Internet Technology as a Tool in Customer Relationship Management

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ABSTRACT
The Internet’s growth, particularly the World Wide Web, as an electronic medium of commerce has brought tremendous changes in market competition among various industries. For example, past researches have examined the impact of Internet technology on customer relationship management in various areas—in small and large firms, services and business-to-business companies. However, there remains a need to empirically examine the impact of implementing Internet technology on various dimensions of relationship management in South East Asia, particularly Malaysia. Primarily, the interest was led by traditional customer management economics—it costs the industry five times as much to acquire a new customer than to retain an existing one (Peppers and Rogers 1996). The results of this study indicate that click-and-mortar companies show a higher percentage of using the Internet technology for CRM compared to pure dotcom companies. There is a positive impact on the utilization of Internet technology on the CRM variables being studied. These findings may reflect a similar situation in other countries in South East Asia where the penetration rate of e-commerce is relatively low. The limitations and future directions of this research are also discussed and highlighted.

INTRODUCTION
The emergence of Internet technology, particularly the World Wide Web, as an electronic medium of commerce has brought tremendous changes in how companies compete. Companies that do not take advantage of the Internet technology is viewed as not delivering value added services to their customers, thus are at a competitive disadvantage. Obviously, the Internet technologies provided companies with tools to adapt to changing customer needs, and could be used for economic, strategic and competitive advantage. In contrast, companies that utilize the technology (at least having a web site that displays corporate and products information), are viewed as progressive and continuously striving to meet the current needs of customers. In turn, these companies have a low cost base and have begun producing competitive high quality products. This general industry trend has created tremendous cost pressures on traditional businesses. By far, both companies and consumers have acknowledged the Internet as an effective tool for disseminating information. From a marketing perspective the Internet is not just another marketing tool, but a tool that can reach far to help companies understand customers better, to provide personalized services and to retain customers. Hence, the Internet technology is imperative in managing customer relationship for e-businesses.

In order to understand the roles of the Internet in managing customer relationship, other researchers have approached this issue by examining company usage of the Internet in customer services and online communities (Adam et al., 2002; Ng et al., 1998; Poon and Swatman 1999). Boyle (2001) further reported the effect of adopting the Internet technology as a substitute of a traditional channel on buyers-sellers relationship has increased. In addition, Bradshaw and Brash (2001) found companies become more efficient in managing relationship with the used of the Internet technology. Of course, the concurrent trend driving industry change is rising customer expectations; this meant companies have to refine their ability and serve their “best” customers – and create loyal customers. As a result, previously ad hoc and fragmented techniques for dealing effectively with customers were giving way to a more methodical CRM approach: identifying, attracting and retaining the most valuable customers in order to sustain profitable growth. However, there remains a need to empirically examine the impact of implementing the Internet technology on various dimensions of relationship management—understanding customer behavior, delivering personalized services and acquiring customer loyalty.

The Objectives of the Study
The purpose of this paper is to investigate the impact of using the Internet technology on customer relationship management. Implicit within this objective is to investigate the purpose of using the Internet technology in pure dotcom and click-and-mortar companies. Past researches have examined the Internet technology usage towards relationship management in small and large firms (Dutta and Segev 1999; Hamill and Gregory 1998;
McGowan et al., 2001), in services and business-to-business firms (Berthon et al., 1999; Klein and Quelch 1997), and geographic regions (Adam et al, 2002; Arnott and Bridgewater, 2002; Dutta and Segev 1999). But none of these studies further examined the impact of the Internet technology usage in pure dotcom and click-and-mortar companies in relation to CRM. In order to achieve the objective, different types of the Internet technologies—web sites, emails, web form, and chat rooms—were tested against their usage to obtain critical information. Therefore, in this study we investigated whether these Internet technologies could assist companies in three ways:

- understanding customer behavior,
- providing personalised services, and
- acquiring customer loyalty.

More specifically, the issues of this study are: is there any relationship between the utilization of the Internet technology and managing customer relationship?, and do pure dotcom companies utilize the Internet technology more strategically than the click-and-mortar companies?

CRM: e-Marketing Strategy

In the age of digital business, Tapscott (2000) emphasizes that the wealth embedded in customer relationship management is astonishingly valuable if compared to other tangible assets. Consequently, a previous survey revealed that most CEOs are giving more attention on managing customer relationship now than ever (Galbreath 2002). As the numbers of both Internet companies and users grow rapidly, competition becomes immensely intense. Companies are facing difficulties in distinguishing themselves and in acquiring new customers. As a result, companies are continuously rethinking of new ways to generate sales and increase profits. These efforts include, among others, strategizing for the “new paradigm” of relationship marketing (Gronroos 1994; McKenna 1991; Morgan and Hunt 1994; Zineldin 2000). Relationship marketing and the emphasis on the management of customer relationships in business is not a new phenomenon (Gronroos 2001). This perspective has been discussed in the marketing literature over the last 10 to 15 years. The term relationship marketing was introduced in the service marketing by Leonard Berry in 1983. As Sheth and Parvatiyar (1995) indicated the focus of marketing in relationships is to facilitate and support the customers’ consumption and usage processes throughout the relationship, in which value for customers is created by the customers and in interactions with the supplier or service provider. In business-to-business markets and in service markets where there are limited numbers of customers and/or where continuous interactions with customers occur, a relationship approach is relatively easy to adopt. When a firm has mass markets with limited direct contact with its customers, a relationship approach is less obvious, but it may still be profitable and it is certainly possible—for example, through the development of information technology and interactive media. The Internet’s growth and new media technologies provided innovative communications solutions such as Khan and McCauley (2001) reported:

- Internet-centric technologies that integrated with existing business infrastructures (e.g., telecommunications, data communications and other connectivity) could provide cross-media business solutions and enhance customer value
- Enhanced Internet telephony and e-marketing communications that leveraged new media technologies, including IP telephony, visual communications, Internet kiosks, interactive responses and messaging portals.

Hence, customer relationship is an important determinant of marketing success since loyal customers tend to be less price sensitive and are cheaper to maintain (Galbreath 2002). Further, according to Reichheld (1996) there is a tremendous increase in profits resulting from a small increase in customer retention (Winer 2001). Hence companies who are not giving reasonable consideration on managing customer relationship shall be sidelined and risk losing huge numbers of Internet customers to their competitors. As a basis for our discussion in this study, we used the following definition of relationship marketing:

(The purpose of)… marketing is to identify and establish, maintain and enhance, and when necessary terminating relationships with customers (and other parties) so that the objectives regarding economic and other variables of all parties are met. This is achieved through a mutual exchange and fulfilment of promises (Gronroos 2001, pp26).

Internet Technology and Relationship Management

Studies on relationship marketing predominantly have been on the influence of technology on facilitating more meaningful relationship between channels (McGowan et al., 2001). The interactivity (Furash 1999; Walsh and Godfrey 2000) and the ability to capture useful information of the Internet technology have spurred interests in the feasibility of delivering personalized services.

THEORETICAL FRAMEWORK AND HYPOTHESES

The premise of this paper is that the Internet technology such as email, web sites, and chat rooms is an effective, efficient and interactive medium of obtaining useful information about customers. Processed by other technologies in
back-end systems, the information that has been captured shall be translated into knowledge on customer behavior. Consequently companies can offer personalized products to meet the individual needs of their customers. In turn, a long-term relationship—loyalty with customers—can be established which will lead to increased revenues and profits.

Galbreath (2002) illustrates that processed information is used to create better user experience such as personalization, which in turn can lead to building trust and loyalty. Based on the attributes for customer relationship given by him, this study investigated empirically the impact of utilizing the Internet technology on these three variables: understanding customer behavior, providing personalized services, and acquiring customer loyalty. Each of these variables will be discussed next.

Understanding Customer Behavior

The central tenet to customer relationship management is to understand the needs and wants of individual customers by learning and delivering according to their preferences. Customer preferences are the heart of marketing (Dolan 2001). When analyzing consumer behavior, we are typically assessing how consumers make purchase decisions (i.e., the process via which they come to value one purchase alternative over another). Understanding of consumer preferences is particularly important for product policy (for example, what features to have and whether or not to offer a new product) and pricing decision. As such, companies must exploit any source available to obtain the knowledge about customers, which in turn will enable them to maximize revenue and profits (Galbreath 2002). Further Billington (1996) discusses that learning about individuals is imperative to keeping customers. Apparently, the Internet is a cost-effective medium of information gathering (Boyle 2001; Hoffman and Novak 1996). The Internet, as a front-end application in a customer relationship management system acts as the first interaction point between companies and customers in the cyberspace, which collects useful information about customers. Arnott et al (2002) suggest that Internet interactivity increase marketers’ ability to understand customer behavior which can help them offer products or services according to what customers wants. Hence, we propose the first hypothesis:

H1: The utilization of Internet technology has a positive impact on understanding customer behavior.

Delivering Personalized Services

A marketing revolution will emerge as a result of the Internet (Arnott and Bridgewater 2002; Berthon et al., 1999; Kiani 1998; Lazer and Shaw 2000; Peattie and Peters 1997; Sandelands 1997). However, the revolution will only be realized if marketers take advantage of the potential of the Internet to deliver personalized services (Arnott and Bridgewater 2002). According to Pine (1993), in many instances companies are propelled to offer personalization in their business models (Billington 1996). The information gathered about customers via the Internet helps companies to offer unique services to individual customers (Bradshaw and Brash 2001). Therefore, a second hypothesis is proposed:

H2: The utilization of Internet technology has a positive impact on delivering personalized services.

Acquiring Customer Loyalty

Gronroos (1994) and Gummesson (1996) suggest that the importance of the Internet tools, particularly the World Wide Web in creating and enhancing business relationships should be stressed. Without an effective use of these tools relationship marketing is not an effective strategy. Hence, relationship marketing that utilizes Internet technology advances can be considered as a new paradigm where it changes the focus from previous marketing tactics aimed exclusively at acquiring new customers to relationship building in order to retain and extend existing relationships (White 2000). Therefore, we propose the third hypothesis:

H3: The utilization of Internet technology has a positive impact on acquiring customer loyalty.

METHODOLOGY

Questionnaire design

We designed the questionnaire used in this study based on the research objectives discussed. The questionnaire was divided into three main sections, each of which attempted to assess how Internet technology contributes to the three dimensions of Customer Relationship Management mentioned above. A 5-point labeled Likert type scale was used with anchor from "Strongly Agree" to "Strongly Disagree".

Sample

Primary data for this research were collected using a self-administered questionnaire designed to serve the purpose of the research objective. The questionnaires, which were distributed via email, included a cover letter specifying the objective and the rationale of the survey. Secondary data for this study came mainly from newspapers, the Internet, journals, publications, magazines, books, and databases accessed via the Internet. The survey was carried out in
approximately three months beginning in October 2001. The targeted respondents were those companies having corporate web sites and listed in the Business Directory of a Malaysian portal called www.cari.com.my. Six hundred respondents from all kinds of business activities were chosen using systematic random sampling. Of the 600, only 108 (18%) responded to the survey by the end of January 2002, out of which 92 were usable for analysis. Various industries that were well represented included financial, construction, software development and travel industries. 68.5% of the respondents are click-and-mortar companies. Surprisingly, none of these companies were involved in the “click” business operations for more than 5 years. A possible explanation could be that the popularity of the use of the web sites among Malaysian companies is a relatively recent phenomenon. Table 1 summarizes the profile of the respondents.

<table>
<thead>
<tr>
<th>Industry</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance/Banking</td>
<td>5</td>
<td>5.4</td>
</tr>
<tr>
<td>Software Development</td>
<td>16</td>
<td>17.4</td>
</tr>
<tr>
<td>Electronics</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Construction</td>
<td>3</td>
<td>3.3</td>
</tr>
<tr>
<td>Packaging</td>
<td>4</td>
<td>4.3</td>
</tr>
<tr>
<td>Travel</td>
<td>3</td>
<td>3.3</td>
</tr>
<tr>
<td>Education</td>
<td>12</td>
<td>13.0</td>
</tr>
<tr>
<td>Telecommunication</td>
<td>15</td>
<td>16.3</td>
</tr>
<tr>
<td>Automotive</td>
<td>4</td>
<td>4.3</td>
</tr>
<tr>
<td>Information Portal</td>
<td>2</td>
<td>2.2</td>
</tr>
<tr>
<td>Transportation</td>
<td>6</td>
<td>6.5</td>
</tr>
<tr>
<td>Office Supplies</td>
<td>3</td>
<td>3.3</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Internet Start up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>29</td>
<td>31.5</td>
</tr>
<tr>
<td>No</td>
<td>63</td>
<td>68.5</td>
</tr>
<tr>
<td>Years of operation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 6 months</td>
<td>11</td>
<td>11.96</td>
</tr>
<tr>
<td>6 - 12 months</td>
<td>24</td>
<td>26.1</td>
</tr>
<tr>
<td>1 - 3 years</td>
<td>39</td>
<td>42.4</td>
</tr>
<tr>
<td>3 - 5 years</td>
<td>18</td>
<td>19.6</td>
</tr>
<tr>
<td>more than 5 years</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Data Analysis

In this study, path analysis was used to test the proposed relationships. Path analysis is a regression-based technique that can be used to test the research models that assume a causal ordering (Aladwani, 2002; Duncan, 1996). Standardized betas are used to determine the strength and direction of relationships in the model. Chi-
square test for independence was used to determine the strategic intent use of the Internet between pure dotcom and click-and-mortar companies.

RESULTS

Table 2 reveals that click-and-mortar companies are more prone of using the Internet strategically than pure dotcom companies do. Overall, companies, regardless of whether their business is a pure dotcom or a click-and-mortar use the Internet primarily to boost their corporate image, thus building a brand name in the cyber market. Despite the potential of the Internet as a tool of marketing intelligence, the companies did not seem to capitalize on this advantage, or at least not yet. This indicates that the potential of the Internet as a strategic tool in managing customer relationship has not yet been realized. Surprisingly, the results show that there is a low percentage of pure dotcoms who use the Internet to gain competitive advantage. This may reflect that these pure dotcom companies merely put up web sites for informational purpose without supporting their web sites with actual online purchase facilities.

Table 2: Strategic use of the Internet

<table>
<thead>
<tr>
<th></th>
<th>Click-and-mortar</th>
<th>Pure Dotcoms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (%) n=63</td>
<td>Yes (%) n=29</td>
</tr>
<tr>
<td>Competitive advantage</td>
<td>61.7</td>
<td>23.9</td>
</tr>
<tr>
<td>Marketing intelligence</td>
<td>36.3</td>
<td>11.6</td>
</tr>
<tr>
<td>Corporate image</td>
<td>85.1</td>
<td>79.7</td>
</tr>
<tr>
<td>Cost effectiveness</td>
<td>74.5</td>
<td>50.8</td>
</tr>
<tr>
<td>2</td>
<td>23.67*</td>
<td>39.55*</td>
</tr>
<tr>
<td>2</td>
<td>31.81*</td>
<td>46.33*</td>
</tr>
</tbody>
</table>

*p < 0.05 (two-sided)

Finally, Table 3 below presents the results of the main objectives of this study. The table reveals that the use of these Internet technologies has significant influence on all the three dimensions of customer relationship management, which were investigated in this study. Apparently, the use of the Internet has the strongest direct effect on delivering personalized services (beta = 0.74, p <0.05) where 68% of the variances in the use of the Internet could be explained by personalized services. Further, the result of regressing the use of the Internet for understanding user behavior shows that there is a significant direct relationship between the use of the Internet and understanding consumer behavior (beta = 0.66, p <0.05) where 33% of the variances in the use of the Internet could be explained by understanding consumer behavior. Interestingly, customer loyalty has the lowest beta value (0.58, p<0.05), which indicates that among the three variables, the use of the Internet has the weakest effect on acquiring customer loyalty. Nevertheless, the result shows that there is a significant direct relationship between the use of the Internet and customer loyalty where 24% of the variances in the use of the Internet could be explained by acquiring customer loyalty. Hence, the results provide good support for our proposed hypotheses H1, H2 and H3.

Table 3: Internet utilization

<table>
<thead>
<tr>
<th></th>
<th>Beta-coefficient</th>
<th>Adjusted r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand Consumer Behavior</td>
<td>0.66*</td>
<td>0.329</td>
</tr>
<tr>
<td>Personalized Services</td>
<td>0.74*</td>
<td>0.684</td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td>0.58*</td>
<td>0.238</td>
</tr>
</tbody>
</table>

*p < 0.05 (two-tailed)

DISCUSSION AND CONCLUSION

The primary goal of this paper was to investigate the impact of utilizing the Internet technology on the three dimensions of customer relationship management: understanding consumer behavior, personalization and earning customer loyalty. The findings provide empirical evidence that the use of the Internet does have a significant impact on the study variables. To the best of our knowledge, so far there has been no previous empirical research about these relationships. Thus, this study makes a contribution to knowledge about the Internet technology and customer relationship management. An interesting finding from the results shows that although the Internet has a positive impact on customer loyalty, the impact can be considered as marginal. This may be due to the fact that there are some other critical factors besides technology that may contribute to acquiring customer loyalty. Such factors may include: the quality of after sales service and complaint handling. Future research is required to confirm this.

Further, this study also presents preliminary evidence to the strategic use of the Internet by click-and-mortar and pure dotcom companies. The results indicate that companies are using the Internet primarily for providing corporate information in order to build brand identity. This affirms Dutta and Segov’s (1999) argument that a majority of firms are using the Internet for providing corporate information rather than for other strategic purposes. In addition, the findings reveal that the pure dotcom companies were not using the Internet more strategically than the click-and-mortar companies. A possible explanation for this result could be due to pure dotcom companies having difficulties in garnering customers’ trust—without an established brand name prior to their existence, pure dotcom companies are at a disadvantage compared to the click-and-mortar. As such, the pure dotcom companies have lower online purchasing rate, which in turn implies that their heavy investment in the Internet technology is viewed as not strategic in nature. In brief, the finding confirmed what the literature had empirically investigated.
before, that is, online firms have not been successful in defining their online objectives and in formulating a sound strategy to achieve sustainable competitive advantage (Porter 2001; Adam et al., 2002). Another possible explanation for this result is that of majority of the pure dotcom respondents are quite new in their business operation (less than three years). Hence their decision to quickly invest heavily in the internet technology could be hindered by the uncertainty towards the market response. Since majority of dotcom companies are funded by venture capitalists, it makes more sense for these companies to take a prudent approach in investing rather than risk of not meeting investors’ expectations of showing profits at year end.

In turn, some limitations also deserve mentioning and are discussed next. The findings in this research are delimited to the companies in Malaysia, but the Internet literacy and adoption level differences between Malaysia and countries where the Internet penetration rate is higher could hinder the generalizability of the findings of this research. However, the findings could apply to many other countries with a similar situation, particularly in Asia. Further research using qualitative methods could complement this research by exploring the study variables and other variables not mentioned in depth in this study.

REFERENCES


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