

Evaluation of Factors Affecting for Select Internet Service Providers

DMT MADUSHANKA¹, JMN WIJEKUMARA², KADTD KURUPPU³, SPAAM SUGATHAPALA⁴

¹ Department of Information System, Faculty of Management Studies, Rajarata University of Sri Lanka, Mihinthale

² Department of Accountancy and Finance, Faculty of Management Studies, Rajarata University of Sri Lanka, Mihinthale

³ Department of Business Management, Faculty of Management Studies, Rajarata University of Sri Lanka, Mihinthale

⁴ Bank of Ceylon, Kandy

Abstract- The researchers' attempt is to investigate the factors affecting to customer's intention to select a particular internet service provider in Gampola area. According to the literature reviewed, effecting factors of service quality, price, brand image and promotion are used as independent variables and customer satisfaction used as dependent one of the study. The target population includes internet users in Gampola area. In order to collect necessary information 100 internet users were selected randomly as the sample consumer of the internet service providers in Gampola area. Both primary and secondary data are used to test the model develop in this research. Questionnaire is the primary method followed in this research and the questionnaire includes 35 questions. SPSS version (21) was used for statistical analysis process of the research. Reliability analysis was used to check the internal consistency of questionnaire. The hypotheses have been tested using correlation and regression analysis. The correlation analysis resulted that all variables (SQ, P, BI, PR) are positively affect to customer satisfaction of selecting and staying with a particular Internet service provider. Result of regression analysis indicated that brand image and promotion are not significantly effect for the selecting with a particular Internet service provider, but price and service quality are significantly effect for the selection of internet of service providers According to the study Service Quality, price, brand image and price factors should be favorable to the customers. This research and developed model cold be useful for service providers to develop SQ, P, BI

and PR factors suitably to improve customer satisfaction.

Indexed Terms- Brand image, internet service providers, price, price factors, service quality

I. INTRODUCTION

Although the internet's history goes back to the early 1960's it was relatively new to Sri Lanka until the initiation of the project called learn (Lanka experimental academic and research network) in 1990 by the University of Moratuwa. It is the first step that launched towards the connectivity of academic and research communities in Sri Lanka to the internet. Also, learn interconnects most of the academic and other research institutions across the country. It has provided the Sri Lankans first e-mail service, which was operated by the department of computer science and engineering of the University of Moratuwa. Since 1993, academics in the country started to access the internet by means of techniques such as international direct dialing – IDD on a fairly regular basis. However, in 1995 learn was connected to the real global internet giving unrestricted access to its users. In addition to the academics there are many other private computer users and business organizations who want to have access to the internet and the www. Therefore, the need of such services emerged in order to provide the internet access to anybody. An organization that provides access to the internet in some form is called an internet service provider (ISP). Lanka internet is the Sri Lanka's first such ISP established in 1995. Now they provide necessary

services such as electronic mail World Wide Web access, FTP, telnet and gopher. Before Lanka internet launches these operations Sri Lanka's communications capabilities were very difficult and the technology was expensive. Only a limited number of large multinationals and shipping companies were able to access the new technology.

In addition to the internet facilities Lanka internet also specializes by providing services such as local area (LAN) and wide area (WAN) network solutions, radio modem connections, and project management. Country's second ISP was Sri Lanka telecom which also hopes to improve the nation's telecom infrastructure which will be of benefit to the internet users around the country. They provide both dialup and dedicated line access to the internet for reasonable fees. Later a number of ISP's joined the internet offering full internet connectivity to the people. However, in most cases access was restricted to users in the capital, Colombo and the suburbs.

According to the latest published report, at the end of June 2016 the number of internet users in Sri Lanka at 6,087,164. This data is further verified by Google's Public Data Analysis which indicates a 27.4% internet penetration in the country at the end of year 2016. Facebook reported 3.8 million monthly active users as of June 2016. Assuming 50% of all internet users are on Facebook this will be 7.6 million total internet users (World Bank Stats, 2016).

There are seven main internet service providers in Sri Lanka. Those are, Hutch, Sri Lanka Telecom (SLT), Dialog, Mobitel, Etisalat, Airtel, Lankabell and Suntel. Every internet service provider must try their best to develop their marketing strategy and improve their business performance to increase their levels of competitiveness. The first step to increasing their competitive potential is to acquire customers as much as possible based on a thorough understanding of customers' decision making of how and why consumers choose particular service providers. A strong understanding of customer decision making or customer's selection behavior is then very important for the service providers in order to be successful and achieve their business goals.

II. PROBLEM STATEMENT

An internet service provider (ISP) is an organization, provides service accessing and using the internet. Internet service providers are becoming more popular and the rapid development of information technologies is affecting almost every aspect as entertainment, education, business and other of peoples' lives around the world.

Currently, there are many internet service providers for provide user's internet service. They had become competitive to acquire new users and retain existing users into world. Therefore, users need best internet service provider to successful their various activities through the information technology. Many countries identified that various factors effect on user's satisfaction when select internet service providers from persons had done investigation.

Price fairness influences customer satisfaction and loyalty. Service quality positively influenced customer satisfaction in terms of loyalty and attitudes. In addition, there was a significant gap between the perceived satisfaction and expectation (P-E) on all of the service quality dimensions (Arokiasamy and Abdullah, 2013).

Balmer et al., (2009) highlights the importance of corporate image, asserting that a link exists between an individual's image of the organization and that person's behavior towards it. These circumstances are forcing companies to change their customer promotional strategies. It is analyzed that advertisement play a dominant role in influencing the customers but most of the customers are of opinion that promotional strategies of cellular companies are more sale oriented rather than customer oriented according to (Kumar, Vani and Vandana, 2011).

Currently, in Sri Lanka, Internet usage is at high level for various activities such as education, business, entertainment and other. Institutes and person's activities become efficiency and effectiveness as well as increasing the economy and social development of Sri Lanka through adopt the information technology and expand internet service.

Internet users try to select a best internet service provider among the internet service providers only if users become satisfaction through provided their internet services. According to privies research of other countries, identified that factors as service quality, price, promotion, brand image and other effect on customer satisfaction when select internet service providers.

The main problem which internet service providers face is attract new users, retain existing users and expand their internet services because internet service providers correctly don't identify what are the factors effect on the customer satisfaction when select internet service providers in Sri Lanka. Therefore, researcher attempt to investigation about this problem and identify the key research problem of this study is

- To check whether identified factors influence customers' satisfaction to select internet service providers in Gampola area?

According to this research, it will help for user to select the best Internet service provider and internet service providers may be attracting new users, retain existing users and expand their internet service as success

III. METHODOLOGY

- Conceptual framework

The researchers have identified the factor, service quality, price, brand image and promotion as independent variables and customer satisfaction is considered as dependent variable for this current study.

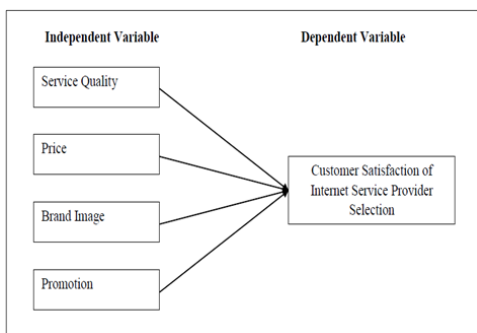


Fig 1: Conceptual framework
Source:Develop by researcher, (2020)

- Type of the study
According to this research researcher try to identifying factors affecting to selection of internet service providers in Gampola area, which is a certain problem that commonly identified. Therefore, this research can have considered as the basic type of research.

- Nature of the study
The data were comprehensive and detailed study will be Carrie out of internet users in Gampola area. The researchers have used the single cross-sectional design for this research. The data had collected only one time from target population. This research follows the deductive approach and thus becomes explanatory in nature.

- Sampling
The target population for this study was defined as individuals who have internet access in the Gampola area. Therefore, by considering time and cost restrictions, researchers have selected 100 consumers who are using internet servicers as the sample based on simple random sampling method.

- Data collection method
In this research data was collected in using a structured questionnaire which included 35 questions to identify the relationship between independent and dependent variables. For this study, researchers gathered the secondary data from research articles, magazines, books publications, internet and annual reports, which were relevant and able to support the literature review.

- Methods of Data Analysis and Evaluation
In this research, data collected through questionnaires and those data analyzed properly to reach the objectives of research. Therefore, researchers used to investigate about Internet service provider selection in Gampola area. For this purpose, researchers used reliability analysis, descriptive analysis and correlation analysis in order to analyze the collected data by Statistical Package for Social Science (SPSS 20).

IV. FINDINGS OF THE STUDY

Analysis of Demographic Profile of the Sample

- Gender distribution

Table 1: Gender distribution

	Frequency	Percent	Valid Percent	Cumulative Percent
female	50	50.0	50.0	50.0
Valid male	50	50.0	50.0	100.0
Total	100	100.0	100.0	

Source: Develop by researcher (2020)

According to the above table 50%, respondents were female and other 50% were male.

- Age level of the sample

Table 2: Age level of the sample

	Frequency	Percent	Valid Percent	Cumulative Percent
18 years old below	33	33.0	33.0	33.0
18-30 years old	31	31.0	31.0	64.0
Valid 31-50 years old	28	28.0	28.0	92.0
51 years old and above	8	8.0	8.0	100.0
Total	100	100.0	100.0	

Source: Develop by researcher (2020)

Majority of respondents (33%) were below age of 18, 31% respondents were within the 18-30 age group, 28% respondents were within the 31-50 age group and 8% were 51 years old and above. These results indicate that the age category of below 18 was the largest segment of the Gampola area population that has internet access.

- Current Internet Service Provider and time of the respondent been with this service provider

Table 03: Current Internet Service Provider and time of the respondent been with this service provider

	time				Total
	Less Than 1 year	2 year	3 year	More than 3 years	
Sri Lanka Telecom (SLT)	2	0	2	2	6
Hutch	0	4	3	2	9
Valid service Airtel	0	3	3	2	8
Mobitel	4	7	9	4	24
Dialog	5	10	11	15	41
Etisalat	2	2	2	6	12
Total	13	26	30	31	100

Source: Develop by researcher (2020)

In this survey questionnaire provided potential internet service providers with seven categories representing Sri Lanka Telecom (SLT), Hutch, Airtel, Mobitel, Dialog, Etisalat and Other. The majority of respondents (41%) indicated that Dialog was their current service provider, 24% of respondents using Mobitel, 12% respondent using Etisalat and 9% using Hutch, 8% using Airtel and 6% using SLT.

When consider how long they had used their current service provider, the majority of respondents (31%) had used their current service provider more than 3 years. There were 30% of the respondents who had used their current service provider for 3 years, 26% who had used their current service provider for 2 years and 13% who had used their current service provider less than 1 year.

- Respondents' reason for using internet

Table 04: reasons for using internet

	Frequency	Percent	Valid Percent	Cumulative Percent
Education	20	20.0	20.0	20.0
Entertainment	46	46.0	46.0	66.0
Valid Get awareness about information	24	24.0	24.0	90.0
Shopping	7	7.0	7.0	97.0
Business Activity	3	3.0	3.0	100.0
Total	100	100.0	100.0	

Source: Develop by researcher (2020)

The main reasons for using internet were classified into five categories of education, entertainment, get awareness about information, shopping and business activities. According to the table respondents' mainly (46%) using internet for entertainment, 24% of respondents using internet access for get awareness about information, 20% of respondents using internet access for education, 7% of respondents using internet access for shopping and 3% of respondents using internet access for business activities.

- Reliability Analysis

Table 5: Reliability analysis

Variable	Cronbach's Alpha	Number of Items
Service Quality (SQ)	0.782	6
Price (P)	0.703	5
Brand Image (BI)	0.701	5
Promotion (PR)	0.772	5
Customer Satisfaction (CS)	0.792	5

Source:Develop by researcher (2020)

Generally, the Cronbach alpha value should be at least reach 0.7. It should be located in 0.7-0.98 that means high reliable. According to the above table researchers can clearly identify that Cronbach's Alpha value of customer satisfaction is 0.792. It exceeds the standard level of reliability measurement. Therefore, could get a conclusion that customer satisfaction questions are more reliable to measure the customer satisfaction. In addition to the customer satisfaction, Cronbach's alpha value of service quality was 0.782, price was 0.703, brand image was 0.701 and promotion was 0.772. According to those values Cronbach alpha value exceed the minimum level of standard. Therefore, researchers identified that questions are more reliable to measure the variables.

- Descriptive statistics for Research Variables

Table 6: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SQ	100	1.00	4.17	2.3050	.60768
P	100	1.00	4.00	2.7200	.60969
BI	100	1.20	4.00	2.6300	.59178
PR	100	1.00	4.40	2.5720	.65568
CS	100	1.00	4.00	2.6880	.62171
Valid N (listwise)	100				

Source:Develop by researcher (2020)

Mean value indicates the mostly given answers by the respondents for the questions of the researchers. According to the above explanation, the mean scores of the composite variables in this research were between 2.3050 and 2.7200, which means that the respondents have given average scores on most composite variables. According to that respondents' attitude towards the service quality, price, brand image, promotion and satisfaction were in moderate level. The standard deviations of the composite variables were between 0.59178 and 0.65568.

- Correlation Analysis

Correlation coefficient indicates the strength and the direction of the relationship can be computes by applying a formula that takes into consideration the two sets of figures (Sekaran, 2013).

- Hypothesis testing

Table 07: Hypothesis testing

Hypothesis	Pearson Correlation	Sig.	Status
H1 - There is a significant relationship between service quality and customer satisfaction of	.565**	.000	Accepted

service provider selection.			
H2 - There is a significant relationship between price and customer satisfaction of service provider selection.	.634**	.000	Accepted
H3 - There is a significant relationship between brand image and customer satisfaction of service provider selection.	.481**	.000	Accepted
H4 - There is a significant relationship between promotion and customer satisfaction of service provider selection.	.378**	.000	Accepted

** . Correlation is significant at the 0.01 level (2tailed).

Source:Develop by researcher (2020)

According to the above table, Pearson Correlation Coefficient between the independent variables of promotions, service quality, price, brand image and the dependent variable of customer satisfaction was respectively denoted as .565,.634,.481,.378. Relationship was statistically significant, because sig value was 0.000 (which is less than 0.05) in every hypothesis. Therefore, it can be statistically indicating that there was a significant positive relationship between the independent variables and dependent variable.

• Regression Analysis

Based on the conceptual model developed under chapter three, researchers have selected the multiple regression model to analyze the linear relationship

between the independent variables and the dependent variable.

Table 08: Model summary

Mode	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.709 ^a	.502	.482	.44767

a. Predictors: (Constant), PR, SQ, P, BI

Source:Develop by researcher (2020)

Model summary constrains the essential information regarding how well regression model fit or did not fit with the observed data. R square assumed that independent variable in the model helped to explain variation of the dependent variable. As illustrated in model summary table, R square value of 0.502 indicates that predictor variables (SQ, PR, P, BI) for the test have ability to explain 50.2% variation of the dependent variable (CS).

Table 09: Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.227	4	4.807	23.984	.000 ^b
	Residual	19.039	95	.200		
	Total	38.266	99			

a. Dependent Variable: CS

b. Predictors: (Constant), PR, SQ, P, BI

Source:Develop by researcher (2020)

According to ANOVA table significant value of the model was 0.000 (which is less than 0.05). That mean is independent variables were significantly affect to the customer satisfaction of service provider selection.

Table 10: Regression coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
(Constant)	.431	.247		1.749	.083	
1	SQ	.307	.090	.301	3.426	.001
	P	.438	.090	.430	4.876	.000
	BI	.104	.103	.099	1.004	.318
	PR	.032	.085	.034	.377	.707

a. Dependent Variable: CS

Source: Develop by researcher (2020)

According to the table, regression coefficient of service quality was 0.307 and sig value was 0.001. It was less than 0.05. Then it indicated a statistically significant leaner relationship between service quality and customer satisfaction

Regression coefficient of price was 0.438 and sig value was 0.000. It was less than 0.05. Then it indicated a statistically significant leaner relationship between price and customer satisfaction.

Regression coefficient of brand image was 0.104 and sig value was 0.318. It was higher than 0.05. There is no statistically significant leaner relationship between brand image and customer satisfaction of internet users in Gampola area.

Regression coefficient of promotions was 0.032 and sig value was 0.707. It was higher than 0.05. There is no statistically significant leaner relationship between promotions and customer satisfaction of internet users in Gampola area.

CONCLUSION

This purpose of this research is investigates the factors that influence a customer's intention to select and stay with a particular internet service provider in Gampola area. It aims to discuss the analyzing factors affecting to customer satisfaction with service quality, price, brand image and promotion.

Discussion of the Relationship between service quality and customer satisfaction of service provider selection.

Service quality positively influence on customer satisfaction, there is a significant relationship between the perceived satisfaction and the service quality (Arokiasamy and Abdullah, 2013). There is a significant positive and highest correlation effect between service quality and customer satisfaction. Service quality influence to attract customers for the internet service (Sumathisri, Muthumeenakshi and Anand, 2014).

In this research researchers found that significant positive relationship between service quality and customer satisfaction of service provider selection in Gampola area.

Discussion of the Relationship between price and customer satisfaction of service provider selection.

There is positive and significant relationship between satisfaction and price fairness. Price fairness is the key factor contributing towards customer satisfaction (Shahzad and Afsheen, 2012). According to Herrmann et al, (2007), price directly influence on customer satisfaction.

In this study also revealed that significance positive relationship between price and customer satisfaction of service provider selection in Gampola area.

Discussion of the Relationship between brand image and customer satisfaction of service provider selection.

Corporate image is believed to have an influence on customers' buying decisions since it can simplify customer decision making and can help customers to choose the most favorable option from different companies or service providers (Markus 1977).

In this research found that brand image is positively affecting to the customer satisfaction but there was not significance relationship between brand image and customer satisfaction of service provider selection in Gampola area.

Discussion of the Relationship between promotion and customer satisfaction of service provider selection.

Advertisement play a dominant role in influencing the customers but most of the customers are of opinion that promotional strategies of cellular companies are more sale oriented rather than customer oriented (Kumar, Vani and Vandana, 2011). In this research found that promotion is positively affecting to the customer satisfaction but there was not significance relationship between promotion and customer satisfaction of service provider selection in Gampola area.

According to correlation analysis the researchers have concluded that all variables are positively affected to customer satisfaction of service provider selection. Results of regression analysis indicated that there is a significance relationship between service quality and customer satisfaction. And price also has significance relationship with customer satisfaction. And other variables (brand image, promotion) are not significant relationship with customer satisfaction. Result revealed that price was the highly effecting factor on customer satisfaction.

RECOMMENDATIONS

In this research found that price was the most affecting factors on customer satisfaction. Therefore, internet service providers should pay more attention on price factors. For managers, this finding has implications with regard to marketing strategies. The internet service providers perhaps could offer affordable package at lower subscription fees for that would help to expand market share and benefit different market segment. It can be viewed as a major competitive factor for service providers and can be used to improve their competitive advantage.

According to this findings management needs to emphasize service quality. Due to the fact that internet service providers do not provide a tangible product, their service quality is usually assessed by measures of the service providers' relationship with customers. Thus, ISP management should pay attention to staff skill possession, knowledge, attention to customers and their needs, offering of fast and efficient services and general attitude to customer services.

Customers tend to make their purchase decision to a select a particular service provider brand image may influences customers' selection. Internet service providers must be taken to ensure that elements such as company name, logo and other features that distinguish the company from its competitors are outstanding in the consumers mined. Management can continually promote these identities in advertising, point of sale material and other promotional activities directed at selling services to customer.

According to the findings promoting will useful for new consumers and it may be change new internet

users mind and attracting more customers for service providers by using promotion. It can be done through offering excellent promotion packages and special promotion plan. Considering the result, it seems that promotions based on immediate price reductions can be use. It has been proved that it is this technique that exerts a greater influence on the brand choice process. Immediate price reductions (price cuts) that have a more important effect on consumer behavior. Therefore, promotions based on price are most effective. This fact is very important, since the service providers can invest in promotional actions that are not valued by consumers.

This research will be valuable for internet service providers in Gampola area because service providers can apply the research results with their service and marketing strategies in order to acquire new customers as well as to retain their existing ones

REFERENCES

- [1] Parasuraman,a., Valarie A. Zeithaml, Leonard L. Berry. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, 4(1).
- [2] Aziz1, A.R.A., Bashiru I.I. Saeed, Alexander. A., (2014). Customer satisfaction of mobile telecommunication networks in Ghana: service delivery perspective. *journal of accounting and management*.
- [3] Ghobadian,A., Gallear,D.,Hopkins,M., (1984). Quality and Reliability Management. *Journal of Quality science*.
- [4] Agyapong, G. K. (2010). The Effect of Service Quality on Customer Satisfaction in the Utility Industry – A Case of Vodafone (Ghana). *International Journal of Business and Management*.
- [5] Syakir,A., Junoh,B.,Ismail, Bin,M.R., Yaacob. (2011). Determinants of Customer Satisfaction towards Broadband Services in Malaysia. *International Journal of Business, Humanities and Technology*, 20, 115-122.
- [6] Rajapakse,A., Dissanayake,A.,(2013). Internet in Sri Lanka.

- [7] Ampomah, Y. K. (2012). Factors affecting customer satisfaction and preference in the telecommunications industry.
- [8] Arokiasamy,R.A.,, Abdullah,A.G.K., (2013). Service quality and customer satisfaction In the cellular telecommunication Service provider in malaysia. *Journal of Arts, Science & Commerce*.
- [9] Anderson, E.W. and Fornell, C. (1994). A customer satisfaction research prospectus. *Marketing Science*.
- [10] Herrmann,A., Xia,L., Kent B. Monroe, Huber.F., (2007). The influence of price fairness on customer satisfaction: an empirical test in the context of automobile purchases. *Journal of Product & Brand Management*, 1(1).
- [11] Andreassen. (1994). Satisfaction, Loyalty and Reputation as Indicators of Customer Orientation in the Public Sector. *International Journal of Public Sector Management*, 30, 18-24.
- [12] Molina,A., Consuegra,D.M., Esteban,A., (2007). Relational benefits and customer satisfaction in retail banking. *International Journal of Bank Marketing*, 34(2), 351-384.
- [13] Sumathisri,B., Anand,S. Muthumeenakshi, M.,(2014). An analysis on customers' satisfaction Towards internet service providers. *European Journal of Business and Social Sciences*, 1(6).
- [14] Alvarez,B. Casielles,R.V., (2005). Consumer evaluations of sales promotion: the effect on brand choice. *European Journal of Marketing*, 3(2).
- [15] Burnham, T.A., Frels, JK & Mahajan. (2003). Consumer Switching Costs: A Typology Antecedents, and Consequences. *Journal of the Academy of Marketing Science*, 37, 515-523.
- [16] Fornell,C., Michael D. Johnson, Eugene W. Anderson, Cha,J., Bryant,B.E., (1996). The American Customer Satisfaction Index: Nature, Purpose, and Findings. *Journal of marketing*.
- [17] Cronin, J.J., Taylor. (1992). Measuring Service Quality: A Re-examination and Extension. *Journal of Marketing*.
- [18] Devlin, J., Gwynne, A., Ennew. (2002). The Antecedents of Service Expectations. *Journal of Service Industries*, 10(4).
- [19] Dorsch, M.J., Grove, S.J. ,Darden., (2000). Consumer Intentions to Use a Service Category. *Journal of Services Marketing*, 1(3).
- [20] Kumar G. N. S., Vani,H., Vandana.,S., (2011). An Empirical Research on Factors Affecting Mobile Subscriber Intention for Switching between Service Providers in India.
- [21] Glenn B. ,Voss, A. ,Parasuraman, Grewal,D.,(1998). The Roles of Price, Performance, and Expectations in Determining Satisfaction in Service Exchanges. *Journal of Marketing*, 7(3).
- [22] Gronroos, C. (2000). *Service management and marketing: A customer relationship management approach* (2nd edition ed.). New York: John Wiley & Sons.
- [23] Group, W. b. (2016). World bank status .
- [24] Aspara,J. Tikkanen,H., (2011). Corporate marketing in the stock market: The impact of company identification on individuals' investment behaviour. *European Journal of Marketing*, 19(4), 55-61.
- [25] Krafft,J., sallies,E., (2006). The cost of switching Internet providers in the French broadband industry, or why ADSL has diffused faster than other innovative technologies . *Journal of marketing*.
- [26] Engel, J.F.,Blackwell,R.D.,miniard,P.W., (1995). *Consumer Behavior* (8th Edition ed.). chicago: Dryden Press.
- [27] James R.Bettman, C. Whan Park. (1980). Effects of Prior Knowledge and Experience and Phase of the Choice Process. *Journal of Consumer Research*.
- [28] John M.T. Balmer. (2009). *Corporate marketing*. *Journal of Marketing*.
- [29] Keller, K. L. (2013). *Strategic Brand Management* (Fourth Edition ed.). England: Pearson Education.,
- [30] Khatibi, A. Ismail, S.Thyagarajan. (2002). What Drives Customer Loyalty: An Analysis from the Telecommunications Industry. *Journal of Targeting, Measurement and Analysis for marketing*, 12, 129-137.Menon, D. and Prasad, A. M. (2013). *Development of Building Systems*

using Glass Fibre Reinforced Gypsum (GFRG) Panels, The Masterbuilder.

- [31] Niruba, S. (2014). Analysis of Masonry Infill in a Multi-Storied Building, Civil & Environmental Engineering, Vol.4(2).
- [32] IS 1893: Part 1 (2002); “Criteria for earthquake resistant design of structures”, Bureau of Indian Standards, New Delhi.
- [33] GFRG construction manual, FACT/ RCF building product limited, Cochin- Government of India public undertaking.
- [34] Use of glass fibre reinforced gypsum (GFRG) panel in the building, Structural design manual prepared by Structural engineering division, Department of civil engineering IIT madras.
- [35] Mathey, R.G. and Rossiter, W.J. (1988). A Review of Autoclaved Aerated Concrete Products, National engineering laboratory center for building technology, Gaithersburg.
- [36] Costa, A.A., Penna, A., Magenes, G. and Galasco, A. (2008). Seismic performance assessment of autoclaved aerated concrete (AAC) masonry building, 14 World Conference On Earthquake Engineering.
- [37] Ayudhya, B. I. N. (2011). Compressive and splitting tensile strength of autoclaved aerated concrete (AAC) containing perlite aggregate and polypropylene fiber subjected to high temperatures, Songklanakarin journal of science and technology(SJST), Vol.33 (5), 555-563.