력히 동의하지 않음	동의하지 않음	조금 동의하지 않음	중립	조금 동의함	동의함	강력히 동의함
1) 우리회사 IT 직원들은 기술개발 전략을 세울 수 있습니다.	1	2	3	4	5	6	7
2) 우리회사 경영진과 IT 직원들은 유기적으로 잘 협동하고 있습니다.	1	2	3	4	5	6	7
3) 우리회사 IT 직원들은 항상 배우려는 자세를 가지고 있습니다.	1	2	3	4	5	6	7

Q5. 아래의 문구들은 귀사의 IT 기술에 관련한 것입니다. 동의정도를 평가해 주십시오.

	강력히 동의하지 않음	동의하지 않음	조금 동의하지 않음	중립	조금 동의함	동의함	강력히 동의함
1) 우리회사 경영진과 IT 직원들은 명확한 전략적 원칙을 바탕으로 하는 기술개발계획을 갖고 있습니다.	1	2	3	4	5	6	7
2) 우리회사 경영진과 IT 직원들은 일반적 기술표준을 따르지 않았을 때의 비용을 잘 이해합니다.	1	2	3	4	5	6	7
3) 우리회사 경영진은 필요할 때 그들이 원하는 자료와 정보를 얻을 수 있습니다.	1	2	3	4	5	6	7

Q6. 아래의 문구들은 귀사내 IT 부서와 다른 부서들간의 상호관계에 관련한 것입니다. 동의정도를 평가해 주십시오.

	강력히 동의하지 않음	동의하지 않음	조금 동의하지 않음	중립	조금 동의함	동의함	강력히 동의함
1) 우리회사 경영진과 IT 직원들은 IT 중요성에 대해 견해를 같이 합니다.	1	2	3	4	5	6	7
2) 우리회사 경영진과 IT 직원들은 정기적으로 비즈니스와 기술혁신에 관해 의견들을 교환하고 있습니다.	1	2	3	4	5	6	7
3) 규모가 큰 대부분의 IT 개발계획은 경영진의 적극적인 후원과 지도를 이끌어 냅니다.	1	2	3	4	5	6	7

Q7. 아래의 문구들은 귀사의 국제역량에 것입니다. 동의정도를 평가해 주십시오.

	강력히 동의하지 않음	동의하지 않음	조금 동의하지 않음	중립	조금 동의함	동의함	강력히 동의함
1) 우리회사는 타 경쟁사들과 비교해 상대적으로 풍부한 해외시장 경험을 갖고 있습니다.	1	2	3	4	5	6	7
2) 우리회사는 타 경쟁사들과 비교해 상대적으로 풍부한 수출개발에 필요한 자원들을 보유하고 있습니다.	1	2	3	4	5	6	7
3) 우리회사는 타 경쟁사들과 비교해 상대적으로 많은 수의 수출 시장을 갖고 있습니다.	1	2	3	4	5	6	7

Q8. 아래의 문구들은 귀사의 제품에 관련한 것입니다. 동의정도를 평가해 주십시오.

	강력히 동의하지 않음	동의하지 않음	조금 동의하지 않음	중립	조금 동의함	동의함	강력히 동의함
1) 우리회사는 표준화된 제품들을 세계 여러 나라로 수출합니다.	1	2	3	4	5	6	7
2) 우리회사의 제품들은 비슷한 디자인으로 세계 여러 나라로 수출되고 있습니다.	1	2	3	4	5	6	7
3) 우리회사의 수출품들은 문화적인 특이성을 갖고 있지 않습니다.	1	2	3	4	5	6	7

Q9. 아래의 문구들은 귀사 제품시장의 불확실성에 관련한 것입니다. 동의정도를 평가해 주십시오.

	강력히 동의하지 않음	동의하지 않음	조금 동의하지 않음	중립	조금 동의함	동의함	강력히 동의함
1) 우리회사의 수출시장 들은 경제적, 정치적, 혹은 사회적 불확실성이 높습니다.	1	2	3	4	5	6	7
2) 수출시장에서 경쟁사들의 행동을 예측하기가 쉽지 않습니다.	1	2	3	4	5	6	7
3) 수출시장에서 판매예측이 정확하지 않습니다.	1	2	3	4	5	6	7

Q10. 아래의 문구들은 귀사의 거래비용에 관련한 것입니다. 동의정도를 평가해 주십시오.

	강력히 동의하지 않음	동의하지 않음	조금 동의하지 않음	중립	조금 동의함	동의함	강력히 동의함
1) 우리회사는 제품판매시장, 제품가격, 제품에 대한 소비자 의견들과 관련한 정보들을 쉽게 얻을 수 있습니다.	1	2	3	4	5	6	7
2) 우리회사가 이용하고 있는 정보검색 엔진이나 프로그램은 효율적일 뿐만 아니라 정확하다	1	2	3	4	5	6	7
3) 우리회사가 필요한 정보검색을 위해서 쓰고있는 비용과 노력은 타 경쟁사와 비교해 상대적으로 크지 않다	1	2	3	4	5	6	7
4) 우리회사는 해외바이어나 무역업자들과, 주문량, 주문가격, 납품계획에 대해 효율적으로 교섭하고 있습니다.	1	2	3	4	5	6	7
5) 비효율적인 수출 교섭들이 우리 회사에 손실을 유발하고 있습니다.	1	2	3	4	5	6	7
6) 우리회사와 해외 구매자 혹은 다른 거래업자 들과의 잘 준비되지 않은 협상들은 그와 관련한 결정과정 들을 비효율적으로 만듭니다.	1	2	3	4	5	6	7
7) 우리회사는 수출된 제품의 수량이나 품질확인을 위해 많은 시간과 비용을 쓰고 있습니다.	1	2	3	4	5	6	7
8) 우리회사는 거래한 기업들의 계약의무 이행을 확인하기 위해 많은 시간과 비용을 쓰고 있습니다.	1	2	3	4	5	6	7
9) 우리회사는 수출된 제품에 대한 소비자 만족도를 모니터 하기위해 많은 시간을 쓰고 있다.	1	2	3	4	5	6	7

Q11. 아래의 문구들은 귀사의 해외 구매자 혹은 다른 거래업자들에 대한 의존도에 관련된 것입니다. 동의정도를 평가해 주십시오.

	강력히 동의하지 않음	동의하지 않음	조금 동의하지 않음	중립	조금 동의함	동의함	강력히 동의함
1) 우리 회사의 성공 여부는 기존 바이어들과의 지속적 관계에 달려 있습니다.	1	2	3	4	5	6	7
2) 기존 바이어들과의 거래 중단은 우리회사에게 아주 심각한 손실을 가져 옵니다.	1	2	3	4	5	6	7
3) 기존 바이어들을 새로운 바이어들로 대체하는 것은 아주 어렵습니다.	1	2	3	4	5	6	7

Q12. 아래의 문구들은 귀사의 해외 구매자 혹은 다른 거래업자들과의 갈등에 관련된 것입니다. 동의정도를 평가해 주십시오.

	강력히 동의하지 않음	동의하지 않음	조금 동의하지 않음	중립	조금 동의함	동의함	강력히 동의함
1) 해외바이어 들의 불합리한 요구들이 우리회사를 어렵게 만들고 있습니다	1	2	3	4	5	6	7
2) 우리회사는 해외바이어 들과 거래와 관련해 많은 논쟁을 벌입니다.	1	2	3	4	5	6	7
2) 해외바이어 들과의 상호관계가 불안정적이고 긴장의 연속이다.	1	2	3	4	5	6	7

Q13. 아래의 항목들은 귀사의 지난 3년간의 수출실적과 관련된 것입니다. 귀사의 주요 경쟁사들과 비교해 각 항목들을 평가해 주십시오.

	아주 나쁨			평균		아주 좋음	
1) 시장 점유율 상승 폭.	1	2	3	4	5	6	7
2) 판매 증대량.	1	2	3	4	5	6	7
3) 이익상승률.	1	2	3	4	5	6	7

Q14. 아래의 문구들은 귀사의 시장환경에 것입니다. 동의정도를 평가해 주십시오.

	강력히 동의하지 않음	동의하지 않음	조금 동의하지 않음	중립	조금 동의함	동의함	강력히 동의함
1) 우리나라는 비즈니스와 관련한 규정이나 법률이 엄격 합니다.	1	2	3	4	5	6	7
2) 우리나라에는 수출증진을 위한 많은 정책적 지원이 있습니다.	1	2	3	4	5	6	7
3) 우리나라에선 각종 언론 매체들이 수출에 관해 깊은 관심을 가지고 있습니다.	1	2	3	4	5	6	7
4) 전자상거래의 참여가 향후 기업성장과 생존의 핵심이라는 의견이 우리나라 기업들간에 있어서 지배적입니다.	1	2	3	4	5	6	7

Q15. 아래의 문구들은 귀사의 기업문화에 것입니다. 동의정도를 평가해 주십시오.

	강력히 동의하지 않음	동의하지 않음	조금 동의하지 않음	중립	조금 동의함	동의함	강력히 동의함
1) 우리회사는 역동적, 모험적, 혹은 창의적인 기업문화를 가지고 있습니다.	1	2	3	4	5	6	7
2) 우리회사는 성장과 동시에 새로운 변화에 대한 도전을 강조하는 기업 문화를 갖고 있습니다.	1	2	3	4	5	6	7
3) 우리회사는 딱딱하고 엄격한 기업문화를 갖고 있습니다. 엄격한 규율과 제도에 의해 회사가 운영되고 있습니다.	1	2	3	4	5	6	7
4) 우리회사는 전통과 역사 그리고 안정성을 강조합니다.	1	2	3	4	5	6	7

Q16. 귀사에서 해외 바이어들과의 평균 거래기간이 얼마나 됩니까? _____ 년 _____ 월

Q17. 전체 수출판매의 몇 퍼센트가 인터넷 무역업체를 통해 이뤄집니까? _____%

Q18. 귀사의 주요 수출 상품은 무엇입니까?

- (a). _____
- (b). _____
- (c). _____

Q19. 인터넷 무역업체나 혹은 다른 종류의 무역업체의 이용과 관련하여 어떠한 의견이나 제안이 있으시면 말씀해 주십시오.

귀중한 시간 할애해 주셔서 대단히 감사합니다. 가능한 빨리 설문지에 답을 하신 후 되돌려 주시면 고맙겠습니다. 귀하의 참여는 저의 논문에 있어서 아주 소중한 정보를 제공할 것을 믿어 의심치 않습니다.

APPENDIX C
MODEL SPECIFICATION

OLS Regression model for testing determinants of electronic intermediary use

Extent of electronic intermediary use = $\beta_0 + \beta_1$ IT-related human asset + β_2 IT-related technology asset + β_3 IT-related relationship asset + β_4 International competence + β_5 Product's standardization + β_6 Environmental uncertainty + β_7 Duration of relationship + β_8 D + β_9 IT-related human asset*D + β_{10} IT-related technology asset*D + β_{11} IT-related relationship asset*D + β_{12} International competence*D + β_{13} Product's standardization*D + β_{14} Environmental uncertainty*D + β_{15} Duration of relationship*D + ε (D is Dummy, Korea=1 and the U.S.=0)

OLS Regression models for testing effects of electronic intermediary use

Searching cost = $\beta_0 + \beta_1$ extent of electronic intermediary use + β_2 D + β_3 extent of electronic intermediary use*D + ε

Bargaining cost = $\beta_0 + \beta_1$ extent of electronic intermediary use + β_2 D + β_3 extent of electronic intermediary use*D + ε

Monitoring cost = $\beta_0 + \beta_1$ extent of electronic intermediary use + β_2 D + β_3 extent of electronic intermediary use*D + ε

Export sales = $\beta_0 + \beta_1$ extent of electronic intermediary use + β_2 D + β_3 extent of electronic intermediary use*D + ε

Market share = $\beta_0 + \beta_1$ extent of electronic intermediary use + β_2 D + β_3 extent of electronic intermediary use*D + ε

(D is Dummy, Korea=1 and the U.S.=0)

APPENDIX D
NONRESPONSE BIAS

Comparison of early and late responses in Study 1

<i>Constructs</i>	<i>Korea sample:</i>		<i>U.S. sample:</i>	
	<i>T-test (T-value) (P-value)</i>	<i>Sign- test (W-value) (P-value)</i>	<i>T-test (T-value) (P-value)</i>	<i>Sign- test (W-value) (P-value)</i>
Electronic intermediary use	0.001 (0.999)	107.5 (0.878)	-0.01 (0.993)	103.0 (0.907)
IT-related human asset	-0.36 (0.723)	100.0 (0.737)	0.47 (0.645)	123.5 (0.868)
IT-related technology asset	-0.53 (0.600)	95.5 (0.494)	0.35 (0.733)	128.0 (0.947)
IT-related relationship asset	0.18 (0.856)	95.5 (0.446)	1.35 (0.203)	94.0 (0.424)
International competence	-0.46 (0.652)	85.0 (0.141)	1.06 (0.305)	94.5 (0.443)
Product standardization	1.28 (0.217)	121.5 (0.2247)	1.42 (0.271)	143.5 (0.276)
Environmental uncertainty	-0.92 (0.372)	89.0 (0.238)	-0.23 (0.820)	126.0 (1.00)
Duration of relationship	1.21 (0.241)	118.5 (0.324)	0.52 (0.608)	112.0 (0.619)

Comparison of early and late responses in Study 2

<i>Constructs</i>	<i>Korea sample:</i>		<i>U.S. sample:</i>	
	<i>T-test (T-value) (P-value)</i>	<i>Sign test (W-value) (P-value)</i>	<i>T-test (T-value) (P-value)</i>	<i>Sign test (W-value) (P-value)</i>
Electronic intermediary use	0.001 (0.999)	107.5 (0.878)	-0.01 (0.993)	103.0 (0.907)
Searching cost	1.46 (0.167)	120.5 (0.251)	0.09 (0.926)	105.0 (1.00)
Bargaining cost	0.65 (0.524)	122.5 (0.192)	-1.16 (0.261)	109.5 (0.759)
Monitoring cost	1.49 (0.155)	105.5 (1.00)	-0.24 (0.451)	130.0 (0.652)
Market share	-1.23 (0.229)	98.0 (0.617)	1.25 (0.235)	117.0 (0.305)
Export sales	-0.44 (0.667)	98.5 (0.619)	1.42 (0.177)	120.0 (0.241)