



"Customer Churn Analysis - the tactics of handling customer complains"

Author: Maneeka Oad

Institution for Economics and Informatics
2008-06-16
Supervisor: Martin
Examiner:Ulrike Snis
Thesis code: UIC 500

PREFACE

First of all thanks to Almighty Allah who blessed me with such capability to work on this thesis. Then my parents efforts and struggles in my life. I am also thankful to my teacher and super visor Martin and Ulrika Sins for their guide lines while my studies and also while working on this thesis. Specially the VTD Trollhatan team Marit, Potrick, Nittan, Anglica who helped me by advising their thoughts and providing the information

Finally my friends for bearing the patience and cooperation.

Maneeka Oad

Abstract/ Summary

The Retention has been most important factors for the companies because the cost of looking for much higher than the cost of keeping relation with current customers. The customer retention is to understand your customers through the Customer Relationship management and the more you know about them the better: their expectations, satisfaction levels, demographic & geographic & psychographic tendencies.. If you understand more about your customers and know more about which customer groups are defecting to rival providers, more effective retention strategies can be developed. This is the key to the successful retention marketing.

The aim of this report is two fold:

1) To help the company confronting the problem of the churn customer with complains at 60 percent due to the different reasons in the business of delivery the paper. Here the literature study from the other authors been taken as the reference. Maslow Theory has been served as the background model theory of this study.

2) To deliver how the churn analysis could be helpful to solve the problem. It serves with detailed information, a strategy, recommendations to handle the customer complains in reflection of the churn and customer relation ship management.

In addition to this, data ware house gives an open invitation to the data mining. The churn ratio of the customer can be identified as in the groups for the variables in respect to the calls received, tear paper call, wet paper calls. So in data mining one can analyse the data with the high or the low degree of description of the variables. In this manner there could be the chances the variable for the tear paper variable shows more in the customer segment. The data mining has been tried to apply here with some of the theories.

This report doesn't include the software application due to the insufficient data. It also doesn't include the interviews.

The method of the report includes the empirical, survey based the instrument is used as the questionnaires.

The report comes with the conclusion of handling of the problem area with certain recommendations and suggestions.

Key words: Customer churn, Customer relation ship management, Data ware housing, Data mining.

Publisher:	University West, Department of Economics and Informatics P.O. SE-461 81 TROLLHATTAN, SWEDEN Phone: + 46 520 223000 Fax: + 46 520 223099
Examiner:	Lektor Ulrika Lundh Snis
Supervisor:	
Subject:	Management Informatics
Language:	English
Number:	2008:June
Date:	June 16, 2008
Thesis code:	UIC 500

Table of Contents

<u>Contents</u>	<u>Page no</u>
<i>Abstract / Summary</i>	3-3
<i>1 Introduction</i>	5-6
<i>1.1 Background</i>	6-7
<i>1.2 Research problem (domain) formulation and research question</i>	7-7
<i>1.3 Research aim and objective</i>	7-8
<i>1.4 Delimitation</i>	8-8
<i>2 Research method n Setting</i>	8-11
<i>2.1 Description of Company</i>	8-9
<i>2.2 Research approach</i>	9-11
<i>2.3 Data collection methods</i>	11-11
<i>2.4 Work Analysis</i>	11-11
<i>3 Theoretical Frame Work</i>	13-21
<i>3.1. Customer Relation Ship Management</i>	13-14
<i>3.2. Customer Churn</i>	15-16
<i>3.3. Data Mining</i>	16-17
<i>3.4. Data Ware housing</i>	17-19
<i>3.5. Quality of services</i>	19-21
<i>4 Results</i>	21-25
<i>4.1 Complains</i>	21-21
<i>4.2 One time Complains</i>	21-22
<i>4.3 Repeated complains</i>	22-22
<i>4.4 The company end Recording</i>	22-22
<i>4.5 Making notes</i>	22-23
<i>4.6 Meeting calls with delivery person</i>	23-23
<i>4.7 To access the delivery person</i>	23-23
<i>4.8 Questionnaire Results Customer</i>	24-24
<i>4.9 Questionnaire Results the delivery person</i>	24-25
<i>5 Potential Analysis</i>	25-26
<i>6 Recommendations</i>	26-28
<i>7 Discussion</i>	28-29
<i>8 Conclusion</i>	30-30
<i>References</i>	31-34
<i>Appendices</i>	35-37

1. Introduction

As matter of fact the customer are the most demanding factor in any business entity the newspaper, Information technology, Finance, Stocks, Education, Brokerage and many more. They look for the better services with the product performance. Due to the lot of choices available in global and the local market they have more choice than ever before.

To discuss here, the customer relation ship management plays a vital role for the basic background of this study. This is a modern approach builds the strong relation ship between the customer and company. This provides the customer for the life time (43) with billion of turn over and thousand of employees serving the customers.(44) for example There is an interesting theory supporting this problem area , the one of company in UK Bt was the most poor for the customer service and become most successful by using the Customer relation ship management reducing the operational cost by 20 percent and improvement in the service level 40 percent.(45) The better Customer Relationship Management understanding in the business it should proceed with the business need, clear strategy, business results, defining and to design the solution, to deliver these solutions, the business out come confirmation and optimize those results(46).

The basic problem issue those makes the customers make complain when they are not properly responded in reference to their request and when the request is not answered properly then the unsatisfied state rises. The customer complains are the major issue for the many industries and companies. The customer expectations now a day has become a challenging task to handle. The area of concern of this report is the customer complains with relation to the most effecting variables. For example they (customers) say not receiving paper on time, missing and wrong paper, and torn papers.

To proceed further, The Gap Model could be an answer to handle the customer complains. When we talk from the management point of view, with this we can also here discuss about the gap theory for the customer complain handling. In this we can elaborate the difference between the customer and company choice of service and product. Lie wise there is difference of the customer expectations with relation to the service rendered by the company. (Edvardsson 2008)

With this regard, the service provider should think customer service delivery in differentiated manner for each segment. One of the study surveys shows that the overall quality of service for the customers found as fair, terrible and rest 63 percent as merely meeting customer expectations. (48)

According to one of the theory the study tells about the implementation for the success for the Customer relation ship management in an organization. The better program implementation leads to the significant benefits. (47) The customer relation ship management provides an opportunity to news paper to come up with the solution to the customer. The theme of the Customer relation ship management solution a data base where customer information is stored and updated and interacted accordingly. Graph in appendix (49)

Other than that, this way the customer churn risk is quite controlled. The unsatisfied state calls to the complain. To link the schools of thoughts with the advanced demands of human business transactions it (50) looks quite challenging for the companies to satisfy the customer.

Naturally, it also adds with the Rough sets theory that elaborates about the meaning full information can be driven for the individual variables. Like wise the reasons of the complains late paper, missing paper. The main theory the school of thought of this report is the Maslow theory with connection to the other research papers. The Maslow theory predicts about the human nature for demanding more and more from one to an other stage of need and demand. The problem area as a back ground of study focuses upon the complains based upon the customers state of dissatisfaction.

The customer relation ship approach is put in practice by the companies to develop the good relation ship with the customer. This also helps in retaining the customer who is not satisfied with services and products offered to them. The basic focus of this report is the customer complains and handling the problems. About the delivery of the news paper. This also focuses upon the solutions of those problems with help of some theories, application, approaches of the customer relation ship, customer churn, data ware housing, data mining.

Conclusively, The dissatisfied customers are not easy to detect because most of the times customer switch with out any call to the company there fore the churn analysis could be a better solution to diagnose the churn customer in the future in company . It also could be help full to the company for the price, competition and customer response with the data the company has in this regard can help to handle the complains. This also discusses about the currents application. The study self focuses upon the solutions for the reduction in customer churn and targeting the potential customers.

1.1 Back ground: The domain of the reports commercial business. In fact back ground of this report is the empirical study with the utilisation of survey tolls as the questionnaires, direct observations, discussions and secondly it includes the internet, articles, and libraries.

The company should take owner ship for the problem raised said by the moment a business coach. The coach says that the outstanding customer can be achieved by retaining the customers. To show the customer empathy, apologize for the problem, continuous customer follow-up and keep the promise with customer (51).

On the other side, Steve Ecken news press in fort Myers, his team focused upon the circulation Strategy of the paper that come to reduction of the complains daily by 4 percent, Sunday complains 21.6 percent and repeat complains brought down by 22.6 percent. The second largest news paper in Nether land AD NieuwsMedia BV will use the spss data mining software tool in order to target the groups more effectively. The companies are focusing upon the deeper customer relation with the customer by using the tools for making the email and subscription and thanking letters to the customers that also increase the customers and decreases the customer churn.

The customer are more conscious about the content in the paper, The look for the stock market, business information, children section, women section for the cooking, sports section and detailed information covering the detailed information.

The report discusses customers wants the paper in time and in the good condition the standard complains can be categorized as:

- Problems area late delivery of the news paper,
- The positing of the paper on the target as the assigned boxes or the inside the doors.
- The papers tear off or damaged that will cause complain.
- Incorrect newspaper not delivered as per requested by the customer, Missing of the paper in the boxes or the doors.
- Wet Paper due to the weather problems as the rain or snow.
- In case of the short quantity of the paper while the delivery no report made to the concerned supervisor.
- Not finding the exact names of the customers on the doors and boxes.

The company plans to handle with these complains currently for having the monthly meeting with the distribution persons in order to know their problems and discuss the issue regarding the complains with in the concerned area of the delivery person. The management is also putting efforts to entertain the customer complains calls on the immediate basis and by having the continuous follow up.

With this the company has the objectives like wise need to pay the salaries by reducing the cost and that is increasing due to more cost by printing again the less papers, to increase the profits, to explore more markets by utilising the available resources, to decrease the absence below 6% at the work.

1.2 Problem formulation: The specific problem question of this thesis is to identify and how to reduce the churn customer with the news paper office. Those are very much annoyed with the company and are unsatisfied because with service of company. This study delivers and suggests the strategies and tactics to handle the complains.

The major problems are discussed as follows for this study:

- 1-Late delivery of the news paper.
- 2-The positing of the paper on the assigned boxes or the inside the doors.
- 3-The papers tear-off or damaged that will cause the complain.
- 4-Incorrect newspaper not delivered as per requested by the customer.
- 5-Missing of the paper in the boxes or at the doors.
- 6-Wet Paper due to the weather problem as the rain or snow.
- 7-In case of the short quantity of the paper while the delivery no report made to the concerned supervisor.
- 8-Not finding the exact names of the customers on the doors and boxes.

1.3 Aim of Research: The aim of the research is to retain customer through the answer to the question of this study how to reduce the annoyed, churn customers. Delivering the model application of churn analysis. Following the theoretical model

Maslow theory approach and advising the strategies and tactics to tackle the customer complains.

Now a day the methods used to handle the customer complains are use of the Customer relationship management and churn analysis to identify the most effecting factors those contribute in increase of the churn customers. Customer relation ship could be a good tool to use there by changing the customer concept for the company by offering them different offers and showing them the importance. The data ware housing is helpful to identify the relational data bases by use of the model like wise the dimensional modelling. Other than this Data mining is helpful to transform that data into the future from the huge group of data bases. It identifies the most effecting variables to the complain. Accordingly the company manages their polices for the customers.

The Company is confronting the challenge of the customer since establishment of the company. The only change in this regard is occurred by the number of the customer complains are increasing by the certain period of the time. The complains are handled by the delivering the missing paper to the customers, Receiving the customer call and making the apology for the mistake done. Company also asks the delivery person for the complain reasons so that it should not repeat again and should not make the customer angry. The company calls the meeting with the delivery person if they have any problem while the delivery of the paper.

1.4 Delimitations: This doesn't include the interviews with the customers because due to the non availability and their busy schedule. There fore this includes the easy and approachable better mode the questionnaires to have their feed back for the product and service they receive. Theory problem area it doesn't cover because the case study it follows upon the literatures and self explanation for the report that is based on it self a practical study. To add more, it doesn't include the statistical application due to insufficient data.

2. Research Method and Setting

2.1 Description of the Company:

The Company for the research is selected is located in the Sweden Trollhattan "VTD". The focused area where the research has taken place is Trollhattan Who is working along with in Millard, Van Borg, Lilla Edet and Udevala. VTD has geographical distribution for the delivery of papers. The company daily distributes near about 40,000 papers with in 124 districts and average distribution in one district is about 300 to 400 papers. There are different types of papers that company delivers those include, Ttela, Gp, Ind, Dn, Svd, Bhn, and NLT. It also includes the magazines as the HJ, Hv, Lib, and Trav. In the Trollhattan VTD have the 67 districts only with 20,000 papers. The major paper distributed is the TTELA in the trollhattan. They receive the papers from the Head office at Gothenburg through the buses transportation.

In general, the source of the data used is the direct observations the officer and representative officer the way they deal complain on telephone, fax, or the delivery of the paper by issuing the notes. Here the customer phones to the company in the quite angry mood for not receiving paper or some of them came to the office for complain of

the paper. The also discusses literatures, questionnaires (two types customer and delivery person) as the tools of the survey. The secondary method used is the internet, libraries university and Public library and articles on the net. The method used is the empirical study.

The risks with this study that it doesn't include the interviews with the customers those could be conducted. But due to their schedule we had to proceed with the questionnaires. Here tried to conduct the survey is the newspaper product line based where they have different sort of the new papers. The focused area of the company is to increase the productivity of the company by reducing the cost and getting more satisfied customer. The report research is based upon the complains and their solution . The goal of the company is to increase the profit and reduce the cost. . The ratio of complains in getting higher and making complex conditions for the company.

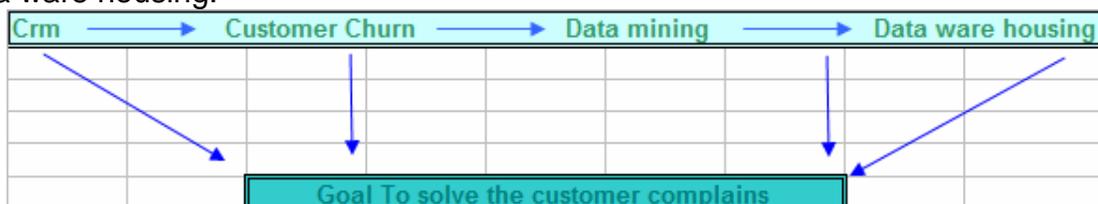


The data and information in this study is quite worthy for the reliability and validity because it basically uses the practical application rather than the conceptual thinking. So in the practical applications, that is observed the way the management deals the customer calls, discussed, evaluated, got feed back and then implemented with the results. So this could be a good example for the future studies.

To expand again, here have tried to link and elaborate the theories and application in order to handle the customer complains. In this scenario the data ware house shows the relation data bases in order to manipulation of the data and it helps in any double entry in the system by use of the primary and foreign key in the model. This newspaper office when uses the data ware house it will identify the dimensions for the late delivery of the paper and short papers daily. Similarly the data mining will show the most effecting factors in the group of data as the type of complains are being discussed. So here it can be said that the 60 percent of the customers complains about the late delivery, missing, wrong, torn paper among the group of complains. Rest of 40 percent goes with no complains.

In the same manner the customer churn can be reduced when we have identified the most effecting and relational factors through the data ware house and data mining tools. These will help the company to find the potential new customer by utilising the available resources with the company as the human resources, financial resources and economical and Information technology resources.

2.2 Research Approach: The study approach is qualitative and empirical based . Applies for the application comes with the CRM, customer churn, data mining and data ware housing.



The tool of the survey is used as the questionnaires with the random samples every observation could have equal chance of probability. These questionnaires were distributed amongst ten customers. The feedback was received from the seven and three with the no response. Here the sampling size is taken very small With reference to the data mining it helps in the digging of the information that is with most effecting variables with relation to the group of data with the minimum, maximum values to predict the results.

The analysis of the questionnaires the most effecting variable in the group of complains is late delivery of the paper with the customer feed complain feedback is 30 percent most effecting factors late paper start, to quit and move to next customer and come later, to follow the list as the address, late paper from the Head Office. Likewise we can see for the other complain at 20 percent missing and wrong paper in the boxes and doors, then 10 percent shows that torn paper complain and 10 percent feed back with the satisfaction of the service and 30 percent didn't reply and when checked the complain for these silent customers they didn't have any complain with the company.

Furthermore some of the news paper companies challenging problem as US newspaper companies lose their 50% of business circulation base in a year. The declining ratio as an individual readership.

A use full way is to focus upon the subscriber life cycle as part of the business, generation, acquisition, service, renewals and cross sell processes. The company has to focus upon the churn upgrade or degrade by the seven day delivery till the week end edition. This will show up the positive or negative trend for the churn customers.

Apart of this the advertiser churn more than 30% in the US newspaper in 1999 did not renew their contracts in 2000 resulting in millions of dollars lost revenue. To acknowledge this from the publishers the advertiser might have decreased their budgets due to inadequate sales procedures. There is a significant drive at many newspapers to transform sales representatives from order takers to sales professionals, those can understand the advertiser's marketing goals and can propose solutions to meet these objectives.

The CRM solutions can help the sales officers to spend more time on selling and less time on administrative tasks. To know the advertiser contact history, including the ability to model the advertising company's relationship with its advertising agency.

Other than this, in North America news paper companies confronting the problem since 1990 in print destroying the revenues. Major in afternoon and evening edition due to internet, Radio and Television. A significant fall in readership the 25 years age people never had an interest in reading the paper.

Realizing this need this generation divides news paper publishers are using business approach for the print and internet editions. Launching the Metro style paper. This paper aimed at the morning, providing a quick view of news, sport and entertainment for a specific city. It was specifically targeted at people who did not read a morning newspaper.

As we discussed above the problems those are confronted by the news paper companies with some solutions as well. The data mining techniques could be used to answer and decide to make the score for every customer, the score of risk to leave the company; this can identify the company why the customer is leaving. This information could be used by the marketing dept to make certain offers for different reason complain customers. Then results could be brought in front of the customer service representative, retail, marketing. The data mining could only be used after the overall review by the data ware house for the predication of the churn customer in overall.

In the nut shell data warehousing techniques could be helpful in using predictive modelling to target customer and in data mining to predict the probability of most effecting factors by using reliability of data can be evaluated and the model presentation in SPSS software for the decision tree, neural net works, regression could be used for the validity of the data. Deciding which customer has more chance to quit the company. To be more specific predictive modelling could be used to reach small group of churn customer. This brings results the best of the results evaluated and making the decisions accordingly.

2.2 Data Collection Methods: The data is collected as the primary and the secondary phase. The primary includes the discussions, survey, open end questionnaires (customer and delivery person) and secondary it includes the articles, literature, Internet resources.

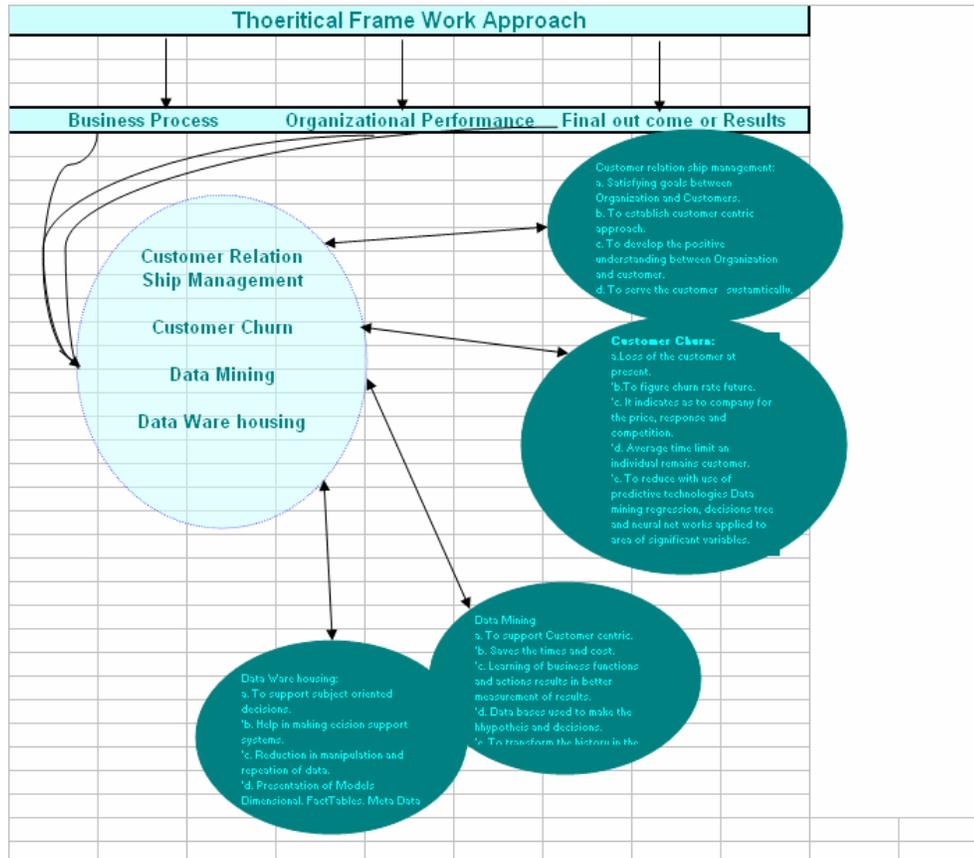
2.3 Work Analysis: The analysis of this study goes with the problem area analysis with the applications as the data mining, data ware housing, CRM, Customer Churn. The study analysis the feed backs from the customer questionnaires and this was analyzed with solution in reflection of the application as we discussed earlier. The work procedure includes the survey in the area of the customer as the location in the Trollhattan, Bjaratn, Strdberg, Magnus Berg. The questionnaires were designed by keeping in view the basic target problems of the customers.

These questionnaires were discussed with the management to take their point of view as well. After the discussion with the management these were finally decided to put in letter boxes of the customers. With this the feed back was nil. So the other step the questionnaires were distributed to the customer by hand. After the feed back from customers about the paper and service. Amongst the questionnaires 60% percent asked found the satisfied. Rest of unsatisfied complain for the late paper delivery and missing paper.

With the help of data warehouse showing the relational data bases, dimension modelling and data mining defining the variables the groups of variables those effecting more for the churn causes as the late paper delivery. Then the role of customer relation ship comes on screen by building the strong relation with the customers. And giving them the feeling of important to company and this way bringing the customer for company forever. This way the theory model was decided to carry the report work through the analysis to come to conclusion to the retention of customers.

3. Theoretical Frame Work

This section of the theoretical frame work would start with basic Qualitative Theory the Maslow. (53) This will lead the rest of the approaches as mentioned below. In the reflection of the Maslow theory in late 1960 the Maslow developed the hierarchal and layered theory about the human needs and values –model can be found in the appendix. It describes about the human needs those go through the no of stages to reach the specific need. This Maslow theory tells about the human concerns about making their choices.



The model as we can see depicts about in the appendix. Changing demands and needs from the basic to upper need. The basic need starts from the food and survival and moves to economical and standard conscious needs.

The theoretical approach applied here is Organizational Performance Measurement. This Integrative approach leads to the business performance on the initial level as the business process within the firm, and these business process lead to the credibility of the organizational performance rendering the service delivering the products and finally the organizational performance leads to the final results.

To some extend, the effective and efficient business process implemented by the internal resources. Basically the business processes relates to the customer perspectives (the way it appears), then the customer perspectives develop the good organizational performance. There fore we accept the Organizational performance Measurement approach as the theoretical frame work Approach to attain the goal of customer satisfaction and lower risk of churn following the Customer relation ship management, Customer Churn, Data mining, Ware housing

3.1 Customer Relation Ship Management:

“The customer relation ship management is a basically customer oriented business philosophy that involves the proper analysis, planning, implementation, evaluation and controlling customer relation ship by means of new, modern information and communication technologies”. (6)

The customer relation ship management is an important factor of the modern business management. Under the head of the Customer relation ship management it creates the relation ship between the customer and organization. The customer are considered in any business environment as the back bone of the company whether the company generating the millions and billions of the profits and by employing the many of the employees. Even though if we look at retailing business they have also the customer but very limited so it depends upon the size of the business. But what ever the business is, there customer is considered as the king. (1)The customer relation ship management remains same in any of the given examples.

The customer relation ship focuses upon the relation ship:

- 1-To determine the mutually satisfying goals between the organization and customer.
- 2-To establish the customer good will.
- 3-To develop the positive understanding between the organization and customer.

The Customer relation ship management has been quite challenging for the companies and business entities. As we look around in the market we find the different companies exists for the same product and to stick with the customer satisfied has become quite challenging. Here in this article we can analyze that the Customer relation ship management has been quite failed for the companies to implement irrespective of the investment they do so far. Here the success of the implementation of the Customer relation ship management is 30 percent the causes to effect are the organizational structures, reward system, human resources.(4) Here one more thing we can add that the company before implementing the Customer relation ship management should identify the Customer relation ship management capability to implement it. After wards to know the future outcome with the Customer relation ship management (2)

The Customer relation ship management gives the information for the customers to increase the profitability of the company. As in this author study of telecommunication peter coffee says that it creates the win-win position for both the customers and buyers. (3)

In the reflection of customer complains we look in for the buying behavior of the customer as well. It depends upon the quantity of the purchase of the product, the quality of the product, the motives to purchase the product that leads to the customer choice for the purchase of the product among the different choices available in the market. There we can see the cut throat competition in the market so the customer buying behavior can easily change their choice if they are not satisfied.

Here we can also evaluate the buying behavior of the customer for the post purchase of the product that means when they purchase the product and find whether the product serves the needs of the customer, when the product serves the customer choice it will lead to repurchase the product and a good customer for the company other wise if it doesn't serves the purpose of the customer it will loose the customer with dissatisfied state. (9)

When we talk about the approach for the theory here it depicts that by applying the Customer relationship management it does not matter that it is a product or service or any other communication basically it is the customer mind set that accepts the organization and its perception. The Customer relationship management also puts focus upon the issues in an enterprise as the retain of customer (7), potential customers development, marketing strategies conciliation and to serve the customer systematically (5) and than it reaches to state of the satisfaction. When there is no success is in the relationship then vacuum is left and customer is taken for granted in the case when the other competitors are surviving in the market.

The attitude of the customer towards the purchase of product is never ignored. The business entities conduct the market surveys and marketing researches to find the right customers for having positive attitude towards their product. To have customer in the long run is considered good rather than short term. The relationship of company and customer depends upon the good service or the product delivery or the placement. Once the customer attitude upon the company they start to believe the company one of their favorites entities and they believe in the products of the concerned company. (10)

Naturally, The Customer relationship management in the business environment provides the better chances of implementation, to handle the customer complain. (8) Gives the capability measures for the utilities to implement with Customer relationship management. That involves in gaining the retaining of customers, potential customers better marketing strategies and serving the customers. The better the analysis done for the implementation and its evaluation the better the results can be generated. As in the news paper case the management should focus upon the resources they have to review of the marketing strategies. The Customer relationship management application focuses upon the capability of the business entity or the corporation capability to have the Customer relationship management in the company. That leads to the more profitability to the organization.

Gap Theory: When we talk from the management point of view, with this we can also here discuss about the gap theory for the customer complain handling. In this we can elaborate the difference between the customer and company choice of service and product. As in the phase one there is difference of the customer expectations rendered by the company. This same happens in the VTD case where some times company even don't know the right choice of the customer. The management has difference of understanding for designing the right choice for the customer. The management needs to focus upon the problem area in deepest and narrowly. (Edversson 2008)

Other than this the management puts restrictions to reduce the cost that also restricts the staff to meet the customer choices and expectations. Here also company should analyse the customer as the asset to the company that can increase the profitability of the company. The well planned budgeting can help management the proper allocation of the resources and to reduce the cost as well.

Apart of this the goals those are set to serve the standardise service to the customer through the staff can also create the hindrances to serve the right choice of the service to the right customer through the concerned staff. That means the way it was designed for the customer the not the way it was served to the customer on right time. In this phase the company promise the customer for the quality of the service they render to the customer. In the reflection when the customer don't find the right choice rendered they go for the complain. In this case of the VTD the company promise the customer for the best of the service they render to them and when the customer don't find the promised service it destroys the good will of the company.

The company we are discussing here they have certain number of the customer who are quite satisfied by the services of the company and the product line of the papers. But we can't also ignore those are not satisfied with the company services and products. The company has adopted steps to report the complains on the first priority to the concerned department and update like wise in the systems to answerback the complains.

3.2 Customer Churn:

"A measure of customer or employee attrition, and is defined as the number of customers who discontinue a service or employees who leave a company during a specified time period divided by the average total number of customers or employees over that same time period"(54).

The customer churn is also known as the customer attrition, customer turn over, customer defection (11) the business entities define this terminology as the loss of the customers. The companies invest a lot of the money and funds to find the new markets and customers (12). Due to this they do have individual funds for the advertisement and marketing. This type of strategy Costs Company a lot because it depends upon the tactics adopted by the company are efficient in order to generate the potential customer.

Irrespective of this companies also have certain contact or the nowadays called as the call centres to help the customer on the ad hoc basis to solve their problems. This retention of the customer could be more effective and fruitful for the company rather than to make investment for the new customers. The business entities like wise the banks, telephone, supplier chain partners, Insurance provider, Internet service provider use this customer attrition terminology in order to make the analysis(16) for the gain and retention)(13)of the current customer rather to find the new markets. Because the major issue is the cost and that for the existing customers is quite less than to invest on the new customers. This trend helps in marketing strategies for the prediction of the more group of the target customers. The data mining also can help in the reduction of the churn ratio. (17)

In this fast moving and demanding Information technology based environment there is a lot of the attention been provided on the customer and making efforts to improve the customer relation ship management. Here it is quite difficult to predict and define the factors the customer churn and even difficult to manage customer churn for the companies. (15)

To keep the satisfied the existing customer irrespective to attract the new customer is also a challenging for the companies.

The company applies the approaches to retain the customers, as with the reactive approaches it offers the incentives to the customers. When the company applies the proactive approach it identifies and figures the customer in advance those will be churn in later dates so the company puts the programs to escape them from the churning (14).

3.3 Data Mining

“The exploring and analysis of the data that is used for the business transactions. It can also be said the digging of the data from the tons of the data. To describe and discover the patterns and relationships with business and their histories.” (18)

The data mining is used to predict the future behaviour from the databases to a specific group of data. This also helps companies to dig the data for the customers with the common interest. The Customer relation ship management in the area of the data mining helps companies to organize the data about the customer in an organized manner in the source of the soft wares, internet capabilities and methodologies. This is as when a company builds the data in a manner so that it could be easily accessible by the management, sales people, people serving the service, even the customer them selves to access the information, reminders to the customer for the new products, product offerings to the customers, and what the customer other products had purchased and so on.

The organization meets the customer relation ship management as that the people working in the organization should have the necessary information about their customer they are serving; they should know the customer preferences as per their needs and demands. This could help to create the long lasting relation ship between the customer and company.

The industries are now focusing upon the goal for the understanding the each customer independently and making understood the customer individually rather than the customers. In the narrow sense we can say that the data mining is the collection of the tools and techniques. These require more techniques to support the customer centric. This much focuses upon the models and tools used dig the data from the huge data. (20)

That mean the data mining very much focuses upon basically the tools they have to dig the customer data that is in fact required by the customer by irrespective of wasting the time. Where as in the broader sense the data mining requires the learning for the business functions and actions that results in better measurement of the results. This helps to come up with the final results rather to play around the complete procedures. (21)

As per the case study for example focuses upon the model building of the data base presentation that depicts the fraudulent tax declaration detection through the decision tree. According to this different patterns and types of data can be presented to generate the information from large amount of data. The purpose is to show the dependency of data. (22)

So in the data mining for the learning relation ship with the customers the firm should be aware of the customer needs and demands, the relation ship of the company with

the customer so far in the previous times (23), This also helps the analyst to solve the problem with the detailed data speech text of data mining that lead to the hypothesis and making the decisions. In this manner is better to know the better service to the customer from that history and then also firm must have an aggregate idea to make the more profits for the company by effectively serving the customer (24).

The data mining is there to transform that history into the future plans to capture more customers and increasing the profitability. The customer relation ship is there to launch that history based plans to proceed in the practical manner (19).

Here we have also discussed a little about the rough set theory with the data mining (25) The rough set theory is explained here the viable approach through which the meaning full information is extracted that helps in making the predictions for the individual data object rather than the large data objects (26) Here the rules those are defined for the extraction of the data set for the corresponding measures are considered as the models for the description of that data set.

The central idea of the data mining for the customer relation ship management is the data that was gathered in the past and this data being an asset for the past and becomes liability for the future and converts into the useful information with the less in accuracy and missing of the values (27). The purpose of the data mining from the history of the data is that the facts and figures those were collected earlier will give guide line the earlier customer buying behaviour with the current data collected.

The data mining is most of the time concerned with the building of the models. That model is depicted the set of the rules that connects a collection of the inputs to concerned output. Like wise the regression, decision tree, neural networks the techniques for the creation of the model.

Naturally, through these data mining theories, the plenty of the data can be organized in an effective and efficient manner through the data mining. As the missing of values and in accuracy in the data base can also be ignored this manner. The hypothesis can also help to the analysts to make the final decisions. As mentioned above the case study of fraud in tax detection where the decision tree used to present the data with the aim to show the dependency of one data to other and this leads to the increase of the productivity.

3.4 Data ware house:

"A warehouse is a subject-oriented, integrated, time-variant and non-volatile collection of data in support of management's decision making process". (28)

The data base has the hundreds of relational data with the attributes and fields. The data warehouse in the company is designed to support the subject-oriented decision making as the decision support systems. The data warehouse provides an opportunity to have the data from the huge databases with in a limited span of the time for the easy accessibility for the user. To implement the data ware house in the company it needs to be followed by the certain design of the model in the specific problem area to be resolved.

Data ware house shows the dependencies of the one field to an other table field. In any organization and business entity the data is stored in two forms of storages. One is operational systems and other is data ware house (29). With this we can analyse that the data ware housing applications can be used to support the decision support systems. This also helps in problem solving to make the time critical business decisions, those needs to be remaining competitive. To build the data ware house there should be a summarization and accumulation of information from variety of transactions and this will help in solving the business queries, customer complains. Apart of this the data ware housing (30) In this case study for the release of soft ware where the second version of the product is released for the products due to the new features, to repair the known defects and maintenance of the soft ware suppose the data base management systems where the management needs to have correct data and figures to take and support the decisions in timely manner. Visually the dimensional (31), star schema could a good presentation of data in the data aware house to solve the problem and reduce the mistake chances. When we talk about the large organizations there the data ware housing requires needs to spend a lot but this also the data ware housing in such organizations can be done by using the available resources of the company like wise using the work stations and computers. (32)

In addition to this the data ware housing is quite getting the challenging because of the tactical and event driving decision making. Where as the operational stores in and warehouse where the data is out taken from the system. (33).

Further more, the depicted theory elaborates about the Meta model oriented from work for indicating the fruitful business conditions (34) when the organization has plenty of the information to indicate the problem area. Then the data and servers to collect that information (35) then it becomes quite confusing the management and take the concerned decision. There for the Meta Data model can be a good presentation for the reporting the querying (36) and making the decisions.

Visually, it requires more demanding in the area of the availability, performance and updated data with the new data ware house development and implementation. VLDWH Workshop Keynote Active Data Warehousing: A New Breed of Decision (37) however the data ware house is a quite emerging and complex field. Due to the different options available to the companies in the market for the price, products that gives a chance company to compare it before making any decision for the data ware house implementation. This fact also can't be left behind that the market competition and return on investments has made data ware house nearly impossibly to ignore.

In our daily life the services have becomes the integral part of our lives. As the author assumption I would like to add that the manufacturing area is increasing more day by day to the increased demands of the customers. This trend has led to the more productivity by the fewer people. This also leads to the rendering of the services in his industries. As the more goods are produced the prices also go down. Where the services has become now more costly. Like wise in the technical industry the software developers services rendered are more costly as compared to the computer purchased. (4 book quality of services)

The services are that area that plays the crucial role for the control of the customer complains and make them satisfied. Now a days when we look around as for the example of the General motors (reference 6 GM and Nortel: Whither market focus) they put the lots of dealer ship for the small and big cars, They offered the lots of brands this created the confusion for the deal buyer customer and this resulted the company loosing the cash flow. When we see by comparison the Toyota they had brands for the car models those frequently redesigned with the low prices with clear description of the brands and product price points. This way they obtained the positive cash flow. This manner we can elaborate the services to rendered in effececient and effective manner is worthy rather than to render it in any manner.

The approach of the better service to the customer also help to satisfy the customers and decrease the complains and increase the profitability.

3.5 Quality of services:

The customer complains can also he replied as together with the productivity, Quality and Profitability is also the basic mission of the companies. The productivity plans to use the company resources in order to produce the more goods and reduce the cost and managing it with the capital investment. The Quality refers to the maintenance of the produced product with the cause of the customer satisfaction the focus here is the customer not the company but company has to foresee the revenue also in the long run in the benefit of the company(Edversson 2008)

In addition to this, The International standardized organization (ISO) put their focus on the quality of the products to have more market share. Here the idea popup in my mind to add some of the professor Klassen (38) according to him the companies the impact o f the environmental management on the business entity, supply chain and the customers. The one company has the direct effect to an other company interlinked. This leads to the environment friendly causes by the companies that also helps the customers, that the company from they buy the product keep s all the regulation as socially, economically, and environmentally friendly concerned.

- To improve the quality standards we can go with different techniques in order to reduce the complains as the just in time deliveries and TQM total quality management (39) here we add some of the points from this article that Delphi is a world leader in mobile electronics and transportation components and systems technology they strive their struggles to the small lots and compressing the lead times in order to meet the just in time deliveries. They put the mission to reduce the logistic costs and inventory dollars.
- The basic issue is not the compalin comes the issue is how the complain is solved. The customer most of the times don't compalin but they look for the other supplier. As the American study here shows that (Krauss 1987) 96% dissatisfied those don't compalin, 65-90 they ask for the change for the other company, 54-70 those compalins and if the company reply them and satisfy their complain and resolve it the customer can be retained back and this attitude of the company creates a good impression infront of the company as before they had and it creates a long lasting relationship in between the company and customer. This can also help to most of the time to reduce the refund and compalin costs. This way the company finds the fully satisfied and

happy customer is the long run and generating the good revenue for the company.

- When it comes to the sense of responsibility the costs can be reduced for the redo of the work, the inspection, investments and checking again and again continuously. When we are fully equipped with technique and know well than we don't need to check it again and again this will help to save the time and disruption in the working. This can also help in the reduction of inspection costs and repairation costs.

The business entities has to look the better service with the good strategies they adopt for the better quality. They need to implement these strategies in company with the involvement of the employees. Firstly they make the group from the all departments and all of them should have he each other deaprtment working and getting the training in the groups while working in groups(42), then they needed to be reminded for the company message for the quality by some notifications of as banners , poster, badgets. Afterwards each employee should remember wht is required from them and they better understand the company goals and then they also know the errors cosst they make and how much it costs to company. This also involvesthe parners and stake holders involment to ensure the startegy is put on the right track.

To win the customer confidence:

Further proceeding to the complain solutions to gain the custome confidence with the problem solved is the gaining the customer in the long run and customer catches the positive approach for the company. The most important factors those focused arethe customer confidence and reliability.

As the study that uses the data of IBM contributes that the data gathered has a direct relation to the customer satisfaction (40) that means the data collected provides solid figures to identify the most effecting factors in the subject.It also follows the number of mistakes done with relation to the number of defects and no of days taken to solve the problem.

The customer retention comes across with the trust winning. The company needs to adopt the behaviour with the customer that they are the very precious asset of the company and give them the feeling of that they are important to the company. (41)This issue most of the times the working staff and management forgates and that creates the problem area also. There the personal care, attenation, empathy can lead the company on the track to win the customer trust and customer retention.

Conclusively, Organizational Performance Measurement is the approach applied here with support the business performance relates to business process with internal resources human, finance and other resources of firm, and business process lead to the organizational performance service delivery in shape of products and finally the organizational performance leads to the final results. Following this it found me interesting to add The maslo theory school of though says The theories depicts, that human needs changes by the passage of the time and that need is effected by the most effecting factors and variables by the tough competition. Even though the customer expectations are not answered for the service rendered, they quit the way rise the churn ratio. The could be controlled by the effective relation ship with the

customers, efficient delivery of the service and product with the reflection of data mining and data warehousing applications.

Now to move on further, when the customer relationship is established its responsibility to serve the customer in specific area of interest of the customer. As per this theory we can evaluate that the needs of the human beings those changes as per the choices available. These could be referred as the physical, logical, safety, belonging, esteem and self actualization.

This whole above describes that these needs are full filled by the people working in a company that can lead the better working in a company and will effect the less complains the thing is to effectively and efficiently perform the responsibilities with reference to benefits provided by the company.

4. Results

Company End: With this reference to our studies and observations and survey have tried to explore the solutions by applying some theories and analysis and conducted the surveys and collected the primary and secondary data. Designed some questionnaires on the Company, customer and delivery person end for their problems and asked advises so all to gather we can foresee the results. The designed questionnaires also includes in this paper.

4.1 Complains: The company procedure to carry the complain goes in a systematic manner. While going in deep discussion we first to identify that what the complain we discuss here.

Here in this research area the customer has different types of complains with the company and when their required demand is not fulfilled they call and complain to the company. There are two types of complains those can be discussed here as:

4.2 One time complain: In this area the complain arises only for the one time from a customer. The major problem they could have due to the late delivery of the paper. When the customer is not provided for the new paper with certain reasons those fall in the area of the complain as:

- Wet paper
- Torn paper
- Wrong paper
- Missed paper
- Short paper in quantity and put an other news paper in box
- Paper not put in the door or box
- Paper not delivered on the time

When any of the above mentioned problems confronted by the customer they call to the service centre to the Gothenburg office and make the complain recorded in between time 7 to 4 pm.

Here below we can see that the below update from the data base of the company note that the customer has made the complains for the papers and magazines they have not received from the delivery person.

DIRGKOET Hantera Körorder-Etiketter 8-04-09

Bläddra till: 4=Ta bort
2008-04-09 5=Visa
E=Etikett

Mot.dat	Omr	Tid	Dist	Gata	Ort	Tdn	Kod	Behandling
08-04-09	9999	4:39	20182	KLOSTERANG	LÖDGE	HJ	S	
-	08-04-09	9999	6:35	20251	MELLERSTOMMEN	FRANDEFOR	GP	S
-	08-04-09	9999	6:35	20251	V BODANE	FRANDEFOR	NYT	S
-	08-04-09	9999	6:35	20251	V BODANE	FRANDEFOR	NYT	S

Slut

F9=Avsluta F12=Föregående F21=Skriv etiketter

HR c 08/002

4.3 Repeated Complains from the customer end: In this phase the customer confronts the problems near about daily for the problems as we discussed above on the basis of repeating of mistake by the delivery person. This type of complain could be quite trouble some for the company because in this case customer is fully unsatisfied with the company and looks for the other company and quit the deal so this causes the loss to the company by loosing the customer.

In this regard, the complain types as we discussed above the company has to look in the details for the complains rising by the customer in order to serve then in the better manner. The company has to make aware the situation to the people who are responsible to carry those activities. They need to be aware for the loss occurring to the company due to the irresponsibility of the delivery persons. The company needs to have certain meetings with the delivery persons to discuss the problems they have while the delivery of the paper. The company needs to motivate the delivery persons by positive motivations and some fringe benefits to encourage them for the better working and providing them the good and friendly environment. Below is provided the one sample of the repeated complain note that describes about the customer complains date for the paper the made a complain with the mentioned dates.

4.4 The company end complains recording: The Company has a very good follow up system with good quality of people working to serve the customer. They are quite equipped with the required information to update the customer on the time. The staff has complete knowledge of product line they have. When the customer call for the complains they call to the head office as we discussed above they call to the customer service department and concerned people, they record their request by putting that info in the system.

After wards when the head office staff records the detail of the complain into the data base of the company then they call to the concerned branch office for the concerned customer to handle the complain in particular area.

4.5 Making the notes: The customer complains are recorded in the Head office and they issue the notes to the branch offices. These notes consists the information about the customer name, address, the code of the gate, newspaper that was missed, the missed paper reason on the note, time of the recording the complain into the system. As below there is one note for the reference purpose:

REKLAM	ATION	\	SAKND	080407
TIDNING				10:17
KORORDER				
LINJE: 325	DISTRICT		MODUL	08.04/2005
2150	20386	.V		10:16
				SIGN
:s238635				TT TRANLR
Kommentar:				
Signatur: Leverans datum\ tid:				
NAMN				
C/O				
ADDRESS				
MEDD				
REKL.TYP	01	TIDNINGEN		
UTEBLIVIT				

When the note is received by the branch company they then contact to the concerned supervisor to ask them to deliver the missed paper to the customer. The officer also calls to the delivery person for why the mistake was done and asks the reason because head office also asks the branch office for the reasons of missing papers from the delivery person. Some times it also happens that the customer calls to the centre himself or her visits to the near by office that they have not received the paper on a particular day.

4.6 Meeting calls with delivery persons: The Company is called like the gate to gather with the delivery persons. These meetings schedules for the discussion with the delivery newspaper staff by providing them the company information and latest polices carried on. Discussing with them the problems they have with the company and what they face problems when they deliver the paper. They also discuss why the complains arises when the correct paper is put in the boxes.

4.7 To Access the Delivery person: While the meeting the delivery person told that they are provided with the list of the customer as the practice followed to perform the responsibility of the job they have also the book with them with the names and addresses of the customers. The company has issued them a cell phone set with the sim to report the start time and end time of the delivery to the head office. That list is individual for the each region that is called the district. They drive the district as per the assigned lists to them. They told when the complain is arisen they discuss it with the supervisor that if the reason of the complain is not given on the paper they ask that why the customer have complained so that issue should not be repeated again. Time of the delivery of the paper lies in between the 4 to 6 am and by this time they are able to deliver the paper to the customer. The weather has a big effect on the delivery of the paper as the rain and snow they get wet the paper in the trolleys they drive to the district and it makes late when the snow is there.

Self Evaluations: The results from the survey for the newspaper office by using the tool questionnaires for the delivery person and customer are discussed as below: When we talk from the management point of view we say that people who are working in the company they need the lunch breaks, motivations, and salaries and wages to purchase the necessities of the life. When these are fulfilled they look for the job security and safe working environment, then they look for the team based projects and social gatherings like entertainments , visits, then giving the recognition by giving the rewards and prizes to motivate them finally setting challenges for the employees in order to full fill their career potentials.

4.8 The questionnaires Results: The customer

- Late paper delivery causes the complain
- Missing, wrong and improper placement of the paper in box or the door
- Tone paper

Complains	Factors
The late delivery of paper	The late starting of the delivery of the paper,
	To quit the one customer and after a while to deliver,
	To follow the list as per address, late paper from the head office.
Missing and wrong paper in the boxes and doors.	Not following the list, delivered to the wrong name.
Torn papers.	The small door squares to pass the papers that tear the paper,
	Improper folding of paper, The weather problem rain and snow,

By having the questionnaires feed back, the numbers of questionnaires distributed to the customer were 10. Amongst those seven were replied back and three with the no response. Here the sampling size is taken very small and randomly method that every observation could have equal chance of probability. With reference to the data mining it helps in the digging of the information that is with most effecting variables with relation to the group of data with the minimum, maximum values to predict the results.

As in the above table we can see that the most effecting variable in the group of complains is late delivery of the paper with the customer feed complain feed back is 30 percent most effecting factors late paper start, to quit and move to next customer and come later, to follow the list as the address, late paper from the Head Office. Like wise we can see for the other complain at 20 percent missing and wrong paper in the boxes and doors, then 10 percent shows that torn paper complain and 10 percent feed back with the satisfaction of the service and 30 percent didn't reply and when checked the complain for these silent customers they didn't have any complain with the company.

The reliability of data in Data mining can be evaluated and the model presentation in SPSS software for the decision tree, neural net works, regression could be used for the validity of the data. The model is basically the graphical presentation of the results to show the best of the results evaluated and making the decisions accordingly.

In the nut shell we can say that the data mining application shows the most effecting variable the late delivery of the paper with value 30 percent and relation to the other factors are the late start time and following the list and quitting the customer and delivering later. By applying the mean average says that 60 percent says for the complains.

4.9 The questionnaires Results: The Delivery person

- Un activated codes of the houses that wastes the time
- Un updated lists
- No exact names on the doors and boxes
- Short papers in the news paper bundles.

On the delivery person end they answered they feel good with the working condition of the company, but un-updated lists, codes of the building mostly waste the time. Some

times they don't find the correct names on the door and the name searching also wastes the time. The lists consists the names with same names some times and delivery person thinks they have delivered the customer paper. They also added some times.

5. Potential Analyses

The model from the theory section has been selected Maslow theory. This suggests the developing needs of the human being in order to satisfy the rising demands. In the newspaper company this could be a good to avail as the theoretical model because it describes the customer could switch due to their demands increasing due to the different modes of information from the other media and different content of information in paper sections. The competitors are putting efforts to divert the existing company by offering different offers that can better suit the customer. Basically this involves raising the need of the customer.

This model selection of Maslow theory purifies this study with the analysis. Here we have tried to explore churn analysis. The purpose is to identify the customer profile with the high margin of the churn risk. This type of churn analysis gives the specification of those characteristics which follows the annoyed customers. Through this averages are estimated with the huge no data of individuals. That is applied to the individuals to evaluate the chances of churning and developing the churning score.

In the reflection of the data mining we can analyze that the data mining helps the organizations to dig the data from the groups of the data. It gives the knowledge to the entity to serve the customers with the specific needs and interests. This also helps the companies to organize and maintain the specific data in a well mannered and organized way. As the data ware house that gives the solution to problem where it exists and to describe it through the model application with the specified the primary and foreign keys in the fact tables and dimensions tables that doesn't allow to the repetition of the data or the fields. In the same manner the data mining urges to solve the problem with the figures statistically. In this report the data is not enough to present so it is not included in this report.

For example, Miles Groves, the chief economist for the Newspaper Association of America showed the first statistical analysis in 1996 churn quite important. This problem was not as much for the small news papers. For the newspaper circulation below 25000 with rate of 23 percent. Where as in the early seventy's it was near to one digit. When they analysed their last year statistics churn was raised to 58 percent. When the survey was done and poll through the questionnaire people apart from the poor delivery service was people don't want to devote the time to the newspaper. (56) In order to have better relation with customer it is necessary to understand the, seek the cooperation, making easy payments, training the carriers. (57).

When we analyse the customer quality for the service rendered from the management point of view, the management should put the efforts to meet their perceptions with the customer expectations. Some the management need to plan the budgets in relation to the costs that go in the favour of the customer because it leads to create forever customer. The company also should struggle for goals they set for the best of quality

of the customer. This means what was planned it should be implemented to the concerned customer.

Along with this the management should be very careful for the making of promises to the customers. Because the error in the service are never promised and happens in the systems and working. The customer looks for the fulfilment of the promises and no mistakes in the delivery because they pay and want the exact investment return. The gap model basically is the customer focused that depicts about the quality of service rendered to the customer in the reflection of the expected and perceived quality.

Nevertheless, productivity of the company can be increased by giving the importance to the customer. As our model Maslow says customer needs are increased when their demands increases and find the unsatisfied from existing situation. In real sense the customer prefers the attention, empathy, devotion and importance from the company. The business entities often forget this rule while rendering to the customers.

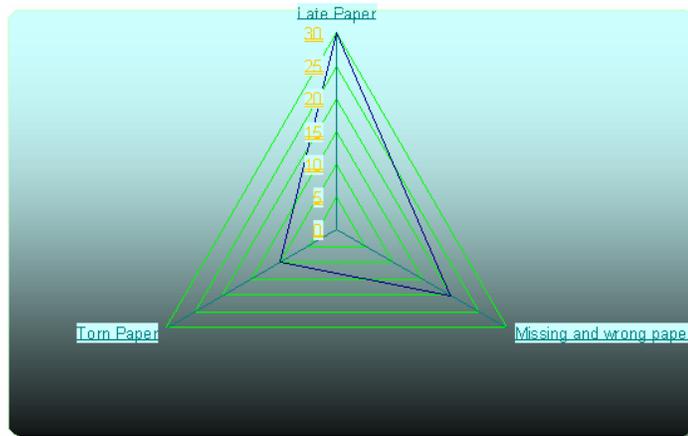
6. Recommendations

More interestingly, the churn analysis could be better solution to the VTD news paper distribution office. With the risk of churn increase, solution to churn and its analysis for the reliability and validity of data. Here we can come to the point of how churn arise, solution and analysis. We will analyze it further.

Here in the table we can foresee the reliability of the facts for the complain with high churn customer and most effecting factors.

Ratio	Complains	Factors
30%	The late delivery of paper	The late starting of the delivery of the paper, To quit the one customer and after a while to deliver, To follow the list as per address, late paper from the head office.
20%	Missing and wrong paper in the boxes and doors.	Not following the list, delivered to the wrong name.
10%	Torn papers.	The small door squares to pass the papers that tear the paper, Improper folding of paper putting in box, The weather problem rain and snow,
10%	Satisfied	Satisfied
60% Complain Ratio		Random Sampling where N is the number of Questionnaires = 10
10% With Satisfaction		
30% no feed back		

In above table as we discussed the result part for the questionnaires results. As we can find in the model after the survey feed back from the questionnaires from customers for randomly selected in the population. In the reference of this table the most annoyed customer are targeted as the 30 percent in the future as the risk of frequent churn customers with the complain of the late delivery of the paper, then 20% for missing and wrong paper and 10% for the torn paper complain. This way the churn can diagnosed as the 60 % and 40% with satisfied level of customers. The factors those effecting the complains are the late start of the paper, to quit the customer and deliver after while, late paper delivered from the head office to the branch office. This leads us to the reliability of the data.



We can predict from the above graph that depicts that there are 30 percent of the customer complains that need immediate actions to be taken to save from becoming the churn customers. This way the measurement of performance of results can be evaluated for the validity of the data.

Now when we discussed the reliability and validity of the survey that we conducted. Here comes more interest to discuss that to deep dig the churn as the analysis we are now on the track to suggest some analytical policies in terms of reduction in churn customer and high margin of the retention.

Here VTD can focus its marketing and selling strategies to 60 percent of the churn customers to be retained by the means declining line of the contracts, the circulation in terms of the quantity of the paper, the declining revenue margin, with the company and switching to the competitors and Cost per order in terms of marketing performance are the meaning full way of the measuring performance. This way the company can evaluate the incoming order and updating the customer profile. To increase the aggregate audience content of paper to cover every community coverage. To serve as the street paper, to reach all segments of the communities demographically as should cover the general information to attract the attention of younger as they put the focus on classified section for the jobs. Niche publication, the cover those areas of the paper that missed earlier and compare with the competitor area ignored. As the language that could be read by the other immigrants too. This could be solution to less churn and creating potential customers.

In addition to this, to develop the predictive models for scoring as the use of the data mining model neural networks and others in a way to recognize the customer group with high churn ratio. The customer survey could be also an important factor for identifying the customer defection. To know the reasons as inadequate service quality and high cost. To focus upon the just in time delivery. To implement the strategies those properly planned, implemented and evaluated for the results to measure major issues.

Moving ahead, the customer churn analysis is also a focused issue in the field of relation ship management. Through the effective customer relation ship management building the most of the rising issues in churn can be omitted. The latest technology techniques and history of the customer buying behaviour, habits helps companies to target in advance the churn customers.

As matter of fact the customers never tell in advance the churn state, it's the carrier who identifies that unidentified and unsatisfied state of the customer.

The customer relation ship management solutions best practice can lead to the customer segmentation, campaign management, dedicated team, to test on the small scale, to train the delivery officers in order to deliver the papers ore effectively and efficiently service for effective results. Like wise when a customer call for making a complain as 5 times then the it trigger to the representative automatically in order to ensure the complain solution immediately. Those are answered in side from the newspaper self Customer relation ship management applications.

Then the data mining could be used for the more help full results for the statistical applications for the more effecting factors in the group of the data. This will help in identifying the digging of the data from the huge information for the most effecting factors and applying the statistical application. This manner it will show the most effecting factors on churn and the faithful ness of the customer with company or showing the minimum and maximum results. Like wise in the news paper office the major complain can be segmented as complains from the customers as the age, gender, age group, address, no of times the call received for complain.

The weather, mistake by distribution person: Major causes could be service complains:

The data mining software as SPSS could be used to get the out put that presents the statistical applications. The reliability of the data is checked with the presentation of the statistical out put and validity of the data can be checked by the models as the regression or the decision tree and neural networks.

This report can identify that the reader ship of the paper includes both the younger and older people. They used to read the paper anxiously for waiting the paper on time and in good condition with the correct paper and prefer to have paper before the 5 o clock in the morning as their address were in the list of the distribution person and they had to wait for the paper. In addition to this the company should be focused to solve the customer complains.

VTD can reduce the churn customers and retain the 60 percent of customers effectively and efficiently following the churn analysis. This way they can predict the annoyed customer. Above steps could be break through for them to find the more potential markets and keeping the current customers satisfied. The only thing to perform the long lasting relation ship between the customer and the company. The customer relation ship management builds company good will and impression in the mind of the customers. When the customer is satisfied this brings a loyal and devoted customer to the organization.

7. Discussion

As far as the analysis of the delivery questionnaires is concerned, by evaluating the questionnaire we come to discuss that the paper those are delivered to the destination area for the delivery person should be delivered on the time at least 30 minutes before from the Head office. The working conditions delivery person finds very well for them and facilities provided to them.

Apart of this, the late opening of codes could be asked customers to activate the codes from the times the delivery man comes to deliver the paper as they want the paper early. This will help to save the times of delivery person and will lead to timely delivery to the other people.

The list those are provided to the delivery person should be updated one day before in order to intimate the delivery person for the change of address or cancel or the any new entry of the customer. In the case when there are the same names there should be a particular code allocation as per area to the same name in the building or the villa. The extra paper should be given to the delivery person if in the case there is shortage in the bundles of the papers. When the paper is delivered the delivery person also tells the supervisor to deliver the paper that he or she can't do because of the short paper.

So far as the customer questionnaire analysis are concerned, that the complains could be reduced by the focus upon the area of attention to be paid. As the early delivery of the paper at the customer door. The right paper to the right customer is also another solution to the complain to proceed as per the list provided by the company to the delivery person. Other than this, the papers need to be placed as the proper placement on the door or the box to let the customer know for the delivery of the paper. This way the customer will avoid switching the company and better service will emerge to the good faith in customer and create the customer for life.

In the reflection of above analysis, the immediate precautions and giving sense of the importance to the customer can help in reduction of the cost of reprinting and increase the loyalty of the customer with the company.

8. Conclusion

In the nut shell, due to the globalization, the world has changed in a little village. The commercialization has put the lots of choices to the customers. This has become the difficult task for the companies to keep the customer fully satisfied due the cut throat competition. The demands of the customers increasing day by day when they come across to compare same product with the other company. So to solve this correctly entities should stay focused upon the importance, empathy of the customer. The only thing is to give time and solve the problem from the root and improve the quality of the service.

In this regard this study answers the questions of this study how to identify the churn customers due to complains of the late delivery paper, missing and torne papers. The churn analysis is the solution to the question in this study. The findings those we collected from the survey tools the questionnaires analysis. This questionnaires analyses describes there are 60 percent customers those were identified as the churn customers.

Some of the tactics and strategy could be the up gradation of the profiles of the risky churn groups based on demographic, age, gender, sex, geographically, interest attributes for the reader and service pattern. This will help Vtd for the customers not staying with company.

Also the age difference issue as young people avoid to the reading the news paper. The young people prefer to look in the paper for the classified section to search the job. The metro style paper aimed at morning providing a quick view, sport and entertainment, job for a specific city.

The Marketing strategies should be quite strong as per the segmentation of the customers. To build a quite stable relation with the customer by sending to customers thanking email and different offers as per need of the customers. Like wise for the women they are more conscious for the cooking sections.

Hence forth, we can come to the conclusion; the retention of the churn customer can be identified through the churn analysis following the theoretical frame work of Maslow theory. The data ware housing approach is the storage of the historical customer behaviour interactions it keeps the recording of the earlier customer and company relation ship with the customer needs and requirement. The data mining is there to transform that history into the future plans to capture more customers and increasing the profitability. The customer relation ship is there to launch that history based plans to proceed in the practical manner.

References

Books

- Data ware housing for ebusiness by inom, terdeman, norris, meers (d)p 66
- Data mining techniques 2nd edition Michael J. A. Berry , Gordon S. Linoff (page 2-3,6-12)(6)
- Quality of Services by Bo Edvardsson, Bertil Thomason, John Ovretveit
March/April 2008
Electronic
- (1) Available http://en.wikipedia.org/wiki/Customer_relationship_management
- (2) (Implementation Assessing the readiness of firms for CRM: a literature review and research.model).
<http://ieeexplore.ieee.org.ezproxy.server.hv.se/search/searchresult.jsp?history=yes&queryText=%28%28crm%29%3Cin%3Emetadadata%29>
- (3) Available IEEE (Customer relationship management in e business Walter O. Andersson Jr)
- (4) A Study on Developing CRM Scorecard Hyung-Su Kim; Young-Gul
Available:
Kim; <http://ieeexplore.ieee.org.ezproxy.server.hv.se/search/searchresult.jsp?history=yes&queryText=%28%28crm%29%3Cin%3Emetadadata%29>
- (5) CRM Ontology Based on CMMI Project Planning for Business Applications
Chang-Shing Lee; Yi-Chuan Wang; Wei-Ming Liu; Yi-Chen Lin; Available
<http://ieeexplore.ieee.org.ezproxy.server.hv.se/search/searchresult.jsp?history=yes&queryText=%28%28crm%29%3Cin%3Emetadadata%29>.
- (6) Performance Monitoring of CRM Initiatives Grabner-Kraeuter, S.; Moedritscher, G.; Waiguny, M.; Mussing, W.;
Available:
<http://ieeexplore.ieee.org.ezproxy.server.hv.se/search/searchresult.jsp?history=yes&queryText=%28%28crm%29%3Cin%3Emetadadata%29>
- (7) Hierarchy Analysis of Customer Relationship Management of Power Supply Enterprises Zhao Jun; Li Yi-jun; Huang Ti-yun;
Available:
<http://ieeexplore.ieee.org.ezproxy.server.hv.se/search/searchresult.jsp?history=yes&queryText=%28%28crm%29%3Cin%3Emetadadata%29>.
- (8) Internalization in Technology Innovation: A Case of CRM Adoption
Chen, J.H.F.; Wang, E.T.G.;
Available
<http://ieeexplore.ieee.org.ezproxy.server.hv.se/search/searchresult.jsp?history=yes&queryText=%28%28crm%29%3Cin%3Emetadadata%29>
- (9) Exploration into as consumption behavior
Associate Professor Jeffrey F. Durgee, Assistant Professor Gina Colarelli O'Connor
School of Management, Rensselaer Polytechnic Institute, Troy, NY
<http://www3.interscience.wiley.com/cgi-bin/abstract/112782796/ABSTRACT>
- (10) Attitude and risk: Exploring the relationship
Assistant Professor Robert N. Stone¹, Russell Professor J. Barry Mason^{2*}
Available <http://www3.interscience.wiley.com/cgi-bin/abstract/112782794/ABSTRACT>
- (11) (http://en.wikipedia.org/wiki/Customer_attrition customer churns
- (12) Customer Churn Prediction Based on the Decision Tree in
Personal Handyphone System
Service Available <http://www.google.se/search?hl=sv&q=Customer+Churn+Prediction+>

- Based on the Decision Tree in Personal & Meta = [January/February 2008](#)
- (13) Customer churns analysis – teemu 2006 Available www.google.com
- (14) Defection Detection Paper – Scott A. Neslin 2004 [www. Google.com](http://www.google.com) search engine
- (15) Mobile operator customer classification in churn analysis – Piot Sulikowski 2008 www.Google.com
- (16) An econometric model for resource management in competitive wireless data networks
Das, S.K.; Lin, H.; Chatterjee, M.; Available <http://ieeexplore.ieee.org.ezproxy.server.hv.se/search/searchresult.jsp>
- (17) A churn-strategy alignment model for managers in mobile telecom
Yu, W.; Jutla, D.N.; Sivakumar, S.C.; Available <http://ieeexplore.ieee.org.ezproxy.server.hv.se/search/searchresult.jsp?SortField=Score&SortOrder>
- (18) data mining customer relationship management
http://searchcrm.techtarget.com/sDefinition/0,,sid11_gci213567,00.html.
- (19) Rough Set Theory: A Data Mining Tool for Manufacturing Available www.google.com
- (20) Expanding the meaning and of application for data mining- Michael H smith. Available IEEE
- (21) Data mining information visualization beyond charts and graphs-nigel robinson. Available IEEE
- (22) Data mining application issues in fraudulent tax declaration detection -2003 Fan Yu Zheng Qin Available IEEE)
- (23) Semantic data mining of short utterances sept 2005 – lee Begeja, Hariis Drucker Available IEEE
- (24) A systematic frame work for the field of data mining and knowledge discovery Available IEEE)
- Rough Set Theory: A Data Mining Tool for Manufacturing Available IEEE
- (25) A knowledge management platform for optimization based data mining – Xingsen 2006 Available IEEE.
- (26) On density based transforms for un certain data mining – Charu C. Aggarwal 2006 IEEE
- (27) data ware house definitions and model graph Available <http://www.intranetjournal.com/features/datawarehousing.html>
- (28) . The implementation of data ware house in Batelco- Maqbool U. Sheikh IEEE 2004 case study
- (29) A data ware house for managing commercial soft ware release - H. Dayan- Fard Available IEEE 2005
- (30) modelling Knowledge data ware house Web usage OLAP Application- M Quafafou IEEE 2005
- (31) DWS-AQA: A Cost Effective Approach for Very Large Data Warehouses <http://www.google.se/search?hl=sv&q=DWS-AQA%3A+A+Cost+Effective+Approach+for+Very+Large+Data+Warehouses&btnG=Google-s%C3%B6kning&meta=>
- (32) Book Ref The data ware house toolkit II Edition page 1 to 4
- (33) Modelling Analytical Indicators using data ware house Meta Model – Andrzej 2006 Available IEEE

- (34) (Business Meta data for data ware house – veronica Slefanov and Beate list 2006 Available IEEE)
- (35) testing a data ware house an industrial challenge – harry m. sneed 2006 available ieee
- (36) <http://www.google.se/search?hl=sv&q=vldwh+workshop+keynote+active+data+warehousing%3a+a+new+breed+of+decision+&btnq=google-s%c3%b6kning&meta=>
- (37) boosting the triple bottom line by [carol stephenson](#) available www.iebusinessjournal.com
- (38) (reference 8)(book q of service page 28,29,56,57)
- (39) ieee journal isbn: 0-8186-7141-6 discovering relationships between service and customer satisfaction [buckley, m.](#) [chillarege, r.](#)
- (41) how to create market-focused product winners by [roger more](#) boosting the triple bottom line by [carol stephenson](#) available www.iebusinessjournal.com
- (42) a plan for every part: manufacturers fine-tune just-in-time delivery to better serve an evolving supply chain [automotive industries](#), [august, 2004](#) by [brent haight](#) page 28, 29
- (43) Customer relationship management by Ellen Gifford Available <http://www.businessballs.com/crmcustomerrelationshipmanagement.htm>
- (44) <http://www.mycustomer.com/cgi-bin/item.cgi?id=131606>
- (45) November 9, 2004 *NEWS* An Interview with Eileen McPartland Available <http://www.b2bworkforce.com/industry/siebelobserver/nov9issue2004.htm>
- (46) [Semantic Query for Microsoft Dynamics CRM](#) Written by Stephen E. Arnold April 23, 2008 Available <http://arnoldit.com/wordpress/2008/04/page/2/>
- (47) CRM System Implementaion Ten Points for Ensuring Success May 25, 2008 Available <http://servicexen.wordpress.com/2008/05/25/crm-system-implementaion-ten-points-for-ensuring-sucsess/>
- (48) Available <http://idealresidence.wordpress.com/2008/05/19/consumers-demanding-better-service-survey/>
- (49) CRM best practices help newspapers uncover revenue opportunities Nov 2002 By Margaret Molloy Special to Newspapers & Technology Available http://www.newsandtech.com/issues/2002/11-02/pt/11-02_crm.htm
- (50) Separating Financial From Commercial Customer Churn: A Modelling Step Towards Resolving The Conflict Between The Sales And Credit Department Available http://econpapers.repec.org/paper/rugrugwps/07_2F476.htm
- (51) Customer-service complaints done right Last Update: 11/18/2007 1:30:00 AM Available <http://readingeagle.com/article.aspx?id=68781>
- (52) <http://www.naafoundation.org/global/presscenter/2003/circulation-sales-executives-newspaper-carriers-honored-by-naa.aspx?lg=naaorg>
- (53) Maslow's Theory Applies Today: Nurture Advocacy by "Tree" Rings Around Touch-Points By Michael Lowenstein, Ph.D., CMC, Harris Interactive Loyalty . See

modelinappendix

Available

http://www.customerthink.com/article/nurture_advocacy_touch_point_tree_rings

(54) Customerchurndefinition

Available http://searchcrm.techtarget.com/sDefinition/0,,sid11_gci940457,00.html

(55) Lessons learned: A case study using data mining in the newspaper industry

Candace L Gunnarsson, Mary M Walker, Vern Walatka, Kenneth Swann Taken as example <http://www.palgrave-journals.com/dbm/journal/v14/n4/abs/3250058a.html>.

(56) Churn, Baby, Churn <http://www.ajr.org/article.asp?id=3496>

(57) <http://www.naa.org/Presstime/9704/p497churn.html>

Appendix

CUSTOMER QUESTIONAIRE;

- 1- How do you find or prefer to read this paper?
Varför har du valt att läsa TTELA?

- 2- Are you satisfied with service?
Är du nöjd med distributionen?

- 3- Do you receive paper in good condition?
I vilket skick är tidningen när du får den?

- 4- Do you receive on time?
Får du tidningen i tid?

- 5- Do you get correct paper?
Får du rätt tidning?

- 6- Any suggestions;
Har Ni några förslag till förbättring gällande distributionen?

NEWS PAPER DELIVERY PERSON QUESTIONNAIRE;

1-Do you enjoy your job?

2-Do you enjoy the benefits and facilities provided by the company?

3-How much think of yourself equipped with basic information that is required to perform your task?

4-Which time you start and end the delivery of paper?

5- Do you receive complains from your customer?

6-Please describe reasons in some detail:

- 1- Wet paper
- 2- Damaged paper
- 3- Wrong paper
- 4- Missing paper
- 5- Late delivery
- 6- Paper not put correctly in door or box
- 7- Not found the correct customer name as per address
- 8- Any other you can add here:

7-Are you familiar with your district customer for what type of complain they are making for?

- One times complain _____
- Repeated complain from the same customer _____

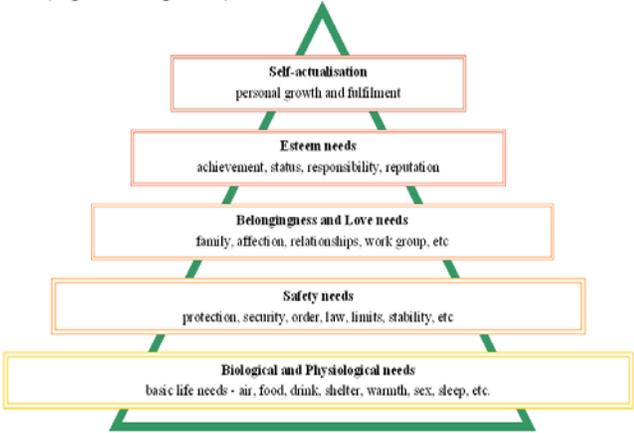
8-While the delivery of paper if paper is short how do you handle it?

9-Do you think the weather is major factor that affects the working conditions?

10-Do you face problems from the company end?

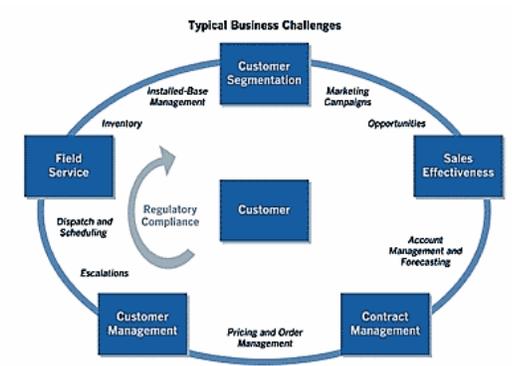
Any suggestions to handle the complains;

Maslow's Hierarchy of Needs
(original five-stage model)



© Alan Chapman 2001-4, based on Maslow's Hierarchy of Needs

Not to be sold or published. More free online training resources are at www.businessballs.com. Alan Chapman accepts no liability.



(49)Source http://www.newsandtech.com/issues/2002/11-02/pt/11-02_crm.htm