Factors affecting the success of business-to-business international Internet marketing (B-to-B IIM): an empirical study of UK companies

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Introduction

In recent years business-to-business international Internet marketing (B-to-B IIM) has received widespread attention. Avlonitis and Karayanni (2000), Duffy and Dale (2002), Hamill and Gregory (1997), Hoffman et al. (1999), Porter (2001) and Quelch and Klien (1996) conducted in-depth studies to understand those factors that are needed to enhance B-to-B IIM implementation. They conclude that organisations need to understand how to identify the critical factors that affect the implementation process and address them effectively to ensure that the promised benefits can be realised and failures can be avoided.

However, research in business-to-business Internet marketing is still in its infancy. Most research on Internet marketing has been either descriptive or theoretical/speculative. There is a lack of solid research models to guide future research in this area. There have been a number of attempts to identify the CSFs for B-to-B international Internet marketing (Archer and Yuan, 2000; Avlonitis and Karayanni, 2000; Berthon et al., 1996a; Chan and Swatman, 2000; Duffy and Dale, 2002; Furnell and Karweni, 1999; Honeycutt et al., 1998; Lord, 2001; Lynn et al., 2002; Soh et al., 1997); however, few of them can provide strong theoretical or statistical support for the existence of these CSFs. This may be because of the exploratory nature of these studies. As such they deal more with the potential than the reality of the Internet’s impact. Hence, full-scale research conducted in a highly scientific manner must be undertaken.

To fill this gap various articles, empirical research, and secondary case studies on B-to-B, Internet, International marketing, and information technology were studied. The findings of these studies identified 21 factors that have a direct impact on successful implementation of the B-to-B IIM. These factors were classified into five categories:

1. marketing strategy;
2. Web site;
3. global dimension;
4. internal related factors; and
5. external related factors.
Definitions, techniques and discussion on these factors are described in the following sections. Further discussion on each category is also underpinned.

**Proposed factors**

A number of studies were carried out to identify those factors most critical to B-to-B IIM success. Avlonitis and Karayanni (2000) noted that sales force has a central role to play in the Internet marketing strategies implementation if the appropriate training is provided. However, top management team’s support is one of the keys to integrate the Internet effectively with the strategic marketing plan. Bremer (1996) agreed that correct planning for training sessions, management support and staff awareness programmes are important to B-to-B IIM implementation.

Chan and Swatman (2000) pointed out other factors such as supplier and customer involvement, culture and the use of both the traditional and online marketing. Cronin (1996a) added the security factor to the marketing strategy and culture. Damanpour (2001) showed the importance of meeting client demand as necessary to fulfil obligations in Internet-based marketing. Being flexible when collaborating with the trading community, identifying potential valuable partners, thinking globally and doing business in the Internet time (speed) are critical factors for the successful implementation of B-to-B IIM.

Duggan and Deveney (2000) indicated that the integration between off and on-line marketing efforts, as well as, customer acceptance and the language used were also critical success factors. Furnell and Karwaci (1999) agreed that the development of successful inter-organisational relationships is another critical factor, which is based primarily on the quality and quantity of information exchanged over the Internet. Gogan (1997) cited that selecting the appropriate technologies infrastructure is a key factor for Internet marketing. Hamill and Gregory (1997) suggested that well designed Web sites provide an organisation with a leading edge in the global market. Herbig and Hale (1997) emphasise that customer needs must be identified.

Poon and Jevons (1997), Hoffman *et al.* (1999) and Zairi (2001a, b) all agreed that trust and confidence between vendor and potential customer is another critical factor. E-commerce is not a technology play! It is a relationship; partnership, organisational and communications play made possible by new technology.

**Factors categorization**

The different critical factors for B-to-B IIM successful implementation have been grouped into five related factors categories A, B, C, D and E as shown in Figure 1.

**Research model and hypotheses**

The model tested in this research examines how different CSFs affect B-to-B IIM success. Figure 2 depicts the research model and illustrates the propositions tested in this study.

First, many researchers and practitioners have increasingly considered factors related to marketing strategy as a vital component of successful B-to-B IIM. These include, top management support, setting the strategic goals, integrating Internet marketing with marketing strategy, collaboration (strategic partners), and deciding the potential audience are the most important factors related to marketing strategy for successful B-to-B IIM implementation (Avlonitis and Karayanni, 2000; Chaffey *et al.*, 2000; Chan and Swatman, 2000; Cronin, 1996b; Damanpour, 2001; Duggan and Deveney, 2000; Gurau *et al.*., 2001; Hofacker, 2001; Honeycutt *et al.*, 1998; Lynn *et al.*, 2002; Naude and Holland, 1996; Perry and Bodkin, 2002; Porter, 2001; Queich and Klein, 1996; Wilson and Abel, 2002). To see the role of the marketing strategy related factors in B-to-B IIM success the following hypothesis is proposed:

\[ H1. \text{Marketing strategy related factors affect the success of B-to-B international Internet marketing.} \]

Second, many researchers have considered the Web site as a crucial component of any
B-to-B IIM efforts. These include, well-designed site and effective marketing of the site are the most important factors that contribute to success of B-to-B IIM efforts (Anderson, 1996; Hamill and Gregory, 1997; Herbig and Hale, 1997; Hofacker, 2001; Kotab and Helsen, 2000; Lynn et al., 2002; Quelch and Klien, 1996; Samiee, 1998). Accordingly, the following hypotheses are proposed:

**H2.** Web site related factors affect the success of B-to-B international Internet marketing.

Third, many authors have considered global dimension related factors as a vital component of successful B-to-B IIM efforts. These factors include in-depth understanding of foreign marketing environment, resources required to work globally, multilanguage Web site to successfully reach target customers, culture consideration, and availability of delivery channel such as international shipping (intermediaries-shipping information-charges) (Chaffey et al., 2000; Chan and Swatman, 2000; Duggan and Deveney, 2000; Gogan, 1997; Hamill and Gregory, 1997; Herbig and Hale, 1997; Hofacker, 2001; Kotab and Helsen, 2000; Quelch and Klien, 1996; Samiee, 1998; White, 1997). Thus, the following hypothesis is proposed:

**H3.** Global dimension related factors affect the success of B-to-B international Internet marketing.
Fourth, many researchers and practitioners have increasingly considered factors related to internal environment as a critical component of successful B-to-B IIM efforts. These factors include technological infrastructure, appropriate internal culture, effective relationship between the marketing and IS/MIS department and a well trained sales force that all contribute to the success of B-to-B IIM efforts (Avlonitis and Karayanni, 2000; Chan and SWATMAN, 2000; Duggan and Deveney, 2000; Gogan, 1997; LYNN et al., 2002; Quelch and Klein, 1996; Samiee, 1998) Accordingly, the following hypotheses are proposed:

H4. External factors affect the success of B-to-B international Internet marketing.

Finally, many researchers and practitioners have increasingly considered factors related to external environment as another key component of successful Internet marketing implementation. These factors include, trust, security, successful relationship, easy and affordable access to the Internet, and customer acceptance and all contribute to successful B-to-B IIM practice (Chan and SWATMAN, 2000; Duggan and Deveney, 2000; Furnell and Karweni, 1999; POON and JEVONS, 1997; Quelch and KLEIN, 1996; Ratnasingham, 1998; Urban et al., 2000; Wilson and Abel, 2002; ZAIRI, 2001a, b) therefore the following hypothesis is offered:

H5. Internal factors affect the success of B-to-B international Internet marketing.

Research methodology
Population and sample
This research has used three basic characteristics that must be presented in each company if it is to be selected in the research sample:
(1) the company should be business-to-business;
(2) use the Internet for marketing purposes; and
(3) work globally to sell its products on the international market via agent, distributor, or subsidiary.

The aim was to select a population of UK business-to-business international companies that use the Internet for their marketing activities. Unfortunately, there is no database that contains such companies. In addition, there are no reliable methods that can be used to distinguish between international and local companies. To determine companies that meet these criteria, a list of business-to-business Web addresses was obtained from Yahoo directory, which listed the majority of the business-to-business Web addresses available at that time of study, totaling 1,230 addresses. It is the Web’s most popular search engine (Search Engine Watch)[1]. It is the oldest major Web site directory, having launched in late 1994. However, although many authors have used it to determine the study population (Avlonitis and Karayanni, 2000; Bennon, 1997; Shama, 2001), this study did not accept it as it is for many reasons that can be discussed below:
• some sites classified as business-to-business are actually business-to-customer;
• some companies that are supposed to be UK companies are only based in the USA;
• many companies appear more than once under different titles within business-to-business; and
• some companies have many links on the directory and therefore are counted more than once.

Consequently, without careful modifications the Yahoo directory may lead to defected results and destroy the random base for a research sample.

Implementation of companies scanning
Consequently, a companies scanning exercise was used in identifying and collecting various companies that appeared in the Yahoo directory over a specific period of time (1 December 2001-31 January 2002). The actual procedures involved are discussed in the following section.

Population industries
This study planned to obtain responses from different industries so that generalisation of the findings could be established. Consequently, the population comprises the companies
addressed in the Yahoo directory in six specific industries:
(1) aerospace;
(2) agriculture;
(3) textile;
(4) chemicals;
(5) computers; and
(6) industrial supplies.

Finally, 250 questionnaires were mailed to the selected organizations. Of the 250 companies, a total of 161 questionnaires were returned. This included nine returned not completed with a label stating “Gone away – please remove from mail list”. A further 24 were returned with a covering letter explaining why they had not completed the questionnaire. Most of the responses indicated that it was not company policy to participate in surveys or lack of time due to work pressures. Therefore, the number of returned completed questionnaires was 128 (including five unusable questionnaires, usable questionnaires = 123). A summary of the responses’ distribution and rate is:

- total number of questionnaires distributed (250);
- number of completed and returned questionnaires (128);
- unreachable companies (nine);
- declined participation (24); and
- response rate (58.98 per cent).

The response rate was calculated using the method proposed by De Vaus (1991, p. 99) and was 58.98 per cent. This high 58.52 per cent response rate may be explained by several factors:

- First, the questionnaire was designed in such a way that means it takes only 20 minutes to be completed.
- Second, attempts were made to contact each organisation up to five times via e-mails and phone calls before the firm was dropped from the sample.
- Third, most companies studied were likely to perceive their participation in the study as further evidence of their success regarding using the Internet for marketing purposes.

**Measurement development**

In order to develop and validate the instrument, several steps were taken:

1. development of the measure from the literature;
2. initial pre-test; and
3. pilot test of the measure.

In this regard, the questionnaire was reviewed first by six academic researchers experienced in questionnaire design. They were asked to provide feedback on the overall design, particularly the measurement scales. Their inputs were then considered in improving the design. Following from that, the questionnaire was piloted with two B-to-B IIM experts known to the researcher. The pilot took the form of an interview where the participant was first handed a copy of the questionnaire and asked to complete it and then discuss any comments or questions he had. The objective of this pilot was to assess time required to complete the questionnaire, clarity of instructions, simplicity, consistency of questions, clear language, and comprehensiveness. As a result of this pilot, some amendments were made to improve the questionnaire. Participants indicated their agreement using a five-point Likert scale.

**Analysis and results**

This section presents the statistics and analytic results of the study.

**Descriptive statistics**

Detailed descriptive statistics relating to the responding organisations and respondents are shown in Table I.

**Construct validity and reliability**

Discriminant validity was assessed using factor analysis. The 33 items (variables) measuring the five CSFs in the research model were subjected to principal component factor analysis. Eigenvalues and scree plot were used to determine the number of factors to be extracted. Moreover, in order to ensure the use of factor analysis, the Berlett test of sphericity (BTS) and Kaiser-Meyer-Olkin (KMO) test of appropriateness were carried out accordingly (see Table II). The results (the BTS ranged from 373.055 to 825.768 and the level of significance at \( p = 0.000 \)) indicated that the data is appropriate for the purpose of factor analysis.
Statistically, this means that there exist relationships between the variables and that they can be appropriately included in the analysis (Bryman, 1989). As shown the result of sampling adequacy ranged from 0.767-0.907 which, following Kaiser-Meyer-Olkin measure of sampling adequacy, reflected high sampling adequacy.

The 33 items was loaded on the five factors as suggested using the criteria of an eigenvalue greater than one, and the extracted factors account for a range from 60.272-75.667 of the total variance. A varimax rotation was also performed. All items loaded on to the expected factors as they were originally designed. Factor loadings were all higher than 0.5 on its own factors. As suggested by Hair et al. (1998), a factor loading higher than 0.35 is considered statistically significant at an alpha level of 0.05. Only one item of Web site related factors, real time on-line interactive elements, has a factor loading less than the accepted level, so we decided to ignore it in our further analysis.

The reliability of all constructs was assessed by the Cronbach alpha reliability coefficient and exceeded Nunnally’s standards for research (Nunnally, 1978) (see Table III).

This section presents the results of all the hypotheses tested. These hypotheses can be expressed in a multiple linear regression equation as:

$$B_{toB\ IIM\ success} = \text{constant} + B_1 \text{marketing\ strategy\ related\ factors} + B_2 \text{Web\ site\ related\ factors} + B_3 \text{global\ dimension\ related\ factors} + B_4 \text{internal\ factors} + B_5 \text{external\ factors} + \epsilon.$$

To investigate the hypothesis, entering all variables in a single block, we found that the proposed model explains a significant percentage of variance in B-to-B IIM success. Table IV shows that 78.9 per cent of the observed variability in the relative advantage is explained by the four independent variables ($R^2 = 0.795$, adjusted $R^2 = 0.789$).

### Table I Characteristics of the sample

<table>
<thead>
<tr>
<th>Measure</th>
<th>Items</th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position</strong></td>
<td>Marketing manager</td>
<td>68</td>
<td>55.3</td>
</tr>
<tr>
<td></td>
<td>Sales manager</td>
<td>32</td>
<td>26.0</td>
</tr>
<tr>
<td></td>
<td>Export manager</td>
<td>11</td>
<td>8.9</td>
</tr>
<tr>
<td></td>
<td>IT manager</td>
<td>12</td>
<td>9.8</td>
</tr>
<tr>
<td><strong>Participation</strong></td>
<td>No</td>
<td>27</td>
<td>22.0</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>96</td>
<td>78.0</td>
</tr>
<tr>
<td><strong>Number of employees</strong></td>
<td>Less than 100</td>
<td>55</td>
<td>44.7</td>
</tr>
<tr>
<td></td>
<td>100-500</td>
<td>46</td>
<td>37.4</td>
</tr>
<tr>
<td></td>
<td>501-1,000</td>
<td>16</td>
<td>13.0</td>
</tr>
<tr>
<td></td>
<td>More than 1,000</td>
<td>6</td>
<td>4.9</td>
</tr>
<tr>
<td><strong>Years of Internet use</strong></td>
<td>Less than two years</td>
<td>22</td>
<td>17.9</td>
</tr>
<tr>
<td></td>
<td>Two to three years</td>
<td>29</td>
<td>23.6</td>
</tr>
<tr>
<td></td>
<td>Three to four years</td>
<td>34</td>
<td>27.6</td>
</tr>
<tr>
<td></td>
<td>More than four years</td>
<td>38</td>
<td>30.9</td>
</tr>
<tr>
<td><strong>Type of industry</strong></td>
<td>Aerospace</td>
<td>8</td>
<td>6.5</td>
</tr>
<tr>
<td></td>
<td>Agriculture</td>
<td>14</td>
<td>11.4</td>
</tr>
<tr>
<td></td>
<td>Chemical and allied products</td>
<td>8</td>
<td>6.5</td>
</tr>
<tr>
<td></td>
<td>Computers</td>
<td>40</td>
<td>32.5</td>
</tr>
<tr>
<td></td>
<td>Industrial supplies</td>
<td>41</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>Textile</td>
<td>12</td>
<td>9.8</td>
</tr>
</tbody>
</table>

### Table II KMO and Bartlett’s test

<table>
<thead>
<tr>
<th>Constructs</th>
<th>KMO</th>
<th>Chi-square</th>
<th>df</th>
<th>Sig.</th>
<th>No. extracted item(s)</th>
<th>Eigenvalues</th>
<th>Per cent variance explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing strategy related factors</td>
<td>0.898</td>
<td>738.520</td>
<td>28</td>
<td>0.000</td>
<td>1</td>
<td>5.272</td>
<td>65.906</td>
</tr>
<tr>
<td>Web site related factors</td>
<td>0.907</td>
<td>825.768</td>
<td>45</td>
<td>0.000</td>
<td>1</td>
<td>6.027</td>
<td>60.272</td>
</tr>
<tr>
<td>International dimension related factors</td>
<td>0.767</td>
<td>373.055</td>
<td>10</td>
<td>0.000</td>
<td>1</td>
<td>3.374</td>
<td>67.489</td>
</tr>
<tr>
<td>Internal related factors</td>
<td>0.863</td>
<td>443.447</td>
<td>10</td>
<td>0.000</td>
<td>1</td>
<td>3.783</td>
<td>75.667</td>
</tr>
<tr>
<td>External related factors</td>
<td>0.807</td>
<td>376.726</td>
<td>10</td>
<td>0.000</td>
<td>1</td>
<td>3.454</td>
<td>69.089</td>
</tr>
</tbody>
</table>

**Notes:** Extraction method: principal component analysis. Rotation method: Varimax with Kaiser normalisation.
To test the equivalent null hypothesis that there is no linear relationship in the population between the dependent variable and the independent variables, the ANOVA in Table V is used. Results from Table V shows that the ratio of the two mean squares ($F$) was 114.716 ($F$-value = 109.754, $p < 0.001$). Since the observed significance level was less than 0.001, the four variables influence marketers’ attitudes toward using the Internet for their B-to-B marketing activities.

To test the null hypothesis that the population partial regression coefficient for a variable is 0, $t$-statistic and its observed significance level were used. The results are shown in Table VI. Results from Table VI indicate that we can safely reject the null hypotheses that the coefficients for marketing strategy related factors ($B = 0.273, t = 4.150, p < 0.001$), Web site related factors ($B = 0.179, t = 2.849, p < 0.01$), global dimension related factors ($B = 0.261, t = 3.868, p < 0.001$), internal factors ($B = 0.140, t = 1.986, p < 0.05$), external factors ($B = 0.187, t = 2.704, p < 0.01$) are 0. The beta weights show that marketing strategy related factors ($B = 0.273$) have a strong significant influence on B-to-B IIM success. Also global dimension related factors ($B = 0.261$), external factors ($B = 0.187$), Web site related factors ($B = 0.179$) and internal factors ($B = 0.140$) have a significant effect on B-to-B IIM success.

Multicollinearity between the independent variables was minimal, as shown by the values of tolerance that average between 0.304 to 0.382 and VIF that average between 2.621 and 3.285, indicating that the results were reliable.

### Discussion

Our findings generally support our conceptual model. The results give support to the hypotheses. Consideration of the five broad

<table>
<thead>
<tr>
<th>Table IV</th>
<th>Model summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>R</td>
</tr>
<tr>
<td>1</td>
<td>0.908$^a$</td>
</tr>
</tbody>
</table>

**Note:** $^a$Predictors: (constant), B-to-B IIM barriers, B-to-B IIM drivers, perceived ease of use, perceived compatibility, perceived relative advantage

<table>
<thead>
<tr>
<th>Table V</th>
<th>Summary of ANOVA table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Sum of squares</td>
</tr>
<tr>
<td>Regression</td>
<td>106.162</td>
</tr>
<tr>
<td>Residual</td>
<td>22.634</td>
</tr>
<tr>
<td>Total</td>
<td>128.797</td>
</tr>
</tbody>
</table>

**Notes:** $^a$Predictors: (constant), external related factors, marketing strategy related factors, Web site related factors, global dimension related factors, internal related factors; $b$Dependent variable: international Internet marketing success

<table>
<thead>
<tr>
<th>Table VI</th>
<th>Results of regression coefficients$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Unstandardized coefficients</td>
<td>Standardized coefficients</td>
</tr>
<tr>
<td>(Constant) B</td>
<td>Beta</td>
</tr>
<tr>
<td>Marketing strategy related factors 0.281</td>
<td>0.273</td>
</tr>
<tr>
<td>Web site related factors 0.184</td>
<td>0.179</td>
</tr>
<tr>
<td>Global dimension related factors 0.268</td>
<td>0.261</td>
</tr>
<tr>
<td>Internal factors 0.143</td>
<td>0.140</td>
</tr>
<tr>
<td>External factors 0.192</td>
<td>0.187</td>
</tr>
</tbody>
</table>

**Note:** $^a$Dependent variable: Internet: perceived relative advantage
dimensions emerging from this study provides an indication of what CSFs underlie implementation of B-to-B IIM. This analysis confirms the significant positive relationships of marketing strategy related factors, Web site related factors, Global dimension related factors, internal factors and external factors with the perceived success of B-to-B IIM. These results are discussed below.

**Marketing strategy related factors**
Studies of Avlonitis and Karayanni (2000), Chaffey et al. (2000), Chan and Swatman (2000) and Weill (1992) confirm the finding of this study that top management commitment and support has a critical role in B-to-B IIM success. Top management's support has been characterised as an important factor for the successful implementation of any business innovation (i.e. the use of the Internet for B-to-B IIM) (Weill, 1992). The Chan and Swatman (2000) study addresses this factor in more detail and shows that the executive level of management, those having direct supervisory accountability and who are responsible for the implementation, are the most crucial element in the success of the implementation. Similarly, the study findings support the previous research that shows that using the Internet in marketing should be based on clearly defined strategic goals (Anderson, 1996; Chaffey et al., 2000; Honeycutt et al., 1998; Naude and Holland, 1996). Companies should decide the strategic goal of the Internet use on their global marketing strategy. Similarly, the finding of this study seem to reinforce the increasingly accepted view that companies' Internet-enabled capabilities ought to be employed in ways that complement and support their traditional channels (Avlonitis and Karayanni, 2000; Chan and Swatman, 2000; Cronin, 1996a, b; Duggan and Deveney, 2000; Gurau et al., 2001; Honeycutt et al., 1998; Lynn et al., 2002, Perry and Bodkin, 2002; Porter, 2001; Quelch and Klein, 1996). The Internet must be part of the company's overall marketing plan and strategy – not simply an afterthought. Again, the four cases illustrate different responses to that factor. However, while findings of this study support Chan and Swatman (2000), Duggan and Deveney, (2000), Lightfoot and Harries, 2003, Phan and Stata (2002), Poon and Jevons (1997), Bremer (1996) and Damanpour (2001); studies that trading partner relationships are crucial issues facing the company in achieving its objective of getting closer to its customers, the finding of this study, however, shows that it is of a second degree of importance. For B-to-B IIM to succeed, large networked communities comprising business partners, suppliers, internal personnel and customers should be established. The findings suggest that collaboration is a key factor to support not only marketing activities but also to transform activities on different parts of the value chain. Consequently, when planning the marketing strategy, companies should consider possible tie-ins and partnerships, both off and online. Finally, studies of Herbig and Hale (1997), Hofacker (2001), Hollens (2001) and White (1997) confirm the finding of this study that defining the audience or customer is one of the primary tasks because it determines how and when internal and external actors should be involved. Undoubtedly, target customer affects many other aspects of the Internet marketing, from site design to online marketing techniques. The more specific the target audience, the more companies will be able to provide the appropriate information on their Web sites.

**Web site related factors**
Well-designed site and effective marketing of the site are important tools for companies aiming to use the Internet for their marketing activities. However, as supported by Hamill and Gregory (1997), Herbig and Hale (1997), Hofacker (2001), Kotab and Helsen (2000), Poon and Swatman, (1998), Quelch and Klein (1996) and Samiee (1998) studies, a number of design characteristics have been identified by this study as a critical factor contributing to the success of B-to-B IIM efforts. However, the study respondents identified the Web site related factors as a crucial factor in their strategies to develop their B-to-B IIM activities. Consistent with the arguments of Hamill and Gregory (1997), Herbig and Hale (1997) Chaffey et al. (2000) and Haig (2001) well designed site has been found to play a critical role in the success of B-to-B IIM. As noted by Haig (2001), the most important design principle is to keep it simple. As business
decision-makers generally want to absorb information on a Web page in as short a time as possible, text and images should be used with strict restraint throughout a Web site. Similarly, easy to use site (usability) is another design criterion that has been found to affect B-to-B IIM success. Without adhering to the principles of usability it will be more difficult for a B-to-B site to achieve its objectives. As discussed by Chaffey et al. (2000) and Haig (2001), easy to use site (usability) is even more significant for B-to-B sector than they are for companies targeting the consumer market. This is because business decision makers generally have less time on their hands than users surfing the Web at home. The findings also confirm the findings of Evans and King (1999) and the argument of Herbig and Hale (1997) that creating a clear Web site, organized and easy to navigate pages to allow smooth movement around the site, is a crucial element in designing a Web site. 

Consistent with the findings of Evans and King (1999) and Hamill and Gregory (1997), the findings of this study show that companies must have up to date sites. In other words, information must be as current as possible with regard to product specifications, prices and links. This is also a way to encourage users to come back to visit the site. Accurate site is another criterion that has been found to have a critical effect on the quality of the Web site. This supports the arguments of Hamill and Gregory (1997) that the information that is seen as biased will not be taken seriously and will have a negative effect on company image. The findings also support the argument of Ghosh and Dou (1998), Haig (2001), Hamill and Gregory (1997), Herbig and Hale (1997) and Hoffman and Novak (1995) that informative site is a critical factor for Internet marketing. B-to-B companies should provide information that will be desired by different needs to encourage a mix of nationalities and cultures. They should take advantage of the highly interactive nature of Web sites by recognizing that Web site users are much more active acquirers of information. As supported by Chaffey et al. (2000), Evans and King (1999) and Hamill and Gregory (1997) studies, speed (download) site has been found to have a critical effect on the quality of the Web site. The importance measure in relation to performance is the speed with which a Web page is delivered to users from the time it is requested by clicking on a hyperlink. The length of time is dependent on a number of factors, some of which cannot be controlled (such as the number of users accessing the Internet), but primarily depends on the bandwidth of the ISP’s connection to the Internet and the performance of the Web server hardware and software (Chaffey et al., 2000). Consequently, companies should do everything possible to maintain the speed of downloading their Web page. Finally, the findings of this study support studies of Bennett (1997), Evans and King (1999) and Hamill and Gregory (1997) that effective marketing of the Web site is crucial for B-to-B IIM to succeed. Therefore, Web sites must be continually promoted not just when it is first launched (Evans and King, 1999).

**International dimension related factors**

Although the opportunity to achieve sales to new overseas markets is often used to champion the use of the Internet by businesses, our findings highlighted varieties of critical factors that should be considered to gain such opportunity. Consequently, many factors should be considered before targeting an international market. However, the findings of this study is different from that of Bennett (1997), Berthon et al. (1996b, c), Mehta et al. (1996) and Vescovi (2000) theoretical views, but are the same as Hofacker (2001), Quelch and Klein (1996) and Samiee (1998) views that the mere existence on the Internet does not mean anything internationally. Consistent with Hofacker (2001), Quelch and Klein (1996), Samiee (1998) and Wood and Robertson (2000) studies, in-depth understanding of foreign marketing environment has been found to play a critical role in B-to-B IIM success. However, while Hofacker (2001) and Wood and Robertson (2000) focus on the political climate, the level of economic development, infrastructure, legal system, trade regulations between countries and the package delivery options, Samiee (1998) focuses on other planning and management considerations such as local product standards, target market pricing and competitive factors, export currency and payment issues, customer support and service requirements. However, it is clear that
access to resources plays an important role in determining the sophistication of Internet usage. Therefore, companies’ resources play a critical role in B-to-B IIM efforts. However, while Mehta et al. (1996) see that Internet provides a level playing field for the small company vis-à-vis the large company in an international market, Arnott and Bridgewater (2002), Kotab and Helsen, 2000, Quelch and Klein (1996) and Samiee (1998) agreed that large firms still enjoy a substantial competitive advantage because of larger resources and more visibility among prospective customers worldwide. Furthermore, Arnott and Bridgewater (2002) found that smaller firms are using significantly fewer Internet tools of any type than their larger counterparts. This may be explicable by resource arguments. Moreover, studies of Hofacker (2001), Wilson and Abel (2002), Kotab and Helsen (2000) and Quelch and Klein (1996) confirm the finding of this study that language and communication is generally playing a big challenge for companies who use the Internet for their B-to-B IIM.

Kotab and Helsen (2000) address this factor in more detail, and show that by 2005, 57 per cent of the Internet audience will speak a language other than English. Finally, consistent with the findings of Quelch and Klein (1996), Samiee (1998), Simeon (1999) and Wood and Robertson (2000), culture was found to have a crucial role in B-to-B IIM. This could be a confirmation of the idea that a company’s approach to attracting, informing and positioning will be greatly affected by the social and cultural environment in which it operates (Simeon, 1999). In other words information concerning the subtleties of a specific international market is desired. This includes, as discussed by Wood and Robertson (2000), insights into similarities and differences of a market’s culture relative to one’s home market. Consequently, companies have to study the foreign marketing environments to assess the advantages of their own products and services. As supported by Palumbo and Herbig (1998), Poon and Swatman (1998) and White (1997), delivery channel is identified by this study as a critical factor contributing to the success of B-to-B IIM efforts. Thus, the Web page that promotes the company’s products should show where they can be acquired. According to Palumbo and Herbig (1998), it is important to design a logistical system that allows a company to deliver its products across nations efficiently and inexpensively before soliciting orders from abroad. Furthermore, Poon and Swatman (1998) state that Web sites should clearly indicate shipment costs to each country to which delivery is available and provide information on how the products are shipped and arrangements taken to ensure their quality on arrival.

Internal related factors
Technological infrastructure, internal culture, relationships between the marketing and MIS departments, sales force and training programmes are important internal tools for companies aiming to establish the B-to-B IIM practice. Technological infrastructure, which includes computer literacy, Internet-related software and availability and standardisation of equipment (for access and services), is required to reach the stage of information integration. Internal culture has a major role in enabling or disabling implementation efforts. Relationship between the marketing and MIS departments helps the implementation of the Web-based system. Sales force should be highly qualified and trained to be able to take advantage of the Internet capabilities. Finally, training programmes affect the understanding of the system and technologies, which in turn lead to greater acceptance of B-to-B IIM implementation. However, the entire internal factor comes on the second or the third level of importance. This may be interpreted by the fact that companies that use the Internet for their marketing purposes are supposed to be prepared internally before using it.

Similar supporting findings can be drawn from several studies. Consistent with Naude and Holland (1996), Phan and Stata (2002), Samiee (1998), technological infrastructure is identified by this study as a critical factor contributing to the success of B-to-B IIM efforts. However, the infrastructure of Internet marketing can be built on the existing technology (Phan and Stata, 2002). Anderson and Choobinin (1996, p. 127) summarised these elements as a viable worldwide network, a relational database of products photos and graphs, computers, and personnel resources.
The internal culture dimension in B-to-B IIM has a major role in enabling or disabling implementation efforts. Organisational culture influences the organisation’s ability to adopt to change that is required for the effective use of the Internet and existing culture might contain beliefs and values that are often no longer appropriate or useful in the new environment of doing business. Therefore, companies must understand and conform to the new values and the communication style that are brought by the Internet (Chan and Swatman, 2000; Duggan and Deveney, 2000; Samiee, 1998; White, 1997). Doing business on the Internet is much like doing business in any foreign country: the key to success is understanding, appreciating, and honouring the cultural protocol of the company as well as the country with which the company is dealing (Jones, 1996, p. 30). The relationships between the marketing and MIS departments cannot be overemphasised. Technological change, due to the Web, is forcing a paradigm shift within IS/MIS department. The Internet opens up a new stage of cooperation between the marketing and MIS departments. Studies of Bennett (1997) and Lynn et al. (2002) support this finding. However, the externalisation wrought by Internet computing will drive IT and marketing together. The marketing department must build strong relationships between itself and the company’s main line of business, including the IS/MIS department (Lynn et al., 2002). However, there are two points of view regarding the role of the sales force. To many, Internet technology facilitates the communication between sales force and customer and provides much greater and easier access to information that can add significant value to the relationship. On the other hand, many sales professionals feel that Internet technology can maintain the current level of sales and increase profits by eliminating a portion of the sales force. However, consistent with the findings of Avlonitis and Karayanni (2000), Bondra and Davis (1996), and Kotab and Helsen (2000), the findings of this study support the first point of view that sales department and sales force have a central role in the successful implementation of the Internet marketing strategies for industrial organisations. Most respondents indicated that salespeople would never be eliminated. However, the sales force must understand what the Internet does well and then structure their customer support around this technology in order to better serve their customers. At the same time, the sales force must focus on activities that add value to their customer relationship in ways the Internet cannot. Finally, companies must ensure that all of their employees understand the corporate Web strategy and must be aware of the Web site’s content. However, the findings of this study support the findings of Chan and Swatman (2000), Duggan and Deveney (2000), Lynn et al. (2002), Samiee (1998) and White (1997) that training programmes, which align with the Internet strategy for the employees are very important for B-to-B IIM.

External related factors

This study also identifies several external factors for success. As mentioned earlier, for the Internet customers, trust, security, successful relationship, easy and affordable access to the Internet, and customer acceptance all contribute to successful B-to-B IIM practice. The mean scores for all the external factors are in the upper half of the distribution. However, while customer acceptance, easy and affordable access to the Internet and successful relationship are of the first degree of importance, security and trust are of a second degree of importance.

Consistent with Hoffman et al. (1999), Mayer et al. (1995), Ratnasingham (1998), and Urban et al. (2000), an environment of trust has to be established in order to have a successful B-to-B IIM. However, this is not necessarily because of a lack of confidence in the security technologies themselves, but because, in many cases, people are not sufficiently aware of the possible protection that exists (Furnell and Karweni, 1999). Urban et al. (2000) discuss this point in more detail and they found that Internet trust could be divided into three stages; trust in the Internet and the specific Web site, trust in the information displayed, and trust in delivery fulfillment and service. Similarly, as supported by the findings of Evans and King (1999), Furnell and Karweni (1999), Honeycutt et al. (1998), Ratnasingham (1998) and Samiee (1998), security in placing orders and in providing confidential data is essential to the
successful efforts of B-to-B IIM. Furnell and Karweni (1999) found that if more known about the security features employed on the Internet then it will encourage significantly more people to use it. Consequently, companies should contain comprehensive information for customers regarding security and privacy policy. Ratnasingham (1998) further divided the Internet security into two significant areas that affect the Internet commerce globally: Internet security and transaction security. The former deals with the network, system and applications components of the electronic commerce solution, while the latter addresses the requirements for secure electronic commerce transactions. The finding of this study seem to reinforce the increasingly accepted view that Internet companies are required to develop more responsive and deeper and broader relationships with customers, suppliers and distributors to increase the success level of their Internet marketing efforts. (Furnell and Karweni, 1999; Naude and Holland, 1996). The strategic implementation of the Internet depends on effective on-line and off-line relationships with customers, suppliers and distributors. In order to achieve those effective relationships, companies have to use databases in order to acquire an understanding of the individual customer’s needs and develop an interactive Web site involving real customer relationships (Sparks and Thomas, 2001).

However, with electronic database(s) on current and prospective customers’ needs, B-to-B companies could provide better targeted and more tailored service. The previous studies suggest that customers who experience such (Internet-enabled) customised service often return to continue the already initiated online relationship (Hoffman and Novak, 1996; Poon and Jevons, 1997; Quelch and Klein, 1996). Easy and affordable access to the Internet (connectivity) is another factor that has been found to affect the success of B-to-B IIM. This finding supports the previous studies of Palumbo and Herbig (1998), Phan and Stata (2002) and Samiee (1998). Companies should not expect to find across nations the same easy electronic access that exists in USA for example. However, companies have two options regarding that problem, the proactive or the reactive solution. The proactive approach means that companies should use their own resources to solve the connectivity problem. Intel, for example, tested the connectivity with customers in the real production environment. Because performance can vary significantly in different countries, Intel went the extra miles to bring customers’ connection up to the global standard (Phan and Stata, 2002). The reactive approach, on the other hand, suggests that companies should wait until these countries invest in better telecommunication infrastructures before they can take full advantage of the opportunities the Internet offers for global commerce (Palumbo and Herbig, 1998). Finally, customer acceptance is one of the critical factors that has been cited in many studies (Chaffey et al., 2000; Chan and Swatman 2000; Cronin, 1996b; Phan and Stata, 2002) and has been found on this study to have the greatest importance within the external related factors ($M = 4.2439$). However, the findings of the study support the argument of Chaffey et al. (2000) that customer orientation is one of the most important factors in achieving a successful Internet marketing. Therefore, companies should use different marketing research techniques to find out the needs of the site audience.

**Implications**

The findings discussed above have a number of implications for management theorists. The critical success factors put forward in this study serve as building blocks for the development of a holistic conceptual theory dealing with B-to-B Internet usage. However, this study is considered as one of the first studies to suggest and validate empirically those factors that play a crucial role in the success of B-to-B IIM (Eid et al., 2002). It also provides scope for academic theorists to operationalise the concept of CSFs in B-to-B IIM. This involves more than including B-to-B IIM and CSFs as a topic or chapter in a text. Rather, the roles of these marketing approaches in organisations and their complementary nature should be recognised.

This study has potential for managerial application in the adoption and use of the Internet for marketing purposes. It provides useful guidelines in the form of the critical
success elements and factors that can engender success in B-to-B IIM efforts. From this study practitioners can derive a better understanding of the activities that are undertaken by the organisations, and how the way these activities are being dealt with can result in different forms of results. The factors proposed by this study should also enhance the current practice of B-to-B IIM. While the focus on Internet research has emerged as a reaction to the technological developments and IT focus, this study takes a balanced perspective and develops further a detailed understanding of major components and their sub-elements that have to be considered together.

Conclusions and recommendations

This research provided a comprehensive analysis of the CSFs for B-to-B international Internet marketing efforts in an organisation. In doing so, it has contributed to the cumulative body of research in both CSF concept and techniques and in research on using technology (i.e. Internet) for marketing purposes. The results from a survey conducted on CSFs for B-to-B IIM in UK B-to-B companies have been presented in this paper.

However, before going global by the Internet a company should make some marketing preparations and redefine its organisation, since the Internet environment has changed the rules of traditional business. These important marketing preparations are the critical factors for successful B-to-B IIM and include five basic dimensions:

1. marketing strategy related factors;
2. Web site related factors;
3. global dimension related factors;
4. internal factors; and
5. external factors.

These factors are expected to have a great role in the perceived success of B-to-B IIM efforts. Future research can concentrate on refining and further validating the instrument developed here through applying it in different types of EC applications, such as B-to-C, business-to-administration, consumer-to-administration, etc. Comparison could then be made across these different types.

Another possible area to develop is the quantification of these CSFs into an “index of practice index” in a company to determine the level of performance on a time-based approach, such as year on year. The results from the index could pinpoint areas that need attention and improvement. Finally, the area of Internet marketing is developing very rapidly. Electronic commerce applications will undoubtedly affect many business processes. Therefore, it would be interesting for researchers to explore how the application of EC technologies, such as the Internet marketing, will be integrated with other applications such as enterprise resource planning (ERP) and customer relationship management (CRM) which is an information industry term for methodologies, software, and usually Internet capabilities that help an enterprise to manage customer relationships in an organised way (Xu et al., 2002).

Note


References


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Industrial Management & Data Systems

Volume 104 - Number 1 - 2004 - 16-30


