

The Effects of E-Commerce Drivers on Export Marketing Strategy

ABSTRACT

The emergence of e-commerce technology has had a significant effect on firms' export marketing. However, limited knowledge exists as to how e-commerce drivers affect a firm's export marketing strategy. This study develops and tests a theoretical model to delineate how e-commerce drivers affect export marketing strategy. The empirical findings suggest that internal e-commerce drivers (product online transferability and e-commerce assets) directly increase a firm's degree of promotion adaptation, enhance communication and distribution efficiencies, facilitate greater distribution support, and improve price competitiveness for export ventures. Furthermore, both internal and external e-commerce drivers (export market e-commerce infrastructure and demand for e-commerce) moderate the relationships between environmental factors and elements of export marketing strategy. Overall, the findings support incorporating e-commerce constructs into existing theory on export marketing strategy. The authors discuss theoretical and managerial contributions and offer directions for further research.

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Two major trends have characterized the modern business landscape: the advancement of e-commerce technologies and the rapid global expansion of firms. In the first trend, e-commerce technologies (e.g., the Internet) have led to entirely new possibilities for exporters to access new markets and improve their efficiency in terms of receiving customer orders and handling inquiries (Bennett 1997; Hamill 1997; Prasad, Ramamurthy, and Naidu 2001; Samiee 1998). In the literature, several conceptual works have described the implications of e-commerce and the Internet on marketing strategy (e.g., Hoffman and Novak 1996; Javalgi and Ramsey 2001; Karavdic and Gregory 2005). Several empirical studies have also examined the influence of e-commerce on firm internationalization (e.g., Berry and Brock 2004; Moen 2002), perceptions of barriers in the use of the Internet in exporting (e.g., Bennett 1997), the role of the Internet in supply chains (e.g., Lancioni, Smith, and Oliva 2000), and the importance of environmental forces on e-commerce activities (e.g., Jennex, Amoroso, and Adelakun 2004; Oxley and Yeung 2001).

In the second trend, the globalization of the world markets has led to explosive growth of global trade and exporting

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firms around the world. Correspondingly, a considerable amount of research has been conducted to identify factors that affect exporting performance (e.g., Leonidou, Katsikeas, and Piercy 1998; Morgan, Kaleka, and Katsikeas 2004; Souchon and Diamantopolous 1996). Thus far, research in export marketing has established that the key determinants of a firm's export performance are its export marketing strategies (e.g., Zou and Stan 1998) and that a firm's export marketing strategies must fit its internal and external forces (Cavusgil and Zou 1994).

Given these major trends and the voluminous related research, it is surprising that little progress has been made to integrate the two streams of research. Because of the lack of integration of e-commerce with export marketing strategy studies, little is known about how e-commerce influences a firm's export performance, how to incorporate e-commerce into export marketing, and what theoretical framework is appropriate to integrate e-commerce drivers into export marketing (Karavdic and Gregory 2005). This is a major gap in the export marketing literature because without incorporating e-commerce into a firm's export marketing strategy, the current export marketing theories would be incomplete, and current knowledge of the determinants of export performance would be biased.

In the current research, we attempt to examine the effect of e-commerce drivers on a firm's export marketing strategy. Specifically, we identify the underlying dimensions of e-commerce and integrate them into the existing theory of export marketing strategy. Internal and external e-commerce drivers are theorized both as the antecedents of export marketing strategy and as the moderators of the relationship between environmental factors and export marketing strategy. We also offer an empirical test of the proposed theoretical relationship. We believe that by focusing on the effects of e-commerce drivers on export marketing strategy, we can shed light on how e-commerce can be used to enhance a firm's export performance and contribute to the export marketing literature.

The current vision for e-commerce is that it is a universal and ubiquitous electronic marketplace relevant to all commercial activities and trading partners. As such, e-commerce has been defined as the process of buying and selling or exchanging products, services, and information through computer networks, such as the Internet (Turban, McLean, and Wetherbe 2002). However, e-commerce is more than simply buying and selling goods electronically. For the purpose of this study, we define e-commerce as an environment for presenting, trading, distributing, servicing customers,

E-COMMERCE AND EXPORT MARKETING STRATEGY

E-Commerce and E-Commerce Drivers

collaborating with business partners, and conducting transactions using electronic technologies.

On the basis of a literature review, we identify four major e-commerce drivers, both internal and external, in terms of their relevance to export marketing strategy. Internal e-commerce drivers include product online transferability and e-commerce assets, and external drivers include e-commerce infrastructure and demand for e-commerce. Product online transferability is the extent to which a product can be digitized for transfer over the Internet. A firm's e-commerce assets are defined as allocated technology and human resources in the service of e-commerce activities. E-commerce assets represent a means to acquire resources that are critical to developing technical infrastructure and human skill sets. As for external e-commerce drivers, export market e-commerce infrastructure is defined as the set of resources that enable reliable and affordable access to all parties involved in e-commerce transactions in the export market. Several layers of infrastructure can be identified (e.g., infrastructure for Internet access, Internet infrastructure software necessary to facilitate transactions). Demand for e-commerce is defined as the extent to which the parties involved in the export business pursue a greater usage of e-commerce in business relationships and transactions. Demand for e-commerce development by importers puts pressure on exporters to develop e-commerce business tools because exporters rely on the importers' continuous business for their success (Samiee 1998).

Export Marketing Strategy

There is a rich body of literature on the impact of environmental forces on export marketing strategy (e.g., Cavusgil and Zou 1994; Crick 1995; Lim, Sharkey, and Kim 1996). A key dimension of a firm's export marketing strategy is the degree to which a firm adapts its marketing strategy to the export market environment (Cavusgil and Zou 1994). Not surprisingly, most prior studies have considered product adaptation, promotion adaptation, pricing adaptation/competitiveness, and distribution adaptation/support as key components of a firm's export marketing strategy (Aaby and Slater 1989; Zou and Stan 1998).

In line with the existing literature, the current study conceptualizes export marketing strategy as a multidimensional factor that incorporates Cavusgil and Zou's (1994) four dimensions of product adaptation, promotion adaptation, price competitiveness, and distribution support, as well as two additional dimensions of communication efficiency and distribution efficiency. The rationale for adding two efficiency dimensions to export marketing strategy is the central role of e-commerce in helping reduce the cost of communication and distribution. A comprehensive export marketing strategy

should help a firm achieve cost efficiency while maintaining local responsiveness.

Industrial organization theory focuses on external markets to identify drivers of a firm's export marketing strategy. The industrial organization framework is captured by the notion of coalignment, or the fit between a firm's strategy and its environment (Venkatraman and Prescott 1990), in which strategy is viewed as a firm's deliberate response to the external industry/market imperatives. The premise is that the external market (or industry) imposes selective pressures (or drivers) to which a firm must respond. According to industrial organization theory, external environmental factors, such as export market competitiveness, export market infrastructure, entry barriers, and technology orientation of industry, are major drivers of a firm's export marketing strategy (Cavusgil, Zou, and Naidu 1993). We include these traditional external drivers in the current study.

In contrast to industrial organization theory, the resource-based view (RBV) considers a firm's internal organizational resources (assets, capabilities, processes, managerial attributes, information, and knowledge) key drivers of its strategy and performance (Deligonul and Cavusgil 1997; Wernerfelt 1984). The RBV conceptualizes a firm as a unique bundle of resources and argues that the differential endowment of strategic resources is the ultimate determinant of its performance (Grant 1991; Wernerfelt 1984). The RBV regards strategy as a firm's move to capitalize on its resources. Thus, according to the RBV, internal factors, such as export experience, management commitment, and unique product offering, are among the major drivers of a firm's export marketing strategy (Zou and Stan 1998). The current study investigates these traditional internal drivers.

Because e-commerce drivers include internal drivers (e.g., product online transferability, e-commerce assets) and external drivers (e.g., e-commerce infrastructure, demand for e-commerce), we combine industrial organization theory and the RBV to build a theoretical framework of the effect of e-commerce drivers on export marketing strategy. Given that internal e-commerce drivers can be viewed as organizational capabilities that can modify the relative power of buyers and suppliers by lowering the cost of finding and distributing market information (Mahadevan 2000), they are more than just antecedents to export marketing strategy. Indeed, a firm's e-commerce capabilities can influence the relationship between traditional environmental drivers of export marketing strategy. This is because the developments in interactive decision aids in an e-commerce environment alter how customers search for information and make purchase decisions (Haubl and Trifts 2000). The dissemination of information

THEORETICAL FRAMEWORK OF E-COMMERCE DRIVERS OF EXPORT MARKETING STRATEGY

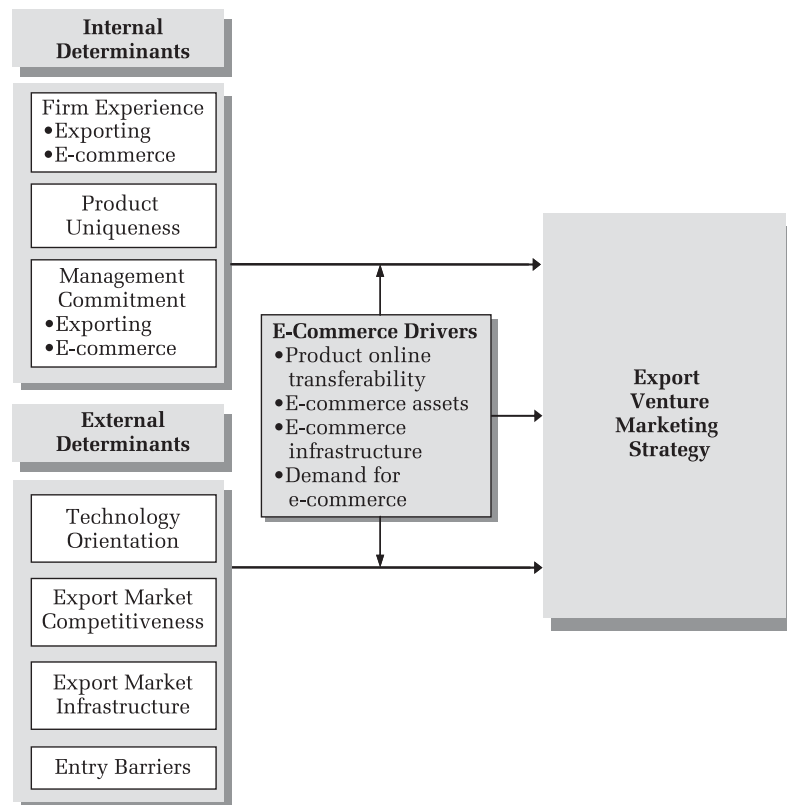
Theoretical Foundation

An Integrated Theoretical Framework

through e-commerce further enables firms to adapt their strategy to the changes in the export market environment (Varadarajan and Yadav 2002) and to customize goods and services specifically to each customer's needs (Kiang, Raghu, and Shang 2000). Thus, e-commerce drivers can function as “enablers” of a firm's adaptation of export marketing strategy to export market conditions. In other words, in addition to driving export marketing strategy directly, e-commerce drivers also moderate the effects of traditional (external and internal) drivers on export marketing strategy.

By integrating e-commerce drivers into the existing frameworks of export marketing strategy (e.g., Cavusgil and Zou 1994), we present an expanded theoretical framework in Figure 1 to summarize the direct and moderating effects of e-commerce drivers on export marketing strategy. This framework contains two major extensions of the existing literature. First, none of the export marketing strategy frameworks (e.g., Cavusgil, Zou, and Naidu 1993; Leonidu, Katsikeas, and Piercy 1998) in the existing literature incorporate e-commerce as drivers of export marketing strategy. Our proposed framework explicitly incorporates internal and external e-commerce drivers as new antecedents to export marketing strategy, thus expanding the existing frameworks. Second, the existing frameworks have considered only direct

Figure 1.
A Contingency Model of the
Antecedents and Drivers of
Export Venture Marketing
Strategy



effects of drivers of export marketing strategy. Our framework enriches the literature by conceptualizing e-commerce drivers as organizational capabilities that moderate the relationships between traditional drivers and export marketing strategy.

In addition to e-commerce drivers and export marketing strategy, the proposed theoretical framework also incorporates traditional environmental drivers of export marketing strategy that have been studied in many prior studies. Although there are several classifications of traditional drivers of export marketing strategy (Zou and Stan 1998), for the purpose of this research, they are classified into two categories: internal forces and external forces. Among traditional internal drivers of export marketing strategy, research findings tend to suggest that international experience, product uniqueness, and management commitment are important drivers of export marketing strategy adaptation (Cavusgil and Zou 1994; Katsikeas, Piercy, and Ioannidis 1995).

International experience refers to the amount of experience a firm has in international marketing. Experienced firms are more likely to identify unique market demand and possess a better understanding of how to adapt to foreign market forces. Product uniqueness, which is defined as the degree to which a product incorporates features to satisfy unique needs or to be used for unique purposes (Cavusgil, Zou, and Naidu 1993), helps firms gain competitive advantage in overseas markets (Louter, Ouwerkerk, and Bakker 1991). Management commitment, along with attitudes and perceptions, has been identified consistently as an important determinant of export marketing strategy in prior studies (Zou and Stan 1998). A committed management gives a higher priority to exporting with carefully planned business objectives and tends to adapt marketing strategies that lead to better performance (Leonidou, Katsikeas, and Piercy 1998). The importance of this factor to exporting implies that it is desirable to extend this concept by considering management commitment to e-commerce in exporting.

We include four traditional external drivers in the proposed theoretical framework: technology orientation of industry, export market competitiveness, export market entry barriers, and an export market's infrastructure. Technology orientation of industry refers to the degree to which technological innovation and application affect success in the industry (Holzmuller and Stottinger 1996). In industries in which technology orientation is high, firms can use technology to shape demand and practices, which leads to less need for adaptation of product and promotion (Cavusgil, Zou, and Naidu 1993). Export market competitiveness refers to the intensity of competition that a firm encounters in the export

market. In a highly competitive market, competitive pressures may necessitate customization to gain an advantage over rivals by matching local conditions more precisely. Entry barriers are defined as the degree to which extensive regulations (e.g., health, safety, technical) exist in the export market. In an export market in which the legal regulations are extensive, firms are forced to modify their products and promotional programs to meet health, safety, or technical standards (Cavusgil and Zou 1994). Although advances in communication technologies create distribution efficiencies, increased usage of electronic channels has resulted in additional legal and regulatory concerns related to e-commerce (Karavdic and Gregory 2005). An export market's infrastructure consists of the systems and institutions necessary to develop and service demand in a market, including the availability and capabilities of intermediaries and of warehousing and transportation necessary for success. In export markets with a developed marketing infrastructure, standardized products and marketing programs could be a better strategic choice.

RESEARCH HYPOTHESES

In this section, we discuss the relationships between e-commerce drivers and export marketing strategy. Because the direct effects of traditional environmental drivers (both internal and external) on export marketing strategy have been well documented in the existing literature (Zou and Stan 1998), we discuss these effects but do not advance specific hypotheses for them to avoid repeating what has been done in prior studies (for the rationale of these relationships, see Cavusgil and Zou 1994; Leonidu, Katsikeas, and Piercy 1998). Instead, our focus is on developing hypotheses that highlight the moderating effects of e-commerce drivers on the relationship between these traditional drivers on export marketing strategy, as well as on the direct effects of e-commerce drivers on export marketing strategy.

Product Online Transferability

To some extent, product online transferability relies on the degree of product intangibility or digitalization—that is, a product's ability to be transformed into a digital signal. Traditional products and services with significant information content are susceptible to becoming highly digitized, from design to production to delivery (e.g., music, news, financial services), and products that manage information (e.g., copiers, telecommunications) are adopting digital technologies for more of their components. Product online transferability enables a marketer to tailor the products more easily to fit customers' needs in an export market, which leads to a higher degree of adaptation, increased efficiency, greater distribution support, and even a more competitive price. Product online transferability positively influences export marketing strategy. In addition, product online transferability

facilitates a firm's strategic response to traditional drivers, magnifying the effects of traditional drivers. Thus:

H₁: Product online transferability has a positive, direct effect on export marketing strategy.

H₂: The effects of traditional drivers on export marketing strategy are stronger when product online transferability is high than when product online transferability is low.

The transaction costs and management costs are dependent on a firm's capabilities and resources (Tsang 2000). One such resource associated with technological development is that of e-commerce assets. E-commerce assets represent a means to acquire resources that are critical to develop technical infrastructure and human skill sets. As a result, it is expected that a firm with greater e-commerce assets (i.e., investments in information technology [IT] and e-commerce technology) tends to enjoy a source of competitive advantage in value creation. We argue that the overall development of e-commerce assets, especially human resources and capital, not only gives a firm the capability to be flexible with its export marketing strategy but also enables the firm to respond more effectively to its internal and external forces with a properly adapted export marketing strategy. Thus:

H₃: E-commerce assets have a positive, direct effect on export marketing strategy.

H₄: The effects of traditional drivers on export marketing strategy are stronger when e-commerce assets are high than when e-commerce assets are low.

Export market e-commerce infrastructure facilitates a firm's flexibility to respond to export market demands for efficiency, creates a structure to support e-commerce export sales activities, and provides a mechanism to provide online technical support to foreign distributors and subsidiaries. With well-developed e-commerce infrastructures in an export market, exporters are able to exploit the full potential of e-commerce technologies, to adapt their export marketing strategies to fit the export market conditions, and to make e-commerce technologies more effective in initiating strategic responses to traditional drivers. In contrast, in an export market in which the e-commerce infrastructure is poorly developed, exporters are constrained in their strategy choices and in their ability to respond to environmental conditions presented by traditional drivers. Thus:

H₅: Export market e-commerce infrastructure has a positive, direct effect on export marketing strategy.

E-Commerce Assets

Export Market E-Commerce Infrastructure

H₆: The effects of traditional drivers on export marketing strategy are stronger when export market e-commerce infrastructure is highly developed than when export market e-commerce infrastructure is poorly developed.

Demand for E-Commerce

A challenge to global competitors is the need to respond to ever-increasing uncertainty, particularly at a time when e-commerce has resulted in a remarkable growth in competition by providing more and more companies with access to export markets (Etemad and Wright 1999). Because technological changes are largely uncontrollable by individual firms in an export market, firms form networks to develop and/or borrow new technologies or products in cooperation with their partners (Overby and Min 2001). To respond quickly to changes (i.e., customer preference changes and technological change), firms need to achieve greater agility with the help of supply chain partners (Christensen, Da Rocha, and Gertner 1987). Powerful importing customers are in an advantageous position for implementing e-commerce-based export processes because of their dominant position to coordinate and, to some extent, dictate channel activities and exert pressure on exporters to adopt such a process. Demand for e-commerce development puts pressure on exporters to develop e-commerce business tools and to adapt their marketing strategies to fit customers' demands. Such a demand drives a firm's export marketing strategy and facilitates its strategic response to changing export market conditions. Thus:

H₇: Demand for e-commerce has a positive, direct effect on export marketing strategy.

H₈: The effects of traditional drivers on export marketing strategy are stronger when demand for e-commerce is high than when demand for e-commerce is low.

METHODOLOGY

To collect data to test our research hypotheses, we conducted a cross-sectional survey of firms currently using e-commerce in exporting. The unit of analysis in the research is the individual export venture (Cavusgil and Zou 1994). We expect the key variables in our proposed theoretical model, including traditional drivers, e-commerce drivers, and export marketing strategy, to vary across individual export ventures, thus generating variances needed for hypothesis testing.

Questionnaire Development

We conducted 15 interviews with both Australian exporting manufacturers and service firms in the Sydney area in the initial stage of research. The major objectives of these interviews were (1) to gain an in-depth understanding of how e-commerce is currently being used in developing export

marketing strategy and (2) to identify “key” e-commerce drivers (both external and internal). During the interviewing process, we also discussed the validity of prior research constructs and explored administration issues in conducting online surveys (e.g., incentive, timing, technology).

We developed the initial measures of export marketing strategies and traditional drivers in accordance with prior export research, and we developed preliminary new measures of e-commerce drivers in accordance with extant literature on e-commerce. In the 15 in-depth interviews, we discussed these preliminary measures and modified them into a draft questionnaire. Before finalizing the survey, we pretested it with managers in companies that have adopted electronic business practices, faculty members who are familiar with the e-commerce and/or export marketing research, and other industry experts. Each item was reviewed for its content, scope, and purpose. We used a five-point Likert-type scale to collect most responses; some questions involved actual numbers, percentages, or categories.

Export Marketing Strategy. Scales adapted from Cavusgil and Zou’s (1994) research instrument included measures of product adaptation, promotion adaptation, support to foreign distributor, and price competitiveness. We developed and adapted some new e-commerce scale items using the following guidelines: (1) Scales needed to be consistent with previously established measures, (2) previous scales related to export marketing strategy were taken into consideration and adapted when necessary, and (3) industry surveys’ items related to e-commerce in domestic or international markets were taken into consideration and modified for this study. We also developed additional e-commerce measures related to communication efficiency and distribution efficiency in accordance with previous work (e.g., Hoffman and Novak 1996; Varadarajan and Yadav 2002).

Traditional Environmental Drivers. We adapted measures for three internal drivers (export experience, management commitment, and product uniqueness) and four external drivers (technology orientation of industry, export market competitiveness, export market entry barriers, and export market infrastructure) from the work of Cavusgil and Zou (1994) and expanded them on the basis of extant literature. We developed and adapted additional e-commerce-related measures for these constructs. The survey also contained questions that collected company profile/characteristics data, such as the company size, the number of export markets, years of export experience, years of experience using e-commerce, and the number of foreign markets supported by e-commerce. The additional data helped us understand the profile of the sample and interpret the results.

Product Online Transferability. We developed measures of product online transferability using Varadarajan and Yadov's (2002) conceptual framework and in accordance with the notion of product digitizability. We captured the degree to which firms can and do electronically transfer and distribute products/services through the following two items: the degree of potential product online transferability using e-commerce and the degree of "actual" product online transferability.

Firm's E-Commerce Assets. The basis for e-commerce assets is the firm's investment in e-commerce resources. On the basis of input from export managers and managing directors from the 15 in-depth interviews, we established the following e-commerce asset measures: investment in IT, development of the firm's e-commerce infrastructure, and the firm's Internet flexibility in exporting. Measures adapted from previous research included assets related to dedicated personnel for e-commerce; investment in an e-commerce team in the export marketing department; service to support e-commerce export; and a firm's number of full-time employees in e-commerce, which we measured by the actual number of employees (Rasheed and Geiger 2001).

Export Market E-Commerce Infrastructure. On the basis of Samiee's (1998) conceptual development, we developed the following measures: Internet usage in the export market, the degree of access to Internet networks, e-commerce competition intensity in the export market, and the sophistication of e-commerce infrastructure in export markets.

Demand for E-Commerce. The in-depth interviews revealed that demand for e-commerce is derived from many different sources in the value chain. To capture demand as a driver of e-commerce strategy, we developed items that measured the degree of customer demand for e-commerce, the degree of supplier demand for e-commerce, and the degree of distributor demand for e-commerce. Furthermore, preliminary results suggested that channel members' potential usage of e-commerce technologies also affects demand; thus, we also developed an item to measure potential usage by value-chain members.

Data Collection

To collect the data, we employed a survey based on the computer-assisted Web-interviewing method nationwide across Australia. After exporters identified a specific venture market in the survey, we programmed the computer-assisted Web interviewing so that this venture market (e.g., China) would automatically appear in bold text in all other questions about this venture, which both reminded participants of their chosen venture and provided consistency throughout

the survey (e.g., minimizing measurement error). If an exporter was not qualified to take part in the study because it did not meet certain screening criteria (e.g., minimum exporting experience, specification of export venture market, e-commerce usage in exporting), we programmed the Internet survey to terminate further responses to other questions, thus reducing sampling frame error.

The sampling frame used for this study was the Australian Suppliers Directory (ASD), created by the Australian Trade Commission and the Australian government. The ASD is considered the most comprehensive and extensive source of exporters in Australia because it covers all industries that export from Australia. Firms were screened in an attempt to target exporters that had a minimum of three years' experience in a specific export venture business, had a Web site, and currently used e-commerce technologies in exporting. Consistent with prior research, the unit of analysis was a specific export venture, which is defined as the marketing of a specific product in a specific market (Cavusgil and Zou 1994; Morgan, Kaleka, and Katsikeas 2004).

We identified company managing directors, export managers, or marketing managers as key informants because of their extensive knowledge about company involvement in the export business (Kumar, Stern, and Anderson 1993) and their personal involvement with the specific export venture under investigation. We sent an e-mail invitation to participate in an online survey to senior managers who were responsible for export business for the entire 5233 exporting firms in the ASD. In addition, we added 1600 new contacts from medium-sized and large companies from Business Who's Who of Australia database, published by Dun & Bradstreet, to supplement the ASD database. Overall, the total response rate based on click-throughs was 30.3%, which is well within the range of Internet surveys, for which response rates typically range from 6% to 76% (Simsek and Veiga 2000). After we cleaned up the data and eliminated responses that did not meet the screening criteria, the final sample included 340 export ventures. If we compare secondary data on exporters' population characteristics from the Australian Bureau of Statistics with this study's final sample characteristics, the analysis of nonresponse bias suggests that the survey data's breadth of the chosen sample represents a broader population of Australian exporters. We summarize a profile of the sampled export ventures in Table 1.

Consistent with prior research, we used a moderated regression analysis (MRA) to test the direct and moderating effects of e-commerce drivers (Murray, Kotabe, and Wildt 1995). Specifically, we test the following equations:

Analysis and Results

Table 1.
A Profile of the Sampled
Export Ventures

	Percentage of Ventures		Percentage of Ventures
Firm Type		Percentage of Export Sales Revenue	
Manufacturer	48.2	Less than 10%	37.4
Services organization	28.5	10%–50%	34.1
Distributor and transport/storage	6.5	50% or more	28.5
Wholesaler	11.8	Percentage of Export Sales Revenue Generated by E-Commerce	
Retailer	5.0	Less than 10%	56.5
Firm Size (Number of Employees)		10%–50%	20.0
		50% or more	23.5
Small firms (<20 employees)	77.0	Export Venture Regions	
Medium-sized firms (20–199 employees)	20.6	Asia	48.8
Large firms (200+ employees)	2.4	North America	27.4
		European Union	17.4
		Other	6.4
Years of Firm's International Operation		Export Venture Product Type	
≤3	25.6	Final consumer product	40.9
4–5	33.8	Final industrial equipment	22.6
6–9	17.4	Final consumer service	8.2
10+	23.2	Business-to-business service	27.4
Years of Using E-Commerce		Other	.9
≤3	33.8		
4–5	45.6		
6–9	17.6		
10+	3.0		

$$\text{Model 1: } y = b_0 + b_1x,$$

$$\text{Model 2: } y = b_0 + b_1x + b_2z, \text{ and}$$

$$\text{Model 3: } y = b_0 + b_1x + b_2z + b_3xz,$$

where

y = the dependent (criterion) variable (e.g., export venture marketing strategy),

x = the independent (predictor) variable (e.g., environmental forces),

z = the independent (moderator) variable (e.g., e-commerce drivers),

xz = the predictor × moderator interaction, and

b = the regression coefficient.

To test for direct effects of e-commerce drivers, we examined the regression coefficients for the independent (moderator) variable (b_2 in Model 2). To test for moderating effects, we examined the regression coefficient of the interaction term (b_3 in Model 3). For a moderating effect to be significant, b_3 must be significantly different from zero and have a sign in the expected direction (Aiken and West 1991). Next, Models 2 and 3 need to be compared for changes in explanatory power (R^2). When R-square in Model 3 is greater than that in Model 2 ($R_3^2 > R_2^2$), the moderating effect is supported (Barrett, Balloun, and Weinstein 2000). If these conditions do not hold, the expected moderating effect is not supported.

We first checked for outliers, normality, linearity, and homoskedasticity to satisfy the underlining assumptions of multivariate data analysis (Hair et al. 1998). To satisfy the assumptions of linearity and homoskedasticity, we performed transformations on four variables: the degree of product uniqueness, the degree of potential and actual product online transferability, and online promotion of products. Next, we computed the coefficient alpha for each factor measured with multiple items, and we purified some measurements by dropping “bad” items. Because this research represents a first attempt at developing measures of e-commerce drivers in an exporting context, we needed to make some modifications of existing measures, and we set the standard for judging the acceptability of the reliability of measurement scales at .50 (Nunnally 1978). We then computed variance inflation factors for all factors; they fell well below the level of 10.0 that Mason and Perreault (1991) suggest for threshold of multicollinearity. We then computed factor scores of multi-item scales by summing all items that measured the corresponding factors. Finally, we mean-centered each factor to reflect the appropriate representation of the factor (Murray, Kotabe, and Wildt 1995) before using it to test the moderating effects of e-commerce drivers. The purified measures of all factors and their coefficient alphas appear in the Appendix.

Using MRA to analyze the three models and test the research hypotheses, we estimated the models that include all traditional environmental drivers simultaneously for each element of export venture marketing strategy and for each e-commerce driver. That is, we performed separate regression analyses (Models 1 and 2) for each of the six dependent strategy variables with all environmental variables simultaneously and with each of the four independent e-commerce drivers. The analysis for Model 3 (moderating effects) included all traditional environmental drivers simultaneously and each e-commerce driver separately as main effects, along with the product terms (environmental variable \times e-commerce driver) representing the moderating effects of

Preliminary Analysis

Hypothesis Testing

e-commerce drivers. In addition, we included two control variables—firm size (number of employees) and industry type (manufacturing and services)—in all the regression models.

Table 2 presents the results of the regression analyses for each of the four e-commerce drivers as a direct antecedent and a moderator. Each column in the table represents separate regression models (Model 2 and Model 3) with all the export strategy variables as dependent variables and the environmental variables and e-commerce drivers as independent variables. For simplicity, we report only the significant results for the direct effects of e-commerce drivers (in Model 2) and for the moderating effects of e-commerce drivers (in Model 3). When a moderating effect is significant, we compare the R-squares for Models 2 and 3.

Effects of Product Online Transferability. Table 2 shows the direct and moderating effects of product online transferability on the traditional environmental drivers–export venture marketing strategy relationship. As Table 2 shows, product online transferability has a direct, positive effect on four of the six dimensions of export venture marketing strategy: promotion adaptation, communication efficiency, distribution support, and distribution efficiency. These findings lend overall support to H₁. With regard to the moderating effects, product online transferability moderates (enhances) the effects of product uniqueness on promotion adaptation and the effects of e-commerce export experience on communication efficiency, and it reduces the effects of export market entry barriers on distribution efficiency. Because the score for entry barriers was reverse scaled, a positive coefficient means that as entry barriers are reduced, exporters realize an increase in distribution efficiency. However, although these results are promising, they provide only partial support for H₂. Overall, the MRA results indicate that not only does product online transferability moderate (enhance) the effects of selected traditional environmental drivers, but it also directly affects many key elements of export venture market strategy, with more pronounced effects as a direct antecedent of export strategy.

Effects of E-Commerce Assets. Table 2 depicts the direct and moderating effects of e-commerce assets on the environmental forces–export venture marketing strategy relationship. The results show that e-commerce assets have a positive, significant effect on five of the six dimensions of export venture marketing strategy: promotion adaptation, communication efficiency, distribution support, distribution efficiency, and price competitiveness. These results provide compelling evidence in support of H₃. Furthermore, the results of the MRA indicate that e-commerce assets moderate (enhance) the

Independent Variables	Product Adaptation	Promotion Adaptation	Communication Efficiency	Distribution Support	Distribution Efficiency	Price Competitiveness
H₁ and H₂: Product Online Transferability						
Product online transferability		b ₂ = .198+++	b ₂ = .118 [†]	b ₂ = .139++	b ₂ = .117 [†]	
R ² for Model 2		.091*	.251*	.088*	.169*	
E-commerce export experience			b ₃ = .659++			
Product uniqueness		b ₃ = .227+++			b ₃ = .150++	
Entry barriers					.172*	
R ² for Model 3		.095*	.273**			
H₃ and H₄: E-Commerce Assets						
E-commerce assets		b ₂ = .348+++	b ₂ = .296+++	b ₂ = .123 [†]	b ₂ = .192 [†]	b ₂ = .301+++
R ² for Model 2	.130*	.142*	.214***	.046***	.168*	.166***
E-commerce export experience	b ₃ = .219+++					
Management commitment to export				b ₃ = .247+++		
Management commitment to e-commerce			b ₃ = .509+++		b ₃ = .399+++	b ₃ = .459+++
Product uniqueness		b ₃ = .209++				
R ² for Model 3	.132*	.146*	.267***	.058***	.169*	.175*
H₅ and H₆: E-Commerce Infrastructure						
E-commerce infrastructure			b ₂ = .336+++			
R ² for Model 2		.058**	.305***		.159*	.143*

Table 2.
Direct and Moderating Effects of E-Commerce Drivers on the Environmental Forces–Export Marketing Strategy Relationship

Table 2.
Continued

Independent Variables	Product Adaptation	Promotion Adaptation	Communication Efficiency	Distribution Support	Distribution Efficiency	Price Competitiveness
E-commerce export experience					$b_3 = -.259^+$	$b_3 = .102^+$
Management commitment to e-commerce			$b_3 = .488^{+++}$			
Product uniqueness		$b_3 = .173^{++}$				
Entry barriers					$b_3 = .198^{++}$	$b_3 = .162^{++}$
Export market infrastructure						$b_3 = -.128^{++}$
R ² for Model 3		.064**	.306*		.167*	.169**
H₇ and H₈: Demand for E-Commerce						
Demand for e-commerce			$b_2 = .295^{+++}$		$b_2 = .191^{++}$	$b_2 = .171^{++}$
R ² for Model 2		.058**	.295***		.159**	.154**
Product uniqueness		$b_3 = .214^{++}$				
Management commitment to e-commerce			$b_3 = .483^{+++}$		$b_3 = .395^{+++}$	
Export market infrastructure						$b_3 = .138^+$
R ² for Model 3		.067**	.300*		.165*	.161*

*F is significant at $\leq .05$.
 **F is significant at $\leq .01$.
 ***F is significant at $\leq .001$.
 +T is significant at $\leq .05$.
 ++T is significant at $\leq .01$.
 +++T is significant at $\leq .001$.

effects of management commitment to e-commerce on three of the six export marketing strategy dimensions: communication efficiency, distribution efficiency, and price competitiveness. In addition, e-commerce assets enhance the effects of management commitment to exporting on distribution support, the effects of e-commerce export experience on product adaptation, and the effects of product uniqueness on promotion adaptation. In summary, the MRA results indicate that e-commerce assets moderate (enhance) the effects of all internal environmental drivers. Although the evidence is strong for internal environmental drivers, the overall findings suggest only partial support for H₄.

Effects of Export Market E-Commerce Infrastructure. The results of the MRA in Table 2 show that export market e-commerce infrastructure directly affects only communication efficiency. Thus, the results provide little evidence in support of H₅. However, export market e-commerce infrastructure enhances the effects of e-commerce export experience on both distribution efficiency and price competitiveness. Similarly, there are moderating effects with export market entry barriers on distribution efficiency and price competitiveness. Again, because the score for entry barriers was reverse scaled, a positive coefficient represents a reduction in the effects of export market barriers on both efficiency and competitiveness. Export market e-commerce infrastructure also enhances the effects of product uniqueness on promotion adaptation and enhances the effects of management commitment to e-commerce communication efficiency. The overall findings suggest that export market e-commerce infrastructure plays a particular role in enhancing the effects of export experience and in reducing the effects of export market barriers on distribution efficiency and price competitiveness, providing partial support of H₆. Notably, the results suggest that export market e-commerce infrastructure plays a far greater role as a moderator than as a direct antecedent of export venture marketing strategy.

Effects of Demand for E-Commerce. The results of the MRA in Table 2 show that demand for e-commerce has a positive, direct impact on three of the six export marketing strategy dimensions: communication efficiency, distribution efficiency, and price competitiveness. Thus, the results provide partial support for H₇. Furthermore, demand for e-commerce enhances the effects of management commitment to e-commerce on both communication and distribution efficiency. Consistent with all other e-commerce drivers, demand for e-commerce also enhances the effects of product uniqueness on promotion adaptation. Finally, demand for e-commerce interacts with export market infrastructure to enhance a firm's price competitiveness. These findings suggest that demand for e-commerce has a moderating effect on

three key areas of export venture marketing strategy: price competitiveness, communication, and distribution efficiency; this provides partial support for H₈.

DISCUSSION

The emergence of e-commerce technologies has fundamentally altered the business models that many firms have followed for achieving success, and globalization has had a similar impact on firms' business operations and performance. How do e-commerce technologies influence firms' export marketing strategies? How should e-commerce be incorporated into export marketing? What is the proper theoretical framework to integrate e-commerce drivers into export marketing strategy? The lack of integration of the e-commerce research and export marketing research has rendered these questions unanswered in the existing literature.

A key goal of our research is to integrate e-commerce into existing exporting theory by examining the role of e-commerce drivers in the environmental drivers–export marketing strategy relationship. Building on industrial organization and RBV theories, as well as the extant e-commerce research, we developed a theoretical model that treats e-commerce drivers both as direct antecedents of export marketing strategy and as moderators of the relationship between traditional environmental drivers and export marketing strategy. Based on a survey of 340 export ventures in Australia, our empirical findings provide (partial) evidence that both internal and external e-commerce drivers enhance the coalignment between traditional environmental forces and selected export marketing strategy dimensions. The overall findings lend general support to the prediction that e-commerce is a direct antecedent of export marketing strategies and is an important moderating factor of the environmental drivers–export marketing strategy relationship.

These findings are significant in that they enhance the understanding of how e-commerce influences a firm's export marketing. Specifically, these findings shed light on the way that e-commerce can be incorporated into export marketing. Indeed, e-commerce drivers need to be incorporated into firms' export marketing strategy formulation (as direct antecedents) and into their export marketing strategy implementation (as a moderator or an enabler). Next, we highlight the important findings of our research and discuss their implications for theory development and practical application.

Our findings indicate that the internal e-commerce drivers (a firm's product online transferability and e-commerce assets) and external driver (demand for e-commerce) appear to have a significant, direct impact on selected export strategy dimensions. Specifically, a firm's ability to transfer products/

services electronically is positively linked to its promotion adaptation strategy and support of exporting distribution. Presumably, ITs provide a relatively inexpensive way to gather, disseminate, and customize promotional messages directly to individual customers. Exporting firms that electronically transfer elements of their product likely find promotional adaptation on the Internet more cost effective. Increased digitizability of the product/service offerings also has a strong, positive effect on communication efficiencies, distribution efficiencies, and distribution support. It is conceivable that the Internet enhances the exchange of information between business partners (Ratnasingham 1998; Teich, Wallenius, and Wallenius 1999), leading to greater efficiency in their communication and distribution activities and to stronger support of the distributors. In summary, these findings support the contention that product intangibility leads directly to greater efficiencies in distributing and supporting digitizable products (Varadarajan and Yadav 2002).

The research findings also show that the more a firm's e-commerce assets are developed, the greater are its degrees of promotion adaptation, communication efficiency, distribution efficiency, distribution support, and price competitiveness. Through deployment of e-commerce assets, exporters may become knowledgeable about customer motivations, local distribution channels, and competitors' activities. The enhanced knowledge then permits exporters to seek a high degree of promotion adaptation, attain efficiency in communication and distribution, offer proper support to distributors, and make smart and competitive pricing decisions. These findings are consistent with the view that resources, such as IT infrastructure, are vital factors in successful exporting using the Internet (Samiee 1998). Overall, the effects of internal e-commerce drivers on export marketing strategy are consistent with research findings that internal firm-based factors are far more influential on the use of e-commerce in marketing strategy than are external environmental forces (Tiessen, Wright, and Turner 2001).

In contrast to internal e-commerce drivers, external e-commerce drivers are significant only in selective dimensions of export marketing strategy. Our findings indicate that demand for e-commerce in the export market directly leads to greater communication and distribution efficiencies for export ventures. Consistent with recent research, meeting client demand serves as an important motivator for firms to fulfill their obligations in Internet-based marketing (Damanpour 2001). Demand for e-commerce implementation also forces exporting firms to become more price competitive. The general view here is that demand for online pricing increases industry-level pricing pressures (price trans-

parency) and reduces search costs, resulting in greater price competition between sellers (Varadarajan and Yadav 2002).

In addition to the direct effects of e-commerce drivers on export marketing strategy, several moderating effects are found to be significant in the traditional internal environmental drivers–export strategy relationship. The relationship between e-commerce export experience and export marketing strategy is moderated by three of the four e-commerce drivers: product online transferability, e-commerce assets, and export market e-commerce infrastructure. The impact of e-commerce export experience on communication efficiency is significantly enhanced when exporting firms have a high degree of product online transferability. This suggests that for highly digital and digitizable products, firms are better able to leverage the potential of the Internet to provide information and after-sales support to prospective buyers (Varadarajan and Yadav 2002). Exporters with more e-commerce experience may also be more confident in the process of product adaptation when they have support from e-commerce assets (internal e-commerce infrastructure and human resources) and may be able to use their experience more effectively in adapting products.

Our findings indicate that as export market e-commerce infrastructure becomes more developed, exporters make use of their experience in e-commerce to improve distribution efficiency. Leveraging available e-commerce infrastructure in export markets further enhances transaction efficiency, reduces distribution costs, simplifies transactions, and increases scale economies (Amit and Zott 2001). Our findings also show that when e-commerce infrastructure is highly developed, exporters rely on experience in e-commerce to become more price competitive.

The most pronounced moderating effects of e-commerce drivers occur in the examination of the linkage between management commitment and export marketing strategy. Our findings show that e-commerce assets moderate the management commitment–export strategy relationship in four of the six strategy dimensions: communication and distribution efficiency, distribution support, and price competitiveness. Management commitment is one of the most important factors (if not *the* most important) when integrating the Internet effectively with the strategic marketing plan (Eid, Trueman, and Ahmed 2002). In addition to e-commerce assets, both external e-commerce drivers (i.e., export market e-commerce infrastructure and demand for e-commerce) moderate management commitment to the e-commerce–communications efficiency relationship. Greater management commitment to e-commerce implies an appropriate assessment of foreign market IT infrastructure and a better

understanding of what can facilitate communication efficiency. In addition, commitment to invest in e-commerce provides managers with the ability to select appropriate e-commerce tools available in the export market e-commerce infrastructure—tools that are required for greater communication efficiency. Demand for e-commerce by suppliers/buyers also serves as an impetus in this relationship.

The findings in this study confirm that all four e-commerce drivers moderate the relationship between product uniqueness and promotion adaptation. When the export product is unique, management tends to concentrate on customizing promotions to fit foreign buyers' needs. This process is more efficient in the case when a unique product is transferable online, when the exporter possesses significant e-commerce assets, when the export market has well-developed e-commerce infrastructure, or when export customers demand e-commerce programs. E-commerce drivers clearly enable the exporter to adapt its promotional strategy more easily to fit foreign customers' needs.

Our findings contribute to the body of knowledge in several important areas. First, the theoretical framework we developed represents a significant extension of the existing theories of export marketing. In particular, our framework has successfully incorporated e-commerce drivers into existing export marketing theories, both as new antecedents and as moderating factors. As a result, we now have a broadened theory of drivers of export marketing strategy. Second, for the first time, several new and distinctive constructs related to e-commerce drivers and export marketing have been conceptualized, and their preliminary measures have been developed. These new constructs complement and extend the existing knowledge of export marketing (for a review, see Zou and Stan 1998). Indeed, this research extends the export literature by showing that firms' e-commerce internal and external drivers are important moderators in the environmental forces–export venture marketing strategy relationship.

Third, this research offers an integrated theoretical foundation for combining e-commerce and export marketing studies, which have been two separate streams of literature until now. Given the widely accepted role of export marketing strategy in determining a firm's export performance (Cavusgil and Zou 1994; Katsikeas, Piercy, and Ioannidis 1995; Zou and Stan 1998), it is possible that e-commerce drivers affect export performance through their direct and moderating effects of export marketing strategy. Thus, this study contributes to the literature by explicating the way that e-commerce affects a firm's export performance for the first time. Fourth, this study extends the existing conceptualization of export marketing

Theoretical Contributions and Managerial Implications

strategy by including additional dimensions and by adding new antecedents to it. For example, the findings imply that it might be beneficial to add communication efficiency and distribution efficiency as new dimensions of export marketing strategy in the e-commerce context.

The findings of this study are also of significance to executives who are responsible for their firms' export marketing operations. By demonstrating how the linkage between environmental forces and export marketing strategy is strengthened by e-commerce, this study accentuates the point that e-commerce is a business imperative that applies to firms' export operations. Export managers need to secure senior management's commitment and initiatives to devote necessary resources in terms of both technology (e.g., a firm's e-commerce infrastructure) and technology management skills (e.g., human resources) to use e-commerce effectively for internal and external marketing activities and for processes relevant to the firm's export market.

Export managers can be expected to be more successful in achieving a sustainable competitive advantage if the integration of e-commerce into export marketing activities is carried out in a customized way to achieve or strengthen a distinctive strategic position in the export markets. With e-commerce integrated into export marketing strategy, a firm is able to shorten the time of product introduction, presentation, and, in some cases, distribution directly to customers. Because exporters cannot influence or shape external e-commerce drivers, management must carefully consider which markets are appropriate to use e-commerce and then allocate resources accordingly. The level of the development of export market e-commerce infrastructure and the demand for e-commerce appear to be significant drivers that must be taken into consideration when market entry strategy is created. Finally, because e-commerce drivers have both direct and moderating effects on export marketing strategy, managers are advised to integrate e-commerce into both strategy formulation and strategy implementation processes. When formulating export marketing strategy, managers should carefully examine their firms' e-commerce assets and product transferability, as well as customers' demand for e-commerce and export markets' e-commerce infrastructure, to make sure that their strategy fits these e-commerce drivers. Proper investment in e-commerce assets and in making products/services more digitized should facilitate the coalignment of export marketing strategy and environmental drivers in the implementation stage.

Limitations and Directions for Further Research

Although this study makes important contributions to the literature, it is not without limitations, but these limitations can offer directions for further research. Because the pro-

posed model encompasses a large number of relationships, there is a trade-off between breadth and depth. We resolved this issue by testing a set of broad research hypotheses. Thus, sophisticated modeling techniques could not be applied. Given this limitation, further research should explore the possibility of operationalizing our broad framework into more specific and managerial models and testing them with sophisticated modeling approaches. Another limitation of our study is the single-country context in which we obtained the data. Further research is needed to validate and generalize the findings across different country settings.

The cross-sectional research approach we applied does not allow us to make clear, causal attributions for the observed relationships. Further research should endeavor to employ a longitudinal study that would provide a clearer picture of how e-commerce influences export marketing strategy in a clear, causal linkage. Finally, although Internet surveys offer enormous potential for researchers, it is necessary to try to find ways to improve response rates and validate the value of online surveys.

Construct	α	Items
E-Commerce Drivers		
Product online transferability	.96	Degree of potential product transferability
		Degree of actual product transferability
E-commerce assets	.77	E-commerce team in export marketing department
		Services to support e-commerce export
		Budget for e-commerce export
E-commerce infrastructure	.75	People in charge for e-commerce export
		Internet usage in export market
		Sophistication of e-commerce infrastructure in export market
		Degree of access to Internet networks
Demand for e-commerce	.89	E-commerce competition intensity in export market
		Suppliers demand for e-commerce
		Customer demand for e-commerce
Internal/External Drivers	.70	Distributors demand for e-commerce
		Degree of firm's e-commerce exporting experience
		Number of years using e-commerce
Export experience	.81	Export sales revenue in last financial year
		Degree of firm's exporting experience
Product uniqueness	N.A.	Degree of product uniqueness
Management commitment to e-commerce	.76	Planning for e-commerce entry to export market
		Management commitment to invest in e-commerce in exporting

Appendix. Measures of Constructs

Appendix.
Continued

Construct	α	Items
Management commitment to exporting	.80	Extent of entry planning for market venture Extent of management commitment to exporting
Technology orientation	N.A.	Degree of technology orientation of industry
Export market competitiveness	.76	Competitive intensity Degree of competition with integrated channels Degree of price driven competition
Export market infrastructure	N.A.	Sophistication of marketing infrastructure
Entry barriers	N.A.	Extent of legal/regulatory barriers
Export Marketing Strategy		
Product adaptation	.53	Product adaptation Product adaptation on Web site Support to product
Promotion adaptation	.57	Communication adaptation Web site in local language Adaptation of promotional approach Degree of promotion on Internet
Distribution support	.83	Training of foreign distributor Training of sales forces Overall support to foreign distributor Online technical support of foreign distributors
Price competitiveness	.57	Quotes and tenders online Price negotiations online Price differentials
Communication efficiency	.75	Online communication efficiency Information intensity Online after-sales support Market research efficiency
Distribution efficiency	.60	Online logistic support Distribution channels reduction

Notes: N.A. = not applicable.

REFERENCES

- Aaby, N.E. and S.F. Slater (1989), "Management Influences on Export Performance: A Review of the Empirical Literature 1978-88," *International Marketing Review*, 6 (4), 7-26.
- Aiken, L.S. and S.G. West (1991), *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park, CA: Sage Publications.
- Amit, R. and C. Zott (2001), "Value Creation in E-Business," *Strategic Management Journal*, 22 (6-7), 493-520.
- Barrett, H., J.L. Balloun, and A. Weinsten (2000), "Marketing Mix Factors as Moderators of the Corporate Entrepreneurship-Business Performance Relationship: A Multistage, Multivariate Analysis," *Journal of Marketing Theory and Practice*, 8 (2), 50-62.

- Bennett, R. (1997), "Export Marketing and the Internet: Experiences of Web Site Use and Perceptions of Export Barriers Among UK Businesses," *International Marketing Review*, 14 (5), 324–44.
- Berry, M. and J. Brock (2004), "Marketspace and the Internationalisation Process of the Small Firm," *Journal of International Entrepreneurship*, 2 (3), 187–216.
- Cavusgil, S. Tamer and Shaoming Zou (1994), "Marketing Strategy–Performance Relationship: An Investigation of the Empirical Link in Export Market Ventures," *Journal of Marketing*, 58 (January), 1–21.
- , ———, and G.M. Naidu (1993), "Product and Promotion Adaptation in Export Ventures: An Empirical Investigation," *Journal of International Business Studies*, 24 (4), 479–506.
- Christensen, C., A. da Rocha, and R. Gertner (1987), "An Empirical Investigation of the Factors Influencing Exporting Success of Brazilian Firms," *Journal of International Business Studies*, 18 (3), 61–77.
- Crick, D. (1995), "An Investigation into the Targeting of U.K. Export Assistance," *European Journal of Marketing*, 29 (8), 76–94.
- Damanpour, F. (2001), "E-Business E-Commerce Evolution: Perspective and Strategy," *Managerial Finance*, 27 (7), 17–33.
- Deligonul, Z. Seyda and S. Tamer Cavusgil (1997), "Does the Comparative Advantage Theory of Competition Really Replace the Neoclassic Theory of Perfect Competition?" *Journal of Marketing*, 61 (October), 65–73.
- Eid, R., M. Trueman, and A.M. Ahmed (2002), "A Cross-Industry Review of B2B Critical Success Factors," *Internet Research: Electronic Networking Applications and Policy*, 12 (2), 110–23.
- Etemad, Hamid and Richard W. Wright (1999), "Internationalization of SMEs: Management Responses to a Changing Environment," *Journal of International Marketing*, 7 (4), 4–10.
- Grant, R.W. (1991), "The Resource-Based Theory of Competitive Advantage: Implications for Strategy Implementation," *California Management Review*, 33 (3), 114–35.
- Hair, J.F., R.E. Anderson, R.L. Tatham, and W.C. Black (1998), *Multivariate Data Analysis*, 5th ed. Englewood Cliffs, NJ: Prentice Hall.
- Hamill, J. (1997), "The Internet and International Marketing," *International Marketing Review*, 14 (5), 300–323.
- Haubl, G. and V. Trifts (2000), "Consumer Decision Making in Online Shopping Environments: The Effects of Interactive Decision Aids," *Marketing Science*, 19 (1), 4–21.
- Hoffman, Donna L. and Thomas P. Novak (1996), "Marketing and Hypermedia Computer-Mediated Environments: Conceptual Foundations," *Journal of Marketing*, 60 (July), 55–68.
- Holzmuller, Hartmut H. and Barbara Stottinger (1996), "Structural Modeling of Success Factors in Exporting: Cross-Validation and Further Development of an Export Performance Model," *Journal of International Marketing*, 4 (2), 29–55.

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- Javalgi, R. and R. Ramsey (2001), "Strategic Issues of E-Commerce as an Alternative Global Distribution System," *International Marketing Review*, 18 (4), 376–91.
- Jennex, M., D. Amoroso, and O. Adalakun (2004), "E-Commerce Infrastructure Success Factors for Small Companies in Developing Economies," *Electronic Commerce Research*, 4 (3), 263–86.
- Karavdic, M. and G. Gregory (2005), "Integrating E-Commerce into Existing Export Marketing Theories: A Contingency Model," *Marketing Theory*, 5 (1), 75–104.
- Katsikeas, C.S., N.F. Piercy, and C. Ioannidis (1995), "Determinants of Export Performance in a European Context," *European Journal of Marketing*, 30 (6), 6–35.
- Kiang, M., T. Raghu, and K. Shang (2000), "Marketing on the Internet: Who Can Benefit from an Online Marketing Approach?" *Decision Support Systems*, 27 (4), 383–93.
- Kumar, N., L.W. Stern, and J.C. Anderson (1993), "Conducting Inter-Organizational Research Using Key Informants," *Academy of Management Journal*, 24 (2), 201–233.
- Lancioni, R.A., M.E. Smith, and T.A. Oliva (2000), "The Role of the Internet in Supply Chain Management," *Industrial Marketing Management*, 29 (1), 45–56.
- Leonidou, Leonidas C., Constantine S. Katsikeas, and Nigel F. Piercy (1998), "Identifying Managerial Influences on Exporting: Past Research and Future Directions," *Journal of International Marketing*, 6 (2), 74–102.
- Lim, J.-S., T.W. Sharkey, and K.I. Kim (1996), "Competitive Environmental Scanning and Export Involvement: An Initial Inquiry," *International Marketing Review*, 13 (1), 65–80.
- Louter, P.J., C. Ouwerkerk, and B.A. Bakker (1991), "An Inquiry into Successful Exporting," *European Journal of Marketing*, 25 (6), 7–23.
- Mahadevan, B. (2000), "Business Models for Internet-Based E-Commerce: An Anatomy," *California Management Review*, 42 (4), 55–69.
- Mason, Charlotte and William D. Perreault (1991), "Collinearity, Power, and Interpretation of Multiple Regression Analysis," *Journal of Marketing Research*, 28 (August), 268–80.
- Moen, O. (2002), "The Born Globals: A New Generation of Small European Exporters," *International Marketing Review*, 19 (2), 156–75.
- Morgan, Neil A., Anna Kaleka, and Constantine S. Katsikeas (2004), "Antecedents of Export Venture Performance: A Theoretical Model and Empirical Assessment," *Journal of Marketing*, 68 (January), 90–108.
- Murray, Y.J., M. Kotobe, and R.A. Wildt (1995), "Strategic and Financial Performance Implications of Global Sourcing Strategy: A Contingency Analysis," *Journal of International Business Studies*, 26 (1), 181–202.
- Nunnally, J.C. (1978), *Psychometric Theory*, 2d ed. New York: McGraw-Hill.

- Overby, J.W. and S. Min (2001), "International Supply Chain Management in an Internet Environment," *Industrial Marketing Review*, 18 (4), 392–420.
- Oxley, J.E. and B.Y. Yeung (2001), "E-Commerce Readiness: Institutional Environment and International Competitiveness," *Journal of International Business Studies*, 32 (4), 705–724.
- Prasad, V.K., K. Ramamurthy, and G.M. Naidu (2001), "The Influence of Internet-Marketing Integration on Marketing Competencies and Export Performance," *Journal of International Marketing*, 9 (4), 82–110.
- Rasheed, S.H. and W.S. Geiger (2001), "Determinants of Governance Structure for the Electronic Value Chain: Resource Dependency and Transaction Cost Perspective," *Journal of Business Strategies*, 18 (2), 159–76.
- Ratnasingham, P. (1998), "The Impact of Trust in Electronic Commerce," *Internet Research: Electronic Networking Applications and Policy*, 8 (4), 313–21.
- Samiee, S. (1998), "Exporting and the Internet: A Conceptual Perspective," *International Marketing Review*, 15 (5), 413–26.
- Simsek, Z. and F.J. Veiga (2000), "The Electronic Survey Technique: An Integration and Assessment," *Organizational Research Methods*, 3 (1), 92–114.
- Souchon, A. and A. Diamantopolous (1996), "A Conceptual Framework of Export Marketing Information Use: Key Issues and Research Propositions," *Journal of International Marketing*, 4 (3), 49–71.
- Teich, J., H. Wallenius, and J. Wallenius (1999), "World-Wide-Web Technology on Support of Negotiation and Communication," *International Journal of Technology Management*, 17 (1–2), 223–39.
- Tiessen, H.J., W.R. Wright, and I. Turner (2001), "A Model of E-Commerce Use by Internationalizing SMEs," *Journal of International Management*, 7 (3), 211–33.
- Tsang, E. (2000), "Transaction Cost and Resource-Based Explanations of Joint Ventures: A Comparison and Synthesis," *Organization Studies*, 21 (1), 215–42.
- Turban, E., E. McLean, and J. Wetherbe (2002), *IT for Management*, 3d ed. New York: John Wiley & Sons.
- Varadarajan, R.P. and M.S. Yadav (2002), "Marketing Strategy and the Internet: An Organizing Framework," *Journal of the Academy of Marketing Science*, 30 (4), 296–312.
- Venkatraman, N. and J.E. Prescott (1990), "Environment-Strategy Coalignment: An Empirical Test of Its Performance Implications," *Strategic Management Journal*, 2 (1), 1–23.
- Wernerfelt, B. (1984), "A Resource-Based View of the Firm," *Strategic Management Journal*, 5 (2), 171–80.
- Zou, S. and S. Stan (1998), "The Determinants of Export Performance: A Review of the Empirical Literature Between 1987 and 1997," *International Marketing Review*, 15 (5), 333–56.