

International Journal of Business and Management Invention
ISSN (Online): 2319 – 8028, ISSN (Print): 2319 – 801X
www.ijbmi.org Volume 2 Issue 9 | September. 2013 | PP.121-131

Rural Consumers' Adoption of CRM in a Developing Country Context

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ABSTRACT: *This paper illustrates how understanding consumer preferences through market research may enhance CRM adoption among the rural customers of a developing country like Bangladesh. It presents the case of Community Information Centre (CIC) established by Grameenphone, a company owned by Telenor, the Norwegian telecommunications company and Grameen Bank, the Nobel prize winning micro credit organisation in the rural settings of Bangladesh. The paper shows that CIC is an innovative way of building and maintaining customer relationships and technological interface with the financially constrained consumers in a poor developing economy like Bangladesh.*

KEYWORDS: *CRM, Technology innovation and entrepreneurship, International marketing.*

METHODOLOGY: *Empirical study; interviewing.*

I. INTRODUCTION

Customer Relationship Management (CRM) is an enterprise-wide business strategy to cut down on cost and boost profitability by solidifying customer loyalty. Moreover, CRM gets together information from all data sources within a business (and if possible, from outside the business) to provide one and holistic view of each customer in real time. This allows customer-facing-employees in such areas as customer support, sales, and marketing to formulate fast informed decisions from cross-selling and up selling prospects to target marketing strategies and competitive positioning tactics. Effective customer relationship management technology needs much more than simply tracking buying behaviour. In many cases, CRM implementations have faced serious difficulties or even complete malfunctions for taking a narrow approach (Davids, 1999; Raman and Pashupati, 2004). These ineffective approaches were incapable of producing profitable growth and in some cases were even damaging to existing customer relationships (Reinartz et al., 2004; Rigby et al, 2002). An effective CRM approach is 'personal', shows an awareness of customers' preferences and ensures that these preferences are mirrored in how employees contact their customers, each and every time. The best way to improve CRM adoption is finding more details about their customers/clients using best marketing research. Marketing research helps to implement the CRM technology amongst different consumer bases.

This paper looks at the developing country perspective and its rural consumer base in Bangladesh, a country in Southeast Asia. It illustrates the case of Grameenphone, a local name of the Norwegian telecommunications company, Telenor, there. Grameen Bank, a Nobel Prize winning social enterprise, being a partner of Telenor (Grameenphone) in Bangladesh, gives it an interesting social angle. How Grameenphone builds relationships with rural consumers there with the use of Community Information Centre (CIC) is of particular interest in the paper. It is novel and unique and it has replicability potential across developing countries in Asia and Africa, wherever low level of infrastructure in rural areas necessitate such type 'socially good' presence in the form of community information centres. They are good advertisements for corporate social responsibility for the organisations, but at the same time they are a different customised form of CRM with a good business model that meets profit and non-profit motives simultaneously. CRM being essentially technology driven, there is an implication of CRM technology whenever we use the term CRM.

II. LITERATURE REVIEW

Several studies have focused on technology as a dimension of CRM conceptualisation (Sin et al., 2005), the effect of CRM technology adoption on sales agent performance (Avlonitis & Panagopoulos, 2005), and diffusion of CRM in organisations (Wu & Wu, 2005). Moreover, the main purpose of CRM is to retain current customers through escalating their loyalty and to select new customers ensuring higher profitability (Hansotia 2002). In addition, CRM systems are popular with the growth of information technology applications in organisations. Successfully implemented CRM systems assist organisations to manage customer information more effectively, and increase customer satisfaction, customer loyalty and customer profitability through meaningful communication with customers (Winer, 2001). Moreover, the integration of CRM within the firm refers to the incorporation and synthesis with business processes and IT systems. The integration of CRM has

been identified by IT researchers as a significant factor in the successful adoption of CRM within a firm (Ling & Yen, 2001). Moreover, there is significant dissimilarity between a standalone customer contact application for individual sales people and an enterprisewide centralised customer database accessible by all authorised users. The integration aspect replicates how well the CRM is connected to other aspects of the business to offer a seamless customer experience (Richard et al, 2007).

CRM is critically enabled by IT, yet few research papers are available that focus on the level of technology adoption to support CRM from the strategic marketing perspective (Reinartz et al, 2004). However, amongst the few research work published, a conceptual model developed by Richard et al (2007) depicts both market and technology orientation impacts on the level of CRM technology adoption, and subsequent effects on relationship strength and performance, which is very useful. This conceptualisation is also motivated by the challenge put forward by Reinartz et al (2004) for CRM research that identifies the type of CRM activities that companies can employ and how this relates to performance. Their model proposes that firm orientation, consisting of market orientation (MO) and technology orientation (TO), positively affects a firm's decision to adopt CRM technology, not only through management commitment and resources, but more specifically through the ability to adopt and leverage technology appropriately (i.e., what to adopt and how to integrate it) (Karimi et al, 2001). Furthermore, the degree of CRM technology adopted positively affects relationship strength, measured through trust, commitment and communications quality, and relationship performance, measured through customer satisfaction, loyalty and retention.

Moreover, MO has been shown to influence customer satisfaction positively (Singh and Ranchod, 2004) which in turn leads to customer retention and increased profitability (Storbacka, Strandvik and Gr nroos, 1994). The most common MO characteristic identified from the research is the degree of focus on the customer (Gray, Matear, Boshoff and Matheson, 1998; Helfert, Ritter and Walter, 2002). Furthermore, underlying the growing acceptance and adoption of CRM technology in business are the concepts of marketing orientation (MO) and relationship marketing (RM) (Grönroos, 1995; Kohli, Jaworski and Kumar, 1993). A few studies have been conducted to investigate the magnitude and functionality of CRM adopted by a firm and the impact on relationship development, strength and performance (Dishaw & Strong, 1999; Venkatesh et al., 2003). Interestingly, Aberdeen Research predicted during 2002 that over \$13 billion was spent worldwide on CRM related technologies and services (Thompson, 2003). Despite the huge growth in the acquisition of CRM systems, critics point to the high malfunction rate of CRM implementations. CSO Insights has estimated in an international survey of 1,337 companies who have put into practice CRM systems to support their sales force that only 25 percent reported significant improvements in performance (Dickie, 2005).

Within the CRM domain, there is a lack of research that evaluates the success of CRM systems in actual use. Moreover, Raman et al (2006) suggested that finding more details about their client using marketing research techniques to improve CRM is the best way. This paper considers the internet modem business of Grameenphone as a case study indicating that effective CRM involves understanding customers' preferences in their context (rural, for example) and ensuring that these preferences are reflected in how employees communicate with customers every time, again in their context. CRM is being adopted increasingly in developing markets by multinational companies like Telenor who have the majority share in Grameenphone in Bangladesh. Telecom sector in developing countries like Bangladesh is very promising. According to IE Market research Corporation (2011), mobile subscriber connections are going to be 92 million in Bangladesh by 2015. At present, there are six mobile phone operators there which makes the market more competitive for the Telecom industry players. Among these six, five are providing GSM and one uses CDMA. The operator-wide average subscriber growth Year Over Year (YoY) was 32.0% in 4th Quarter of 2010, up from 18.6% in 4th Quarter of 2009. Banglalink (Orascom Telecom) saw its subscriber growth (YoY) rise from 34.3% in 4th Quarter of 2009 to 40.7% in 4th Quarter of 2010. Grameenphone's subscriber growth rose from 10.8% in 4th Quarter of 2009 to 25.8% in 4th Quarter of 2010. On the other hand, Robi Axiata's (another competitor) subscriber growth (YoY) was 42.4% in 4th Quarter of 2010, slightly down from 43.3% in 4th Quarter of 2009 (IE Market Research Corp., 2011).

Grameenphone is one of the leading mobile phone operators in Bangladesh. It is a joint venture organisation between Grameen Telecom Corporation (34.2%), a nonprofit sister concern of the internationally acclaimed micro-credit pioneer Grameen Bank, and Telenor (55.8%), the leading telecommunications service provider in Norway with mobile phone operations in 12 other countries. The other 10% shares belong to general retail and institutional investors (Grameenphone Website, 2010).

Grameenphone is used to considering the cultural and social aspects of a developing country like Bangladesh, partly because of multinational business experience and practices, and partly because of its

grassroots level understanding of consumers by its partner – Grameen Bank. With this unique partnership, it gained successful entry in the telecom business in Bangladesh. For example, with a combination of micro loans, a savvy entity structure, and superior word of-mouth, Bangladesh's Grameen Bank has managed to bring cell phone service to estimated 42,000 rural villages through its Village Phone Programme (VPP). The strategy in this case was to make micro loans to local entrepreneurs who set up cell phone "exchanges" – basically pay phone locations – giving access at low rates to people who had no access to telecom previously (Grameenphone Website, 2010).

However, Grameenphone realised that providing cell phone service only to rural poor is not enough to sustain in the competitive market in a social business model. Soon, it got into another market – that of internet modem. It is widely accepted that information and communication technologies can be used to remove a wide range of obstructions for economic and social progress in the developing world. This is particularly true of the Internet. As a universal platform for sharing and accessing information, the Internet offers unique opportunities to meet the informational needs of businesses, and communities in a developing country like Bangladesh. Grameenphone did all these keeping in mind that a combination of poor telecommunications infrastructure, population density, inadequate regulation, and high cost technologies make Internet connectivity in many parts of Bangladesh a complex and costly proposition. It is good news that Grameenphone developed wireless Internet technology which is raising new hopes for sustainable Internet diffusion in the developing world. These technologies allow sharp reductions in Internet deployment costs. More importantly, Grameenphone made possible an infrastructure improvement model based on small-scale investments, community-shared resources, and user experimentation (Grameenphone Website, 2010). After the development of wireless Internet technology, Grameenphone assures to enlighten the lives of 20 million people by giving easier and faster access to information than before. Grameenphone so far brought Internet to people in the following ways: 1) Mobile screen browsing, 2) Desktop and Laptop browsing, and 3) Community Information Centre - CIC (Grameenphone Website, 2010).

Grameenphone is looking to spread out further into the digital world by expanding its Internet platforms and developing more Internet related products, thus becoming the biggest Internet Service Provider of Bangladesh (Grameenphone Website, 2010). For this, Grameenphone brought a unique Plug-Play device called Internet Modem to give a complete Internet solution. There is no doubt that Wireless Internet Modem has already added an extra value for Grameenphone (Grameenphone Website, 2010). Currently, Grameenphone leads the market with nearly 20 million subscribers in Bangladesh. Moreover, it tries to give the best customer services to retain the existing customers and attract potential and new customers. Increasing sales is not only the main thing to maximise the profit of the company today - retaining the existing customer is also important. Moreover, attracting the new customer is more costly than retaining the present customer. Therefore, Grameenphone emphasises more on its customer service and builds up a good relation with the customer and in many cases they are successful in retaining their existing customers and attract new customers by using their own Customer Relationship strategy. Moreover, Grameenphone has their call centre under their customer service division, and they manage 70% of their customer retention and new customers operation from there. Customers dial to call centres to know about the product attributes, different value added services, which are provided by the operator, or whether they face any problem regarding the use of their connection (Grameenphone Website, 2010). From the call centres, the outbound calls generate new customer for the attraction of different offers. Grameenphone uses CRM software like Seibel communication 8.1 (Oracle based CRM Software), which gives the service as efficiently as possible to the customer (Grameenphone Website, 2010). The information above was to give an overview of Grameenphone, its operations and customer service in general. Now, we focus on the rural consumers focused community information centre related details that are of particular interest in this study.

III. GRAMEENPHONE COMMUNITY INFORMATION CENTRE (CIC)

Grameenphone Community Information Centre (CIC) is an organisation that was formed as a means of maintaining the relationship with customers in the rural areas. The objective of a CIC is to function as nodal points for information exchange, communication, entertainment, citizen-centric services and learning. The CIC fulfills the objectives by the establishment of IT infrastructure, IT awareness amongst the local populace. The CIC makes all possible efforts to put the remote areas of the country IT enabled. The establishment of CIC helps the people in the rural areas to advance in tandem with the rest of the country. CIC is an internet service providing project. Grameenphone is providing this service by using their EDGE GPRS technology. The CICs consist of one or two computers, printers, digital camera, web camera etc.

There are 525 CICs in Bangladesh located in different villages and underprivileged areas (Grameenphone CIC Website, 2011). Grameenphone works with different organisations, in various categories, as strategic partners. The rollout partners of Grameenphone in this initiative are Grameen Telecom, Society for Economic and Basic Advancement (SEBA), Eagle nationwide, Kalikapur Daridro Kallan Sangsta (KDKS), Socio-Economic Development Association (SEDA), Karmakutir, Goriber Asroy, and SSTD Communication. All of these organisations are Non-Governmental Developmental organisations working with the rural populace for the development of the individuals and the community (Grameenphone CIC Website, 2011).

Effectiveness of CIC largely depends on how the concept is introduced to the people. This might pose a great challenge because most of the rural people might not have received even primary education. Getting used to and availing IT services is a completely new phenomenon to them. Grameenphone has some strategies which helps them to introduce IT services in the rural areas. While choosing partner entrepreneurs, they select those under the age of 40 with primary knowledge of computers and internet. They prefer persons who have credibility in the community so that they can influence people to get acquainted with IT services. After the selection process, Grameenphone provides training on preliminary knowledge of relevant hardware and software. This training is provided free of cost and is essential for most of the entrepreneurs to make a head-start (Grameenphone CIC Website, 2011).

Moreover, Grameenphone arranges an inauguration ceremony at the place where CICs are situated. There the local people are informed about the services that are available and the opportunities and benefits. After the inauguration, promotional and awareness activities are left to the devices of the respective entrepreneurs. The initial communication process to raise awareness regarding community information centre is followed up by conducting separate training programmes or workshops with different workgroups like peasants, students, educated youth, women etc. In these workshops people of different professions are informed about the potential benefits they can reap out of it. Local students from colleges and high schools are trained to use computers and internet so that they can use the services independently.

In addition, initial technical know-how is a very important factor for the success of the CIC programme. The entrepreneurs are responsible for the operation so they are given preliminary training on the basics of computing and networking like modem installation, LAN setting and the use of internet. This training programme is conducted by experienced professionals and provides basic knowledge that is required for availing the internet services. The services that users frequently avail in CICs are e-mail, video-conferencing, digital photography, printing (including high quality photo printing), agricultural consultation etc. E-mails are used by the consumers as a substitute for the traditional mail services. The best part is that this facility is available at incredibly nominal rates. As a result, visitors of all age groups come to CICs to communicate with others in the digital world (Grameenphone CIC Website, 2011).

Video conferencing is used to communicate with near and dear ones. Since this technology allows people to watch live video, it has some emotional aspect as well. There are numerous instances of people being very emotive after seeing the near and dear ones after many years via video-conferencing. This has a tremendous effect on the social life of the rural people. Even the most ignorant persons know that one can chat with people through computers where live pictures are also available. CIC has been most successful in spreading this service to the most remote parts of the country. Another frequently used service is the digital photography and subsequent printing facility. People can have their pictures taken and printed within ten minutes which previously took 1-2 days. They can send their photos to relatives through e-mails. This has radically changed the total concept of communication (Grameenphone CIC Website, 2011).

Farmers can get suggestions about their crops and cultivation through CIC. Sometimes they take pictures and send those to ruralinfobd.com. Experts of ruralinfobd send necessary suggestions which help the farmers take necessary actions like applying pesticides and fertilizers, etc. Farmers can also become members of a forum called ekrishok and use the service to get information about modern cultivation techniques to have better harvest. However, this kind of usage has not become very popular yet. People can use value added services such as flexiload, public phone facilities, ring tones downloading, etc. at each CIC. The internet browsing service is another service commonly provided by CIC. Moreover, CICs provide basic computer composing services. Potential job candidates can compose their CV for the purposes of job application. CICs are supposed to offer e-governance service as well. But since e-governance is at its infancy in Bangladesh and is limited to very few organisations only, this service has a long way to go before it becomes successful. Thus Grameenphone CIC is an innovative way of building and maintaining customer relationships in the rural landscape of Bangladesh.

IV. OBJECTIVE AND METHODOLOGY OF RESEARCH

This paper reports preliminary findings from a quantitative research study that was undertaken to explore the linkage between CRM technology adoption and marketing research to understand the customers' preferences for Grameenphone's internet modem. A further qualitative research with open-ended interviews with customers and young entrepreneurs in the rural areas of Bangladesh was conducted to understand rural consumers' views in their social and cultural context in a developing country perspective.

Measurement instrument and data source

Exploratory as well as descriptive research methods were used in this study. Primary data were collected through survey questionnaire for quantitative research and personal interview for qualitative research. A sample of 100 people has been used. This sample consists of internet users. Sampling frame of quantitative research includes existing Grameenphone subscribers. Cluster sampling method is used in this quantitative research. Moreover, twenty people were interviewed individually in the remote and rural areas of Bangladesh for qualitative research because it is an easy way to get information from people who are very low on literacy and numeracy. Young consumers were the group of interest for the study because of their current and potential high level of use of such services.

Sources of secondary data were annual reports, newspapers and official web site. The secondary data also include internet sources, company prospectus, news clips, etc. While using the secondary data, criteria like specification, error, currency, objective, nature and dependability of the secondary data were considered. The questionnaire included both open and close-ended questions to facilitate a more insightful understanding of the views and attitudes of the consumers. The questionnaire was developed in order to explore important elements for attracting and retaining new customers of Grameenphone internet modem through CRM. The questionnaire used simple, direct and familiar words, keeping the respondents in mind. Interview of 20 people were conducted for qualitative research to find out how Grameenphone is implementing CRM in the rural areas of Bangladesh by using marketing research and insights into consumer preferences.

Quantitative research hypotheses

The verbal model of hypothesis under consideration is "Consumer satisfaction of wireless internet modem of Grameenphone depends on internet availability, the effects of different marketing promotions, internet speed, monthly rate, network coverage, initial cost, and positive image of Grameenphone."

Null hypothesis (H₀):

Preference for using Grameenphone internet modem does not depend on internet availability, the effects of different marketing promotions, Internet speed, monthly rate charge, network coverage, initial cost, positive image of Grameenphone.

Alternative hypothesis (H₁):

Preference for using Grameenphone internet modem depends on internet availability, the effects of different marketing promotions, Internet speed, monthly rate charge, network coverage, initial cost, positive image of Grameenphone.

V. DATA ANALYSIS

After getting all the questionnaire, each of the questions has been coded along with the variables in SPSS. The SPSS database then has become the source of further analysis. This helped to make the analysis of data collected during the research easier, more efficient, and more effective.

Multiple regression analysis results

Multiple regression analysis is a descriptive tool used to test and explain relationships. In this study, a multiple regression analysis was used to test and explain the relationships between the independent and dependent variables. The following independent and dependent variables are taken into consideration for this regression model.

Dependent variables:

Prefer to use internet modem of Grameenphone (Y).

Independent variables:

Internet availability(X1), effects of different marketing promotions (X2), internet

speed(X3), monthly rate charges(X4), network coverage (X5), initial cost(X6), positive image of Grameenphone(X7).

Thus, the regression equation is:

Preference for using Grameenphone internet modem= $\beta_0 + \beta_1$ internet availability+ β_2 effects of different marketing promotion + β_3 internet speed + β_4 monthly rate charge+ β_5 network coverage + β_6 initial cost + β_7 positive image of Grameenphone+ ϵ_i

Where,

β_0 = coefficient of the constant

β_1 = coefficient of internet availability

β_2 = coefficient of effects of different marketing promotion

β_3 = coefficient of internet speed

β_4 =coefficient of monthly charge

β_5 =coefficient of network coverage

β_6 = coefficient of initial cost

β_7 = coefficient of positive image of Grameenphone

ϵ_i = Error term

Null hypothesis, $H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0$

Alternative hypothesis, H_A : at least one $\beta_j \neq 0$

These hypotheses were tested using the F test. The results of these tests are given below.

Table 1 Anova

| Table 1. Anova | | | | | |
|-----------------------|----|----------------|-------------|---------|------|
| Source | DF | Sum of squares | Mean square | F-value | Sig. |
| Model | 7 | 38.142 | 5.449 | 9.782 | 0 |
| Error | 92 | 51.248 | 0.557 | | |
| Total | 99 | 89.39 | | | |

Here, null hypothesis H_0 is rejected and alternative hypothesis H_1 is accepted, because p -value (0.000) < (0.05).

The regression equation is-

Preference for using internet modem of Grameenphone (Y) = .194+.177(internet access availability) +.360(effects of different marketing promotion) +.128(speed is fairly good) +.264(monthly rate charges) +.047 (network coverage of Grameenphone) -.187(initial cost of internet modem) + .074 (positive image of Grameenphone)

Table 2 Coefficients

| Model | Unstandardized Coefficients | | t | Sig. |
|---|-----------------------------|------------|-------|------|
| | Beta | Std. Error | | |
| (Constant) | 0.194 | 0.179 | 1.086 | 0.28 |
| Internet access available in my area | 0.177 | 0.136 | 1.297 | 0.2 |
| effects of different marketing promotion | 0.36 | 0.094 | 3.847 | 0 |
| Speed is fairly good | 0.128 | 0.095 | 1.346 | 0.18 |
| Monthly rate charges by Grameenphone is higher than its competitor | 0.264 | 0.073 | 3.602 | 0 |
| Grameenphone network coverage all over the country | 0.047 | 0.112 | 0.42 | 0.68 |
| Initial Cost of Grameenphone internet modem is high comparing to the modem or broadband | -0.19 | 0.092 | -2.04 | 0.05 |
| Positive Image of Grameenphone increases my expectation level | 0.074 | 0.107 | 0.691 | 0.49 |

Dependent Variable: Preference of Grameenphone Internet Modem

Table 3 Model summary

| Table 3. Model summary | |
|-------------------------------|-------|
| R Square | 0.427 |
| Adjusted R Square | 0.383 |
| Std. Error of the Estimate | 0.746 |

From model summary, we see R²=42.7%. Since it is >20%, we can say that the dependent variable is explained by independent variables in a good manner. It means that independent variable is explained by dependent variable with 42.7% accuracy. In other words, we can say that 42.7% variation in the dependent variable is due to the effect of all explanatory variables. The previous regression model was consisting of some insignificant variables. Therefore, the models discussed in this paper was of the best among all of the models that were being tested in this type of analysis as these models were revised by dropping insignificant variables.

The results of the revised multiple regression analysis are shown in Table 4.

Table 4 ANOVA

| Table 4. ANOVA | | | | | |
|-----------------------|----|----------------|-------------|---------|------|
| Source | DF | Sum of squares | Mean square | F-value | Sig. |
| Model | 4 | 36.837 | 9.209 | 16.648 | 0 |
| Error | 95 | 52.553 | 0.553 | | |
| Total | 99 | 89.39 | | | |

Here, null hypothesis Ho is rejected and alternative hypothesis H1 is accepted, because p-value (0.000)<(0.05).The regression equation is-

Preference for using internet modem of Grameenphone (Y) = .386+.235 (internet access availability) +.409 (effects of different marketing promotion) +.256 (monthly rate charges) -.173(initial cost of internet modem).

Table 5 Coefficients

| Table 5. Coefficients | | | | |
|---|-----------------------------|------------|-------|------|
| Model | Unstandardized Coefficients | | T | Sig. |
| | B | Std. Error | | |
| (Constant) | 0.386 | 0.097 | 3.974 | 0 |
| Internet access available in my area | 0.235 | 0.1 | 2.35 | 0.02 |
| Effects of different marketing promotion | 0.409 | 0.083 | 4.925 | 0 |
| Monthly rate charges by Grameenphone is higher than its competitor | 0.256 | 0.07 | 3.67 | 0 |
| Initial Cost of Grameenphone interent modem is high comparing to the modem or broadband | -0.17 | 0.083 | -2.09 | 0.04 |

Dependent Variable: Preference of Grameenphone Internet Modem

Table 6 Model Summary

| Table 6. Model Summary | |
|-------------------------------|-------|
| R Square | 0.412 |
| Adjusted R Square | 0.387 |
| Std. Error of the Estimate | 0.744 |

From model summary of Table 6, we see $R^2=41.2\%$. Since it is $>20\%$, we can say that the dependent variable is explained by independent variable in a good manner. It means that the explanation of the variables is with 41.2% accuracy. In other words, we can say that 41.2% variation in the dependent variable is due to the effect of all explanatory variables.

Residual analysis of this regression model

Figure 1 Residual analysis of revised regression model –

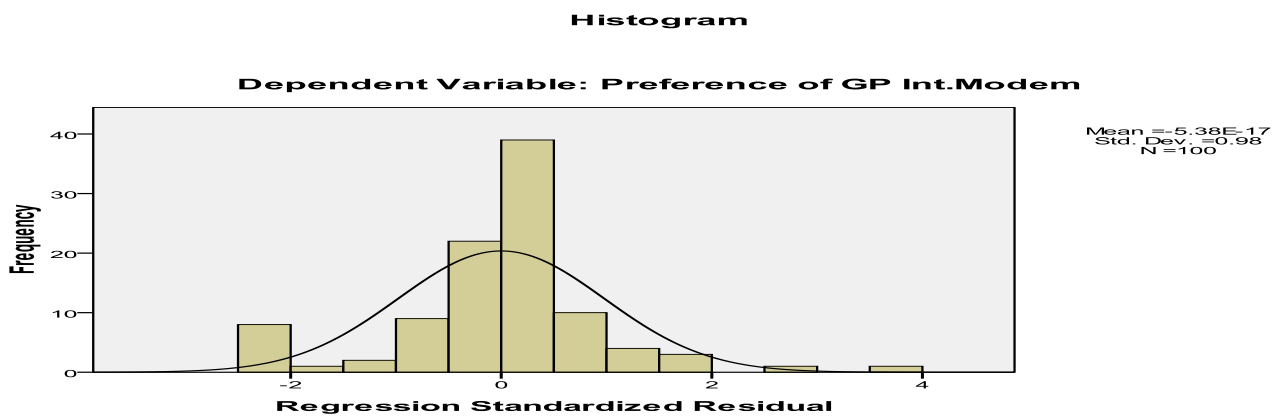


Figure 1 shows that the Residuals of the regression model have been graphically represented with the help of histogram of residuals and also their normal probability plot. And from these graphs it can be suggested that the residual of the model has somewhat well enough fit to comment that the residuals of the model is somewhat normally distributed.

Figure 2 Normal P-P plot of regression standardised residual

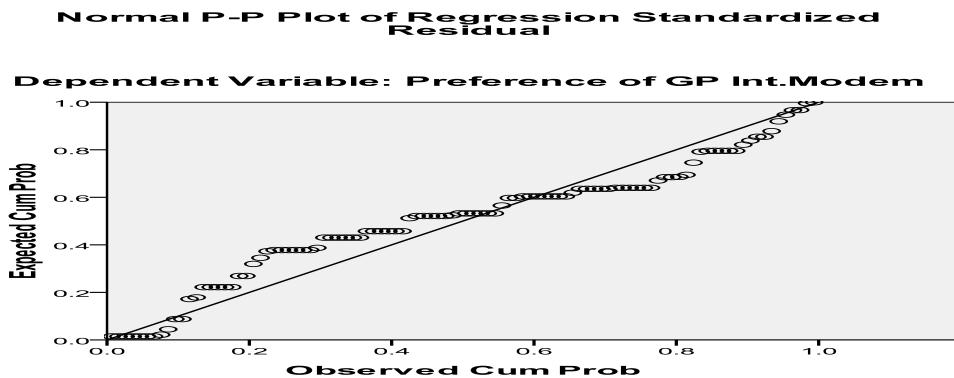


Figure 2 shows that the residual plot shows a random scatter of the points (independence) with a constant spread (constant variance). The residual plot shows a random scatter of the points (independence) with a constant spread (constant variance) with no values beyond the ± 2 standard deviation reference lines (no outliers). The normal probability plot of the residuals shows the points close to a diagonal line; therefore, the residuals appear to be approximately normally distributed. Thus, the assumptions for regression analysis appear to be met.

Main Findings from the Quantitative Study

Main elements important for retaining and attracting new customers of Grameenphone internet modem, thus improving CRM are -

- The effect of the different marketing promotions which generates feelings of disadvantage among the customers because of not having internet modem.
- Internet access availability in the area of the customers which means the network coverage of Grameenphone in the area of the customers so that customers can access the internet.
- Monthly rate charges by Grameenphone – in this case it is higher than its competitor which indicates that Grameenphone needs to rethink its monthly charges in a competitive market.
- Initial cost of Grameenphone internet modem - in this case it is higher compared to the modem or broadband available, which indicates that Grameenphone internet modem's initial cost is an important element to attract the new customers.

Insights from Qualitative Research

As seen from the above, one of the findings from the quantitative research was that consumers' preferences for Grameenphone Internet modem depends on internet access in the consumers' area. However, in the rural areas of a developing country like Bangladesh, there was no internet connection available. Grameenphone understands that internet access is important in remote areas. For that very reason, it established the Community Information Centre (CIC), which provides the facility to access internet in the rural areas. One customer said: "...by using community information centre, I can easily access internet, voice communications, video conferencing, and other information services. It is very helpful to have internet access in a remote and rural area like this".

CIC was a pilot project started in February 2006 with 16 CICs; today the project has become a massive operation with over 500 CICs operational in nearly 450 Upzilla's (GrameenphoneCIC Website, 2010). CIC also works as CRM in the rural areas to solve the various problems of customers. One customer said: "...from CIC we get other forms of support like payphones, electronic recharge for prepaid and post paid mobile connection, IT facilities, solution to different problems regarding the use of mobile phones and internet." Moreover, Grameenphone understands that consumer preferences of Internet modem also depend on the initial cost of the Internet modem. Therefore, they do not try to sell the Internet modem to each individual in the rural areas as a family's economic condition of rural areas in Bangladesh is not good. Grameenphone realises that it is not possible for people in the rural areas to afford an Internet modem because of the high initial cost of purchasing Internet modem of Grameenphone. Therefore, Grameenphone utilises CIC, where Grameenphone's wireless internet modem is used to give the Internet service to the rural areas. One customer said: "...it is not possible for me to afford an Internet modem, however, now I am getting the internet service by using CIC which is very helpful, flexible and reasonable for me."

On the other hand, monthly charge is another important factor in consumer preferences. The fees charged by Grameenphone CIC are very reasonable keeping in mind the income level of the consumers in the rural areas. One customer said: "...the CIC is very flexible to use, I can use it when it is necessary to use for any important purpose, and I need to pay based on usage. "Another finding from the previous quantitative research was that consumer preferences of Grameenphone internet modem depends on the effects of the different marketing promotions which create the feeling of disadvantage of not having internet modem among the customers. Therefore, Grameenphone also realised that different marketing promotions are also required to raise awareness, and educate customers regarding the services of CIC in the rural areas of Bangladesh. Grameenphone designed their CIC to be run independently as small businesses by local entrepreneurs, and the entrepreneurs are trained and provided with continuous support from Grameenphone to promote their CIC services to the customers of rural areas. One young entrepreneur of Grameenphone said: "...I visited the local educational institutes with laptop and Motorola mobile phone and showed demonstration of Internet. I also took these equipments to houses of the family members of overseas workers and informed that they could video/voice chat with their family members at a very cheap rate. I also conducted local seminars. I distributed leaflets, posters, visiting cards in the locality....". CIC is a unique way of CRM adoption in the rural areas of Bangladesh, and it is best implemented by using marketing research to understand consumer preferences.

VI. CONCLUSION

CRM is an exciting and topical area, but there are few rigorous studies exploring the phenomenon within the Relation Marketing context. Some IT and marketing research indicates that CRM may not actually help in the formation or maintenance of customer relationships (Peters & Fletcher, 2004). In contrast, CRM is

considered by some academics as the practical implementation of Relationship marketing theory (Gummesson, 2004) and social and cultural context influences the development of a CRM project (Lorenzon and Pilotti, 2008). This study provides some evidence that understanding customer preferences, social and cultural factors using marketing research techniques help adopt CRM at the consumers' end. Moreover, Customer relationship management (CRM) helps businesses to gain an insight into the behaviour of their customers and modify their business operations to ensure that customers are served in the best possible way. In essence, CRM helps a business to recognise the value of its customers and to capitalise on improved customer relations. The better a company understands its customers, the more responsive it can be to their needs. CIC in this study is deemed as an effort as such in understanding rural customers in a developing economy like Bangladesh. The paper shows that CIC in this case is an innovative way of building and maintaining customer relationships and technological interface with the financially constrained consumers in a poor developing economy like Bangladesh.

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