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Perception of Export Barriers in a High-Tech Sector in a Less Developed Country: The Case of ICT SMEs in Malaysia

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This paper investigates which export barriers are most pressing to small and medium sized enterprises (SME) in a high-tech sector in a developing-country. It also examines whether exporters and non-exporters perceive different export barriers as being more pressing to their export development/initiation. The unit of analysis is SMEs in Malaysia's information and communications technology (ICT) sector. The findings suggest that the high cost of exporting is the most severe problem facing firms in the sample, with cultural differences posing the least important obstacle. Furthermore, with just two exceptions, there are no statistically significant differences in the perceptions of export barriers between exporting and non-exporting firms.

Keywords: *Export barriers, developing country, ICT, SME*

Introduction

This paper investigates the obstacles to exporting facing Small Medium Enterprises in a high-tech industry in a less developed country (LDC). Moreover, it analyzes the main differences between exporting and non-exporting firms with regards to their perceptions of export barriers. The unit of analysis is SMEs in Malaysia's information and communications technologies (ICT) industry. This study's main contributions are based on the following three limitations of the extant literature.

First, studies investigating export barriers have tended to focus on problems faced by firms from developed countries (Bell, 1997; Leonidou, 2004; Tesfom and Lutz, 2006; Shaw and Darroch, 2004; Karelakis et al., 2008), which undermines the generalizability of previous findings (Lee and Griffith, 2004; Tesfom and Lutz, 2006; Karelakis et al., 2008). This study responds to calls by various authors for more research on export barriers facing firms in LDCs (Das, 1994; Leonidou, 2004; Tesfom and Lutz, 2006; Smith et al., 2006). Considering their increasingly central role in international export activity, it is particularly important to pay attention to rapidly developing countries in Asia (Sim, 2005; Smith et al., 2006).

Second, existing studies have focused, in the main, on manufactured goods, rather than other trade sectors (Bell, 1997; Crick and Chaudhry, 2000; Karelakis et al., 2008),

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with firms in high-tech sectors, such as ICT, largely peripheral in the literature. In view of the ICT industry's rapid and continued growth and fierce global competitiveness in recent years (Saarenketo et al., 2004; Gabrielsson et al., 2006), and where the pressure on firms to internationalize is particularly intense (Blomqvist et al., 2008; Saarenketo et al., 2004), it is imperative that researchers examine this sector more closely.

Third, previous research has virtually neglected to investigate strategic determinants of export failure, focusing instead on factors conducive to superior export performance (Leonidou et al., 2002), which makes it crucial to study in greater detail the factors restricting the initiation of export activities by non-exporting firms. Few studies focusing on the preinternationalization behavior of firms have been undertaken (Tan et al., 2007). By comparing the perceptions of export problems between exporting and non-exporting firms, this paper contributes to this strand of literature, and also allows for greater understanding of the nature of export barriers.

Thus, this study seeks to address these notable weaknesses in the literature by providing vital insights into the nature of export barriers through:

(a) Identifying the key factors that impede export development amongst
  (i) ICT SMEs
  (ii) In a developing country; and
(b) Shedding light on any differences between exporter and non-exporter perceptions of these factors.

Literature Review

Literature on Export Barriers

Export barriers, defined by Leonidou (1995a: 31) as "all those attitudinal, structural, operational, and other constraints that hinder the firm's ability to initiate, develop, or sustain international operations", may be either internal or external to the firm (Suarez-Ortega, 2003). Table 1 shows some of the key barriers inhibiting export performance that have been identified in previous studies.

Export Barriers in Developing Countries

Research on export barriers has focused largely on developed-country firms (Karelakis et al., 2008; Leonidou, 2004). However, the internationalization path of firms from LDCs and newly-industrialized economies often differs from that of their developed-country counterparts (Cuervo-Cazurra, 2007; Lau, 2008), and thus generalizing prior research to LDC exporters may be inappropriate (Aulakh et al., 2000).

Certain export barriers are more pressing to LDC firms than to firms from more developed countries, while other obstacles may even be exclusive to the former. For example, LDC firms often face the problem of negative 'country-of-origin perception' among foreign consumers (Tesfom and Lutz, 2006). Studies consistently indicate that 'country-of-origin' (COO) has a considerable influence on the quality perceptions of a product (Ahmed and d'Astous, 2008; Bilkey and Nes, 1982), particularly for high-tech products (Ahmed et al., 2002; Leonidou et al., 2007), with an apparent consumer bias towards products from more developed countries (Batra et al., 2000; Kaynak et al., 2000). Quite relevant to the present study are the results of Zain and Ng's (2006) recent survey, which suggested that Malaysian software firms frequently encounter a negative country-of-origin perception when they present their product to the Australian market (developing Malaysia as opposed to developed Australia). Thus it is suggested that:

H1a: Negative country-of-origin effects constitute an important export barrier to firms in the study

Table 1. Export barriers identified in previous studies[1]

Type of export barrier	Export barrier	Research paper
Knowledge barriers	Lack of knowledge/experience of exporting	Tesfom and Lutz (2006); Suarez-Ortega (2003); Morgan and Katsikeas (1997); Leonidou (2004)
	Difficulties in locating foreign markets	Bilkey and Tesar (1977); Hook and Czinkota (1988); Suarez-Ortega (Suarez-Ortega, 2003)
Financial barriers	High cost of exporting/lack of funds to finance exports	Bauerschmidt et al. (1985); Weaver and Pak (1990); Bell (1997); Shaw and Darroch (2004); Bell (1995)
	High transportation costs	Gripsrud (1990); Al-Aali (1995); Ramaseshan and Soutar (1996); Suarez-Ortega (2003)
	Difficulty in providing after-sales services to overseas customers	Cheong and Chong (1988); Lall (1991); Leonidou (2004)
	Foreign currency exchange risks	da Silva and da Rocha (2001); Nabil and Veganzones-Varoudakis (2004); Altintas et al. (2007)
Market barriers	Competition in overseas markets	Cheong and Chong (1988); Crick et al. (1998); Tesfom and Lutz (2006); Altintas et al. (2007); da Rocha et al. (2008)
	Trade Barriers	Madsen (1989); Morgan and Katsikeas (1997); Zukauskas (1998); Leonidou (2000); Korneliussen and Blasius (2008)
	Negative country-of-origin perception	Tesfom and Lutz (2006)
	Product specification in foreign markets	Kaleka and Katsikeas (1995); Lall (1991); Leonidou (Leonidou, 2004); Fliess and Kim (2008)
	Strict foreign country rules and regulations	Bilkey (1978); Sharkey et al. (1989); Yamin et al. (2007); Rabino (1980); Porto (2005); Julian and Ahmed (2005)
	Difficulty in promoting brand name abroad	Lall (1991)
	Difficulty in offering foreign customers satisfactory prices	Keng and Jiuan (1989); Tseng and Yu (1991); Altintas et al. (2007)
	Difficulty in offering competitive prices abroad	Leonidou (1995b); Tesfom and Lutz (2006)
Cultural barriers	Different customer habits and attitudes abroad	Leonidou (2004)
	Different business practices abroad	Leonidou (2004); Tesfom et al. (2006)
	Language and communication barriers	Kaynak et al. (1987); Barker and Kaynak (1992); Leonidou (2004)
Barriers to export assistance requirements	Lack of government assistance/incentives	Dicht et al. (1990); da Silva and da Rocha (2001); Tesfom and Lutz (Tesfom and Lutz, 2006)
	Lack of foreign contacts	Keng and Jiuan (1989); Kaynak et al. (1987); Burgess and Oldenboom (1997); Leonidou (2000)

[1]The degree to which each obstacle impedes export activity varies from study to study, thus it is difficult to accurately rank each barrier.

Firms which have already initiated export activities often perceive different obstacles as being more serious to their export development than firms in the pre-export stage (Yaprak, 1985). According to some scholars (Cheong and Chong, 1988; Tesar and Moini, 1998), exporters encounter problems related more to export procedures, different product specifications in foreign markets and competition abroad (post-market entry obstacles), while non-exporters' perceptions are usually associated with future export involvement, such as information needs, foreign contacts, cost of initiating exports and high costs of operating in export markets, etc., (pre-market entry obstacles) which they believe will absorb any possible profits. As problems associated with the promotion of brand-names are usually considered to be a 'post-market-entry' difficulty (Lall, 1991), it is expected that:

H1b: Negative country of origin effects constitute a more serious export impediment to exporting firms than non-exporting firms

Another problem facing LDC exporters concerns product specification in foreign markets. Despite the availability of qualified personnel, LDC firms are often unused to applying stringent quality standards, as domestic consumers may not be sophisticated enough to demand higher quality and performance standards (Correa, 1996). Tesfom and Lutz (2006) argue that quality standards are likely to differ between developed and developing countries, which can also cause difficulties for firms from the latter exporting to the former. With several developed countries accounting for the majority of Malaysia's exports of high-tech products, including ICTs (e.g. the USA, Japan, Singapore) (MATRADE, 2006), product specifications are likely to create severe difficulties for Malaysian exporters. Further, as a 'post-market entry' export barrier, it is suggested that exporters will perceive this obstacle to be more important than non-exporters:

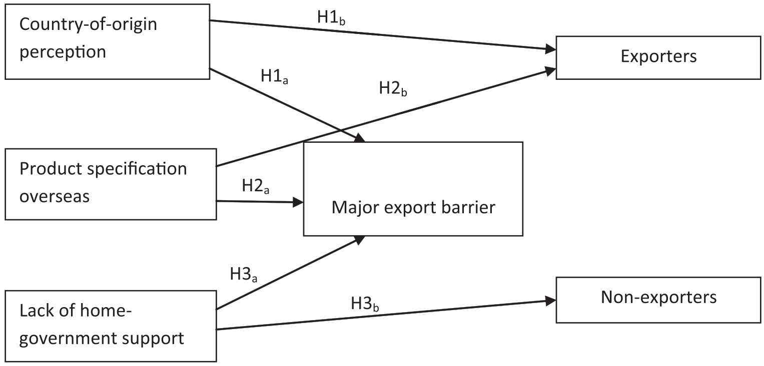
H2a: Product specifications in foreign markets constitute a major barrier to exporting for firms in the study.
H2b: Product specifications in foreign markets constitute a more serious export barrier to exporters than non-exporters.

As Table 1 shows, firms often face difficulties in obtaining government assistance in overcoming export barriers, regardless of the level of economic development in their home country. However, in their study, Kaleka and Katsikeas (1995) revealed that a lack of export promotion and assistance programs sponsored by the government are *particularly* significant to LDC firms. Tesfom and Lutz (2006) argue that exporters from LDCs often suffer because of the inadequacy of government export promotion policies. This includes lack of gathering and provision of information on available export opportunities and ineffective promotion of the country's exports overseas. In India, for example, lack of coordination, clear objectives and vision, and extensive duplication of effort have, in the past, rendered government assistance programs ineffective (Naidu et al., 1997). This inadequacy of government export sales promotion is a serious obstacle for LDC firms as many (potential) exporters lack the required export market knowledge and marketing skills (Tesfom and Lutz, 2006). Moreover, as a 'pre-market entry barrier', it is expected that non-exporters will perceive this obstacle to be more serious than exporters:

H3a: Insufficient/inadequate assistance from the home-government is a major export barrier for firms in the study
H3b: Insufficient/inadequate assistance from the home-government is a more serious export barrier for non-exporters than exporters.

Thus, certain obstacles are more relevant to LDC firms than to their developed country counterparts, and some obstacles may even be exclusive to the LDC firms. However, as most previous studies on this subject have focused on export barriers facing firms from developed countries, in particular those in North America and Europe (Bell, 1997; Crick et al., 1998; Leonidou, 2004; Scharf et al., 2004), with relatively little emphasis being given to export problems of LDC firms (Burgess and Oldenboom, 1997, Karelakis et al., 2008), further investigation is required (Leonidou, 2004; Smith et al., 2006; Tesfom and Lutz, 2006), which is the main contribution of the present study. The hypotheses outlined above are summarized in the following model.

Figure 1. Hypotheses model



Research Method

Within the Malaysian ICT industry, a sample of 140 companies registered on Bank Negara Malaysia's (Central Bank of Malaysia) online directory (*www.smeinfo.com.my*) as being small- or medium-sized ICT firms at the time the research was conducted (May-August 2007) was used in this study. Although the actual number of ICT SMEs in Malaysia is much larger than this, this paper is intended as a pilot study of the issue at hand. Clearly, a deeper investigation is required for any generalizability to be made.

The criteria for defining SMEs in this study are based on the conditions put forward by Bank Negara, namely, either:

1. The number of employees does not exceed 50; or
2. *Annual sales turnover does not exceed RM5 million* (Bank Negara Malaysia, 2007).

A quantitative survey approach, using online questionnaires issued by email, was employed to address the two research questions put forward earlier. It has been shown that email surveys generate better response rates than web-based surveys and they provide greater researcher control over the sample of respondents, avoiding multiple entries to the survey by the same respondent (Ilieva et al., 2002). Moreover, following Ruokonen et al. (2008), we consi-dered that, since the companies involved in the study were operating in the ICT sector, an Internet-based questionnaire would be a suitable tool for data collection.

Where the email address of the company's CEO or executive director was included in the database, the questionnaire was emailed directly to him/her. In the remaining cases, where a more general 'company email address' was provided, the questionnaire was emailed to this address requesting for an employee in a suitable management position to complete the survey, in which case it was difficult to confirm if the appropriate member of staff was responding. Following a poor initial response rate, follow-up telephone calls were made by the researcher to the non-responding companies with a personal request for a response from a staff member in an appropriate management position. This significantly improved the response rate.

In the questionnaire, the respondents were asked to indicate whether their company was an exporter or a non-exporter. The nineteen barriers to exporting highlighted in Table 1 were included in the questionnaire, with some minor modifications to the wording, with the respondents asked to indicate the degree to which each factor impeded export development, on a 5-point Likert scale. Finally, the respondents were asked to indicate any barrier not mentioned in the questionnaire which they felt was relevant to the research.

In this analysis, the criterion variable is the degree of importance attached to the nineteen export problems included in the study. The dependent variables are the participant firms.

Result and Discussion

Of the 140 ICT SMEs listed on Bank Negara's online directory at the time the research was conducted, 36 responded to the survey – a response rate of around 26 percent. Twenty-eight of the responding units described themselves as non-exporters, while eight indicated that they are currently engaged in export activity. The remaining companies not participating in the survey were either reluctant to respond, or could not be contacted because the contact details provided were incorrect or the organization had gone out of business.

Export Barrier Ranking

The questionnaire followed previous studies (da Silva and da Rocha, 2001; Korneliussen and Blasius, 2008; Suarez-Ortega, 2003), with the respondent being asked to indicate, on a scale of 1 (not an obstacle) to 5 (major obstacle), the extent to which each export barrier was considered to be an obstacle to their export development. Table 2 shows the results of the descriptive analysis, with separate columns for the 'overall perception of export barriers', 'exporter perceptions' and 'non-exporter perceptions'.

Contrary to expectations, the results indicate that those export barriers often considered problematic to LDC firms (*H1a, H2a, H3a*) are actually of relatively little concern. Instead, the firms in the study revealed that their export development and expansion was most impeded by obstacles commonly regarded by firms from more developed countries to be export barriers.

Financial barriers. The results indicate that the most important obstacle limiting export development overall is 'lack of funds to finance exports', highlighting the high costs involved in exporting. This is further supported by the fact that the other three barriers related to cost factors, namely 'difficulty in providing after-sales services to foreign customers', 'high transportation costs', and 'foreign currency exchange risks' all ranked in the top nine of the table and all received mode scores of four. These findings are consistent with those of Bell's (1997) study of export problems experienced by small computer software firms in Finland, Ireland, and Norway. This is a crucial observation as it reveals that financial barriers to internationalization are a problem for firms in high-tech industries as a whole, with the level of economic development of their home country having little bearing on export development and success.

As Bell (1997) points out, the complex nature of ICT products – in terms of installation, customization, upgrading packages, training, providing back-up services, etc. – means that frequent visits to overseas clients and customers are required, which is a costly procedure. The findings here support this argument, as 'difficulty in providing after-sales services to overseas customers' was considered the fourth most severe export problem. Again, there appears to be similarity between the perception of financial export barriers by ICT firms in the developed and developing worlds.

Market barriers. The impact of market barriers varies from factor to factor. Five of the eight barriers in this category ('difficulty in promoting brand name', 'difficulty in offering foreign customers satisfactory prices', 'product specification in foreign markets', 'trade barriers', and 'difficulty in promoting made-in-Malaysia products') were ranked tenth or below in the list.

However, two of the barriers ('difficulty in offering competitive prices abroad' and 'competition in overseas markets') were ranked in the top five, with the latter factor considered the second most severe impediment to export development overall. Fierce competition in overseas markets is not an uncommon problem facing LDC firms (Altintas et al., 2007; Burgess and Oldenboom, 1997; Nadvi et al., 2004; Tesfom and Lutz, 2006). However, in the context of the ICT sector, global competition appears to be a double-edged sword, putting ever-greater pressure on firms to internationalize their operations very early in order to keep up with the competition (Correa, 1996; Saarenketo et al., 2004), yet at the same time acting as a barrier to export development and success, with products becoming obsolete very quickly.

Moreover, the ICT sector is no longer monopolized by firms from developed countries. A growing number of firms from the developing world are now very much major actors in the industry (Correa, 1996; Heeks and Nicholson, 2004), meaning that competition is becoming more intense. In Southeast Asia, Malaysian ICT firms face fierce competition from rivals in other countries in the region such as Taiwan, Singapore and South Korea (Correa, 1996).

Knowledge barriers. The overall perception of knowledge barriers was also inconclusive. Although 'lack of knowledge/experience of exporting' was ranked sixteenth in the list, 'difficulties in locating foreign markets', was third. With respect to the latter factor, SMEs are often unfamiliar with national and international sources of information and unclear as to the specific information required, particularly in terms of identifying and analyzing entry into foreign markets (Leonidou, 2004). At times, SMEs may have relevant information about a range of foreign markets, but may have difficulty in selecting the *best* potential export market (Suarez-Ortega, 2003). Due to limited resources, LDC SMEs may not have the luxury of exporting to multiple markets, or indeed to risk making an incorrect decision as to the best export market. Thus, locating and analyzing adequate export markets is a problem to these firms.

Barriers to export assistance requirements. Contrary to much of the existing literature on exporting problems facing LDC firms (Altintas et al., 2007; Kaleka and Katsikeas, 1995; Naidu et al., 1997; Tesfom and Lutz, 2006), the export activity of firms in this study is hindered only minimally by 'lack of government assistance in overcoming export barriers.' This can be interpreted in one of two ways. First, although not successful across all sectors of the economy (Mahajar and Mohd Yunus, 2006), efforts by the Malaysian government to promote export activity by SMEs through various programs and support agencies, appears to be relatively successful in the ICT industry. Alternatively, it can be concluded that other barriers are simply more important by comparison, and that any additional assistance from the government is perceived to be inadequate or inappropriate to overcoming these other barriers.

Finding suitable overseas partners to act as representatives in foreign markets is also a problem for firms (Leonidou, 2000; Yaprak, 1985). This is confirmed by the results of this study as 'lack of foreign contacts' was considered the sixth most important barrier to exporting. According to Leonidou (2004), finding foreign representatives which meet the various structural, operational, and behavioral requirements is difficult and even where these conditions are met, it is likely that they may already be engaged by a competitor. However, Bell (1997) revealed that finding foreign representation was not a problem amongst small software firms in Europe. Thus, there may be a critical difference between ICT SMEs in developed and developing countries with respect to this particular factor.

Cultural barriers. At the bottom end of the table, three of the six lowest-ranked export barriers ('different foreign customer habits/attitudes', 'different busi-ness practices abroad' and 'language, communication differences') show that differences in various aspects of national and business culture, e.g. consumer taste, ways of doing business, and language, are considered to be less inhibiting to export development than other types of barriers. Not surprisingly, language differences were least problematic to this group of firms, given that a large proportion of the Malaysian population, particularly those active in business activity, speaks English as well as Malay and often an additional Chinese or Indian dialect (a consequence of the racial diversity of the country).

Additionally, exporting firms often have to cope with unfamiliar business practices abroad, such as different negotiation styles (Leonidou, 2004; Tesfom et al., 2006). A lack of management exposure to different methods of doing business can cause a significant problem to exporting firms (Tesfom et al., 2006). However, it is possible that the diversity of cultures in Malaysia means that businesspeople there are flexible in this regard and can readily adapt to different working styles.

In sum, the export development of ICT SMEs in developing countries appears to be most impeded by financial barriers and competition in overseas markets, and least hindered by cultural differences between the home- and export-markets. They appear to differ from their counterparts in more developed countries in terms of finding suitable foreign representation. Whereas small European software firms do not consider this to be an export problem (Bell, 1997), the firms in this study perceive it to be a relatively important one. An important observation to make, however, is that none of the barriers received a mean score of four or more, which suggests that their overall impact does not significantly restrict export activity.

Table 2. Descriptive Statistics Showing Export Barrier Rankings

Export Barrier	Overall Mean	Std. Dev.	Std. Error Mean	Mean (exporters)	Mean (Non-exporters)
1. Lack of funds to finance export	3.72	1.210	0.202	3.88	3.71
2. Competition in overseas markets	3.64	1.222	0.204	3.75	3.64
3. Difficulties in locating foreign markets	3.47	1.207	0.201	2.88	3.71
4. Difficulty in providing after-sales services to overseas customers	3.47	1.230	0.205	3.13	3.50
5. Difficulty in offering competitive prices abroad	3.42	1.312	0.219	3.68	2.38
6. Lack of foreign contacts	3.39	1.128	0.188	2.38	3.64
7. High transportation costs	3.37	1.228	0.201	3.25	3.46
8. Strict foreign-country rules and regulations	3.31	1.037	0.173	3.00	3.36
9. Foreign currency exchange risks	3.25	1.180	0.197	3.13	3.29
10. Difficulty in promoting brand name	3.17	1.231	0.205	2.63	3.39
11. Difficulty in offering foreign customers satisfactory prices	3.11	1.116	0.186	3.00	3.11
12. Product specification in foreign countries	3.08	0.996	0.166	2.38	3.32
13. Different foreign customer habits/attitudes	3.08	0.996	0.166	2.63	3.21
14. Trade barriers	3.03	1.134	0.189	2.63	3.11
15. Lack of government assistance in overcoming export barriers	2.94	1.241	0.207	3.00	2.93
16. Lack of knowledge/experience of exporting	2.94	1.264	0.211	3.00	3.07
17. Difficulty in promoting 'made-in-Malaysia' product	2.89	1.141	0.190	1.75	3.21
18. Different business practices abroad	2.75	0.996	0.166	2.25	2.82
19. Language differences/ communication barriers	1.89	1.116	0.186	1.63	1.86

Exporter vs. Non-Exporter Perceptions

As noted earlier, previous research has provided mixed evidence concerning differences in perception of export barriers between exporting and non-exporting firms. In this sub section, investigate this issue and test our hypotheses by highlighting the key differences in this particular industrial context.

In this analysis, the criterion variable is the degree to which each export barrier is perceived by the respondents to be an obstacle to their export development, while the dependent variable consists of two groups: eight exporters and twenty-eight non-exporters. A stepwise discriminant analysis was employed to derive the discriminant function. A Wilks' lambda of 0.599 and a chi square value of 16.925 with 2 degrees of freedom had a zero probability of incorrectly rejecting the null hypothesis that there are no differences in perceptions.

Only two export problem variables were found to be significantly different between exporters and non-exporters based on stepwise discriminant analysis, namely 'difficulty in promoting made-in-Malaysia products' and 'difficulty in offering competitive prices abroad' (Table 3), thus automatically rejecting *H2b* and *H3b*. Non-exporters' mean scores for both export barriers (3.21 and 3.68 respectively) were significantly greater than exporters' (1.75 and 2.38), thus leading to the rejection of *H1b*.

The first barrier suggests that the *perceived* difficulty in promoting 'made-in-Malaysia' products is more difficult than it actually is in reality. Exporters generally considered that this factor did not pose a barrier at all (mean = 1.75) and therefore the national origin of the product may not limit its marketing success overseas, at least for Malaysian ICT firms. Non-exporting firms often expect to face certain obstacles if/when they start exporting, even though these perceived barriers do not always materialize (Bell, 1997).

The second barrier indicates that offering competitive prices in export markets is more a concern for firms currently not engaged in export activity, which contradicts previous findings (Katsikeas and Morgan, 1994). Due to the high costs involved in exporting, non-exporters may feel that the only way they can offset these costs is to offer higher prices to foreign consumers. However, if they did this, consumers would switch to competitors' products (Hill, 2007). Therefore, pricing needs to be adapted to the market conditions of foreign markets (Rundh, 2007). However, non-exporting firms may be unable to offer competitive prices due to their strict adoption of cost-plus pricing or by unfavorable exchange rates (Leonidou, 2004).

Conclusion

This paper has sought to address two notable weaknesses in existing literature on

Table 3. Standard Discriminant Function Coefficients

Discriminating Variables	Canonical Coefficients	Mean	
		Non-exporters	Exporters
Difficulty in Promoting Made in Malaysia Product	0.609	3.21	1.75
Difficulty in offering competitive prices abroad	0.643	3.68	2.38
Wilks' lambda	**Chi square**	**Degree of Freedom**	**Frequency**
0.599	16.925	2	36

export barriers. *First*, although many studies have been undertaken on the topic, the vast majority of these have dealt with firms from developed countries, especially Europe and North America (Karelakis et al., 2008), with particularly minimal attention given to those in Southeast Asia (O'Cass and Julian, 2003). *Second*, high-tech industries such as ICT have also been largely overlooked, with most studies traditionally focusing on manufacturing industries such as engineering, clothes and textiles, food and drink, etc. (Bell, 1997). By investigating the key barriers to export development facing SMEs in the ICT industry in Malaysia (a developing country), these two weaknesses have been addressed in one study, although clearly more work is needed. In addition to identifying the key barriers to export, we have also examined whether exporters and non-exporters perceive different barriers as more impeding to their export development, in order to understand the nature of these obstacles more clearly.

Our findings reveal that limited funds to finance export activity, and competition in overseas markets, have the most negative impact on these firms' export activity, although neither factor was considered to be a significant or major barrier. Contrary to small ICT firms in Europe (Bell, 1997) however, firms in this study are hindered by difficulties in obtaining foreign contacts and representations in foreign markets. Further, cultural differences are regarded to be the least important obstacle to exporting.

Moreover, our results indicate that exporters and non-exporters do not differ significantly in their perception of export barriers, although there are two exceptions to this. *First*, non-exporters believe a negative country-of-origin perception in foreign markets may hinder their marketing success abroad. However, the response of exporters to this issue, who considered it to be insignificant, suggests that this will not actually pose a problem, and that is based more on the assumptions of non-exporters than personal experience. *Second*, non-exporters considered it more difficult to offer competitive prices abroad than exporters, which suggests that non-exporters are ill-equipped to match competitor prices either due to internal factors (e.g. strict adoption of cost-plus pricing) or external factors (e.g. unfavorable exchange rates) (Leonidou, 2004).

A number of implications relevant to policymakers, business executives and researchers can be derived from the present study. With regard to policymakers, certain policy measures should be introduced in order to limit the inhibiting impact of export barriers on both exporting, and non-exporting ICT SMEs. Policymakers need to address the most pressing difficulties experienced by exporting firms, and firms that wish to export at some point in the future. In particular, it is important to assist ICT SMEs in coping with the high cost of export operations, as this was the most severe exporting obstacle reported by the sample firms. Measures may include short-term loans which may be repayable over a long period of time (e.g. three years) at a fixed annual interest rate.

At the managerial level, it is important to minimize the inhibiting effects of export barriers, in particular those originating internally to the firm. This could be facilitated by using various management consultancy and advisory services which could assist managers of non-exporting organizations improve their managerial skills, formulate a strong export marketing strategy, understand the technicalities of exporting and learn how to understand export documentation. With regards to the differences between exporter and non-exporter perceptions, the fear of negative country-of-origin perception amongst overseas consumers appears to be over-estimated by non-exporters, as exporters do not regard this to be a barrier. Following Zou and Stan (1998), it is suggested that management focuses on the advantages of, rather than (perceived) barriers to, exporting, and remain positive.

Finally, it is important for future researchers to build on these findings in a different setting, possibly undertaking a longitudinal investigation to examine whether and how different export barriers affect firms at different stages of export development.

It is important to consider these conclusions of this study in light of certain limitations. *First*, due to the limited nature of the sample and the relatively small sample size, it is difficult to generalize from the results. *Second*, the present study merely divided companies into two rather rigid categories (exporters/non-exporters). A possible extension would be to distinguish between, say, a disinterested non-exporter and an interested non-exporter (Morgan and Katsikeas, 1997) and perhaps even to analyze the degree to which exporters export, e.g. length of time since exporting was initiated by the company, volume of exports, etc. *Third*, the study was unbalanced somewhat due to the large difference in response rates between exporters and non-exporters, with non-exporters being over-represented in the study sample. Just eight exporters took part in the study, compared to twenty-eight non-exporters. Future analyses should address this imbalance. Finally, it is important to consider the weaknesses inherent in distributing questionnaires electronically. The researcher has no control over the setting in which respondents complete the questionnaire (e.g. timing, understanding of terminology, environment, etc.) and is unable to guarantee that the questions are answered by the appropriate member of staff.

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