CHAPTER 4

IMPACT OF SATISFACTION ON WORD-OF-MOUTH IN E-BANKING DELIVERY CHANNELS

4.1 Introduction

The post industrial revolution saw developments of different tools and techniques of information technology which changed the lifestyle of human beings and as a result importance of physical strength got diminished to a large extent. In the current era of technology revolution, no industry in the world is untouched to the use of information system and banking industry is no exception (Choudhury & Bhattacharjee, 2015). Saha (1986) opined that there have been tremendous growth and diversification in banking activities over last one-and-a half decades. Development of a sound and adequate information system has become a necessity to meet the challenges of growth and diversification. Rawani and Gupta (2002); Grover and Bhalla (2013); Kumra and Mittal (2004) highlighted that due to phenomenal increase in the size, spread, and activities undertaken by banks in India, because of increase in number of bank branches over last three decades and also with the entry of new banks, there is intense competition for attracting and retaining the customers. As discussed by Turner (2001), progress in information technology has slashed the costs of processing information, while the internet has facilitated its transmission, thus bringing change in the very essence of the banking business. Around the world, electronic banking services, have spread quickly in

recent years. Turner (2001) also highlighted that to cope with the pressures of growing competition, Indian commercial banks have adopted several initiatives and E-banking is one of them. Neitsure (2003) defined Electronic Banking as provision of banking products and services through electronic delivery channels. E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels (Salehi, 2010). According to Srivastava (2007) the pace at which technology in internet banking proceeds doesn't match with the customers' usage rate. Even though banks are more interested in adopting new technology to differentiate themselves in competitive market, they are not getting expected ROI. Thus whether is it the fault of technology, perception of users, or it pertains to lack of skill of the users? Now we know that service sector is largest and fastest growing sector in the world economy, accounting largest share in total output and employment in most developed countries. The share of services sector in total GDP is 47 percent in low income countries, 53 percent in middle income countries and 73 percent in high income countries (Ahmed and Ahsan, 2011). Jun (2005) also said that occupation has an impact on adoption of internet banking. Mannan (2010) made an occupation wise analysis of the respondents and found that 45 percent of the total respondents who use E-banking are from service category, business category occupies only 15 percent professionals are 7 percent of the total and students are 30 percent of the total. Moreover in India 95 percent of the salaried class has bank accounts (Sisodia, et al., 2005).

Again we know that quality of product or service leads to customer satisfaction, which leads to customer loyalty, which leads to profitability. Ashtiani and Iranmanesh (2012) says that many marketers consider word of mouth as one of the most powerful marketing communications, especially when expressed by a familiar and trusted person. Arasali, Mehtap-Samdi, and Katircioglu (2005) believe that positive word of mouth about banks is customer recommendation of the bank to others. On the other hand, Ghafari Ashtiani, Charsetad, and Abbasi (2009) have discussed the factors associated with adoption of electronic banking. One of which being positive word of mouth. Again in an organization or at work place, word of mouth communication is considered as an important component of workplace communication. The satisfaction on the E-banking delivery channel can spread positive word of mouth among same class of people for adopting E-banking delivery channels (Choudhury and Bhattacharjee, 2015).

4.2 Concept of Customer Satisfaction

Satisfaction refers to achieving the things we want (Mostaghel, 2006) . FecĬikovaA (2004) interpreted satisfaction as a feeling which results from a process of evaluating what was received against that expected. Customer satisfaction in marketing context has specific meanings: Gustafsson, Johnson, and Roos (2005) brought customer satisfaction definition as customer's overall evaluation of the date. This satisfaction has positive influences on retaining customers among different variety of services and products. Satisfaction can also be a person's feelings of pleasure or disappointment that results from comparing a product's perceived performance or outcome with their expectations (Kotler and keller,

2009). Satisfaction could be the pleasure derived by someone from the consumption of goods or services offered by another person or group of people; or it can be the state of being happy with a situation (AGBOR, 2011).

(Szymanski and Hise (2000) in their study conceptualized e-satisfaction as the consumers' judgment of their internet retail experience as compared to their experiences with traditional retail stores. It is defined as the contentment of the customer with respect to his or her prior purchasing experience with a given electronic commerce firm (Anderson and Srinivasan, 2003). E-satisfaction can also be defined as the customers' evaluation of a product and service in term of whether has met their needs or expectations better than competitors in online environment (Asfour and Haddad, 2014). Thus here satisfaction in electronic banking service can also be considered as E-satisfaction.

4.3 Concept of Word of Mouth

Wrestbrook (1987) defined word-of-mouth as the opinion which consumers communicate to others in an unofficial way after they have used a product or taken a service. Bristor (1990) mentioned that word-of-mouth as the approach to obtain others' experiences through the interaction of social network. This information communication is normally thought more neutral and more reliable, because it is mostly generated directly by consumers rather than by companies.

According to Hennig-Thurau, Guinner, Walsh and Gremler (2004) the definition of electronic word-of-mouth (e WOM) is online customers or potential customers often seek out information on products or companies and share their knowledge,

experiences and opinions, both positive and negative. Thus, we can consider the E-word of mouth as that informal communication made by online users.

4.4 Relationships between Customer Satisfaction and Word of Mouth

Customer satisfaction and word of mouth have always been marketing concern for organizations selling both product and service. There was a time when organizations were small and competition was less too. Managers at that time were not that much concerned regarding customer satisfaction, word of mouth etc. Customers' attitude has changed a lot from earlier time. They are now much more critical and vocal for unsatisfactory services as options available to them are plenty. The relationship between customer satisfaction and word of mouth is not a new concept. Many researches and literature already provided abundant evidence towards existing significant influence of satisfaction on word of mouth.

Prince and File (1992), found that customer satisfaction leads to positive word of mouth in their study positive word-of-mouth: customer satisfaction and buyer behavior. Liao, Chung, Hung and Widowati (2010) also found that customer satisfaction effects word of mouth communication in their study of the impacts of brand trust, customer satisfaction, and brand loyalty on word-of-mouth. (Anderson, 1998), in his study of customer satisfaction and word of mouth found that dissatisfied customers do engage in greater word of mouth than satisfied ones. In case of Iranian banking industry Shirsavar, Gilaninia, and Almani (2012) also found that customer satisfaction influences word of mouth communication in their study of factors influencing positive word of mouth in the Iranian banking industry. Similarly, in the Malaysian banking Industry, Jan, Abdullah and Shafiq

(2013), recommended satisfaction positively influences word of mouth in their study of the Impact of Customer Satisfaction on Word-of-Mouth: Conventional Banks of Malaysia Investigated. Rodrigues and Proença (2010), in their study conducted in Portugal, says that there is a positive correlation between the rate of satisfaction and the positive word-of-mouth, i.e., satisfied consumers are more inclined to express the preference for their bank and recommend it to others. Das (2013) in his study on the effect of pleasure and arousal on satisfaction and word of mouth in Indian Banking sector finds that satisfaction has a significant positive impact on WOM communication.

4.4.1 Relationship between customer satisfaction and word of mouth in electronic medium

Litvin, Goldsmith and Pan (2008) summarized the concept of electronic word of mouth. According to them, all informal communications directed at consumers through Internet-based technology related to the usage or characteristics of particular goods and services or their sellers. This includes communication between producers and consumers, as well as those between consumers themselves. Chung and Shin (2009) in their study of relationship between site characteristics, relationship quality and word of mouth in online retailing found that customer satisfaction positively affect word of mouth communication. Cetin and Dincer (2014), in their study of electronic word of mouth among hotel guest found that the relationship between satisfaction and e-wom to be significant. To find the relationship between e-satisfaction and e-loyalty of consumers shopping online, Ltifi and Gharbi (2012) found that e-satisfaction positively effects e-word

of mouth with positive regression weights. Rezvani and Safani (2016), conducted the study in a specific culture of population, the Tiwali culture and an art social network online shop and also found that customer satisfaction positively effects e-word of mouth providing evidences that more satisfied people will be more motivated to remain with the present online shop. Sanayei and Jokar (2013) in their study of electronic services quality on electronic satisfaction and positive word of mouth found that there is positive relationship between e-satisfaction and e-word of mouth in electronic banking services and electronic satisfaction has the most effect on word of mouth s as a result the customers' satisfaction of website services cause is a factor for offering and advising others for using website services.

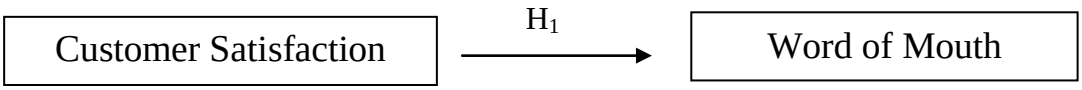
4.5 Research framework and hypothesis

From the existing literature, enough evidences have been found about the existing relationship between two variables i.e. customer satisfaction and word of mouth in different context and different target population. Thus similarly, the objective of the current study has been depicted to find out the relationship between satisfaction and word of mouth pertaining to electronic banking service among another specific group of population i.e. the salaried employees. The target population is chosen as salaried employees because number of literature suggest, salaried employees are in a better position to adopt electronic banking delivery channels such as (Jun , 2005); (Mannan, 2010); (Pandian and Sharma, 2012); (Joshua, 2009); (Gupta and Bansal, 2012); (Sharma, Dhaundial, and Srivastava, 2012). Here customer satisfaction is assumed to be independent variable and word of mouth as a dependent variable. As

a result the following hypothesis was taken based on the target population i.e. the salaried section of the society.

H_1: There is an association between the level of satisfaction and the 'word-of-mouth' of the target population.

Figure 4.1 Research model



4.6 Methodology

Level of satisfaction and word of mouth are two such variables which cannot be measured directly. That is there is no definite procedure to find out the value or measurement for satisfaction and word of mouth. So, we have multiple questions that attempt to get at this (Millsap, 2013). Here the relationship between level of satisfaction and word -of- mouth is the case of multivariate analysis with multiple dependent and independent variables coming into action. These relationships are expressed as a series of equations involving the constructs. The constructs are the unobservable or the latent factors represented by multiple variables (Hair, 2007). Thus a technique which analyze both the observed (measurable) and unobserved (latent) variables is of necessity. Now we know that the traditional multivariate techniques analyze only measurable variables while SEM (Structural Equation Modelling) is a multivariate technique which incorporates both observed (measured) and unobserved variables (latent constructs) (Suhr, 2006). SEM can be

thought of as a unique combination of both dependence and interdependence technique of multivariate analysis because SEM's foundation lies two familiar multivariate techniques factor analysis (Interdependence technique) and multiple regression analysis (dependence technique) (Hair, 2007). In this chapter customer satisfaction is an independent variable of this study, whereas, WOM is the ultimate dependent variable. At first reliability test will be done to check the consistency of the adapted questionnaire. Then factor analysis (EFA) shall be done to identify the dimensions of both variable. Next factor analysis (CFA) to assess the measurement model based on fit measure. And finally structural equation modeling (SEM) shall be done to test the hypothesized causal relationships among the constructs of the model.

4.6.1 Measures and scale

Self administered questionnaire is developed based on relevant statements from (Levesque and McDougall, 1996) for measuring satisfaction and relevant statements from (Goyette, Ricard, Bergeron, and Marticotte, 2010) for measuring word of mouth. Satisfaction was measured by 3 statements and Word of mouth was measured by 13 statements. For scaling techniques 7-point Likert scales, ranging from 1 (strongly disagree) to 7 (strongly agree) have been adopted. 7-point Likert scales are used rather than 5-point Likert scales to increase variation for statistical analysis as well as add additional details.

4.6.2 Subject and Procedure

According to the objective, we are concerned with those subjects who use electronic banking delivery channels and at the same time are salaried employees. Since exactly the size of the population is undeterminable due to banks inability to provide the number of customers fulfilling the criteria of the population. Thus, it is needed to depend on the superset i.e. the total number of customers (Savings Account) of the respective banks under consideration for the study. An error of 5 percent will require a sample of approximately 400 units and to get 400 responses approximate initial sample size of 1042 were contacted based on the equation (1) given by (Malhotra and Dash, 2009).

$$\text{Initial Sample size} = \frac{\text{Final Sample size}}{\text{Incidence rate} \times \text{Completion rate}} \qquad (1)$$

The sample were collected from the districts of Southern Assam, India based on post stratified random sampling to maintain proportional allocation of sample from each bank under consideration. Reliability tests were conducted to ensure the validity and precision of the statistical analysis and accordingly Cronbach's Alpha(α) for the main constructs were calculated and was found that all the two main constructs fall in the acceptance range i.e. $\alpha > 0.6$ as cited by (Jan, Abdullah, and Shafiq, 2013) (Das, 2013) (Azad and Esmaeili, 2012) and many others.

4.6.3 Descriptive Statistics

The descriptive statistics of the data and questions are mentioned as follows.

Table 4.1 Descriptive Statistics

Construct /Measure	Mean	Std. Deviation	Reliability of the Construct
Customer satisfaction			*0.890*
Satfn1*(The overall quality of the e banking services provided by my bank is excellent)*	*2.22*	*1.166*	
Satfn2*(My bank always meets my expectations on e banking services)*	*2.37*	*1.184*	
Satfn3*(Considering everything I am extremely satisfied with my bank and its e-banking services)*	*2.34*	*1.221*	
Word of Mouth			*0.809*
Wom1 *(I spoke/speak about the e-banking services of my bank more frequently than any other bank.)*	*3.08*	*1.362*	
Wom2 *(I spoke of my bank and e-banking services to many individuals)*	*2.89*	*1.423*	
Wom3 ***(****I am proud to say to others that I am this bank's customer)*	*2.48*	*1.216*	
Wom4 ***(****I strongly recommend people to use e-banking services of this bank)*	*2.62*	*1.229*	
Wom5 *(I mostly say positive things to others)*	*2.18*	*1.183*	
Wom6 *(I mostly dis-courage others about e-banking services)*	*5.35*	*1.552*	
Wom7 *(I always speak about the risk associated with E-banking services)*	*3.93*	*1.720*	
Wom8 *(If there is E-banking failure I highlight the problems to others)*	*3.20*	*1.503*	
Wom9 *(I discuss the user-friendliness of its e-banking channels)*	*2.53*	*1.035*	
Wom10 *(I discuss security of transactions of the E banking channels)*	*2.61*	*1.211*	
Wom11*(I discuss the variety of the services offered)*	*2.51*	*1.183*	
Wom12(I discuss ease of transactions)	*2.47*	*1.152*	
Wom13*(I speak of the company's name and fame)*	*3.00*	*1.299*	
Total N=400			*0.835*

The gender wise distribution of the sample is such that the sample comprises of 359 males against 41 females with percentages 89.8 percent and 10.2 percent

respectively. Most of the respondents were found to belong to government employees with 68.3 percent followed by private sector 15.5 percent and public sector with 14.5 percent. The reason may be attributed to less private jobs availability in the study area. Age-wise distribution shows that we have maximum of the respondents belonging to the age group 51 and above with 39.8 percent, followed by age group 41-50 with 25.8 percent and others.

4.7 Analysis and Results

At first the data reduction is done through principal component analysis and later hypothesis testing was done by confirmatory factor analysis and structural equation modeling.

4.7.1 Data reduction

Exploratory factor analysis was conducted separately for both the constructs to extract the number of factors underlying the two constructs. The initial pre requisites for performing principal component analysis (PCA) are that the variables under considerations should be metric variables (Smith, 2002), which is maintained in the current study. The sample size is 400 which are adequate for both constructs. The correlation matrix for the variables must contain 2 or more correlations of 0.30 or greater (Williams, Brown and Onsman, 2012), (Srinivasan and Sivakumar, 2008) which has been attained in both the factor analysis (See Appendix Table A7, Table A17). The Bartlett test of sphericity should be statistically significant ($p \leq$ alpha) (Williams, Brown and Onsman, 2012), (Bartlett, 2011), (Velnampy and Sivesan, 2012), (Perry, 2004), (Kline, 1994) here we have p value = $0.000 \leq 0.05$ for both the constructs which is significant. Similarly the

KMO test value should be close to 1 and greater than 0.5 for sample adequacy (Williams, Brown and Onsman, 2012), (Velnampy and Sivesan, 2012), (Perry, 2004). Here we have achieved 0.749 for satisfaction and 0.807 for Word of Mouth, which is above the threshold value of 0.5 and close to 1. Anti Image correlation Matrix was checked for both the factor analysis and the diagonal correlations (See Appendix Table A8, Table A18) were also found to be more than 0.5 which is the threshold value for retaining the variables (Field, 2007), (Kelemework and Spielman, 2009).

The factor solution were obtained for both the constructs and was found that customer satisfaction has only one dimension or one factor which explains 82 percent of total variance (See Appendix Table A10). The communalities of the variables extracted, need to be more than 0.5 (Yamaguchi, 2008) (Muhammad, Gibraltar and Septiawan, 2014) and those variable with complex structure need to be removed (Sivakumar and Srinivasan, 2008), (Wang, 2015). The communalities of the three variable under satisfaction are greater than 0.50 (See Appendix Table A9) and there is 0 complex structure in the variable as the solution has only one factor, hence all the variables Satfn1**,** Satfn2, Satfn3 were retained.

Word of Mouth was found to have 3 dimensions or factors, which after 2nd iterations explains 71.28 percent of variance (See Appendix Table A16). After 2 iterations, 8 variables or items were retained in 3 factors from total 13 variables. This is because some variables had communalities less than 0.5 after First run (See Appendix Table A11) and thus another run i.e. 1st Iteration was made without taking into consideration those variables having communalities less than 0.5. Now after 1st Iteration all communalities were greater than 0.5 but few variables had

complex structures (See Appendix Table A12 and A13). Thus again another iteration was made i.e. 2nd iteration and after 2nd iteration none of the variable had complex structure and communalities less than 0.5 (See Appendix Table A14 and Table A15). The 8 variables retained were WOM1, WOM3, WOM4, WOM6, WOM7, WOM10, WOM11, and WOM12.

The extracted factors can be represented as

Word of Mouth Intensity: WOM1

Word of Mouth Type (positive/negative): WOM3, WOM4, WOM6, WOM7

Word of Mouth Content: WOM10, WOM11, and WOM12

A revision of reliability analysis were conducted for the retained variable in word of mouth and was found to have $\alpha = 0.7 >$ threshold value of 0.6 and hence it justified that the retained statements are reliable enough to conduct further analysis.

4.7.2 Hypothesis Testing

In the research model shown in figure 1, a two-step modeling approach was adopted, i.e., the measurement model(s) were fitted before fitting the full fledge structural model. IBM SPSS AMOS software version 23 was used to perform confirmatory factor analysis (hereafter, CFA) for each variable. These measurement models were assessed based on the fit measure. For example, chi-square ($\chi 2$), Normed chi-square ($\chi 2/df$), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). The recommended values of model fit are $\chi 2$ is > 0.05, $\chi 2/df < 5$, GFI ≥ 0.9, CFI ≥ 0.9, NFI ≥ 0.9, RMSEA $\leq$ 0.08 (Jan, Abdullah and Shafiq, 2013), (Lo, 2012) (Jackson and Gillaspy, 2009)

(Cheung and Rensvold, 2002). And finally to test the hypothesis the Structural Equation Modeling was adopted.

4.7.3 Results and findings

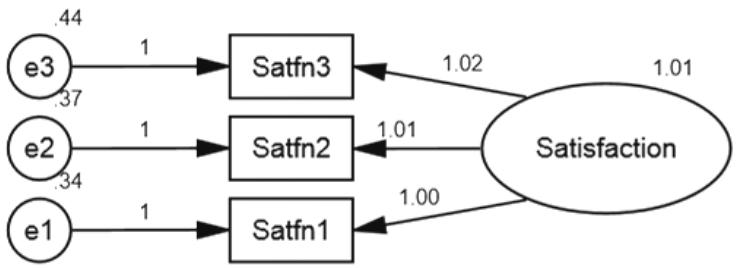
4.7.3.1 Analysis of Measurement Model

At first Confirmatory Factor Analysis is conducted for satisfaction. The results revealed that the data fits the model well. Most of the fit indices were above the threshold value supporting good to perfect fit (See Table 4.2).

Table 4.2 Results of Confirmatory factor Analysis for Satisfaction

Construct	Model	$\chi 2$	df	$\chi 2$/df	GFI	CFI	NFI	RMSEA
	Recommended Values	>0.05	≥ 0	<5	≥0.9	≥0.9	≥0.9	≤0.08
Satisfaction	Current Default Model	0.0	0	0	1.000	1.00	1.00	0
	Fit	Good fit	Good fit	Good fit	Perfect Fit	Perfect Fit	Perfect Fit	Good fit

Figure 4.2 Measurement Model of Customer Satisfaction



Here the variables Satfn1, Satfn2, Satfn3 are significant at 0.05 level of significance with critical values >1.96.

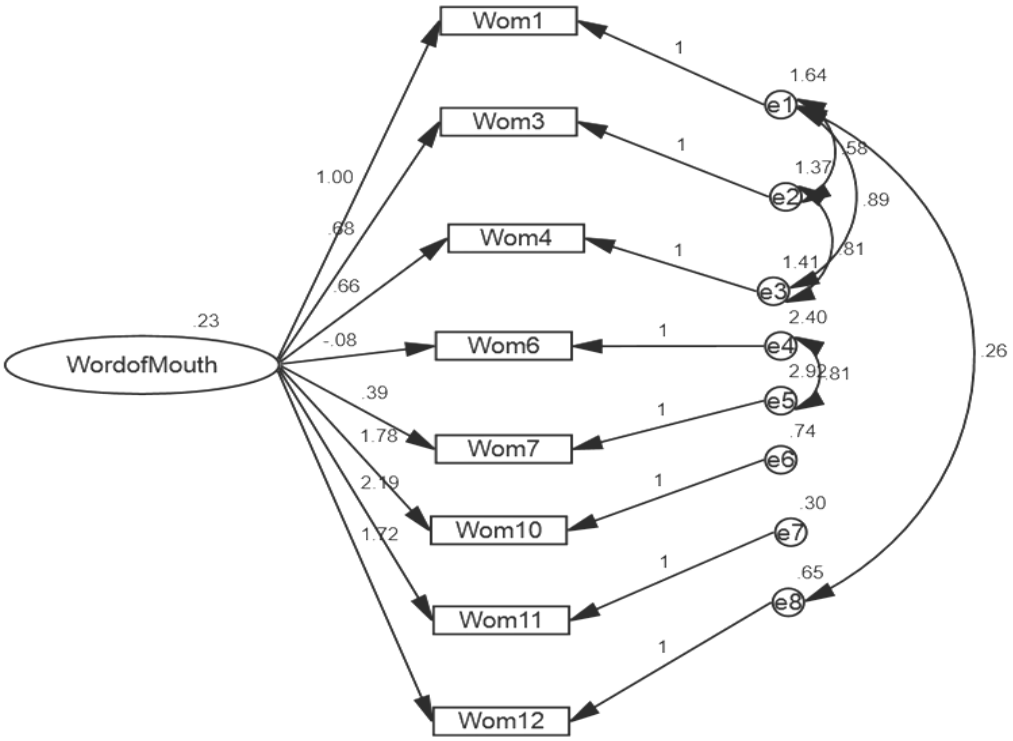
Next confirmatory factor analysis was performed for word of mouth. The results clearly revealed that initially the default measurement model did not come out with

a good fit since $\chi 2/df$ was 21.327 which is greater than 5 i.e. the maximum permissible value. And also GFI, CFI, NFI were all less than threshold value of 0.9 (See Table 4.3). Then modification indices were examined from the co-variances between error terms and the model was revised. The revised model gave a very good fit and consequently all the fit indices were at par with the recommended value (See Table 4.3).

Table 4.3 Results of Confirmatory factor Analysis for Word of Mouth

Construct	Model	$\chi 2$	Df	$\chi 2/df$	GFI	CFI	NFI	RMSEA
	Recommended Values	>0.05	≥ 0	<5	≥0.9	≥0.9	≥0.9	≤0.08
Word of Mouth	Default	426.535	20	21.327	.788	-573	.564	.226
	Revised	45.409	15	3.027	.973	.968	.954	.07
	Comment on fit after revision	Good fit	Good fit	Good fit	Good fit	Good fit	Good fit	Good fit

Figure 3 Measurement Model of Word of Mouth



Here the variables WOM1, WOM3, WOM4, WOM10, WOM11, WOM12 are significant at 0.05 level of significance with critical values >1.96. WOM6 and WOM7 are not significant.

4.7.3.2 Hypothesis decision through Structural Model

After achieving good fit of the measurement model, hypothesis testing was done using structural model to find the causal relationship between the constructs of the model. The results revealed that the hypothesized model at first did not fit the observed data and thus modification indices were examined from co-variances between error terms and the model was revised. The revised estimates were calculated and the revised model was found to fit the observed data well. The normed chi square is below 5, GFI, NFI and CFI were all above threshold value of 0.9. The goodness of fit indices was illustrated in the Table 4.4 below.

Table 4.4 Result of Structural Equation Modeling

Construct	Model	$\chi 2$	Df	$\chi 2$/df	GFI	CFI	NFI	RMSEA
	Recommended Value	>0.05	≥ 0	<5	≥0.9	≥0.9	≥0.9	≤0.08
Full Model	Default	527.64	26	20.294	.744	.725	.717	.220
	Revised	79.955	19	4.208	.959	.967	.957	.09
	Comment on fit after revision	Good fit	Good fit	Good fit	Good fit	Good fit	Good fit	Moderate fit

The Hypothesis was also statistically significant with *p* (0.000 < 0.001), critical ratio 10.379, regression weight of 0.67 and standardized regression weight of 0.778. Thus we can say that customer satisfaction has a direct positive effect on

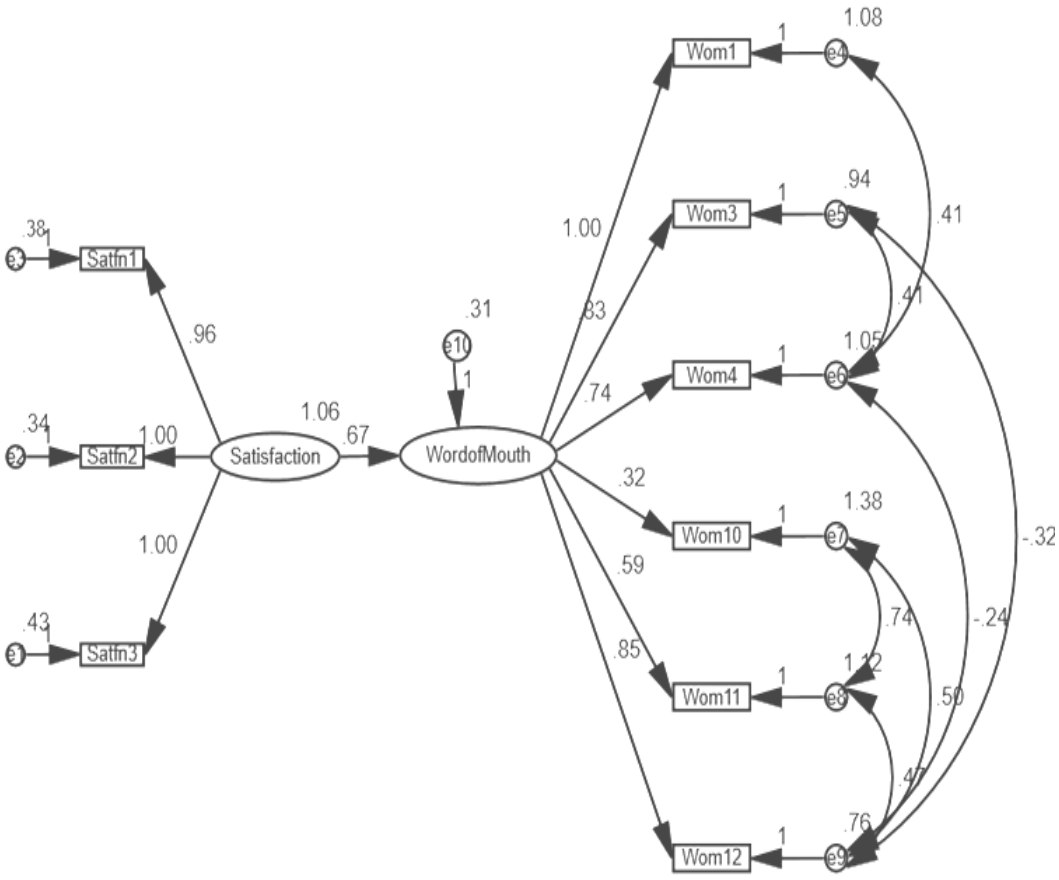
word of mouth in E-banking and accept the hypothesis that there is an association between the level of satisfaction and the 'word-of-mouth' of the target population. The results are found to be consistent with previous studies mentioned in literature in the initial part of this study.

Table 4.5 Regression Weights

Path	Estimate	S.E.	C.R.	P
Word of mouth ⟵ Satisfaction	.670	.064	10.369	0.000*

***** Significant at p=0.001

Figure 4.4 Path Diagram of the Full Structural Model



4.8 Conclusion

Banking organizations looking for sustainable business and competitive edge will always try to retain and increase number of customers and since E-banking is a way of retaining and increasing customers through innovation diffusion hence usability of the E-banking delivery channels are a major concern. Lost business happens daily at many online banks due to dissatisfaction over the use of e-banking channels. Analysis of customer satisfaction and word of mouth for electronic delivery channels are important for the longevity of the banks in the competitive market. This is because enhanced satisfaction leads to positive word of mouth thereby spreading positive message to increase number of users of e-channel and thereby creating loyalty among the existing users.

The study has its own restrictions and limitations. The limitations are results of two distinct constraints that are difficult to overcome. The first one is related to the generalization of the outcome of the study. The generalizations drawn on the basis of objective may not hold good at a different cultural setup, geographical region, race etc. Thus, the finding of the study to certain extent may be true only in the geographical area on which it is subjected. The second issue is the sample size. As time and cost hurdles are difficult to overcome so the current researcher is debarred from taking a bigger sample size that could have diminished the standard error of the results obtained.