eCRM PRACTICES OVER MOBILE TELECOM INDUSTRY IN BANGLADESH AND ITS IMPACT

Submitted to

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Submitted by

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Project Work (BUS 498)

East West University, Dhaka

29 April, 2010.

April 1, 2010

Shek Fattah Ahmed
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Dear Fattah,

At your earliest convenience, I am assigning you to undertake a study about "eCRM practices over mobile telecom industry in Bangladesh and its impact". You will specially highlight on their method of providing service and the satisfaction rate of their customer after getting the service. Please have the report to me by 29th April 2010 because it is your project paper and the semester will end within this date.

Best Wishes to you

Sincerely

_____
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Associate Professor
Department of Business Administration,
East West University, Dhaka
43, C/A Mohakhali.
Dhaka.

April 29, 2010

S I Nusrat A Chaudhury (SINAC)
Associate Professor
Department of Business Administration,
East West University, Dhaka

Dear Sir,

As it is project work, I have to submit a report about my findings. So I made a report about "eCRM practices over mobile telecom industry in Bangladesh and its impact". I tried to highlight on their way of providing service and the satisfaction rate of the customer after getting the service.

If you have any questions after you read the report, please call me.

Sincerely

Shek Fattah Ahmed
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Acknowledgement:

First of all, I thank all mighty Allah, who have provided me the brilliant opportunity to build and complete this report successfully.

I would like to thank our senior brothers and friends who have helped us by giving valuable advice and experiences. I would also like to thank to lab administrator for providing guidelines and information.

I would like to thank the authority of different mobile telecom company because I have taken a lot of information from them. In this regard I am extremely grateful to Ms Jackline Teresa Gomes, Manager, customer Service Department of **Grameenphone**.

I also thank Mr. Sajjad Hossain, officer, marketing department of **Banglalink** and Md. Ali Ahmed, Care line officer of **Banglalink**. Mr. Promesh Borua officer customer service of **Robi (Aktel)**. Who provided me with all the supportive materials for completing the task properly.

Above all, I cannot refrain myself from giving heartfelt thanks to S I Nusrat A Chaudhury (SINAC), Associate Professor for his insisting on the brevity of the report. He helped me determine the objective of the report and guided me through to get to the end. The format prescribed by him is pretty user friendly.

Executive Summary:

Customer Relationship Management is an infrastructure that enables the delineation of an increase in customer value and the correct means by which to motivate valuable customers to remain loyal-indeed, to buy again. Customer Relationship Management is an enterprise-wide mindset, mantra and set of business process and policies that are designed to acquire, retain and service customer.

The influence of mobile telecommunication is multi faceted. It has become an indispensable part of urban life. Certainly nowadays mobile telecommunication services serve not only for traditional communication purposes but also as a new channel for existing entertainment and new types of entertainment. Mobile phone network is not appearing with dynamic features as per demand of the situation rather they are trying to be more traditional with modern technology. The service providers of this industry are now fighting for the existing customers in the same market instead of developing new market and new innovative products.

So it is now very important issue for the mobile operators company to retain their present customer. Because the market growth rate for this particular industry are very dawdling now. For this reasons the companies focusing their Customer Relationship Management strategy through which they mainly retain their present customer.

In this research I have found out how the companies provide their post purchase service to their customer as well as what is their customer opinion about their service.

Through this findings I tried to pin point which factor are more important to achieve the higher customer satisfaction. And how the companies increase their customer satisfaction rate.

*O*rigin of the Report:

As I am doing the course project work so I have to submit report about my project. As per my course instructor instruction I have submitted my report which is about "eCRM practices over mobile telecom industry in Bangladesh and its impact".

I choose this topic because at present time, we know the most growing industry in our country is mobile telecom industry. And the companies in this industry fight each other really hard to attract more customers. And here customer relation management plays a vital role. Because its help the companies to retain their present customer long time. Which make them more profitable. Cause we know retain the present customer is less costly then attract new customer. And maintain the customer relationship they used many types of web based tool. Those web based tools called eCRM.

*O*bjective:

Basically in this project I tried to find out answers of two basic questions:

1.   How the companies provide the service?
2.   What is the satisfaction rate of customers who is getting the service from the company end?

By correlating those question we can generate some understandings of Customer relationship management which will help shed light on what is important to the customer and also suggest the important factors, on which the companies need to furnish more emphasize.
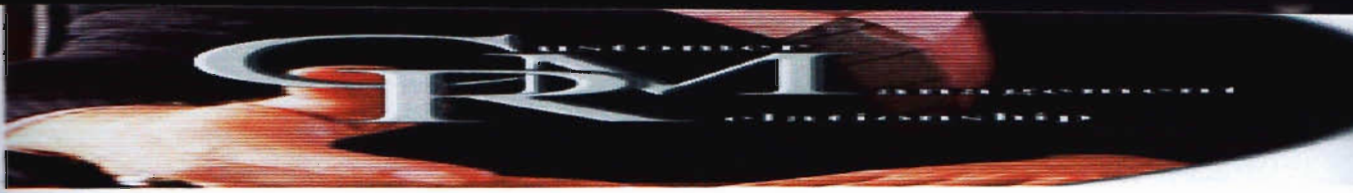
*S*cope:

In the report I have tried to discuss the eCRM impact which mobile telecom companies use to retain and attract their customer. And how they provide the service by using this. And finally I tried to make some correlation between these two things.

*M*ethodology:

The report was largely involved in accumulation of information from the personal interviews. Here, I have also collected information from published materials like different books, journals and the companies' official website which creates a special image of this report.

In the report that I have mainly analyzed the customer satisfaction rate while they get the service from the company end. And I used SPSS to analyze our collected data.

Sample Size:

Sampling Frame is a list which contains the particulars about the items of a Population. If a probability sample is to be taken, a sampling frame is required. It is necessary for the Researcher to select required samples from the population.

For my research purpose I went for sampling rather than choose the whole population. Because currently around 5 crore people in Bangladesh using mobile phone. And they use several Operators' line. So it is very costly if I go for population survey. Another thing is timeliness due to the larger size of population total time involved in the case of census is significantly take huge time. And for the reason of
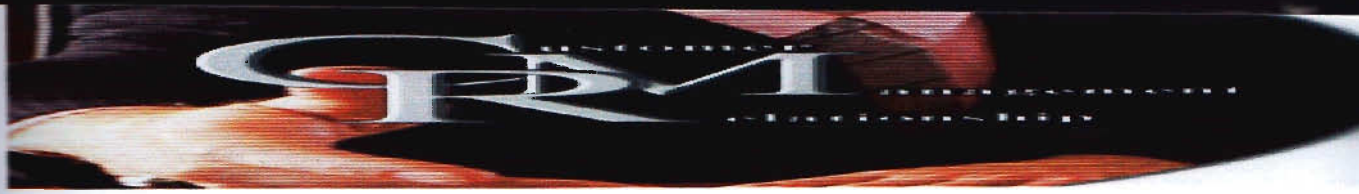
large population size many of them are not traceable due in traveling, disease, death, mental abnormality, prisoners etc.

And finally the main important reason for sampling is the amount of non-sampling error in the case of census is much higher than the total amount of sampling and non-sampling error committed in the case of a sample survey.

The degree of errors has a relationship with reliability. If error decreases than the reliability increase sampling decreases both the sampling and non-sampling error. So, it enhances the reliability of information.

Here I go for random sampling technique because here all item of population have an equal opportunity to be included in the sample. And also here the population size is extremely large so I think if we select sample by following simple random sampling technique then it will be more reliable than other sampling technique.

And finally I choose **50** samples by using simple random sampling technique.

*L*imitations:

In preparing the report I had face several difficulties for gathering appropriate information and other related issues. It would have been helpful for me to analyze the entire scenario if I could discuss the issues with a good number of subscribers of different companies. But it is not possible at all for the time limitation. Despite these limitations I tried our best to collect necessary data and information that have been analyzed in the subsequent section. I did not get adequate books from our library for preparing the report.

According to the report I tried to present some important information about the vital roles of Customer Relationship Management which is now a day's completely depends on various web based tools. Especially I try to mention how they handle their respective customer based on their needs and wants.

What is CRM and eCRM?

According to Wilson (2002) CRM is a concept that enables an organization to tailor specific products or services to each individual customer according to his or her need. In the most advanced scenario, CRM may be used to create a personalized, customized, one-to-one experience that will give the individual customer a sense of being cared for, thus opening up new marketing opportunities based on the preferences, previous behavior and history of the customer (ibid). Fayerman (2002) said that CRM as a customer-focused business strategy that aims to increase customer satisfaction and customer loyalty by offering a more responsive and customized services to each customer.

A new term for taking care of customers via the Internet, eCRM, is recently applied by some organizational and academic communities (Ragins & Greco, 2003). eCRM refers to electronic customer relationship management or, more simply, CRM that is Web-based (Dyche,2001). eCRM can also be defined "as the use of the Internet and IT applications to manage customer relationships" (Chaffey D., 2002).

There is a lot of debate over whether eCRM is a real designation or just a marketing ploy by CRM organizations and academics trying to distinguish themselves in the rapidly increasing morass of CRM pretenders (Greenberg, 2001). Again he went ahead to say that, eCRM is CRM and CRM must become eCRM (ibid).

In the attempt to define the term eCRM, most web-based authors use the term CRM and eCRM interchangeably.

CRM is an infrastructure that enables the delineation of an increase in customer value, and the correct means by which to motivate valuable customers to remain loyal-indeed, to buy again (Dyche, 2001p.4) CRM is an enterprise-wide mindset, mantra, and set of business processes and policies that are designed to acquire, retain and service customers.

According to Galbreath and Rogers (1999), CRM is relatively a new management concept, a new approach to managing customers, currently sweeping

through business worldwide and its especially finding audience in the professional service sector. Freeman 2004 noted that, services comprises of about 80% of US economy and above 50% of every country's economy. Again he further adds that, world trade in services now approaches $ 1 trillion per year and continue to grow even more. Canel, Rosen and Anderson (2000), stated that, the services industries in developed countries have been continuously increasing. They went ahead to say that, in the US alone, during the past 15 years, the non-goods- producing sector, that is the service sector of non- agricultural labor force rose 52%. This further makes it interesting to study the objectives of CRM initiatives and the type of benefits to service companies.

Business Prospect with CRM:

While retaining customer loyalty has been a sales and marketing principle for quite a long time, Customer Relationship Management (CRM) is actually a tremendous step forward in creating a system that can provide a means for retaining individual loyalty in a world of about 6 billion population (Croteau & Li, 2001). Greenberg (2001) stated that in order to understand CRM, you must also understand the changing nature of the customer because customers are not what they used to be. Khalifa and Liu (2001) noted that, a survey of more than 1,600 businesses and IT professionals conducted by the Data Warehouse Institute, found that, some of the respondents have CRM project budgets of over $ 10 million. This finding indicates that CRM is very important for organizations.

The Cap Gemini further added that, the average total investment in CRM of 300 U.S and European companies was $ 3.1 million. More than 69% of the companies surveyed spent less than $ 5 million and more than 13% of the companies spent over $10 million (Sterne, 2000). This finding also indicates that a great number of companies spend great amount of their budget on CRM and therefore in our opinion we believe that it is important for service companies to know the objectives of their CRM initiatives and the type of benefits these organizations intend to derive from them.

A survey of 300 companies conducted at a CRM Conference concluded that CRM is not a cheap, easy, or fast solution (ibid). Mooney (2000) further added

that, more than two-thirds of CRM projects end up in failure. However, he went further to say that, the successful third could obtain up to 75% return on investment (ibid).

Vision of CRM:

While strategies, processes and technology may vary from company to company, the goal of implementing CRM initiatives is roughly the same for all: to build the most profitable relationships possible with customers. To achieve that goal, one of the most important things your company must do is getting the right information to the right place at the right time as efficiently as possible- a concept any fulfillment company should understand and be positioned to support.

Full-service fulfillment companies can help you create, manage and deliver your marketing and sales communications in the most cost effective, timely manner. Additionally, better vendors will share your business vision and provide solutions to help you implement customer centric programs.

Present Situation of CRM:

On average, businesses lose 15 percent to 20 percent of their customer base each year, and half of their customers within five years of acquisition. Given that it costs five to ten times more to acquire a new customer than to sell to an existing one2 (and takes an average of seven years to make a net profit from an individual customer), it's no wonder companies are investing heavily in customer relationship management. According to Forrester companies spent some $12 billion on CRM software, consulting and systems integration in 2005 alone.

Even as they continue to purchase CRM solutions, many businesses have expressed disappointment in their results. Only 10 percent of business and technology executives surveyed by Forrester felt CRM delivered the benefits they expected.

Only 14 percent reported that their CRM applications had improved end-user productivity. And a recent Gartner Group study predicted that 50 percent of CRM initiatives implemented in 2006 will be viewed as failures from the customer perspective.

The Effect of CRM Applications on Customer Knowledge:

A primary motivation for a firm to implement CRM applications is to track customer behavior to gain insight into customer tastes and evolving needs. By organizing and using this information, firms can design and develop better products and services (Davenport, Harris, and Kohli 2001; Nambisan 2002). Davenport and Klahr (1998) argue that customer knowledge has certain attributes that make it one of the most complex types of knowledge. For example, customer knowledge may be derived from multiple sources and media and may have many contextual meanings. Customer knowledge is also dynamic, and it changes rapidly. Customer relationship management applications facilitate organizational learning about customers by enabling firms to analyze purchase behavior across transactions through different channels and customer touch points.

Customer relationship management applications help firms gather and use customer knowledge through two mechanisms. First, CRM applications enable customer contact employees to record relevant information about each customer transaction. After this information is captured, it can be processed and converted into customer knowledge on the basis of information-processing rules and organizational policies. Customer knowledge captured across service encounters can then be made available for all future transactions, enabling employees to respond to any customer need in a contextual manner.

Firms can also use customer knowledge to profile customers and identify their latent needs on the basis of similarities between their purchase behaviors and those of other customers. Second, firms can share their accumulated customer knowledge with customers to enable those customers to serve themselves by defining the service and its delivery to suit their needs (Prahalad, Ramaswamy, and Krishnan 2000). The process of customer self-selection of service features provides additional opportunities for firms to learn about their customers' evolving needs and to deepen their customer knowledge.

Customer satisfaction has significant implications for the economic performance of firms (Bolton, Lemon, and Verhoef 2004). For example, customer satisfaction has been found to have a negative impact on customer complaints and a positive impact on customer loyalty and usage behavir(Bolton 1998; Fornell 1992). Increased customer loyalty may increase usage levels (Bolton, Kannan, and Bramlett (2000), secure future revenues (Rust, Moorman, and Dickson2002), and minimize the likelihood of customer defection (Anderson and Sullivan 1993; Mithas, Jones, and Mitchell 2002).

Customer satisfaction may also reduce costs related to warranties, complaints, defective goods, and field service costs (Fornell 1992). Finally, in a recent study, Anderson, Fornell, and Mazvancheryl (2004) find a strong relationship between customer satisfaction and Tobin's q (asa measure of shareholder value) after controlling for fixed, random, and unobservable factors.

Customer relationship management applications are likely to have an effect on customer satisfaction for at least three reasons. First, CRM applications enable firms to customize their offerings for each customer. By accumulating information across customer interactions and processing this information to discover hidden patterns, CRM applications help firms customize their offerings to suit the individual tastes of their customers. Customized offerings enhance the perceived quality of products and services from a customer's viewpoint. Because perceived quality is a determinant of customer satisfaction, it follows that CRM applications indirectly affect customer satisfaction through their effect on perceived quality.

Until recently most CRM software has focused on simplifying the organization and management of customer information. Such software, called operational CRM, has focused on creating a customer database that presents a consistent picture of the customer's relationship with the company and providing that information in specific application such as sales force automation and customer service in which the company touches the customer.

Strategy and Objective of CRM:

According to Gray and Byun (2001) more than 57% of chief executives in a survey with 191 respondents believe that the major objective and strategy of CRM initiatives is customer satisfaction and retention. Keen (2000) states that one of the strategies and objectives of CRM and eCRM is that companies provide consistent and up-to-date customer catalog, order and inventory data across all their sales channels: web, call center and all physical points of presence. According to Chye and Gerry (2002), one strategy of CRM initiatives is to change the organization into becoming customer-centric with a major focus on customer profitability as compare to line profitability. Again they lamented that, the understanding gained from CRM enable companies or organizations to estimate the profitability of individual accounts. They further add that, organizations are then able to differentiate their customers properly with respect to their profitability. Organizations can then build predictive churn models to retain their best customers by identifying symptoms of dissatisfaction and churning, making sure that the customers who generate profit are retained (ibid).

Peppers (1999) summarize the following as the basic strategies and objectives of CRM initiatives:

• Customer identification: The organization must be able to identify the customer via marketing channels, interactions and transactions for a period of time in order to provide value to the customer by serving his or her need at the right time with a right product or service.
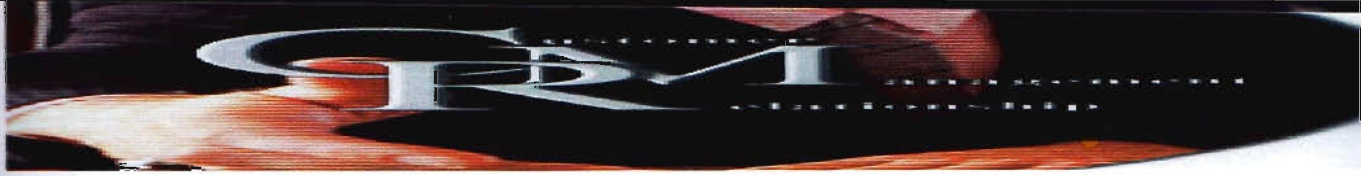
• <u>Customer Differentiation:</u> Every customer has his or her own needs and demands and therefore from the organization's point of view, customers have their own lifetime value.

• <u>Customer Interaction:</u> One of the most important objectives of CRM by an organization is to keep track of customer behavior and needs over time. This is because, from a CRM point of view, the customer's long-term profitability and relationship to the company is very important. This is the reason why a company should continue to learn about its customers and in a continuous manner.

• <u>Personalization:</u> This can be defined as treating each customer differently or uniquely and that is the motto or a major objective of CRM. Through the process of personalization, the organization can increase customer loyalty.

According to Stone (2000) there are two main objectives that influence the need for CRM technologies to support the completion of CRM strategies and initiatives. These are according to Stone (2000) as follows:

• The need for a higher quality in CRM in order to meet the needs of the customers. CRM systems according to Stone (2000) are increasingly being used to arrange companies' resources in a proper order.

• The need for greater productivity in CRM. CRM systems are giving the possibility to automate work previously done by hand (ibid).

According to Thompson (2004) the main strategies and objectives of CRM initiatives are:

• To acquire customers

• To grow profitable customer relationships

• To retain profitable customers

• To create competitive advantage (ibid)

Benefit of CRM:

According to Gray and Byun (2001) the following are the main benefits of CRM. They went on to say that, for an organization to get all these benefits, sales, marketing and service functions must work together:

- To improve the company's ability to retain and acquire customers

- To maximize the lifetime value of each customer

- To improve service without increasing cost of service.

Again they argue that, proper identification of the customer helps sales force to do cross selling. They further add that, this is through clean data about the customer and a single customer view. Furthermore, they say that, understanding the customer through differentiation can lead to cost effective marketing campaign, it could also reduce something like for example direct mailing cost. Also, they argue that customer satisfaction and loyalty through interaction could also lead to cost effective customer service. Moreover, they argue that, customer satisfaction and loyalty through personalization can also lead to lower cost of acquisition and retention of customer and thereby maximizing share of wallet. (Gray and Byun 2001)

Crosby (2002) argues that, by using customer information wisely to deliver what the customer needs, companies will create long-term, collaborative relationships with the customers.

He further states that, this will bring many benefits since long-term customers are less costly to serve and smooth-running relationships are less resource intensive (ibid). A survey of more than 500 executives in six industries, communication, chemicals, pharmaceuticals, electronics/high-tech, forest products and retail, believe that 10% improvement of overall CRM capabilities can add up to $35 million benefits to a $1 billion business unit. (Gray and Byun 2001). CRM is a very big tool that contributes so much to profit indicated by Newell (2000).

Furthermore he stated that, if organizations could transform the customer data into. Knowledge and then use that knowledge to build relationships it would then create loyalty and thereby creating profit (ibid).

Turban et al. (2000) suggest that increasing customer satisfaction increases customer loyalty. Swift (2001 pp. 28) argues that organizations can get a lot of benefits from CRM initiatives. He goes on to say that, these benefits could be found in these areas:

• Higher customer retention and loyalty:

The customer retention will increase when customers stay longer, buy more and buy more frequently. The customers take more initiatives that increase bounding relationship, and as a result the customer loyalty increases.

• Increased customer profitability:

The customer profitability will increase when the customer wallet-share increases, the up-selling goes up as well as cross-selling and follow up sales and also more referrals come with higher customer satisfaction among existing customers.

• Evaluation of Customer profitability:

When the organization gets to know which customers are profitable and which ones that might become profitable in future, that is the potential profitable customers and those who will never become profitable. This is a very important area because the key to any successful business is to acquire and focus on those customers who bring profit, when you get them, you do not want to leave them.

• Reduced cost of sales:

The costs regarding selling are reduced due to the fact that existing customers are usually more responsive. In addition, with better knowledge of channels and distributors, the relationships become more effective, as well as costs for marketing campaigns are reduced.

• Lower cost of recruiting customers:

When the cost of recruiting new customers reduce or go down, there will be savings to be made on marketing, mailing, contact, follow-up, fulfilling, service and many more.

• No need to recruit so many customers to preserve a steady volume of business: When the number of long-term customers increases and consequently the need to recruit many new customers will decrease (ibid).

Bose (2002) argues that, most organizations can use CRM, however he goes on to say that, there are some organizations that are more likely to get more benefits from CRM than others. Furthermore he states that, those are the companies that accumulate a huge customer data when doing business and whose customer needs is differentiated. On the other hand, Bose (2002) says that, companies that rarely have any contact with their customers have a higher customer turn over and identical customer needs are likely to get less benefit from CRM (ibid).

Conclusion of Literature Preview:

From the previous discussion we know that Customer Relationship Management (CRM) is all about retain the present customer so they are satisfy to use particular company's product and do not get the interest to use other products which offer by another companies. Because we know retain the present customer is less costly then attract new customer about my product. But through CRM we also try to attract the new customers who have the willingness to use my product. And we use Customer Relation Management more effectively if we apply some web based tools and other software which are collectively known as eCRM.

CRM and eCRM Practices in Bangladesh among Different Industry:

Customer relationship management (CRM) consists of the processes a company uses to track and organize its contacts with its current and prospective Customer. CRM is mainly the information about customers and customer interactions can be entered, stored and accessed by employees in different company departments. Typical CRM goals are to improve services provided to customers, and to use customer contact information for targeted marketing.

In Bangladesh from past few years Customer Relationship Management play a vital role among different industry. It will increase the total profitability of the industry. It is largely use in our Telecom and Banking Industry. In Telecom and Banking industry every company has rich customer service division. From there they monitor their customer relationship strategy.

From the outside, customers interacting with a company perceive the business as a single entity, despite often interacting with a number of employees in different roles and departments. CRM is a combination of policies, processes, and strategies implemented by an organization to unify its customer interactions and provide a means to track customer information. It involves the use of technology in attracting new and profitable customers, while forming tighter bonds with existing ones

Bangladesh's cell phone carriers are Grameenphone, majority owned by Norway's Telenor (TEL.OL); Egyptian Orascom Telecom's (ORTE.CA) Banglalink; ROBI (AKTEL), majority owned by Telekom Malaysia International (TLMM.KL); CityCell, a joint venture between Pacific Bangladesh Telecom Limited and Singapore's SingTel (STEL.SI); Warid Telecom of the United Arab Emirates and state-run Teletalk.

Grameenphone leads the market with nearly 20 million subscribers followed by Banglalink with more than 10 million. Mobile phone services are an important contributor to the cash-strapped nation's economy.

The sector directly employs more than 15,000 and indirectly creates jobs for 650,000, the ADB said. And the total investment is $3.4 up to June 2008 by the mobile companies in Bangladesh.

These companies are trying to provide the quality customer service to its customer. They ensure that the customer services and related functions within the company at all times are aligned with and support the realization of the company's business objectives. Another thing is that every company has their call center under their customer service division. And basically they run 70% of their customer retention and attract new customer operation from there. Customer give the ring in call center to know about the product attributes, different value added services which are provided by the operator, or whether they face any problem regarding to use their connection.

In other case from call center many outbound calls are generating to attract the customer for their different offers. For example in telecom sector may be some outbound call are generating for attract the customer to use their internet service or to knock the customer either he know the different kinds of new offer or not. As well as in banking sector the same things happen.

And those companies who are presently use the customer relationship policy they utilize it by the help of information technology or eCRM. They use different kind of web based tools and other software to provide the service more efficiently. And that software adds extra value for example many banks in our country provide the service through which we can transfer our money from one account to another account over the phone.

We see that now a day's several industry in our country are trying to provide the best customer services to retain the present customer and attract the potential customer. Because we know today increasing the sales is not only the main thing to maximize the profit of the company. Retain the present customer is also important.

Since attract the new customer is more costly then retain the present customer. And for this reason the companies give more emphasize to their customer service division. So they can provide the better customer service and build up a good relation

with the customer and many cases they are successful to retain their present customers and attract new customer by using their own Customer Relationship strategy.

Analysis Part.

In our Sample size we see that various professionals' background people like govt. service holder or the various private companies' executive. And their cumulative percentage is 64. They are the majority people who call the hotline number.

And after then 34% people call their respective operators hotline number for their various problem and quarries who are student.

One thing we saw from personal interview that students are call the hotline number for difference value added service like friends and family number, welcome tune, balance transfer etc. And in maximum case they use they use the prepaid line.

But the professional personnel call for the core service like billing information, their bill delivery date etc. And most of the case they use the post paid number. Here one interesting I want to mention that the mobile operator companies make the deal with different corporate house to use their corporate line. So they can enjoy the facility of CUG(closed user group).

Profession
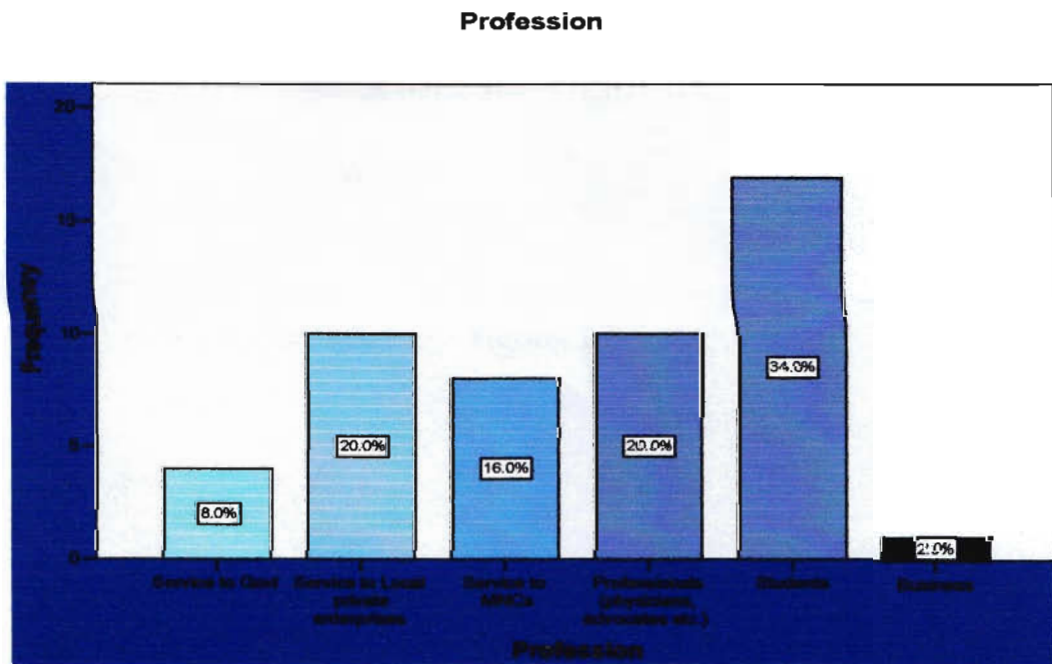
Figure: 1.1

Another interesting matter is previously I said that we choose our sample randomly but again here the majority portion of the people use Grameenphone SIM. So it again prove that Grameenphone is the undoubtedly the market leader in mobile telecom Industry. The below chart can more specify describe the situation:

Operator line using by Respondents
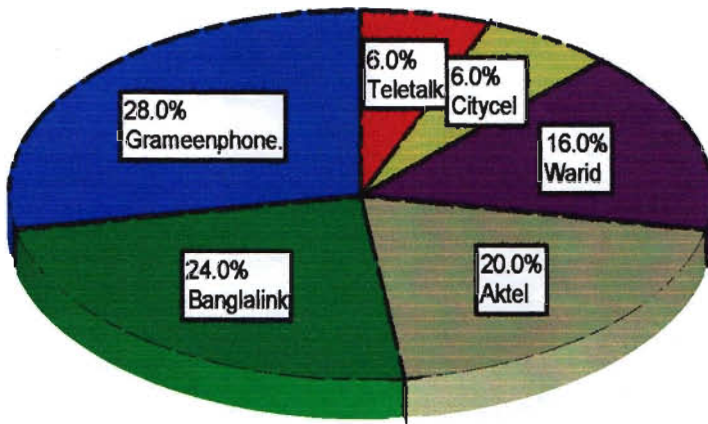
Figure: 1.2

Another thing is from my analysis we can see that 36% people who are in 20-25 age range they call the respective operators customer care number most of the time. And then 25 -30 and 30-40 age range people call the customer care number most of the time and their cumulative percentage is 44. The call get from other age range people like below 20 or above 40 is comparatively low than them.

Approximate age
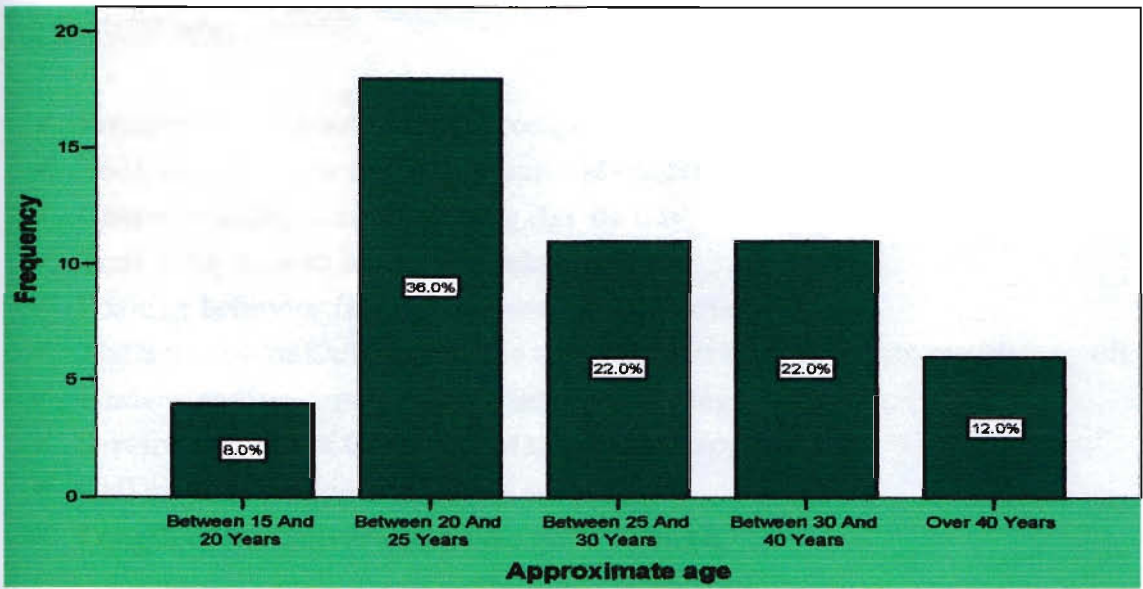
Figure: 1.3

Hypothesis Testing:

I have conducted a sample survey of 50 respondents who call their particular operator hotline number. And the data were analyzed with the SPSS software. The analysis contains some statistical procedure and "hypothesis testing" is one of those.

We have calculated the coefficients of the analysis and also the correlation between them. To come to a perfect decision we need to place several hypothetical testing of some important factors.

The factors are:

- ✓ Problem is resolved from the company end.
- ✓ Took short time to reach Customer Manager.
- ✓ Cost of waiting time increasing day by day
- ✓ Took long time to solve the problem
- ✓ Positive behavior from Customer Manager end.
- ✓ The Solution or Outcome of the conversation brought some positive result
- ✓ Understanding capability of Customer Manager was fine.
- ✓ Service attitude of Customer Manager was appropriate.
- ✓ Call rate for hotline number is suitable
- ✓ Length of the conversation was good enough.

Some important notes:

H_o = Null Hypothesis
H_1 = Alternate Hypothesis
α = Alpha (denoting significance level)

For Problem is resolve from the company end:

H_0: Problem is resolved from the company end
H_1: Problem is not resolved from the company end

Level of significance, $\alpha = 0.05$

Table: 1.1 One Sample t Test for The Problem is Resolve from the Company End.

	t-test for Equality of Means			
	t	df	Sig. (2-tailed)	Mean Difference
The problem is resolved from the company end.	3.416	49	.001	.500

Source: Survey Data

(With 95% significance value): After running the analysis, the significance value for Problem is resolve from the company end is .001; which is less than confidence interval $\alpha = 0.05$. So, null hypothesis is accepted and alternate hypothesis is rejected. That is: Problem is resolved from the company end.

For Take short time to reach Customer Manager:

H_0: Took short time to reach Customer Manager.
H_1: Took long time to reach Customer Manager.

Level of significance, $\alpha = 0.05$

Table: 1.2 One Sample t Test for It was take short time to reach Customer Manager while you call in hotline no.

	t-test for Equality of Means			
	t	df	Sig. (2-tailed)	Mean Difference
It took short time to reach Customer Manager while you call in hotline number.	.375	49	.709	.060

Source: Survey Data

(With 95% significance value): After running the analysis, the significance value for take short time to reach Customer Manager is .709; which is more than confidence interval α = 0.05. So, null hypothesis is rejected and alternate hypothesis is accepted. That is: It was take long time to reach Customer Manager while you call in hotline no.

For Cost of waiting time increase day by day:

H_0: Cost of waiting time increase day by day.
H_1: Cost of waiting time do not increase day by day

Level of significance, α = 0.05

Table: 1.3 One Sample t Test for Cost of waiting time increase day by day.

	t-test for Equality of Means			
	t	df	Sig. (2-tailed)	Mean Difference
Cost of waiting time increasing day by day.	2.483	49	.017	.360

Source: Survey Data

(With 95% significance value): After running the analysis, the significance value for Cost of waiting time increase day by day is .017; which is less than confidence interval α = 0.05. So, null hypothesis is accepted and alternate hypothesis is rejected. That is: Cost of waiting time increasing day by day.

For Took long time to solve the problem:
H_0: Took long time to solve the problem
H_1: Did not take long time to solve the problem

Level of significance, α = 0.05

Table: 1.4 One Sample t Test for Took long time to solve the problem.

	t-test for Equality of Means			
	t	df	Sig. (2-tailed)	Mean Difference
Took long time to solve the problem	1.800	49	.078	.220

Source: Survey Data

(With 95% significance value): After running the analysis, the significance value for Took long time to solve the problem is .078; which is more than confidence interval α = 0.05. So, null hypothesis is rejected and alternate hypothesis is accepted. That is: Do not Took long time to solve the problem.

For Positive behavior from Customer Manager end:

H_0: Positive behavior from Customer Manager end

H_1: Did not get Positive behavior from Customer Manager end

Level of significance, α = 0.05

Table: 1.5 One Sample t Test for Positive behavior from Customer Manager end.

	t	df	Sig. (2-tailed)	Mean Difference
			t-test for Equality of Means	
Positive behavior from Customer Manager end.	11.023	49	.000	1.020

Source: Survey Data

(With 95% significance value): After running the analysis, the significance value for Positive behavior from Customer Manager end .000; which is less than confidence interval α = 0.05. So, null hypothesis is accepted and alternate hypothesis is rejected. That is: Positive behavior from Customer Manager end.

For The Solution or Outcome of the conversation brought some positive result:

H_0: The Solution or Outcome of the conversation brought some positive result

H_1: The Solution or Outcome of the conversation did not bring some positive result

Level of significance, α = 0.05

Table: 1.6 One Sample t Test for the Solution or Outcome of the conversation brings some positive result.

	t-test for Equality of Means			
	t	df	Sig. (2-tailed)	Mean Difference
The Solution or Outcome of the conversation brought some positive result.	4.638	49	.000	.620

Source: Survey Data

(With 95% significance value): After running the analysis, the significance value for The Solution or Outcome of the conversation brings some positive result is .000; which is less than confidence interval $\alpha = 0.05$. So, null hypothesis is accepted and alternate hypothesis is rejected.

That is: The Solution or Outcome of the conversation brought some positive result

For Understanding capability of Customer Manager was fine:

H_0: Understanding capability of Customer Manager is fine.
H_1: Understanding capability of Customer Manager is not fine.

Level of significance, $\alpha = 0.05$

Table: 1.7 One Sample t Test for Understanding capability of Customer Manager is fine.

	t-test for Equality of Means			
	t	df	Sig. (2-tailed)	Mean Difference
Understanding capability of Customer Manager was fine.	7.269	49	.000	.840

Source: Survey Data

(With 95% significance value): After running the analysis, the significance value for The Understanding capability of Customer Manager is fine is .000; which is less than confidence interval $\alpha = 0.05$. So, null hypothesis is accepted and alternate hypothesis is rejected.

That is: Understanding capability of Customer Manager was fine.

For Service attitude of Customer Manager is appropriate:

H_0: Service attitude of Customer Manager is appropriate.
H_1: Service attitude of Customer Manager is not appropriate

Level of significance, α = 0.05

Table: 1.8 One Sample t Test for Service attitude of Customer Manager is appropriate.

	t-test for Equality of Means			
	t	*df*	*Sig. (2-tailed)*	*Mean Difference*
Service attitude of Customer Manager was appropriate	10.553	49	.000	1.000

Source: Survey Data

(With 95% significance value): After running the analysis, the significance value for Service attitude of Customer Manager is appropriate is .000; which is less than confidence interval α = 0.05. So, null hypothesis is accepted and alternate hypothesis is rejected.

That is: Service attitude of Customer Manager is appropriate

For Cost of Call rate for hotline no is suitable:

H_0: Cost of Call rate for hotline no is suitable.
H_1: Cost of Call rate for hotline no is not suitable.

Level of significance, α = 0.05

Table: 1.9 One Sample t Test for Cost of Call rate for hotline no. is suitable.

	t	df	Sig. (2-tailed)	Mean Difference
			t-test for Equality of Means	
Cost of Call rate for hotline no. is suitable.	-1.726	49	.091	-.260

Source: Survey Data

(With 95% significance value):   After running the analysis, the significance value for Cost of Call rate for hotline no is suitable is .091; which is more than confidence interval $\alpha = 0.05$. So, null hypothesis is rejected and alternate hypothesis is accepted.
That is: Cost of Call rate for hotline no. is not suitable.

For Length of the conversation is good enough:

H_0: **Length of the conversation was good enough**
H_1: **Length of the conversation was not good enough**

Level of significance, $\alpha = 0.05$

Table: 1.10 One Sample t Test for Length of the conversation is good enough.

	t	df	Sig. (2-tailed)	Mean Difference
			t-test for Equality of Means	
Length of the conversation is good enough.	4.516	49	.000	.520

Source: Survey Data

(With 95% significance value):   After running the analysis, the significance value for Length of the conversation is good enough is .000; which is less than confidence interval $\alpha = 0.05$. So, null hypothesis is accepted and alternate hypothesis is rejected.
That is: Length of the conversation is good enough.

SPSS statistical system generated the output shown below:

Table: 2.1 Coefficients, t-value & significant Value

Model		Unstandaraized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	-.167	1.160		-.144	.887
	The problem is resolved from the company end.	.009	.144	.010	.064	.949
	It took short time to reach Customer Manager while you call in the hotline no.	.220	.119	.252	1.857	.071
	Before reach the customer manager Cost of waiting time increased gradually	.014	.120	.015	.120	.905
	Took long time to solve the problem	-.299	.139	-.260	-2.152	.038
	Positive behavior from Customer Manager end.	.144	.208	.095	.691	.494
	The Solution or Outcome of the conversation brought some positive result.	.366	.178	.349	2.051	.047
	Understanding capability of Customer Manager was fine.	-.316	.160	-.261	-1.981	.055
	Service attitude of Customer Manager was appropriate	.537	.190	.363	2.828	.007
	Cost of Call rate for hotline no is suitable.	.298	.110	.320	2.700	.010
	Length of the conversation is good enough.	.040	.154	.033	.263	.794

Source: Survey Data.
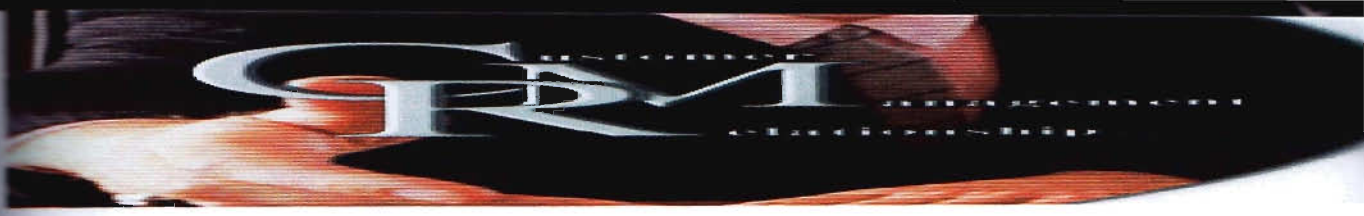
We know the general from of a multiple regression equation with independent variables up to k is:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \ldots\ldots\ldots + b_kX_k$$

Here,

Coefficient of The problem is resolve from the company end,
$b_1 = .009$

Coefficient of It was take short time to reach Customer Manager while you call in hotline no, $b_2 = .220$

Coefficient of Before reach the customer manager Cost of waiting time increase day by day, $b_3 = .014$

Coefficient of Took long time to solve the problem,
$b_4 = -.299$

Coefficient of Positive behavior from Customer Manager end,
$b_5 = 0.144$

Coefficient of The Solution or Outcome of the conversation brings some positive result,
$b_6 = .366$

Coefficient of Understanding capability of Customer Manager is fine,
$b_7 = -.316$

Coefficient of Service attitude of Customer Manager is appropriate,
$b_8 = .537$

Coefficient of Cost of Call rate for hotline no is suitable,
$b_9 = .298$

Coefficient of Length of the conversation is good enough,
$b_{10} = 0.040$

Coefficient for constant (You are satisfied for the overall service.), $a = -.167$

So the determined regression equation is:

$$Y_{\text{Overall Customer Satisfaction}} = -.167 + 0.009X_1 + 0.220X_2 + .014X_3 - 0.299X_4 + 0.144X_5 + .366X_6 - .316X_7 + .537X_8 + .298X_9 + .040X_{10}$$

1. .009 (i.e. b_1) means if **The problem is resolve from the company end, increase** in 1 unit, Customer Satisfaction will be increase by .009 holding $X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9$ *and* X_{10} constant.

2. .220 (i.e. b_1) means if **It was take short time to reach Customer Manager while you call in hotline no, increase** in 1 unit, Customer Satisfaction will be increase by .220 holding $X_1, X_3, X_4, X_5, X_6, X_7, X_8, X_9$ *and* X_{10} constant.

3. .014 (i.e. b_1) means if **Before reach the customer manager Cost of waiting time increase day by day, increase** in 1 unit, Customer Satisfaction will be increase by .014 holding $X_1, X_2, X_4, X_5, X_6, X_7, X_8, X_9$ *and* X_{10} constant.

4. -.299 (i.e. b_1) means if **Took long time to solve the problem, increase** in 1 unit, Customer Satisfaction will be decrease by -.299 holding $X_1, X_2, X_3, X_5, X_6, X_7, X_8, X_9$ *and* X_{10} constant.

5. .144 (i.e. b_1) means if **Positive behavior from Customer Manager end, increase** in 1 unit, Customer Satisfaction will be increase by .144 holding $X_1, X_2, X_3, X_4, X_6, X_7, X_8, X_9$ *and* X_{10} constant.

6. .366 (i.e. b_1) means if **The Solution or Outcome of the conversation brings some positive result, increase** in 1 unit, Customer Satisfaction will be increase by .366 holding $X_1, X_2, X_3, X_4, X_5, X_7, X_8, X_9$ *and* X_{10} constant.

7. -.316 (i.e. b_1) means if **Understanding capability of Customer Manager is fine, increase** in 1 unit, Customer Satisfaction will be decrease by -.316 holding $X_1, X_2, X_3, X_4, X_5, X_6, X_8, X_9$ *and* X_{10} constant.

8. .537 (i.e. b_1) means if **Service attitude of Customer Manager is appropriate, increase** in 1 unit, Customer Satisfaction will be increase by .537 holding $X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_9$ *and* X_{10} constant.

9. .298 (i.e. b_1) means if **Cost of Call rate for hotline no is suitable, increase** in 1 unit, Customer Satisfaction will be increase by .298 holding $X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8$ *and* X_{10} constant.
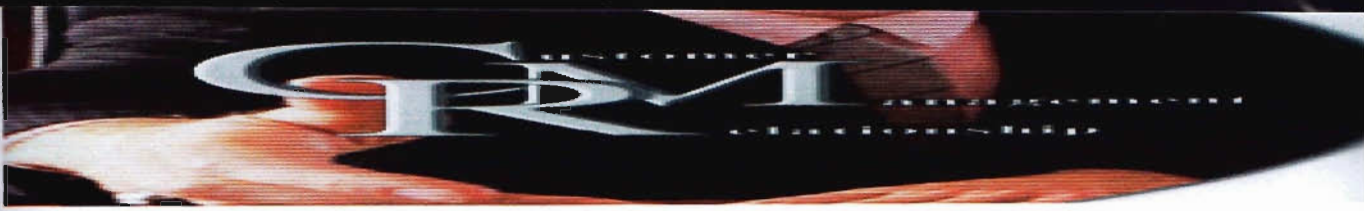
10. .040 (i.e. b_1) means if **Length of the conversation is good enough,** increase in 1 unit, Customer Satisfaction will be increase by .040 holding $X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8$ and X_9 constant.

Model Summary:

Table: 2.2 Model Summaries

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764(a)	.584	.477	.717

Source: Survey Data.

Predictors: (Constant), Length of the conversation is good enough. The problem is resolve from the company end. Cost of Call rate for hotline no is suitable. , Took long time to solve the problem, before reach the customer manager Cost of waiting time increase day by day. Positive behavior from Customer Manager End. , It was take short time to reach Customer Manager while you call in hotline no., Service attitude of Customer Manager is appropriate; Understanding capability of Customer Manager is fine. , The Solution or Outcome of the conversation brings some positive result.

So, the determined R^2 value (Coefficient of Determination) is .584 or 58.4%

Interpretation:

So finally we say that **58.4%** of the total variation in the dependent variable (I.e. Overall Customer Satisfaction) is explained or accounted for by the ten independent variables.

Independent Variables:

(Length of the conversation is good enough; The problem is resolve from the company end; Cost of Call rate for hotline no is suitable; Took long time to solve the problem; before reach the customer manager Cost of waiting time increase day by day; Positive behavior from Customer Manager End; It was take short time to reach Customer Manager while you call in hotline no; Service attitude of Customer Manager is appropriate; Understanding capability of Customer Manager is fine; The Solution or Outcome of the conversation brings some positive result.).

We state the null an alternate hypothesis

H_0 : $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = \beta_8 = \beta_9 = \beta_{10} = 0$

H_1 : **Not all the β's are the same.**

Level of significance, $\alpha = 0.05$

F statistic will to be used.

Decision:

SPSS statistical system generated the output shown below:

TABLE: 3.1 ANOVA TABLE

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.128	10	2.813	5.471	.000(a)
	Residual	20.052	39	.514		
	Total	48.180	49			

Source: Survey Data.

a.   Predictors: (Constant), Length of the conversation is good enough, the problem is resolve from the company end, Cost of Call rate for hotline no is suitable, took long time to solve the problem, before reach the customer manager Cost of waiting time increase day by day, Positive behavior from Customer Manager end, It was take short time to reach Customer Manager while you call in hotline no, Service attitude of Customer Manager is appropriate; Understanding capability of Customer Manager is fine, The Solution or Outcome of the conversation brings some positive result.

b. Dependent Variable: Overall Customer Satisfaction.

Since p-value or Sig. value that is Probability of accepting null hypothesis (i.e. .000) < α value that is probability of rejecting null hypothesis (i.e. 0.05); H_0 is rejected. And H_1 is accepted.

That is, '**Not all the β's are the same**'.

That is, the regression equation is valid.

That is the independent variables (Length of the conversation is good enough, the problem is resolve from the company end, Cost of Call rate for hotline no is suitable, took long time to solve the problem, before reach the customer manager Cost of waiting time increase day by day, Positive behavior from Customer Manager end, It was take short time to reach Customer Manager while you call in hotline no, Service attitude of Customer Manager is appropriate; Understanding capability of Customer Manager is fine, The Solution or Outcome of the conversation brings some positive result.) have the capability to estimate the Overall Customer Satisfaction (Y).

We state the Null and Alternate hypothesis

For The problem is resolve from the company end.
H_0 : $\beta_1 = 0$
H_1 : $\beta_2 \neq 0$

For It was take short time to reach Customer Manager while you call in hotline no.
H_0 : $\beta_2 = 0$
H_1 : $\beta_2 \neq 0$

For Before reach the customer manager Cost of waiting time increase day by day
H_0 : $\beta_3 = 0$
H_1 : $\beta_3 \neq 0$
For Took long time to solve the problem
H_0 : $\beta_4 = 0$
H_1 : $\beta_4 \neq 0$

For Positive behavior from Customer Manager end
H_0 : $\beta_5 = 0$
H_1 : $\beta_5 \neq 0$

For The Solution or Outcome of the conversation brings some positive result
H_0 : $\beta_6 = 0$
H_1 : $\beta_6 \neq 0$

For Understanding capability of Customer Manager is fine
H_0 : $\beta_7 = 0$
H_1 : $\beta_7 \neq 0$

For Service attitude of Customer Manager is appropriate
H_0 : $\beta_8 = 0$
H_1 : $\beta_8 \neq 0$

For Cost of Call rate for hotline no is suitable
H_0 : $\beta_9 = 0$
H_1 : $\beta_9 \neq 0$

For Length of the conversation is good enough

$H_0 \quad : \beta_{10} = 0$
$H_1 \quad : \beta_{10} \neq 0$

Level of significance, $\alpha = 0.05$

t statistic is to be used

Decision:

SPSS statistical system generated the output shown below:

TABLE: 3.2 Coefficients, t-value & significant Value

Model		Unstandaraized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
	(Constant)	-.167	1.160		-.144	.887
	The problem is resolve from the company end.	.009	.144	.010	.064	.949
	It was take short time to reach Customer Manager while you call in hotline no.	.220	.119	.252	1.857	.071
	Before reach the customer manager Cost of waiting time increase day by day.	.014	.120	.015	.120	.905
	Took long time to solve the problem	-.299	.139	-.260	-2.152	.038
	Positive behavior from Customer Manager end.	.144	.208	.095	.691	.494
	The Solution or Outcome of the conversation brings some positive result.	.366	.178	.349	2.051	.047
	Understanding capability of Customer Manager is fine.	-.316	.160	-.261	-1.981	.055
	Service attitude of Customer Manager is appropriate	.537	.190	.363	2.828	.007
	Cost of Call rate for hotline no is suitable.	.298	.110	.320	2.700	.010
	Length of the conversation is good enough.	.040	.154	.033	.263	.794

Source: Survey Data

<u>For It was take short time to reach Customer Manager while you call in hotline no.:</u>

Since p-value or Sig. value that is Probability of accepting null hypothesis (i.e. 0.949) > α value that is probability of rejecting null hypothesis (i.e. 0.05); H_1 is rejected and H_0 is accepted

That is $\beta_1 = 0$.

That is the problem is resolve from the company end is not a good estimator and has not the capability of estimating overall customer satisfaction. .

So, It was take short time to reach Customer Manager while you call in hotline no. should be deleted from the analysis.

<u>For It was take short time to reach Customer Manager while you call in hotline no.</u>

Since p-value or Sig. value that is Probability of accepting null hypothesis (i.e. 0.071) > α value that is probability of rejecting null hypothesis (i.e. 0.05); H_0 is accepted

That is $\beta_2 = 0$.

That is it was take short time to reach Customer Manager while you call in hotline no is not a good estimator and has not the capability of estimating overall customer satisfaction

So, It was take short time to reach Customer Manager while you call in hotline no should be deleted from the analysis.

For Before reach the customer manager Cost of waiting time increase day by day:

Since p-value or Sig. value that is Probability of accepting null hypothesis (i.e. .905) > α value that is probability of rejecting null hypothesis (i.e. 0.05); H_0 is accepted

That is $\beta_3 = 0$.

That before reach the customer manager Cost of waiting time increase day by day is not a good estimator and has not the capability of estimating overall customer satisfaction

So, before reach the customer manager Cost of waiting time increase day by day should be deleted from the analysis.

For Took long time to solve the problem:

Since p-value or Sig. value that is Probability of accepting null hypothesis (i.e. .038) < α value that is probability of rejecting null hypothesis (i.e. 0.05); H_0 is rejected and H_1 is accepted

That is $\beta_4 \neq 0$.
That is Took long time to solve the problem is a good estimator and has the capability of estimating Overall Customer Satisfaction.

For Positive behavior from Customer Manager end:

Since p-value or Sig. value that is Probability of accepting null hypothesis (i.e. .494) > α value that is probability of rejecting null hypothesis (i.e. 0.05); H_0 is accepted

That is $\beta_5 = 0$.

That Positive behavior from Customer Manager end is not a good estimator and has not the capability of estimating overall customer satisfaction.

So, Positive behavior from Customer Manager end should be deleted from the analysis.

For The Solution or Outcome of the conversation brings some positive result:

Since p-value or Sig. value that is Probability of accepting null hypothesis (i.e. 0.047) < α value that is probability of rejecting null hypothesis (i.e. 0.05); H_0 is rejected and H_1 is accepted

That is $\beta_6 \neq 0$.

That is The Solution or Outcome of the conversation brings some positive result is a good estimator and has the capability of estimating Overall Customer Satisfaction.

For Understanding capability of Customer Manager is fine:

Since p-value or Sig. value that is Probability of accepting null hypothesis (i.e. .055) > α value that is probability of rejecting null hypothesis (i.e. 0.05); H_0 is accepted

That is $\beta_7 = 0$.

That is Understanding capability of Customer Manager is fine is not a good estimator and has not the capability of estimating Overall Customer Satisfaction.

So, Understanding capability of Customer Manager should be deleted from the analysis.

For Service attitude of Customer Manager is appropriate:

Since p-value or Sig. value that is Probability of accepting null hypothesis (i.e. 0.007) < α value that is probability of rejecting null hypothesis (i.e. 0.05); H_0 is rejected and H_1 is accepted

That is $\beta_8 \neq 0$.

That is Service attitude of Customer Manager is appropriate is a good estimator and has the capability of estimating Overall Customer Satisfaction.

For Cost of Call rate for hotline no is suitable:

Since p-value or Sig. value that is Probability of accepting null hypothesis (i.e. .010) < α value that is probability of rejecting null hypothesis (i.e. 0.05); H_0 is rejected and H_1 is accepted

That is $\beta_9 \neq 0$.

That is Cost of Call rate for hotline no is suitable is a good estimator and has the capability of estimating Overall Customer Satisfaction.

For Length of the conversation is good enough:

Since p-value or Sig. value that is Probability of accepting null hypothesis (i.e. .794) > α value that is probability of rejecting null hypothesis (i.e. 0.05); H_0 is accepted

That is $\beta_{10} = 0$.

That is Length of the conversation is good enough is not a good estimator and has not the capability of estimating Overall Customer Satisfaction.

So, Length of the conversation is good enough should be deleted from the analysis.

According to the test result, I consider deleting The problem is resolve from the company end, It was take short time to reach Customer Manager while you call in hotline no, Before reach the customer manager Cost of waiting time increase day by day, Positive behavior from Customer Manager end, Understanding capability of Customer Manager is fine, Length of the conversation is good enough from the independent variables

SPSS statistical system generated the output after rerunning the regression analysis with only the significant independent variables in the equation shown below.

<div align="center">TABLE: 3.3 Coefficients, t-value & significant Value</div>

Model		Unstandaraized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	-.086	.973		-.088	.930
	Took long time to solve the problem	-.211	.131	-.184	-1.604	.116
	The Solution or Outcome of the conversation brings some positive result.	.277	.127	.264	2.181	.034
	Service attitude of Customer Manager is appropriate	.536	.169	.362	3.176	.003
	Cost of Call rate for hotline no is suitable.	.378	.104	.406	3.625	.001

Source: Survey Data.

So the new regression equation is follows:

$$Y_{\text{Overall Customer Satisfaction}} = -.086 - .211X_4 + .277X_6 + .536X_8 + .378X_9$$

		You are satisfied for the overall service.	The problem is resolve from the company end.	It was take short time to reach Customer Manager while you call in hotline no.	Before reach the customer manager Cost of waiting time increase day by day.	Took long time to solve the problem	Positive behavior from Customer Manager end.	The Solution or Outcome of the conversation brings some positive result.	Understanding capability of Customer Manager is fine.	Service attitude of Customer Manager is appropriate	Cost of Call rate for hotline no is suitable.	Length of the conversation is good enough.
You are satisfied for the overall service.	Pearson Correlation	1	.467(**)	.268	-.011	-.348(*)	.333(*)	.500(**)	.185	.369(**)	.395(**)	.103
	Sig. (2-tailed)		.001	.060	.938	.013	.018	.000	.197	.008	.005	.476
	N	50	50	50	50	50	50	50	50	50	50	50
The problem is resolve from the company end.	Pearson Correlation	.467(**)	1	.427(**)	-.019	-.262	.286(*)	.428(**)	.410(**)	.383(**)	.231	.000
	Sig. (2-tailed)	.001		.002	.895	.066	.044	.002	.003	.006	.106	1.000
	N	50	50	50	50	50	50	50	50	50	50	50
It was take short time to reach Customer Manager while you call in hotline no.	Pearson Correlation	.268	.427(**)	1	.051	.091	.109	-.150	.077	.054	.250	-.079
	Sig. (2-tailed)	.060	.002		.723	.532	.453	.299	.596	.711	.080	.586
	N	50	50	50	50	50	50	50	50	50	50	50
Before reach the customer manager Cost of waiting time increase day by day.	Pearson Correlation	-.011	-.019	.051	1	.185	.141	.144	.046	-.297(*)	.162	.407(**)
	Sig. (2-tailed)	.938	.895	.723		.198	.328	.318	.752	.036	.261	.003
	N	50	50	50	50	50	50	50	50	50	50	50
Took long time to solve the problem	Pearson Correlation	-.348(*)	-.262	.091	.185	1	-.152	-.370(**)	-.354(*)	-.106	-.070	.037
	Sig. (2-tailed)	.013	.066	.532	.198		.291	.008	.012	.465	.631	.798
	N	50	50	50	50	50	50	50	50	50	50	50

		You are satisfied for the overall service.	The problem is resolve from the company end.	It was take short time to reach Customer Manager while you call in hotline no.	Before reach the customer manager Cost of waiting time increase day by day.	Took long time to solve the problem	Positive behavior from Customer Manager end.	The Solution or Outcome of the conversation brings some positive result.	Understanding capability of Customer Manager is fine.	Service attitude of Customer Manager is appropriate	Cost of Call rate for hotline no is suitable.	Length of the conversation is good enough.
Positive behavior from Customer Manager end.	Pearson Correlation	.333(*)	.286(*)	.109	.141	-.152	1	.573(**)	.388(**)	.093	.066	.363(**)
	Sig. (2-tailed)	.018	.044	.453	.328	.291		.000	.005	.520	.648	.010
	N	50	50	50	50	50	50	50	50	50	50	50
The Solution or Outcome of the conversation brings some positive result.	Pearson Correlation	.500(**)	.428(**)	-.150	.144	-.370(**)	.573(**)	1	.501(**)	.258	.184	.315(*)
	Sig. (2-tailed)	.000	.002	.299	.318	.008	.000		.000	.071	.202	.026
	N	50	50	50	50	50	50	50	50	50	50	50
Understanding capability of Customer Manager is fine.	Pearson Correlation	.185	.410(**)	.077	.046	-.354(*)	.388(**)	.501(**)	1	.261	.045	.281(*)
	Sig. (2-tailed)	.197	.003	.596	.752	.012	.005	.000		.067	.756	.048
	N	50	50	50	50	50	50	50	50	50	50	50
Service attitude of Customer Manager is appropriate	Pearson Correlation	.369(**)	.383(**)	.054	-.297(*)	-.106	.093	.258	.261	1	-.200	-.037
	Sig. (2-tailed)	.008	.006	.711	.036	.465	.520	.071	.067		.164	.796
	N	50	50	50	50	50	50	50	50	50	50	50
Cost of Call rate for hotline no is suitable.	Pearson Correlation	.395(**)	.231	.250	.162	-.070	.066	.184	.045	-.200	1	.112
	Sig. (2-tailed)	.005	.106	.080	.261	.631	.648	.202	.756	.164		.439
	N	50	50	50	50	50	50	50	50	50	50	50
Length of the conversation is good enough.	Pearson Correlation	.103	.000	-.079	.407(**)	.037	.363(**)	.315(*)	.281(*)	-.037	.112	1
	Sig. (2-tailed)	.476	1.000	.586	.003	.798	.010	.026	.048	.796	.439	
	N	50	50	50	50	50	50	50	50	50	50	50

Table: 4.1 Correlation Matrixes

Source: Survey Data

Table: 4.2 Relationships between Dependent and Independent Variables

Dependent Variables	Independent Variables
Overall Satisfaction:	The problem is resolve from the company end = .467
Overall Satisfaction:	It was take short time to reach Customer Manager while you call in hotline no = .268
Overall Satisfaction:	Before reach the customer manager Cost of waiting time increase day by day = -.011
Overall Satisfaction:	Took long time to solve the problem = -.348
Overall Satisfaction:	Positive behavior from Customer Manager End = .333
Overall Satisfaction:	The Solution or Outcome of the conversation brings some positive result = .500
Overall Satisfaction:	Understanding capability of Customer Manager is fine = .185
Overall Satisfaction:	Service attitude of Customer Manager is appropriate = .369
Overall Satisfaction:	Cost of Call rate for hotline no is suitable = .395
Overall Satisfaction:	Length of the conversation is good enough = .103

Source: Survey Data

Discussions:

1. Overall Satisfaction has a weak positive (i.e. .467) correlation with the problem is resolved from the company end.

2. Overall Satisfaction has a weak positive (i.e. .268) correlation with It was take short time to reach Customer Manager while you call in hotline number.

3. Overall Satisfaction has a weak negative (i.e. -.011) correlation with before reach the customer manager Cost of waiting time increase day by day.

4. Overall Satisfaction has a weak negative (i.e. -.348) correlation with Took long time to solve the problem.

5. Overall Satisfaction has a weak positive (i.e. .333) correlation with Positive behavior from Customer Manager End.

6. Overall Satisfaction has a moderate positive (i.e. .500) correlation with The Solution or Outcome of the conversation brings some positive result.

7. Overall Satisfaction has a weak positive (i.e. .185) correlation with Understanding capability of Customer Manager is fine.

8. Overall Satisfaction has a weak positive (i.e. .369) correlation with Service attitude of Customer Manager is appropriate.

9. Overall Satisfaction has a weak positive (i.e. .395) correlation with Cost of Call rate for hotline no. is suitable.

10. Overall Satisfaction has a weak positive (i.e. .103) correlation with Length of the conversation is good enough.

Recommendations:

From the statistical analysis we see that customers overall satisfaction will decrease if Cost of waiting time increase day by that means when customer call their respective operator's hotline number that time they reach the customer manager after waiting long time. For example if the customer call their particular operator's hotline number in any time except mid night then they have to wait 3 to 4 minutes to reach the customer manager. So the mobile telecom companies need to expand their facility like increase the no. of employee and use up to date technology so the rate of drop call decrease and customer reach the customer manager right after they call.

One more important point is, from my analysis I have identified that most of the subscriber of different operators think that the Call rate for hotline number is not suitable. They think this is very much costly for them when they call their customer care number. Because every operator charges for calling their hotline number per minute 1 taka or more than 1 taka. And in addition they have to wait more than 3-4 minutes to reach the customer manager. Which create a negative impact on customer mind. Because for solve a single problem they have to spend 6 to 7 taka. So the mobile operator companies suppose to reduce their call rate for their hotline or customer service number. But they have to reduce it up to an optimum level. Because if they reduce the call rate at minimum level then ultimately the call pressure increase dynamically. Then also Cost of waiting time increase substantially.

Another reason of customer overall satisfaction decrease is take long time to solve the problem. That means when the customer give the complain about their line and other value added service, the mobile operator company take long time to solve their problem. For example overcharging, friends and family number correction, missed call alert problem.

Then the companies take 72 hours from customer to solve that particular problem. To achieve the higher customer rate they need to reduce the time gap. And this can be possible when they use high technological software which has higher analytical capability.

I also want to mention one more things there are some other factors which are directly involve with customer satisfaction rate. These points are Service attitude of Customer Manager and The solution or outcome of the conversation bring some positive result. The service quality also depends on the key person who deals with the customer over the phone. So the companies need to trained their employees such a way that they serve each customer as their first customer. And try to increase their analytical power so they can understand the customer problem within a very short time.

And other important factor like length of the conversation, understanding capability of Customer Manager, positive behavior from Customer Manager end are acting as a vital role to maintain the company's overall customer satisfaction rate. So companies must create more efficiency to maintain the customer satisfaction.

Conclusion:

Customer relationship management (CRM) is a set of strategies, processes, and associated technology enablers designed to improve the interactions and engagement of customers. It involves not only the use of these systems, but also corporate cultural transformation and ongoing programs with the appropriate organizational framework.

Customer service and support is the main CRM areas. It helps the companies to retain their present customer, and make a strong bondage with the customer which make more profit for the company. In Bangladesh the mobile telecom companies first introduce customer relation management in broad perspective. And they are successful because they provide the service through their different eCRM tools. For this reason customer get the service instantly. They do not need to go customer service center.

But here one important thing is the telecom companies need to increase their number of employees in their call center and also they need to introduce new technology which has higher analytical power. By this they can increase their customer satisfaction rate more and more.

Table: 5.1 Level of Education				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SSC	6	12.0	12.0	12.0
	HSC	9	18.0	18.0	30.0
	Graduate	22	44.0	44.0	74.0
	Masters	13	26.0	26.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Table: 5.2 Profession				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Service to Govt	4	8.0	8.0	8.0
	Service to Local private enterprises	10	20.0	20.0	28.0
	Service to MNCs	8	16.0	16.0	44.0
	Professionals (physicians, advocates etc.)	10	20.0	20.0	64.0
	Students	17	34.0	34.0	98.0
	Business	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data
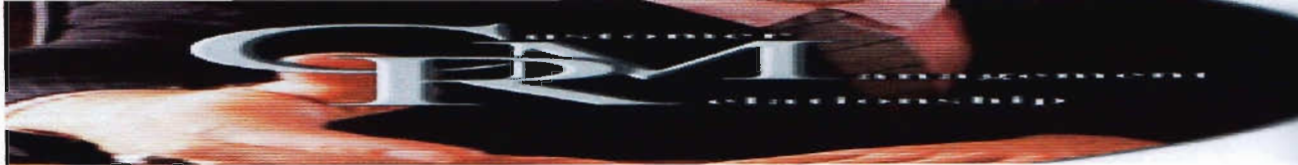
Table: 5.3 Respondents or his/her family's monthly income				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5000-10000	4	8.0	8.0	8.0
	10000-15000	9	18.0	18.0	26.0
	15000-20000	5	10.0	10.0	36.0
	20000-30000	11	22.0	22.0	58.0
	30000+	21	42.0	42.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Table: 5.4 Approximate age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Between 15 And 20 Years	4	8.0	8.0	8.0
	Between 20 And 25 Years	18	36.0	36.0	44.0
	Between 25 And 30 Years	11	22.0	22.0	66.0
	Between 30 And 40 Years	11	22.0	22.0	88.0
	Over 40 Years	6	12.0	12.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Table: 5.5 Gender				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	25	50.0	50.0	50.0
	Female	25	50.0	50.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Table: 5.6 Operator line using by Respondents					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Grameenphone.	14	28.0	28.0	28.0
	Banglalink	12	24.0	24.0	52.0
	Aktel	10	20.0	20.0	72.0
	Warid	8	16.0	16.0	88.0
	Citycel	3	6.0	6.0	94.0
	Teletalk	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Table: 5.7 Respondents call respective operator hotline no. for mobile service related consultancy					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	50	100.0	100.0	100.0

Source: Survey Data

Table: 5.8 Source					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Word of mouth	13	26.0	26.0	26.0
	Newspaper advertisement	9	18.0	18.0	44.0
	TV advertisement	12	24.0	24.0	68.0
	Brochure	7	14.0	14.0	82.0
	Websites	9	18.0	18.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Table: 5.9 The problem is resolve from the company end.				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	8.0	8.0	8.0
	Disagree	3	6.0	6.0	14.0
	Neutral	12	24.0	24.0	38.0
	Agree	26	52.0	52.0	90.0
	Strongly Agree	5	10.0	10.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Table: 5.10 It was take short time to reach Customer Manager while you call in hotline no.				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	14.0	14.0	14.0
	Disagree	8	16.0	16.0	30.0
	Neutral	11	22.0	22.0	52.0
	Agree	23	46.0	46.0	98.0
	Strongly Agree	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Table: 5.11 Before reach the customer manager Cost of waiting time increase day by day.				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	StronglyDisagree	3	6.0	6.0	6.0
	Disagree	6	12.0	12.0	18.0
	Neutral	16	32.0	32.0	50.0
	Agree	20	40.0	40.0	90.0
	Strongly Agree	5	10.0	10.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data
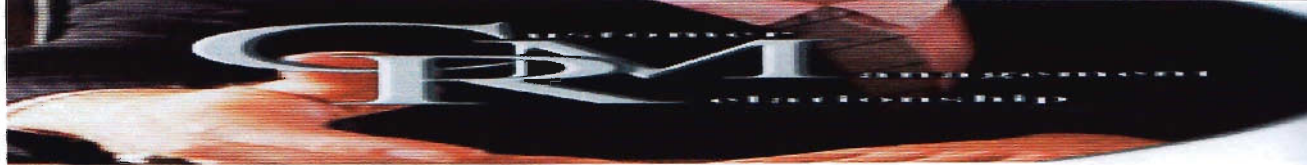
Table: 5.12 Took long time to solve the problem					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	**Strongly Disagree**	1	2.0	2.0	2.0
	Disagree	10	20.0	20.0	22.0
	Neutral	17	34.0	34.0	56.0
	Agree	21	42.0	42.0	98.0
	Strongly Agree	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Table: 5.13 Positive behavior from Customer Manager end.					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	**Disagree**	1	2.0	2.0	2.0
	Neutral	7	14.0	14.0	16.0
	Agree	32	64.0	64.0	80.0
	Strongly Agree	10	20.0	20.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Table: 5.14 The Solution or Outcome of the conversation brings some positive result.					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	**Strongly Disagree**	2	4.0	4.0	4.0
	Disagree	4	8.0	8.0	12.0
	Neutral	11	22.0	22.0	34.0
	Agree	27	54.0	54.0	88.0
	Strongly Agree	6	12.0	12.0	100.0

Total	50	100.0	100.0

Source: Survey Data

Table: 5.15 Understanding capability of Customer Manager is fine.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	4	8.0	8.0	8.0
	Neutral	9	18.0	18.0	26.0
	Agree	28	56.0	56.0	82.0
	Strongly Agree	9	18.0	18.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Table: 5.16 Service attitude of Customer Manager is appropriate					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	11	22.0	22.0	22.0
	Agree	28	56.0	56.0	78.0
	Strongly Agree	11	22.0	22.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Table: 5.17 Cost of Call rate for hotline no is suitable.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	8.0	8.0	8.0
	Disagree	21	42.0	42.0	50.0
	Neutral	12	24.0	24.0	74.0
	Agree	10	20.0	20.0	94.0
	Strongly Agree	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data
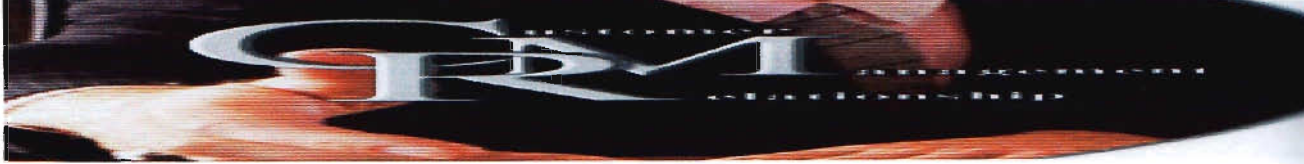
Table: 5.18 Length of the conversation is good enough.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.0	2.0	2.0
	Disagree	4	8.0	8.0	10.0
	Neutral	16	32.0	32.0	42.0
	Agree	26	52.0	52.0	94.0
	Strongly Agree	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Table: 5.19 You are satisfied for the overall service.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	8.0	8.0	8.0
	Disagree	3	6.0	6.0	14.0
	Neutral	14	28.0	28.0	42.0
	Agree	26	52.0	52.0	94.0
	Strongly Agree	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

Source: Survey Data

Survey Questionnaire

As a part of our academic requirement I am supposed to prepare a report on eCRM practice on mobile telecom company in Bangladesh. In this report I need to conduct a survey. I can assure you that the data collected through these questionnaires will be used practically for academic purpose.

1. Level of Education:

___ 1. Below SSC   ___ 2. SSC   __ 3. HSC   __ 4. Graduate   ___ 5. Masters

2. Profession:
   1.____Service to Govt.   5.____Students
   2.____Service to Local private enterprises   6.____Business
   3.____Service to MNCs   7.____Others
   4.____Professionals (physicians, advocates
       etc.)

3. Please check the box which is closest to your or your family's monthly income:

   ❑ Less than 5000   ❑ 5000-10000   ❑ 10000-15000
   ❑ 15000-20000   ❑ 20000-30000   ❑ 30000+

4. Your approximate age:

   ❑ Less Than 15 Years   ❑ Between 15 And 20 Years
   ❑ Between 20 And 25 Years   ❑ Between 25 And 30 Years
   ❑ Between 30 And 40 Years   ❑ Over 40 Years

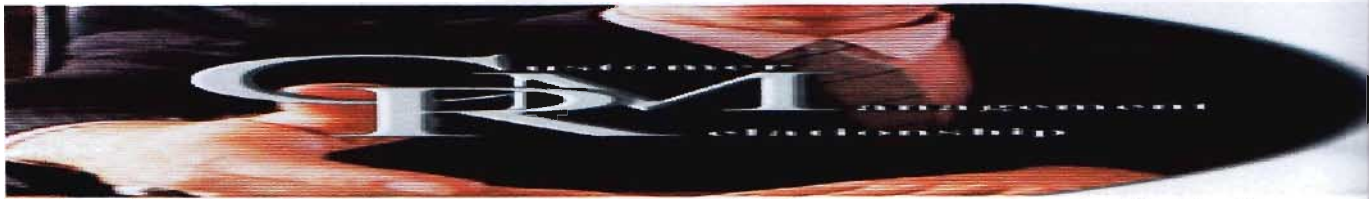5. Please check one: ❑ Male ❑ Female

6. Which operator line you are using _____

7. For any mobile service related consultancy do you call in your respective operator hotline no?

   ❑Yes   ❑ No

8. From which sources you know your respective operators hotline no:

   • Word of mouth   _____
   • Newspaper advertisement   _____
   • TV advertisement   _____
   • Brochure   _____
   • Websites   _____

In the following a few statements are being presented the way of service provided by the different telecom companies and customer satisfaction rate @ FIVE point scales ranging from strongly disagree (1) to strongly agree (5). Please depict your position by putting a mark on the scales in accordance of your agreement with the statements.

Statements	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
1. The problem is resolve from the company end.	1	2	3	4	5
2. It was take short time to reach Customer Manager while you call in hotline no.	1	2	3	4	5
3. Before reach the customer manager Cost of waiting time increase day by day.	1	2	3	4	5
4. Took long time to solve the problem	1	2	3	4	5
5. Positive behavior from Customer Manager end.	1	2	3	4	5
6. The Solution or Outcome of the conversation brings some positive result.	1	2	3	4	5
7. Understanding capability of Customer Manager is fine.	1	2	3	4	5
8. Service attitude of Customer Manager is appropriate	1	2	3	4	5
9. Cost of Call rate for hotline no is suitable.	1	2	3	4	5
10. Length of the conversation is good enough.	1	2	3	4	5
11. You are satisfied for the overall service.	1	2	3	4	5

Thank you for your time and consideration

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