

## **Relationships among Information Technology, Performance of the Employees and Satisfaction of the Customers in Life Insurance Corporation of India**

**Dr. Partha Sarathi Choudhuri**

*Department of Business Administration  
The University of Burdwan, West Bengal, India*

---

**ABSTRACT :** *Satisfaction of the customers depends on a number of factors and based on these factors customers generally try to estimate their satisfaction with their service providers. Information technology has now emerged as an important element of the business strategy of the companies especially to the employees of the organization through which they are now trying to provide better quality of services to the customers in order to satisfy them in the competitive market. Like any other service sector, in life insurance sector also the employees of the insurance companies are dedicatedly trying to improve their performance through maximum utilization of the information technology in most efficient and effective way in their office operation especially at the time of delivery of different types of services to the customers. In the present context, researcher in this paper tried to understand the significant relationships among the information technology, performance of the employees and satisfaction of the customers in life insurance sector with special reference to the Life Insurance Corporation of India (LICI) in Burdwan district, West Bengal. In this study, accepted 221 usable responses were considered as the sample size and statistical package SPSS 16 was used to perform the analyses.*

**KEYWORDS :** *Customer Satisfaction, Employees, Information Technology, Insurance, Performance.*

---

### **I. INTRODUCTION**

In 21<sup>st</sup> century information technology (IT) has become the backbone of every industry, especially for the service industries, all over the world. Due to the effect of the several factors of the globalization, the socio-economic culture of the service providers have already been changed and become very much dependent on the information technology where service industries are now trying to get competitive advantage over their competitors through the use of information technology and information technology enabled services. Satisfaction of the customers comes only when their needs and wants are fulfilled. Considering the various needs and requirements of customers, organizations are concerned in providing quality of services to their customers in order to meet the expectations of the customers. Customer satisfaction has now become the most important objective of the firm through which they will be able to retain their own customers as well as will be able to attract the new customers in the global competitive market. After liberalization, while establishing its role in the economic development process of the country, Indian insurance market has undergone a dramatic change and also influenced the financial sector as a whole. There are now many private and foreign life insurance companies performing their operations in Indian insurance market and offering different type of products and services to the customers. After the entrance of these insurance companies, customers' expectation of quality of services from their insurers has already been changed. In the present competitive insurance market, insurance companies are trying to change their focus from product orientation to customer orientation and involved in IT investment in their business in order to facilitate their employees in their works through which they may be able to provide better quality of services to their customers in order to fulfill their various requirements. The largest as well as one and only public sector life insurance company of India namely Life Insurance Corporation of India (LICI) is no exception to this. The technology savvy employees of the Life Insurance Corporation of India are nowadays fervently using this new and convenient technology in their works in most efficient and effective way. In the present context, the current study has been conducted on the life insurance customers of all the 17 branches of the Life Insurance Corporation of India located in the district of Burdwan, West Bengal, to observe the significant relationships among the information technology, performance of the employees and satisfaction of the customers in life insurance sector.

### **II. REVIEW OF LITERATURE**

Information Technology (IT) is described as any technology that helps to produce, manipulate process, store, communicate, and/or disseminate information (William and Sawyar, 2005). Shang and Seddon (2002) noted that information technology is playing an important role in attaining organizational benefits, mainly

because of its ability to transform resources into core capabilities, and at times, facilitate and accelerate a change in organizational culture. Bauer (2003) affirmed that within an organization, individual business units started creating their information technology units because the cost of computing technology decreased and the trained information technology personnel became readily available. The use of technology presents operational efficiency with additional functionality as well as the convenience (Arend, 1992). According to Markus (2004), information technology has a significant impact in sustaining organizational operations and sparking dramatic changes in the transformation of an institution that may be described as technochange, named for technology-driven organizational change, which has a potential importance to the people, processes as well as organizational performance that assure major strategic benefits and process improvements from the cross-functional integration and process streamlining. Information technology enabled convenient services (ITECS) has emerged as one of the important dimensions of the structure of service quality in life insurance sector (Choudhuri, 2012). In life insurance industry, the organizational performance in the office operation of systems technology leaders was linked to the level of information technology investment intensity (Harris and Katz, 1991). Jen-Her and Yu-Min (2006); Leslie and Richard (2006) asserted that managers of the insurance companies are able to process work quickly as well as response to their customers has been faster and prompt using the latest information technology system. Satisfaction is the outcome of customers' affective commitment about a service (Johnson et al., 2008), i.e., according to Meuter et al. (2000), during the service delivery, recovery and personalization of service, the noteworthy relationship of customer-employee makes customers' satisfaction. Customer satisfaction can be affected and predicted by the five dimensions of the Parasuraman et al.' (1988) SERVQUAL instrument (Landrum et al., 2007) where the maximum items of service quality are straight way related with the human interaction between customer service representative and customers (Bitner et al., 1990). Khatibi et al. (2002) indicated that customer satisfaction very much depends on the performance of the employee when they provide service to the customer.

### III. METHODOLOGY

For the purpose of the study, researcher first of all formulated the following null and alternative hypotheses:

H1<sub>0</sub> : Performance of the employees in life insurance is independent of information technology.

H1<sub>a</sub> : Performance of the employees in life insurance is dependent of information technology.

H2<sub>0</sub> : Customer satisfaction in life insurance is independent of performance of the employees.

H2<sub>a</sub> : Customer satisfaction in life insurance is dependent of performance of the employees.

To collect the data, initial questionnaire was developed as a survey instrument where along with the other items, the importance of having information technology in LICI, performance of the LICI employees and the satisfaction of the LICI customers were included in the initial questionnaire. The pilot study was conducted randomly selecting 30 customers for this study. After explaining objectives and purpose of the study, researcher tried to get valuable feedback from these customers. Based on this pilot study, the preliminary analysis established the internal consistency of the items within questionnaire and gave the confirmation of validity and reliability of final survey instrument. The questionnaire used for the study included both open-ended and close-ended and consisted seven point Likert scale ranging from 1-strongly disagree to 7-strongly agree. After successfully completion of the pilot study, considering different demographic profile of the respondents and using random sampling technique, selecting all the 17 LICI branches located in Burdwan district, total 350 questionnaires were distributed among the customers where 289 customers were agreed to give response and finally obtained 221 usable responses which were considered as the sample size for this study. Here, statistical package SPSS 16 was used to perform the analyses.

### IV. RESULTS AND DISCUSSIONS

Based on the demographic data of the LICI customers which was collected through cross-sectional survey for the purpose of the study, the central tendency of the various demographic profiles of the customers was measured. The summarized demographic profile of the customers of the study is now given in Table 1:

**Table 1: Demographic profile of the customers**

Demographic Variable	Demographic Characteristics	Frequency	Mean	Median	Mode	Std. Deviation
Gender	Male	192 ( 86.9 )	1.1312	1.0000	1.00	0.33841
	Female	29 ( 13.1 )				
Age	≤ 30 years	51 ( 23.1 )	2.6154	2.0000	2.00	1.26905
	31 - 40 years	66 ( 29.9 )				
	41 - 50 years	38 ( 17.2 )				

	51 - 60 years	49 ( 22.2 )				
	≥ 60 years	17 ( 7.7 )				
<b>Income</b>	≤ Rs.14999.00	30 ( 13.6 )	2.3529	2.0000	2.00	0.82150
	Rs.15000.00 -Rs.24999.00	102 ( 46.2 )				
	Rs.25000.00 -Rs.44999.00	70 ( 31.7 )				
	≥ Rs.45000.00	19 ( 8.6 )				
<b>Occupation</b>	Salaried	174 ( 78.7 )	1.4661	1.0000	1.00	1.00226
	Business	15 ( 6.8 )				
	Professional	11 ( 5.0 )				
	Retired	18 ( 8.1 )				
	Housewife	3 ( 1.4 )				
<b>Educational Qualifications</b>	High school	14 ( 6.3 )	3.1991	4.0000	4.00	1.08970
	Graduate	56 ( 25.3 )				
	Post-graduate	38 ( 17.2 )				
	Professional	98 ( 44.3 )				
	Any other	15 ( 6.8 )				
<b>Locality of Living</b>	Center of the town	144 ( 65.2 )	1.5611	1.0000	1.00	0.82138
	Outskirts of the town	30 ( 13.6 )				
	Rural areas adjoining town	47 ( 21.3 )				
<b>Modern Aids</b>	Mobile Phone	64 ( 29.0 )	1.4208	2.0000	2.00	0.90921
	Combination of mobile & internet	157 ( 71.0 )				

\* *Percentage (%) in parenthesis*

To understand the strength of the relationship of performance of the employees and information technology, the simple regression analysis was performed in order to predict the dependent variable from the independent variable (predictor) where performance of the employees was considered as the dependent variable and information technology was considered as the independent variable for this study. The results of first simple regression analysis are given below in the following tables:

**Table 2: Result of Regression Analysis 1  
Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	INFORMATION TECHNOLOGY <sup>a</sup>	.	Enter

a. All requested variables entered.

b. Dependent Variable: PERFORMANCE

**Table 3: Model Summary<sup>b</sup> (IT vs. PERF)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.437 <sup>a</sup>	.211	.203	.65137

a. Predictors: (Constant), INFORMATION TECHNOLOGY

b. Dependent Variable: PERFORMANCE

**Table 4: Result of ANOVA (IT vs. PERF)  
ANOVA<sup>b</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	3.478	1	3.478	7.136	.003 <sup>a</sup>
	Residual	206.517	219	.943		
	Total	209.995	220			

a. Predictors: (Constant), INFORMATION TECHNOLOGY

b. Dependent Variable: PERFORMANCE

**Table 5: Regression Coefficients (IT vs. PERF)  
Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.261	.413		12.284	.000
	INFORMATION TECHNOLOGY	.735	.126	.247	5.316	.003

a. Dependent Variable: PERFORMANCE

# **Legends used:** IT- Information Technology and PERF- Performance

The result of simple regression analysis indicates that dependent variable performance of the employees has a strong relationship with the independent variable information technology. In ANOVA result of Table 4, the value of  $F = 7.136$ ,  $p \leq 0.001$  established the significance of the relationship between performance of the employees and the information technology. The result of regression coefficients in Table 5 shows that standardized coefficient  $\beta$  and corresponding t-value of the information technology are  $\beta = 0.247$ ,  $t = 5.316$ ,  $p < 0.001$  which also proved that there exists positive and strong relationship between dependent variable performance of the employees and the independent variable information technology in the current study. So, in this study the first null hypothesis is rejected and alternative hypothesis “Performance of the employees in life insurance is dependent of information technology” is accepted.

To test the strength of the relationship between customer satisfaction and performance of the employees as well as to predict the dependent variable from the independent variable (predictor), the following second simple regression analysis was performed where mean score of the customer satisfaction of all the life insurance customers of the study was considered as dependent variable and performance of the employees was considered as the independent variable:

**Table 6: Result of Regression Analysis 2  
Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	PERFORMANCE <sup>a</sup>	.	Enter

a. All requested variables entered.

b. Dependent Variable: CUSTOMER SATISFACTION

**Table 7: Model Summary<sup>b</sup> (PERF vs. CS)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.681 <sup>a</sup>	.327	.313	1.03142

a. Predictors: (Constant), PERFORMANCE

b. Dependent Variable: CUSTOMER SATISFACTION

**Table 8: Result of ANOVA (PERF vs. CS)  
ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.273	1	19.273	28.584	.005 <sup>a</sup>
	Residual	266.304	219	1.216		
	Total	285.577	220			

a. Predictors: (Constant), PERFORMANCE

b. Dependent Variable: CUSTOMER SATISFACTION

**Table 9: Regression Coefficients (PERF vs. CS)  
Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.776	.531		11.451	.000
	PERFORMANCE	.829	.104	.361	4.130	.005

a. Dependent Variable: CUSTOMER SATISFACTION

# **Legends used:** PERF- Performance and CS- Customer Satisfaction

From the result of the above simple regression analysis it can be stated that the dependent variable customer satisfaction is strongly related with the independent variable performance of the employees and the prediction of dependent variable (customer satisfaction) has successfully been done by the independent variable (performance of the employees). In Table 7, the value of R Square = 0.327 indicates significance of the study. In Table 8, the result of ANOVA, the value of  $F = 28.584$ ,  $p < 0.001$  established the significance of the relationship between the customer satisfaction and performance of the employees. In Table 9, the result of regression coefficients illustrates that the standardized coefficient  $\beta$  and corresponding t-value of performance of the employees are  $\beta = 0.361$ ,  $t = 4.130$ ,  $p < 0.001$  which again explained that there exists positive and strong relationship between the customer satisfaction (dependent variable) and performance of the employees (independent variables). So, the second null hypothesis is rejected and alternative hypothesis “*Customer satisfaction in life insurance is dependent of performance of the employees*” is accepted here. From the above discussion, in the present context of the study, the model named Information Technology-Performance-Satisfaction (IT-P-S) Model has been developed for the life insurance sector which is now presented below:



**Model 1: Information Technology-Performance-Satisfaction (IT-P-S) Model**

## V. CONCLUSIONS

To investigate the significant relationships among the information technology, performance of the employees and satisfaction of the customers in life insurance sector with special reference to the Life Insurance Corporation of India (LICI), the researcher initially formulated appropriate null and alternative hypotheses as well as performed the regression analyses. The acceptance of first and second alternative hypotheses not only described the perfect positive linear relationship of dependent and independent variables of the study but also established the dependency of performance of the employees on the information technology as well as the dependency of customer satisfaction on the performance of the employees in life insurance sector. Based on these fruitful results, researcher has developed Information Technology-Performance-Satisfaction (IT-P-S) Model for the life insurance sector which might play an important role in the decision support system of the top level management of the life insurance organization, especially to the Life Insurance Corporation of India. IT-P-S model illustrates the significant impact of the information technology on the performance of the employees which also has a strong positive impact on the customer satisfaction in life insurance sector. Thus, it may be concluded that as information technology is the key instrument to the employees of the organization to improve their performance in order to satisfy the life insurance customers so the proper implementation and use of information technology is very much desirable in the life insurance organization in the present competitive market.

## REFERENCES

- [1] Arend, M. (1992). Technology: Ally or enemy of customer service? ABA Banking Journal, 84(9), 88-91.
- [2] Bauer, B. T. (2003). "Is a centralized or decentralized IT organization better?" Darwin Magazine, October.
- [3] Bitner, M., Booms, B., & Tetreault, M. (1990). The service encounter: Diagnosing favourable and unfavourable incidents. Journal of Marketing, 54(1), 71-84.
- [4] Choudhuri, P. S. (2012). "Dimensional Structure of Service Quality for Life Insurance: A Study of Life Insurance Corporation of India in Burdwan", Journal of Business Management, Commerce & Research, Vol. 1, No. 3 (December), pp. 60-70.
- [5] Harris S. E. & Katz J. L. (1991). Firm size and Information Technology Investment Intensity of Life Insurers. Special Issue: Strategic use of Information Systems, MIS Quarterly, 15(3), 333-352.
- [6] Jen-Her Wu. & Yu-Min Wang. (2006). Measuring ERP success: the ultimate users' view. International Journal of Operations & Production Management, 26, 8, 882-903.
- [7] Johnson, M., Sivadas, E., & Garbarino, E. (2008). Customer satisfaction, perceived risk and affective commitment: An investigation of directions of influence. Journal of Services Marketing, 22, 353-362.
- [8] Khatibi, A.A., Ismail, H., & Thyagarajan, V. (2002). What drives customer loyalty: An analysis from the telecommunications industry. Journal of Targeting, Measurement and Analysis for Marketing, 11(1), 34-44.
- [9] Landrum, H., Prybutok, V.R. & Zhang, X. (2007). "A comparison of Magal's service quality instrument with SERVPERF", Information & Management, Vol. 44 No. 1, pp. 104-113.
- [10] Leslie P. W. & Richard S. (2006). The role of the CIO and IT function in ERP. Communications of the ACM, 43, 4, 32-38.

- [11] Markus, M. (2004). Technochange management: Using IT to drive organizational change. *Journal of Information Technology*, 19, 4-20.
- [12] Meuter, M.L., Ostrom, A.L., Roundtree, R.I. & Bitner, M.J. (2000). "Self-service technologies: understanding customer satisfaction with technology-based service encounters", *Journal of Marketing*, Vol. 64 No. 3, pp. 50-65.
- [13] Parasuraman, A., Zeithaml, V.A. & Berry, L.L. (1988). "SERVQUAL: A Multiple- Item Scale for Measuring Customer Perceptions of Service Quality," *Journal of Retailing*, 64 (Spring), 12-40.
- [14] Shang, S., & Seddon, P. (2002). Assessing and managing the benefits of enterprise systems: The business manager's perspective. *Information Systems Journal*, 12(4), 271-299.
- [15] William, B.K., & Sawyer S.C. (2005). "Using Information Technology". 6<sup>th</sup> edition, McGraHill Publishing Co. U.S.A, pp. 3, 4, 147.