Evaluating the Adoption Level of Electronic Customer Relationship Management by Telecommunication Companies

NOOR RAIHAN AB HAMID[1], FAUZIAH AHMAD[2], SAHARBUDIN NAIM TAHIR SHAH [3] and NOOR HABIBAH ARSHAD [4]

Faculty of Business Administration[1]
Tun Abdul Razak University
Kelana Jaya, Selangor.
MALAYSIA
Faculty of Information Technology and Quantitative Science[2,3,4]
MARA University of technology
Shah Alam, Selangor.
MALAYSIA
raihan@unitar.edu.my[1], fauziaha@tmsk.uitm.edu.my[2], naim@tmsk.uitm.edu.my[3],
habibah@tmsk.uitm.edu.my[4] ; http://www.unitar.edu.my[1]; http://www.uitm.edu.my[2,3,4]

Abstract: - Although Customer Relationship Management is no longer a buzz word in businesses today the application continues to play an important in enhancing firms' competitiveness. At a general level, competition in cyberspace is becoming more intense. With vast information available at the click of the mouse, consumers may easily switch at low cost, thus gaining higher bargaining power in the electronic marketplace. In turn, companies have no choice but to rethink their marketing strategies in order to retain customers. Apparently, one of the ways to gain higher market share companies have sought to use information technology to learn the needs and preferences of their customers – building log-term relationships. This study attempts to investigate the extent to which companies utilize the Internet technology to help build customer relationships.   This study aimed to assess the usage level of Electronic Customer Relationship Management (E-CRM) tools by telecommunication companies. The results indicated that companies are indifferent in their levels of usage for *informational* and *transactional* tools but are significantly different in the adoption of *relational* tools. We discuss the results and suggest some directions for future research.

Key-Words: - Electronic CRM, Internet-marketing, Telecommunication companies, Relationship marketing, Customer loyalty, Customer satisfaction, Retention.

1   Introduction

Due to increasing globalization, more companies believe in the significant value of Internet-based transactions and realize the importance of doing businesses over the Internet. 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.

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 businesses in the digital economy

The elements of interactivity and the ability to capture useful information from Internet technology have spurred interest in the feasibility of streamlining information provided, forecasting consumers' needs, understanding preferences, delivering personalized services and enabling customization. Thus the impetus of strategizing Customer Relationship Management (CRM), using Internet technology, or also known as E-CRM, as an enabling tool, escalates as firms strive to

create value to consumers in an intensified competitive market of cyberspace [1].

Clearly, as is evident in today's global marketing, the previously ad hoc and fragmented techniques for dealing effectively with consumers are giving way to a more methodical relationship marketing approach of identifying, attracting and retaining the most valuable consumers in order to sustain profitable growth, that is, CRM [2]. Motivated by economics of consumer management, firms have implemented retention programs, which are aimed at exerting influence on consumers' repeated patronage behaviours.

2.1 CRM and Internet Technology

Chen and Popovich (2003) [3] espouse that the effective management of information is critical in CRM, since information technology enables one-to-one marketing to grow faster and to deliver the promise of greater profitability from an increase in retention rate [4]. Winer (2001) [4] further notes that the construction of a consumer database or information file is the foundation for any CRM program. The historical data about consumers can be used to build consumer segmentations, which would be demographically or behaviourally based, and consumer profile. The analyses would reveal consumer patterns, behaviours and develop predictive models, that is, depending on which, firms may identify consumers who would provide the most long-term profits from those who would not [5]. Expanding on consumer identification, the 'mining' of consumer data provides knowledge of each consumer's preferences, which are then used to deliver personalized products/services, based on their needs and values. The Internet application has brought new meaning to building consumer relationships, that is, large volumes of data can be collected, processed, and analyzed efficiently which allows firms to offer personalized products/services to every consumer [6].

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 various marketing activities such as promotions, customer services, product reviews, consumers' forums, loyalty programs and so forth [7][8]. Today, companies realize the advantages of adopting the Internet technology as a substitute of a traditional channel on improving buyers-sellers relationships. In other words, in order to compete and be sustainable, companies have no choice but to, amongst others, leverage on the Internet technology in building long-term relations with customers [9][10].

Therefore, the main purpose of this research was to investigate the degree of E-CRM adoption by telecommunication companies. In this study, the use of E-CRM tools refers to the extent to which companies utilize the Internet technology to disseminate information, enable customers to carry out certain transactions and provide value-added services which in turn, leading to customers loyalty..

2 Telecommunication Companies and E-CRM

2.2 Telecommunication Service Providers in Malaysia

Among all players in the telecommunication industry, six major companies provide telecommunication services to both households and corporate users throughout Malaysia. For the purpose of confidentiality, they are named as Company A, Company B, Company C, Company D, Company E and Company F. These companies are locally owned except for Company B, whose 49% of its shares are held by a foreign telecommunication in Europe. The following paragraphs describe each company's market and its position in the industry.

Company A is the oldest mobile telecommunications company in Malaysia. Company A upgraded its service from SRT-900 to GSM900 service and quickly grew to become the largest mobile phone company in Malaysia until it was overtaken by Company C. Company C is the leading mobile communications service provider in Malaysia with a subscriber base of 10.1 million as of Quarter 1 2008. It also provides other fixed-line services mainly to the corporate users. On the other hand, Company B is the first telco in Malaysia to launch and operate a fully digital cellular network [11].

Company D is a subsidiary of a mega government-linked company which is the sole network access provider in the country. It has not only become the nation's leading Internet Services Provider (ISP) but also one of South East Asia's largest. The company holds a near monopoly for Internet service in Malaysia, largely because almost all the last mile connections in the country are owned by the parent company. Company E is one of the major players providing fixed-line, broadband, payphone and Internet service networks. It is also a government-linked company which is owned in majority by the government of Malaysia. Lastly, Company F is Malaysia's newest 3G service provider with an aspiration to enrich the lives of its subscribers through its value-added mobile telecommunication services [12].

2.2 The Growth of Internet Adoption and Internet Marketing

The Internet is fast becoming popular among Malaysians

and this is obvious with the rise in the percentage of users, that is, from 17 percent in the year 2001 to 57 percent in the year 2008, with usage levels increasing annually [13]. A report by Malaysian Science and Technology Information Centre on the Internet population for the year 2008 shows that Internet users comprised mainly those who have received tertiary education and more in the science stream, professionals or those at management levels, above average household income level, youths and those who live in an urban locality [14].

Malaysian markets have recently begun to understand the importance of E-CRM [9] . This is clearly seen in the fact that firms have given CRM top priority in their investment decisions, particularly since most of the companies are transforming from product-oriented to customer-focused organizations [15]. Companies are looking for dedicated CRM solutions to meet the challenges of meeting the dynamic needs of consumers. More recently, it was reported that there has been increasing interest in implementing E-CRM by even small-to-medium scale businesses [16][17][18]. In fact, it is reported that there is a positive trend and increasing awareness of the benefits of Internet marketing [19][20].

2.3 E-CRM features on companies' Web sites

Ab Hamid and McGrath (2005)[21] reported 12 dimensions of E-CRM program namely: information quality, ease of navigation, customer service quality, fulfillment, integrated marketing channels, online community, rewards, personalization level, site security , value-added services, perceived trust and price attractiveness. The following paragraph describes Ab Hamid and McGrath's [21] dimensions of ECRM.

a) Information quality

Based on information systems literature, information quality is a reflection of relevancy, recency, sufficiency, consistency and understandability [22]. Since a consumer's decision making efficiency improves when searching is simplified, information presented on the sites should be easy to understand and up-to-date.

b) Ease of navigation

In brief, ease of navigation includes both good organization (*format*) of the content layout as well as simple-to-use navigation (*ease of use*). Sites that are easy to navigate offer quick access to information needed with minimized effort [23].

c) Customer service quality

Consumers constantly demand for careful, continuous, useful communication with company representatives. Since these attributes are frequently identified as salient dimensions in store selection behaviour, company representatives should have the knowledge and basic technology skills to answer online questions. They

should understand consumer-specific needs, have the capacity to handle problems that arise and address consumer complaints in a friendly manner [24].

d) Fulfillment

The order fulfillment process is concerned with delivering the right product at the right time and responding to consumer inquiries.

e) Integrated marketing channels

For click-and-mortar companies, integration of the virtual and physical operations is crucial to ensure continuous consumer relationships in both channels. This is because consumers want to be able to deal with companies as single entities [10]. They also expect to get the same consumer service level via all channels.

f) Online community

Consumers can exchange information with each other and obtain online help from their online members when a product related problem arises. These experiences create stickiness - the extent to which a company is able to attract consumers to use a site relatively longer and return, and consumers are more likely to revisit the site [25].

g) Rewards

Reward is another attribute deemed important to attracting consumers to repatronize. Reward programs allow consumers to collect points for every purchase from or visit to a site, in exchange for free gifts, coupons or cash rebates. The program also provides greater membership privileges for returning consumers [4].

h) Personalization level

Personalization attracts consumers to come back repetitively since it turns consumers into product 'makers' rather than simply product 'takers' [4], Thus, consumers are empowered in ways that they can choose their own preferred design, colour, product updates and other attributes that go well with their tastes.

i) Site security

Consumers are concerned about online payment security, reliability and privacy policy since they have to provide their personal details and credit card information in the ordering process. This concern increases the perception of risk and simultaneously reduces the level of trust in an online company, which in turn adversely affects satisfaction. Hence, online companies that clearly communicate to consumers on how their private and transaction data are secured are more likely to benefit from increased consumer satisfaction [26].

j) Value-added services

Consumers will feel empowered and in control when they are able to easily find product/service, learn more about it and quickly make a purchase decision. For example, a site may provide features such as shopping carts, one-click ordering and order tracking to provide

superior convenience and higher levels of consumer control [9].

k)   Perceived trust

Since online transactions are associated with perceived risk; trust and confidence in the firm seem imperative [27] in a consumer's decision making. Assurance of security in using the Web can be done by implementing security features such as digital certificates, secure servers and third party trusting agencies.

l)   Price attractiveness

Online consumers can easily compare prices across e-tailers (retailers who use the Internet as their only marketing channel [28]. Consequently, if a price paid is higher than what is found in other e-tailers for a similar product, the consumer is significantly less satisfied (Anderson & Srinivasan 2003).

Further, Arnott and Bridgewater (2002) [29] categorized marketing features on the Internet into three types:

- Informational feature, refers to one-way, informational marketing activities, for example publication of product information
- Transactional feature, refers to two-way activities involving user-company interactions, for example tracking order status and request for catalogue
- Relational features refers to activities which intrigue customers to return, in other words these activities create site loyalty such as rewards, superior customer service quality, personalization, loyalty programmes and building online community.

In order to be able to compete in the global and borderless market of digital business, Malaysian companies have little option, but to maximize the potential of Internet technology. It appears to be no longer a choice, but a necessity. However, Malaysian companies seem to be lagging in utilizing the potential of the Internet in forging relationships with consumers. Primarily, Malaysian companies are prone to use the Internet merely for informational purposes rather than transactions [1]. Most Web sites for example, display information on corporate profiles, product listings and contacts, but with no interactive features, such as shopping, placing orders, online payment, tracking orders, and online technical support and so forth. As such, consumers visit company Web sites only to obtain information and may have to use other conventional channels, such as the telephone, fax or walk-in to purchase a product. This will result in higher operation costs for companies that run businesses by conventional means, while their competitors world-wide may be enjoying cost savings, speedy markets, better customer services and increases in repeat consumers, as a result of maximizing the potential of Internet technology. Hence, we offer the following propositions:

P1: Telecommunication companies do not differ in the usage level of E-CRM features.

P1a: Telecommunication companies do not differ in the usage level of informational features.

P1b: Telecommunication companies do not differ in the usage level of transactional features.

P1c: Telecommunication companies do not differ in the usage level of relational features.

Relevant to TAM is the consumers' attitude towards a particular adoption and extending on this notion, is the intention to patronize a site. Attitude is an outcome of cognitive evaluation, which is based on users' expectations and experience [30]. Thus, *level of experience* with the Internet activities will have an impact on perceived usefulness, which in turn influences their adoption behavior.

It is believed that a well managed CRM may lead to increased profits and that profitability correlates to choosing the right consumers [31]. That is, better understanding of users' expectations and perceived value is indeed crucial. In essence, as users assimilate a new technology, they tend to have a higher level of expectations of that particular technology [32]. For example, as users are more experienced in using the Internet as a promotional tool, the process becomes much easier the next time. As a result, promotional tool becomes common among users and they tend to look for other new added-value services from the Internet. In other words, the higher the experience level the more sophisticated the utilization of the Internet will be. The first hypothesis is proposed:

P2:   There is no significant difference in the use of E-CRM tools by company's experience in Internet-marketing.

P2a: There is no significant difference in the use of informational tools by company's experience in Internet-marketing.

P2b: There is no significant difference in the use of transactional tools by company's experience in Internet-marketing.

P2c: There is no significant difference in the use of relational tools by company's experience in Internet-marketing.

3   Methods

3.1 Sampling and Survey Methods

The aim of this research was to assess the levels of E-CRM adoption by telecommunication service providers in Malaysia. As mentioned earlier in Section 2.1 there

are six major players in this sector throughout Malaysia and data were collected from all of these companies.

To meet the research objectives, researchers tested the companies Web sites posing as potential customers. A standard process was set and adhered to as to find out the types of features available on each company's retail Web sites. A total of 44 E-CRM features were listed as the operationalized items under study. The availability of these features on each telecommunication companies Web sites were noted and checked against the list. For example, items such as product information, FAQ, email links, locate store, chat, bulletin and so forth were checked "yes" or "no" to denote their existence or otherwise on the sites. In some instances, researchers posed as prospective customers, for example to assess the promptness of customer service. In such case, researchers posted emails to customer service and observed the promptness of reply - whether the reply was automated and standard, and whether it was personalized.

Another source of primary data came from personal interviews with Marketing Managers of major telecommunication companies in Malaysia. The purpose of the interviews was to find out more information and to better understand each firm marketing strategy and E-CRM initiatives. For example, researchers, to a certain extent wish to understand the background of each telecommunication company: culture, climate and business environment. By doing so, the information obtained from these personal interviews helped to better explain the output from the Web sites evaluation and experiment conducted in the earlier process.

A semi structured interview form was used as the interview instrument and the opinion survey was completed in approximately four weeks. Insights from telecommunication companies' Marketing are deemed appropriate for this study as anyone who has an association with the Internet marketing effort is a potential source of rich information [33]. In brief, the representatives shared their opinions and experience on the Internet capabilities as a new marketing channel and consumer responses towards Internet marketing programs.

3.2 Operationalization items

This study adapts the 12 salient dimensions of E-CRM proposed by Ab Hamid & McGrath (2005) [21] as well as the 42 features of E-CRM as purported by Feinberg and Kadam (2002) [8]. In addition, Arnott and Bridgewater (2002) [29] categories of E-CRM activities are adapted as illustrated in Table 1.

Table 1: Theories from Past Studies on E-CRM Tools and Levels

Dimension	Items	Level

(Ab Hamid & McGrath, 2005)	(adapted from Feinberg & Kadam, 2002)	(Arnott & Bridgewater, 2002)
Customer Service Quality	- Purchase terms and condition - Product preview - VoIP - Request catalogue - 1-800 number - Call-back button - Complaining ability - Customer service area - Problem solving	Transactional & Relational
Site security	- Privacy policy	Relational
Rewards	- Member benefits - Gift certificate - Affinity program	Relational
Integrated channel	- Find store	Informational
Information quality	- Company profile - Product information - Info. for first time users - Contact email - Fax number - Postal address - FAQ - Local search	Informational
Personalization	- Site customizing - pURL	Relational
Value-added services	- Order within 3 clicks - Quick order ability - Track order status - On-sale area - Your account info. - Cross sell/up sell/add-on sale	Relational
Online community	- Chat - Bulletin board - Blog	Relational
Ease of navigation	- Site tour - External links - Site map	Informational
Perceived trust	- Third party trust seal	Relational
Price	- Price list - Discounts	Transactional
Emotional benefits	- Entertainment	Relational
Order fulfillment	- Online purchasing - Check out	Transactional

Variables listed in Table 1 above were further grouped into three major levels of E-CRM used by this study to assess the levels of E-CRM adoption by telecommunication service providers as shown in Table 2.

Table 2: Operationalization of Variables

Item	E-CRM Level
Product information	
Site map	
E-mail	
About company	
Local search	

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FAQ Info first time users Mailing list Site tour Find stores Fax number Postal address	**Informational Tools**
Product highlights Preview product Purchase condition Cross sell/upsell/addon sale Online purchasing VoIP Track order status On-sale area Quick order ability Order within 3 clicks Request catalog External links Check out Your account info 1-300	**Transactional Tools**
Complaining ability Privacy policy Customer service area Problem solving Product customization Membership Blog pURL Member benefits Domain fault repair Call-back button Gift certificate Affinity program Chat Bulletin board Site customizing Entertainment	**Relational Tools**

4   Results

4.1   Respondent Profile

As shown in Table 3 all six telecommunication companies are large companies, that is based on the number employees of more than 250. Company C is the largest telecommunication company judging from the number of employees (3000), followed by Company B and Company D.

The results indicate that in general all companies have started using the Internet for more than 11 years, except for Company F which is reported to have begun using the Internet only three years ago. This is due to its relatively new presence in the retail segment of the market.

Table 3: Respondent Profile

Demographic Item	Company Name (Brand)	Qty.
Years in operation	Company A	21
	Company B	14
	Company C	16
	Company D	14
	Company E	13
	Company F	3
No. of Employees	Company A	700
	Company B	1300
	Company C	3000
	Company D	1200
	Company E	1000
	Company F	700
Years using the Internet	Company A	12
	Company B	12
	Company C	11
	Company D	12
	Company E	11
	Company F	3

4.2 Tests of hypotheses
4.2.1 Usage Level of E-CRM Tools

Next, we performed the cross-tabulation analysis to test the hypotheses of this study. The results depict that telecommunication companies do not differ in their usage of *informational* and *transactional* tools ($p= 0.23$ and $p= 0.19$ respectively). Hence, P1 and P2 can be accepted. However, there is a significant difference in the levels of usage of *relational* tools, $p= 0.02$. This shows that not all telecommunication companies are at the same level of implementation for features that can enhance relationships with customers, such as online community building, rewards and incentives and personalized services. Therefore, P3 is rejected. The summary of the results is shown in Table 4.

Company	Information	Transaction	Relation
Company A	Yes:83%	Yes: 93%	Yes: 59%
Company B	Yes:100%	Yes: 100%	Yes: 82%
Company C	Yes:100%	Yes: 100%	Yes: 76%
Company D	Yes:100%	Yes: 93%	Yes: 71%
Company E	Yes:58%	Yes: 67%	Yes: 12%
Company F	Yes:93%	Yes: 83%	Yes: 59%
Chi-square value	$\chi^2 = 29.55$; $p= 0.23$	$\chi^2 = 37.02$; $p= 0.19$	$\chi^2 = 41.82$; **$p= 0.02$**

Table 4: Summary of Results of Proposition 1

4.2.1.1 Descriptive Results
4.2.1.1.1 Usage Level of Informational Tools
A closer look at the descirptive results showed that all the companies Web sites (100%) have information on *company's profile, products/services, FAQ, postal address* and *fax number*, and *external links*. These

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information are deemed essential as the Web site would at least provide sufficient and updated information on who the company is and what each firm can offer. In addition, some basic answers to common questions found in FAQ can assist prospective customers to learn more about the service, purchase or subscription terms and condition and so on. Elements of channel integration are reflected in the alternative "offline" points of contact through fax and/or postal mail. As well, all companies offer external links which enrich customers customer surfing experience where it links customers to supplementary information should customers require such service.

However, the companies vary in the use of site tour (50%), local search and mailing list (67% respectively) and information for first time user and email contact (83% respectively). Indeed, site tour may be useful to new visitors to a Web site and providig a site tour would increase the ease of site navigation to a certain extent. Local search function is also one of the features that would assist users navigation, if it is made available. On the other hand, mailing list feature would assist firms to communicate with their customers more efficiently – by just one click, information can be disseminated to all customers. The detailed results are depicted in Figure 1 below.

Figure 1: Descriptive results for Informational Tools
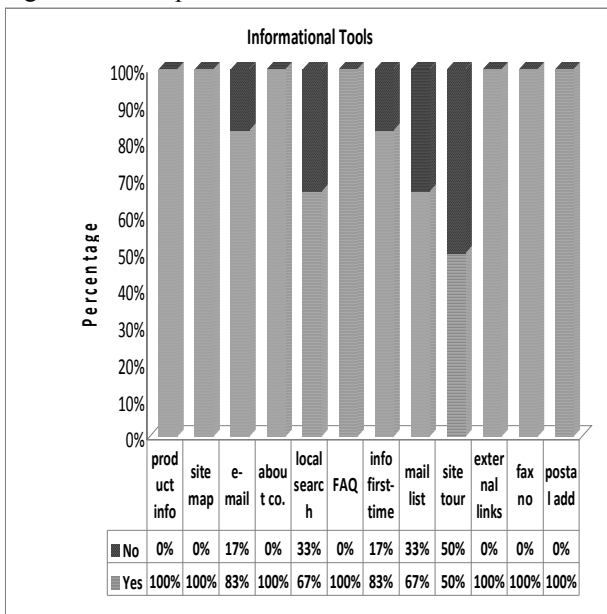
4.2.1.1.2 Usage Level of Transactional Tools
The telecommunication companies are indifferent in the use of some transactional tools (100%) : *1-300 number, product highlights, request for catalogue and on-sale area*. In other words, all respondents regard these "inviting" features as highly important and thus make

them available. Indeed, features such as *request for catalogue and on-sale area* promotes further interests especially to visitors who are "shopping around" and whom may be good prospects for future purchase or returning visitors.

However, features that involved actual purchase or subscription activities, such as *check out, online purchasing, purchase conditions and quick order ability* scored lower – 83%. Evidently, transactional tools that are regarded as value-adding [17]: *order within 3 clicks, order tracking facility, VoIP, and cross-sell/up-sell* are less adopted by Malaysian telecommunication companies where four out of six companies have adopted these features (67%). The least score is reported by channel integration feature – *find store* (50%) which enables online consumers to locate firms physical outlets to perform offline transactions. Figure 2 shows the results in detail.

Figure 2: Descriptive results for Transactional Tools
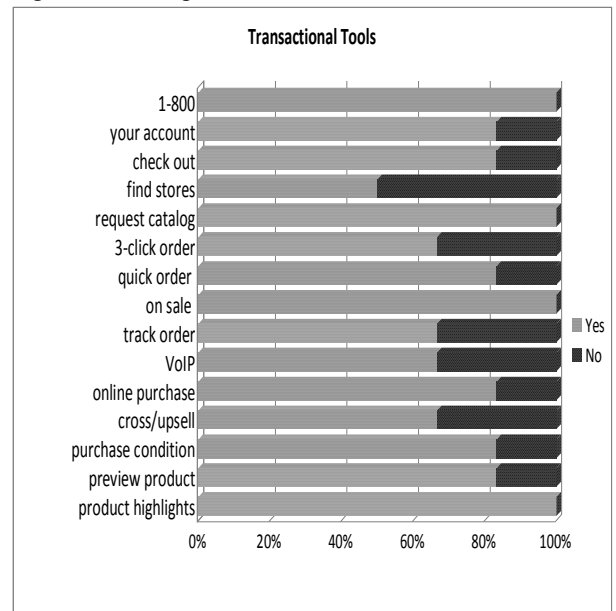
4.2.1.1.3 Usage Level of Relational Tools
Among 17 *Relational* features, only two features were found on all telecommunication companies' retail sites: *complaining ability and privacy policy* (100%). This indicates that all companies are highly concerned with raising consumers' confidence level and securing visitors trust through clear statements of treatment to visitors' personal information.

At the same time, providing facilities for lodging complaints are equally important as consumers are well aware of risks associated with transactions over the cyberspace and seek higher assurance of quality after-sales support. The awareness of customer service quality imperative is reflected by high adoption rate of other customer service related features such as, *customer*

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service area, problem-solving, and call-back button where each item scored 83%.

In addition, telecommunication companies tend to a give reasonable attention to reward component which is shown by high scores for *membership benefits and gift certificate* (83%). Certainly, as is common with consumers' behavior from Asia region reward attractiveness plays an important role to entice repeat visits (Ab Hamid & McGrath, 2005). This indicates that Malaysian telecommunication companies are relatively responsive to online consumers' needs as to offer services which may result in higher retention rate.

Online community feature such as *bulletin board* (50%), *chat* (67%) and *blog* (50%) are not widely adopted. Meanwhile, the findings also reported lower adoption level for personalization component: *product customizing and site customizing* (33%). The results indicate that telecommunication companies are less aggressive in utilizing online community tool and are less personalized in their offerings. The detailed results are depicted in Figure 3 below.

Figure 3: Descriptive results for Relational Tools
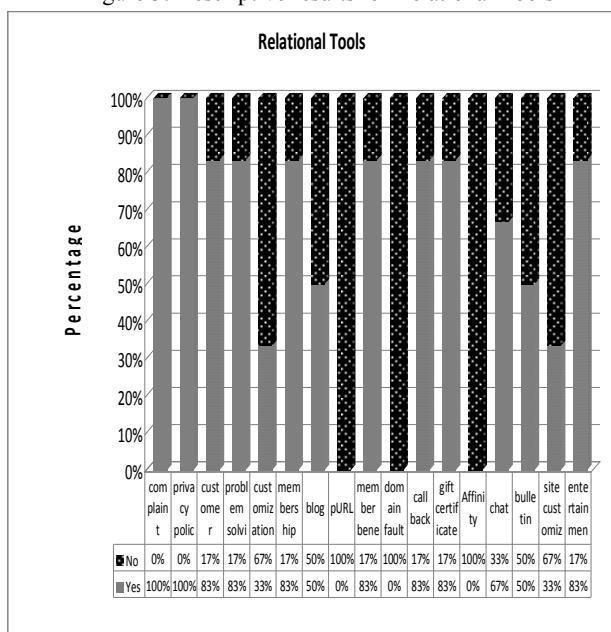
4.2.2 The Use of E-CRM Tools and Company's Experience Level

First, we tested P1a, that is to assess if there is significant difference in the use of informational tools based on levels of experience using the Internet as a marketing channel. From the cross-tabulation analysis it is shown that there is no significant different (p=0.15) in the usage of informational tool by the respondents. In other words, all telecommunication companies in Malaysia utilize the Internet to disseminate corporate profile, display product information and so forth at about the same level. Hence. P1a can be accepted.

Table 4.2 presents the results of the first test.

Table 4.2 Results of Cross-Tabulation Analysis for Informational Tools and Experience in Internet- marketing

No. of years in Internet-marketing	Percentage
More than 10 years	Yes: 88%
Less than 10 years	Yes: 83%
Chi-square value, $\chi^2 = 36.78$; p= 0.15	

Next, we tested our proposition that there is no significant difference in the use of transactional tools based on levels of experience using the Internet as a marketing channel. The cross-tabulation analysis showed that there is no significant different (p=0.11) in the usage of transactional tool by all telecommunication companies in Malaysia. This indicate that telecommunication firms regardless of their levels of experience in Internet- marketing adoption utilize the Internet to sell services, allow online bill payments facilities and so forth at about the same level. Hence. P1b is accepted. Table 4.3 presents the results of the second sub-proposition.

Table 4.3 Results of Cross-Tabulation Analysis for Transactional Tools and Experience in Internet- marketing

No. of years in Internet-marketing	Percentage
More than 10 years	Yes: 91%
Less than 10 years	Yes: 73%
Chi-square value, $\chi^2 = 51.08$; p= 0.11	

Finally, we performed the third test to find out if there is a significant difference in the use of relational tools based on levels of experience using the Internet as a marketing channel. The results showed that there is no significant different (p=0.08) in the usage of relational tool by all study respondents. In other words, telecommunication companies in Malaysia, regardless of their levels of experience in Internet- marketing adoption are using the Internet to build long-term relationship such as providing online community, rewards and personalised services at about the same level. Hence. P1c can be accepted. Table 4.4 presents the results of the third sub-proposition.

Table 4.4 Results of Cross-Tabulation Analysis for Relational Tools and Experience in Internet- marketing

No. of years in Internet-marketing	Percentage
More than 10 years	Yes: 60%
Less than 10 years	Yes: 59%

Chi-square value, χ^2 = 53.12; p= 0.08

5 Implications to Managers

Our findings indicate that companies are at the same level of adoption for *informational* and *transactional* tools. From the detailed analysis it is safe to conclude that all telecommunication companies are using the Internet to disseminate corporate information, promotions, as well as the latest product and pricing list to their customers at a high level.

However, there seems to be differences in practice among telecommunication companies for *relational* tools. Interestingly, despite its "new" presence in the marketplace Company F seems to be more aggressive in its E-CRM initiatives. The company reported a relatively high level (59%) in the use of *relational* tools which tend to be more value-adding features to customers. Features such as reward scheme, "create your account", and online chat may increase consumers' perceived value thus affording higher rate of return and loyalty. Indeed, companies who emerge in the new and digital economy have to be highly dynamic to take advantage of any forms of communication technologies that are available. In fact, "newer" companies who are smaller in size and may possess a supportive culture tend to be more responsive to market needs and are able to quickly recognize the potential and adopt "new" means of communication for sales and marketing activities.

Ironically, Company E has reported a staggering lowest adoption level of *relational* tools (12%). Comparatively, Company A which is the "oldest" of all and have more years of experience on the Internet (as opposed to Company F) has reported only moderate use of *relational* tools (59%). Certainly, established companies may find difficulties to quickly adapt and adopt new technologies or means of communication since these moves often require changes at many aspects both at corporate and business levels. Unless and until the entire organization is willing to adapt to changes in the current work processes and learn to do things differently, then any moves towards using new technology such as E-CRM initiatives would lag.

Overall, Company B is aggressively pursuing an E-CRM strategy which is evident from its highest adoption percentage for all three levels: *informational, transactional* and *relational*. Based on the report, Company C falls in second place followed by Company D, Company F, Company A and Company E. The data obtained during interview and observation sessions at Company B point to the fact that the company embraces dynamic corporate culture with high technology literacy, flatter structure, versatile and a condusive work environment allowing for new initiatives to spring up quickly.

In order to be competitive, firms should strive for adding value in their offerings. Providing facilities such as tracking orders, keeping and tracking records of consumers' history of purchases or activities, allowing some degree of customization, and understanding consumers' specific needs and preferences enhance consumers' perceived value thus increases loyalty.

This study is subject to several limitations. Firstly, the respondents from this research were major telecommunication companies in Malaysia. Further research is needed to generalize the results across different industries in Malaysia. The results of this study may be applied to other countries with similar culture and business environment. Therefore, before conclusions and implications can be made to other countries with different culture and business environment (such as the Western region), further research should be conducted.

In this study, respondents came from telecommunication companies. More in depth studies could be carried out to investigate the use of E-CRM in industry specific environment such as financial sector, entertainment, health, government, and education sector since E-CRM may imply different meanings from one industry to another.

This study is concerned with E-CRM program and its effect on consumer retention. Although companies are well advised to adopt an E-CRM strategy its implementation may vary depending on the business scale. For example, small businesses may not be able to fully utilize the potential of Internet technology due to constraints in resources. Hence, E-CRM implementation in various business scenario merits further investigation.

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