The Use of e-Commerce Site for Partner Search

Ge Zhan and Ada Hiu Kan Wong

Abstract—**The internationalization process of firms have received much scholarly attention in the literature. In particular, foreign market entry decisions, which pertain to market selection and modes of control, have been well studied in the international business domain. However, relatively little is known about the means by which the managers search for, and come to identify, exchange partners in foreign markets. The identification of specific partners is crucial to foreign market entry. Without a foreign customer, distributor, or agent, no exchange can take place. Hence, the study examines how firms search for foreign exchange partners. Specifically, we will investigate the factors that influence the use of e-commerce site for partner search.**

Index Terms— **E-commerce site, internationalization process, internet, partner search.**

I. INTRODUCTION

The internationalization process of the firm is the cumulative result of managerial decisions leading to foreign market entry. Foreign market entry decisions, which pertain to market selection and modes of control, have been well studied in the international business domain. However, relatively little is known about the means by which managers search for, and come to identify, exchange partners in foreign markets. The identification of specific partners is crucial to foreign market entry for without a foreign customer, distributor, or agent, no exchange can take place.

Partner identification often results from managerial search. In extant research, the search for international exchange partners had received little direct attention. Scholars have generally focused on the search for, and evaluation of, markets perhaps assuming that partner search is of secondary importance. No such assumption is made in this study. While information about foreign markets can be collected from publicly available sources, suitable exchange partners are relatively more difficult to identify. Although a number of search alternatives have been identified in the literature, virtually no evidence has been collected explicitly examining actual search practices or the trade-offs inherent to different methods of partner identification. In view of this knowledge gap, this study aims to investigate the factors that influence the use of e-commerce site for partner search.

II. HYPOTHESES

Compared with other communication methods such as post,

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telephone and fax, the internet provides a flexible, low-cost method of communication, especially with distant markets [1]. The internet was rated as a useful means of disseminating company information and conducting sales promotion by 60 per cent of the SMEs surveyed by [2], and 17 per cent of them used internet to capture customer data. Of the 148 UK exporters with their own websites studied by [3], just 8 per cent advertised on the Web. Among the 70 Ghana exporters surveyed by [4], 43 were internet users. Of this group 34 percent used the internet for publicity/promotion while 23 percent used it for foreign partner search.

Novice and light exporters face considerable obstacles when searching for potential exchange partners in foreign markets. Typically they lack network connections to foreign markets [5], the skills required to conduct formal search. They may also lack the resources required to exhibit at trade fairs. Their all-round lack of experience may make them vulnerable to failure and risk-averse [6], [7]. This, in turn, will prompt them to adopt low-cost, low risk search methods such as online search by using e-commerce website. In the modern world, online search is arguably the least costly method of partner search owing to the efficiency of internet advertising [1], [2], [8]. This suggests that e-commerce site will be preferred by inexperienced managers. Thus:

H1: The use of e-commerce site for partner search will be inversely correlated with managerial experience.

H2: The use of e-commerce site for partner search will be inversely correlated with export intensity.

III. METHODOLOGY

In this study primary data were collected from 225 textile manufacturers located in China. China offers a number of unique advantages for a study of this nature. The Chinese government has been actively promoting exports since the initiation of economic reforms in 1978. The programs and organizations designed to promote export include trade fairs, exhibitions, trade missions, overseas offices representing foreign trade organizations and embassies in foreign markets etc. [9]. In recent years, China has been remarkably successful in boosting trade fairs and exhibitor groups. China's exports grew at an annual average pace of 20.5 percent from 2000 to 2008, propelling China into the number two ranked exporting nation in the world [10]. Given this rapid rise, it is surprising to learn that the export practices of individual Chinese firms have been somewhat neglected in the international business literature.

Measurement

Wherever possible, measurement was based on previous sources. The use of e-commerce site was measured by asking interviewees "how did you first identify your customer in this

foreign market" and then coding their answers into one of the ten search options used in [11]. Since this study focused on the search methods that actually led to the formation of exchange agreements with new customers in new foreign markets, searches that did not lead to the identification of exchange partners were not considered.

TABLE I: CORRELATION MATRIX

		1	2	3	4	5	6	7	8	9	10
1	Use of E-commerce site	1.00									
2	Managerial experience	-0.15	1.00								
3	Export intensity	-0.21	0.12	1.00							
4	Firm size	0.07	0.02	-0.06	1.00						
5	Firm age	0.03	0.22	-0.01	0.58	1.00					
6	Ownership	0.04	0.12	-0.06	0.26	0.44	1.00				
7	Product type	0.03	0.06	0.20	-0.13	-0.02	0.05	1.00			
8	International experience	0.05	0.05	0.04	0.31	0.54	0.33	-0.10	1.00		
9	Education	-0.02	-0.09	0.07	0.15	0.12	0.16	-0.04	0.16	1.00	
10	GDP per capita	-0.07	0.11	0.14	0.02	0.05	0.07	0.17	-0.01	0.01	1.00
11	GDP growth	0.16	-0.10	-0.02	0.00	0.01	-0.07	-0.09	0.08	0.03	-0.29

Managerial experience captures the extent to which managers have been involved in exporting. Respondents were asked to indicate the time in years that they have been personally engaged in selling to markets outside mainland China. Longer exposure to exporting was presumed to indicate greater managerial experience.

Export intensity is the proportion of direct exports to total sales. Firms' international experience may influence their partner search methods. To control for this possibility, international experience was measured as the time, in years, separating the FME venture from the firm's first export venture [12]. Consequently, a firm's first FME would be scored as zero, indicating no prior international experience. Conversely, a foreign market first entered 10 years after the firm had begun exporting (to other markets) would be scored as 10. Managers' search methods may also be affected by their level of education. Thus managerial education was assessed using a five point scale adapted from [13] and [14] with anchor points ranging from 1 = primary/elementary to 5 = post-graduate.

Product type was assessed by categorizing textile products into two categories: textile materials (coded as 0) and finished products (coded as 1). Appendix 4 contains a full list of the materials and finished goods observed in this study. The list was adapted from [15, p. 455] with reference to the product classification system used in Customs Statistics.

Since large and well established firms may be better resourced in terms of financial assets, social connections and reputation, firm size and firm age were controlled. Firm size was measured by the number of full time workers currently employed, as the sample was drawn from textile industry which is relatively labor-intensive. Firm age was calculated as 2009 minus the founding year.

China's economic transition has given rise to disparities in economic performance and information access across ownership types and regions [16], [17]. State-owned firms located in coastal provinces may be better placed in terms of access to foreign connections than private firms located in interior provinces. To control for the effects of ownership, a dummy variable was used to reflect state-owned and collectively-owned firms (coded as 1) and privately-owned firms (coded as 0).

The economic environment in foreign markets may have a strong impact on venture performance, so both GDP per capita and GDP growth were included. GDP per capita was measured in US dollars in the year 2008. GDP growth was measured as the percentage increase or decrease in GDP over 2008 at constant 1990 prices. The economic data were from International Country Risk Guide [18].

IV. RESULTS

TABLE II: LOGISTIC REGRESSION MODELS

	Model 1	Model 2
Constant	-1.44 (0.75)	-0.41 (0.90)
Firm size (ln)	0.18* (0.80)	0.19* (0.09)
Firm age (ln)	-0.26 (0.24)	-0.14 (0.26)
Ownership	0.38 (0.46)	0.32 (0.51)
Product type	0.34 (0.27)	0.57* (0.28)
International experience (ln)	0.15 (0.16)	0.21 (0.18)
Managerial education	-0.18 (0.17)	-0.17 (0.19)
GDP per capita	-0.00 (0.01)	0.00 (0.01)
GDP growth	0.11** (0.04)	0.11** (0.03)
Managerial experience		-0.12* (0.05)
Export intensity		-0.02*** (0.00)
Log pseudo likelihood	-218.46	-198.44
Pseudo R^2	0.04	0.12
Wald chi^2	16.20*	40.77***
N	525	520

Notes: Robust standard errors are in parentheses.
* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Table I presents descriptive statistics and correlations for all the variables examined in this study. The hypothesized relationships linking search antecedents with specific search methods were tested using logistic regression. Robust standard errors were used for the determination of p values

and to inform judgments about statistical significance. The use of e-commerce site was dummy coded: search via e-commerce site (coded 1) vs. other search methods (coded 0).

The results of the logistic regression are reported in two models (see Table II). In each case, the first model includes only the control variables. The second model includes both the control variables along with the hypothesized independent variables. Hypothesis 1 and 2 predicts that managerial experience and export intensity will be negatively related to the use of e-commerce site. The results of this test, which are reported in Model 2 of Table II, reveal a negative and statistically significant relationship as predicted. Thus, both Hypothesis 1 and 2 are supported.

V. Discussion and Conclusions

The hypotheses were tested using logistic regression. As the coefficient (β) in logit models cannot be interpreted directly, additional procedures were needed to facilitate the interpretion of the effects being estimated. It has been suggested in the strategic management literature that the results of logit models should be evaluated using a relevant effect size metric such as an odds ratio or the difference in probability, ideally with graphical interpretations [19], [20]. The odds ratio describes the relative likelihood of an event occurring for one group as opposed to the odds of it occuring for another. The odds ratio was used in this study to facilitate the interpretation of effects involving dummy predictor variables (e.g., product type). The effects of continuous predictor variables (e.g., political risk) were interpreted in terms of the difference in probability.

Odds ratios can be calculated as e^b and the percentage change in odds can be obtained using the following equation [21], [22]:

$$\%\Delta = (e^b - 1) * 100$$

where e^b is the exponentiated coefficient (also known as the antilog of the logit coefficient), and $\%\Delta$ indicates the percentage change in the outcome attributable to a one-unit change in the predictor variable.

The probability of using a particular search type can be estimated using the following equation [21]-[23]:

$$P = 1 / (1+\exp[-(\alpha + \beta_i X_i)])$$

where P is the probability of having 1 (the use of a particular search method), α is the intercept, β_i represents the coefficients of the variables in the logit regression, and X_i indicates the variables of the logit regression. As the values of α and β_i are provided in logistic regression models, P is a function of an individual predictor (e.g., [24]-[26]). The difference in probability can then be calculated by giving a range of meaningful values to the predictor with other variables set at their means.

Export intensity and managerial experience was found to influence the use of e-commerce site. The odds ratio of the effect of export intensity on the use of e-commerce site is

0.98. The implication is that light exporters are about 50% (or 0.98/1+0.98) more likely to rely on e-commerce site. The odds ratio of the effect of managerial experience on the use of e-commerce site is 0.89. This means that inexperienced managers are 47% (or 0.89/1.89) more likely to use e-commerce site for search than experienced ones.

Inexperienced managers in this study exhibited a preference for e-commerce site. The implication may be that online search is preferable at the early stages of internationalization, and that as managers acquire experience they ought to be more proactive in pursuing tie-based and fair-based searches. These types of search offer more advantages than online search in terms of learning opportunities about exchange partners and business practice.

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