

Untact Technology and Customer Reconciliation: The Role of Voice and Customer-Centric Strategies

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Abstract

This study works through the usage of untact technology and customer reconciliation. In the urban world, each and everyone has witnessed untact services, untact recruitments, and untact elections, the public finds it convenient and time-saving. It gives room for customization and most importantly the human error factor is ruled out. The study focuses on the moderating role of customer's voice & customer-centric strategies on the relation of untact technology & customer satisfaction and the mediating role of customer satisfaction between untact technology (independent variable) & customer reconciliation (dependent variable). Factor analysis, total variance, descriptive statistics, reliability analysis, correlation analysis, and regression analysis were applied to test the variables, items, and hypothesis. The aim of this study is to propose to the companies; how to get a better understanding of their customers, thus focusing on achieving customer reconciliation. It advises the companies to focus on contact services as well along with untact as people in Pakistan are still struggling with untact technology.

Keywords: Untact technology, customer's voice, customer-centric strategies, customer satisfaction, customer reconciliation

Introduction

This study addresses the linkage between untact technology and customer reconciliation. The stipulation of untact technology is increasing like anything in this fast pace world (Lee et al., 2020). Need of the day is even giving birth to new service-providing businesses, primarily based on untact technology (Shafqat and Byun, 2020). Earlier it was only meant for convenience but now undoubtedly, it's a necessity. The businesses that did not adopt this technology earlier, had to introduce new tools out of it (Khan, 2020) for their survival. To fill the gap, this study has considered customer voice and customer-centric strategies to influence customer satisfaction.

Customers feel valued when they are involved in the co-creation process, plus the self-service factor has reduced the workload of the company to some extent (Kreuzer et al., 2020). Customer's Voice serves as a medium of communication between the company and the customers themselves (Min and Kim, 2019). Customer-Centric Strategies tend to increase the number of satisfied customers; eventually benefitting the

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company (Chwialkowska, 2019) the more customer-centric a company would be, the more customers will be satisfied.

The COVID-19 pandemic has expeditiously changed the behaviors of even those who were not convinced to benefit from this technology (Shafqat and Byun, 2020). The pandemic situation has escalated the usage of untact technology because the rapidly changing needs and preferences of customers can only be catered to through this advancement (Lee and Lee, 2020). Service providers are adopting these technological advancements to serve efficiently. It has made customers try new things and be open to new experiments (Belk, 2014).

Listening to the voice of customers will make companies acquainted with the feelings, ideas, and thoughts of their customers. Nowadays, reasonable prices, customization, and better quality are not sufficing customer satisfaction (Zhang, 2019). The customers are constantly looking for new experiences and co-production in services (Hult et al., 2019). For making this technology successful with the majority of the population, the companies should educate, provide guidance and assistance to their customers (Khan, 2020) in every possible way. At this point, companies should be highly vigilant, because confusion & chaos might disappoint the customer and harm reconciliation.

The aim of the study is to focus on the factors which help the companies with customer reconciliation and how to better cater to the changing demands of today's generation. Subsequent research will broaden this vision, emphasizing that customer's voice & customer-centric strategies would promote customer satisfaction and for achieving customer reconciliation through untact technology, customer satisfaction is essential. For examining the variables under this study, a questionnaire was designed and the data for this research was collected from customers who have used CDM (Cash Deposit Machine) of Bank Alfalah. Particularly CDM has been chosen for this research, not something with digital technology, so even the population who does not have internet access was reached out and their responses were recorded.

Literature Review and Hypotheses Development

Untact Technology leading towards Customer Satisfaction

The word "Untact" was invented in South Korea, it is a portmanteau term, the prefix "un," has been added to the word "contact" which means no contact (Kim et al., 2018). Untact technology facilitates no face-to-face contact and the use of this technology is increasing day by day all around the globe (Kim et al., 2018). With the initiation of untact

technology, customers' needs and preferences are rapidly changing (QianTing et al., 2021). Now our everyday life is rotating around untact services, may it be shopping, ordering food, online classes, an online medical consultation, and even in the work pattern of people (Jeong et al., 2021; Moon et al., 2021). Once tourism and hospitality industry could not be imagined without human resources but now untact technology plays the maximum part (QianTing et al., 2021).

Untact technology has relieved company employees with a reduced workload since companies are introducing self-service, information kiosks, and do-it-yourself operations (Yang and Park, 2021). In this era, some customers are not inclined to engage in personal encounters, plus they have time limitations. So, to cater to them and certain types of companies, this technology is highly beneficial and effective (Lee and Lee, 2020). Therefore, the benefits of untact technology cannot be denied; it has benefited both customers and companies: immediate delivery without any hassle, customized services, and products according to customers' needs and desires, etc. Some people want to be entertained with variety while others chose this technology because it's flexible and up to date.

People have been highly influenced by untact technology but not every aspect of it is positive. Surely, this technology has made things convenient not only for the customers but for the service providers as well (Khan, 2020). This means no unnecessary talking, no sharing information with any individuals, skipping human error, no need to stand in a queue, can feel technologically secured, and this way we can also follow guidelines (Lee and Lee, 2020) regarding safety measures for COVID-19. Whereas some negative impacts might include; limited vacancy, cyber hacking, plus people who aren't savvy with technology can face some issues. Companies should work to deal with these negative aspects, thus reducing customer complaints and in the end achieving customer satisfaction.

The term untact technology was studied in Korea in 2018, for the first time (Kim et al., 2018). With the proliferation of customers who prefer no contact with staff and want to make quick decisions, untact technology is growing exponentially (Kim et al., 2018). Still some customers prefer representatives' interactions; therefore, the human staff is still required. This technology is enlightening people with knowledge, it is not just a platform to buy and sell stuff, people search and read through this technology, everything is available from Wikipedia to novels, photography of nature to historical places, every little information can be

searched through it (Zhang et al., 2019). Every type of business is promoted through this technology since it is convenient and has a very powerful impact (Hult et al., 2019). The positive experiences with untact technology lead to customer satisfaction.

H_{1a}: There is a significant relationship between (Usage of) Untact Technology and Customer Satisfaction.

The Mediating Role of Customer Satisfaction between Untact Technology and Customer Reconciliation

Reconciliation (in the case of a former customer) refers to the reconstruction of warm feelings and closeness (McCullough et al., 1997) and (in the case of a new customer) refers to increasing compatibility. Reconciliation can be achieved, only if customers are satisfied and for this very reason, every company ensures to develop the best image possible (Kuoppakangas et al., 2019). When it comes to service industries, customer satisfaction is a really hard thing, because there is no product to offer, the company only has its intangible characteristics so positive reviews and word-of-mouth have a great impact (Nikookar et al., 2015). Even with tangible aspects; the customer will be satisfied only if the received product or service meets their expectations and likewise dissatisfied if the product or service is below what they expected it to be (Yuksel, 2001). To come up with a product or service that the majority of the people appreciate is quite a difficult job, the probability that a company's idea will be successful in the market is one out of seven (Cooper, 2002).

A company should be aware of the level of satisfaction of its customers and it should be trying its best for customer reconciliation because this is where the company's profit lies. Principally, when dealing with services, service quality and customer satisfaction are very closely interlinked (Bolton and Drew, 1991). Any negative event with receiving the product or service will trigger negative emotions in the customers of that particular company and will break reconciliation (Salvatore & Shelton, 2007; Austin, 2021). Companies should embrace their mistakes and recover them in the quickest manner possible if they wish for customer reconciliation (Mattila, 2001; Chuang et al., 2012). Service recovery at an immediate basis might recover customer satisfaction, also the relation between the customer & the company and thus the reputability of the company remains unharmed (Javornik et al., 2020). Management should be investigating why the customer is complaining and at which step the service has gone wrong (Dash et al., 2021).

If there is a chance for customers to expect something unpleasant and the employees have an idea regarding that, they must inform and apologize to the customers. Creating a new customer is five times more difficult than reconciling with a former customer (Radu et al., 2019). Loyal customers help the company in selling their goods through positive reviews and word-of-mouth but for that, the company has to ensure customer satisfaction (Lee and Lee, 2020). For a larger percentage of satisfied untact customers, more focus on the value chain is required. Companies need to develop the value that the customer desires and yet have to offer something unique and different from the competitors because today's customers won't be taking any decision without comparing the services. Reconciling with customers in such competitive industries through untact technology is only possible when the needs and desires of the customers are satisfied (Bhattacharyya and Rahman, 2004).

H_{1b}: Customer Satisfaction mediates the relationship between (Usage of) Untact Technology and Customer Reconciliation.

The Moderating Role of Customer's Voice on the relationship of Untact Technology and Customer Satisfaction

To understand the needs and desires of customers, companies must have the magnitude to listen to the voice of their customers. Companies should consider the voice (i.e. opinions, suggestions, or complaints) of the customers and modify their services as per customers' preference (Zhang, 2019). Customer reviews are of big help to the companies in getting to know about their experiences and also their desires & demands (Fradkin et al., 2017). This process is trouble-free especially nowadays when companies can get the statistics through untact technologies (Mendes-Filho et al., 2018). Reviews help both potential customers and companies to get all kinds of information about the present-day customers. The products and services can be easily analyzed and then the companies can always improve (Jung and Suh, 2019). The companies have to involve the customers in the design phase and after-sale services, in order to serve them better (Naous & Legner, 2021). Customers should have a vote in developing new products & services and even if redesigning products & services.

No doubt customization will expand the customer's base but for that customers should be allowed to have a say, and for those who are unable to express themselves effectively, proper guidance shall be provided (Naous & Legner, 2021). Customer reviews are also termed user-generated content and this useful information serves as a great tool in

keeping with customer satisfaction (Javornik et al., 2020). For services nowadays, primarily talking about customization the customer himself/herself is the cocreator or coproducer because, without their collaboration, there is no happy customer; hence it is imperative for customer satisfaction and reconciliation (Bendapudi and Leone, 2003; Vargo & Lusch, 2008). We are not only witnessing a dramatic increase in the usage of untact services but also customers' expectations and desires. In this digital age, with several platforms, companies are expected to respond to the customer on every platform where the customer wants, in the quickest manner possible (Mei et al., 2019). Satisfaction can only be attained when the customer's voice is valued and all concerns are taken good care of.

H₂: Customer's Voice moderates the relationship between (Usage of) Untact Technology and Customer Satisfaction.

The Moderating Role of Customer-Centric Strategies on the relationship of Untact Technology and Customer Satisfaction

Customer-centric strategies refer to strategies taken for customers by companies, keeping the needs, wants, and preferences of customers at the center (Gronroos, 2000; Johnston and Mehra, 2002). A new find is that customer-centric strategies are in no way less important than the quality of products and services of the company (Homburg et al., 2000). In this competitive market, full of opportunities, customers compare the products and services of different companies (Gimpel et al., 2018) before they make a choice. That's where customer-centric strategies play a vital role because even quality products and services alone cannot guarantee customer satisfaction (Kreuzer et al., 2020). Higher the value of customer-centric strategies higher the level of customer satisfaction and loyalty which will derive customer reconciliation and eventually the company will get more business (Gronholdt et al., 2000; Semente et al., 2021).

Brand-centric companies do not have any special association with their customers; they only showcase what their brand can offer whereas customer-centric companies make the customers feel valued and customers' preference is always given priority (Chwialkowska, 2019). A product-centric company that does not take charge of its customer's needs and preferences, is likely to lose business (Schauman et al., 2021). People belonging to varied cultures, different backgrounds, and different mindsets cannot be satisfied (Recker and Mendling, 2016) through any global strategy. Different people require different strategies, to serve better; the companies should have a good understanding of their target customers

(Singh, 2021). Undeniably in many cases, the ambiance and the interaction with the customers are more valuable and important than the actual provided product or service (Rousseau et al., 2021). Customer-centric strategies should not be perceived as a cost but as an investment (Rosenbaum, 2015).

Companies shifting towards customer-centricity are enjoying an increasing percentage of satisfied customers (Frank et al., 2020). Companies are burdened to match up to their customer's expectations and to serve the purpose they have to keep improving their features and ways of interaction (Galbraith, 2011; Moormann & Palvolgyi, 2013). Involving the customers at every step or making them a co-creator is mostly the major part of customer-centric strategies (Rosemann, 2014; Trkman et al., 2015). In some cases, companies show that selling or promoting their products and services is not their prime interest but instead creating problem solutions for their customers. They convince customers in this way by presenting their products and services as problem solutions for present and future needs (Semente et al., 2021). Companies that are gaining new managerial insights and have shifted towards customer-centric are achieving customer satisfaction and more financial gain.

H₃: Customer-Centric Strategies moderates the relationship between (Usage of) Untact Technology and Customer Satisfaction.

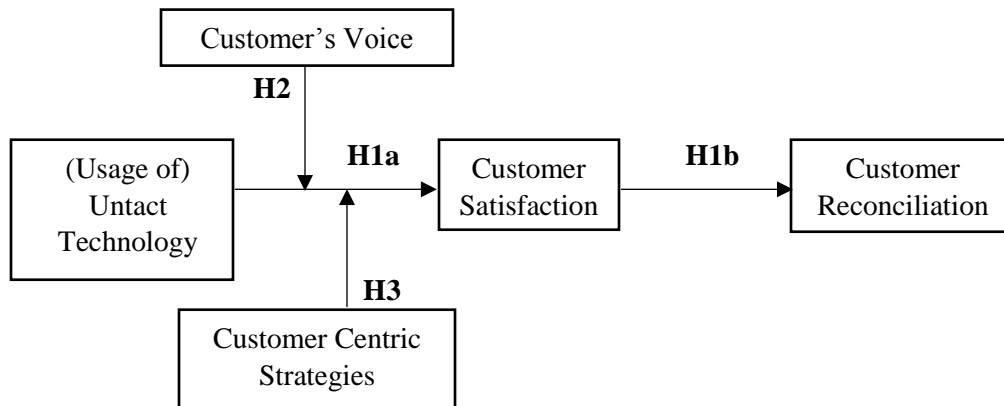


Figure 1.
Research Model

Methodology

Research Design

The data for this study is collected and coded in numeric form as it is suitable for testing causal relationships (Kuoppakangas et al., 2019) and factors that influence a particular outcome. Diffusion of Innovative theory is jointly used with Consumption Values theory for this research. Diffusion of innovative theory helped to seek how people accept technological innovation and what makes them cope (Jeong et al., 2021) with this technology spread. Consumption values theory focuses on decision making, it assists customers with what should they buy and why it is important (Moon et al., 2021).

For the predictive and analytical purpose of the study, a correlational investigation is best suited (Lee, 2018). The study is revolving around customers, the personality of every individual customer is different so the unit of analysis for this research is individuals and the entire data is obtained in natural settings, with the researcher's minimal interference. The data is collected once as it is sufficient for the study so a cross-sectional time horizon is used.

Research Sample and Sampling Technique

The primary data is collected from the users of CDM (Cash Deposit Machine) of Bank Alfalah. The sampling technique incorporated for the research is Convenience Sampling. The sample size is 330 as item response theory is being used and there are 22 items (22 response items x 15) (Nunnally, 1978). Mono method quantitative study is used for the research, only the technique of questionnaire is utilized for data collection. A self-administered questionnaire is designed, so the respondents can complete it on their own, it is a close-ended questionnaire just to measure the study variables. For data analysis: descriptive statistics using SPSS, reliability analysis using Cronbach alpha, correlational analysis, and regression analysis using Process Hayes is conducted. Other classic assumption tests are also performed in this research such as linear relationship test, normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test.

Measures and Scale Purification

The nature of every variable plays a crucial role, especially in the measurement phase (Cooper, 2002). Measurement techniques and scale is selected based on the nature and type of every variable. The measurement scales for variables used in this study are accurate, reliable, relevant, valid,

and consistent. Respondents are given the range of decisions to rate the given variable on a five-point Likert scale where they can demonstrate their level of agreement by consenting to any one alternative and most of them are anchored with 'strongly disagree' and 'strongly agree'.

Empirical Results

Quality of Research Design

To inspect the validity of items; we have used factor loadings and communalities through AMOS Version 23. Factor Loadings (also termed as Standardized Regression Weights) are the main output for PCA (principal components analysis). It describes the estimates of correlation and covariance between variables (Austin, 2021). The values presented have loadings greater than 0.5 which are acceptable. Communalities (also termed as Squared Multiple Correlations) describe the extent of variance (Javornik et al., 2020). All items have communalities greater than 0.4 which are acceptable. The loadings and communalities of the first 2 items are very low but those items are only measuring the duration and frequency of one operating CDM. Therefore, the factor analysis of UT1 and UT2 is not similar to other items and is pretty low. The total variance explained by the variables is also mentioned.

Table 1

Factor Analysis and Total Variance

Items	Factor Loadings	Communalities	Total Variance
UT1	.141	.020	11.612
UT2	.075	.006	1.789
UT3	.846	.716	1.305
UT4	.829	.687	1.111
UT5	.693	.481	.928
UT6	.734	.539	.579
CV1	.876	.767	.564
CV2	.836	.699	.512
CV3	.787	.619	.431
CV4	.798	.637	.374
CCS1	.725	.526	.357
CCS2	.830	.689	.334
CCS3	.781	.610	.316
CCS4	.766	.587	.294
CS1	.874	.765	.252
CS2	.888	.789	.241

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CS3	.843	.711	.209
CS4	.849	.720	.190
CR1	.801	.642	.178
CR2	.850	.722	.160
CR3	.870	.757	1.55
CR4	.795	.632	.109

Source: Data has been extracted from AMOS 23

Table 2
Confirmatory Factor Analysis Model Fitness Comparisons

	Model	χ^2/df	TLI	CFI	RMSEA	SRMR	SRMRw	SRMRb
Alternative Measurement Models	One Factor	3.167	0.719	0.721	0.024	0.078		
	Two Factor	3.218	0.848	0.790	0.192	0.032		
	Three Factor	0.278	0.890	0.816	0.213	0.039		
	Four Factor	1.653	0.917	0.901	0.081		0.002	0.139
	Five Factor	0.735	0.938	0.957	0.035		0.001	0.243

Notes: χ^2 = Chi-square; df= Degrees of Freedom; TLI= Tucker-Lewis Coefficient; CFI= Comparative Fit Index; RMSEA= Root Mean Square Error of Approximation; SRMRw= Standardized Root Mean Square Residual Within; SRMRb= Standardized Root Mean Square Residual Between

Model fitness is validated using confirmatory factor analysis (CFA). To assess the comparative fitness of hypothesized model Root, Mean Square Error Approximation (RMSEA) along with Comparative Fit Index (CFI) and Tucker Lewis Index (TLI) is used. The acceptable limit for these indices is ≤ 0.08 for RMSEA and SRMR within and between > 0.90 for TLI and CF and < 2 for Chi-Square/Degrees of Freedom (Xia & Yang, 2019). Accordingly, the proposed (five factor model) exhibits superior fit indices over alternative models.

Table 3
Composite Reliability & Scale Validity

	CR	AVE	MSV
Untact Technology	0.692	0.719	0.606
Customer Voice	0.691	0.813	0.754
Customer-Centric strategies	0.783	0.884	0.722
Customer Satisfaction	0.805	0.890	0.824

Customer Reconciliation	0.913	0.814	0.786
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Notes: CR= Composite Reliability; AVE= Average Variance Extracted; MSV= Maximum Shared Variance

The composite reliability values (CR) of all study variables fall above the minimum threshold value of 0.06 validating indicators from the same construct that substantiated convergent validity. Furthermore, the maximum shared variance (MSV) for all variable also fall less than the average variance extracted (AVE) that validated the discriminant validity.

Table 4

KMO and Bartlett's Test

KMO Test	Bartlett's Test	Chi-Square	Df
.949	.000	5920.570	231

Source: Data has been extracted from AMOS 23

The value for the KMO test describes the variance in the data set, a value greater than 0.5 is acceptable. The Bartlett's Test also has a significant value, proving the model is a good fit. All these tests prove the quality of Research design with reliable and valid items.

Sample Profile

The characteristics of the sample can be seen through this demography, where 330 respondents were involved.

Table 5

Demographics of the Sample

Variables	Category	Freq.	% age
Education	Matric	62	18.8
	Intermediate	39	11.8
	Diploma	26	7.9
	Bachelors	138	41.8
	MPhil/Masters	61	18.5
	PhD	4	1.2
Age	Below 25	24	7.3
	26-35	168	50.9
	36-45	112	33.9
	45-55	16	4.8
	Above 56	10	3.0

Monthly Income	Below 50,000	44	13.3
	50,000-100,000	148	44.8
	100,000-150,000	72	21.8
	150,000-200,000	31	9.4
	Above 200,000	35	10.6
Gender	Male	228	69.1
	Female	95	28.8
	Other	7	2.1

Source: Data has been extracted from SPSS 21

Description of Study Variables and Correlation Matrix

The analysis of descriptive statistics helps in organizing and summarizing the data, it also provides the mean and standard deviation of all the variables. As a rule of thumb, Standard Deviation greater than or equal to 1 is considered high variation and less than 1 indicates low variation, while Mean is the average of your data set. To check the reliability of the questionnaire Cronbach’s Alpha is used; all the values are greater than 0.7 which means the item scale is acceptable, valid, and reliable. Correlation Analysis determines the association and magnitude of two variables, it is said to be weak if the value is between 0-0.29, moderate if the value is between 0.3-0.69, strong if the value is between 0.7 to 0.99, perfectly positive if the value is +1, perfectly negative if the value is -1. Analysis shows that all the variables are significantly and positively correlated to each other.

Table 6
Descriptive Statistics and Correlation Matrix

Variables	Mean	SD	UT	CV	CCS	CS	CR
Untact Technology	3.9247	0.48218	1				
Customer’s Voice	3.5924	0.72421	.600**	1			
Customer-Centric Strategies	3.6788	0.67680	.552* *	.888**	1		
Customer Satisfaction	4.0258	0.74332	.637* *	.691**	.630* *	1	

Customer Reconciliation	4.2523	0.69832	.630*	.719**	.673*	.948**	1
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** Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis

For hypothesis testing of this study, model 9 from PROCESS Hayes has been chosen as it is best suited for moderated mediation. Model 9 is used for all 3 hypotheses, it includes tests of simple moderation, simple mediation, and mediation within moderation also.

Moderated Mediation

The results of the correlation coefficient: R shows that amount of association between untact technology, customer's voice, customer-centric strategies, both interaction effects & customer satisfaction is 76% and the coefficient of purpose: R-square shows 57% variation in customer satisfaction. The value of F is 86.93 and $p=0.00$, hence the model is a good fit.

Mediation Analysis

The results of the correlation coefficient: R shows that amount of association between untact technology, customer satisfaction & customer reconciliation is 95% and the coefficient of purpose: R-square shows 90% variation in customer reconciliation. The value of F is 1462.07 and $p=0.00$, hence the model is a good fit.

Table 7

Regression Analysis

Direct Effects of Variables Path	Coefficient	p-value	Indices of Partial Moderated Mediation			
			Index	Boot SE	Boot LLCI	Boot ULCI
UT → CS	0.60	0.02				
UT*CV → CS	-0.59	.000				
UT*CCS → CS	0.55	.001				
UT → CR	0.06	0.05				
CS → CR	0.86	.000				
CV			-0.51	0.18	-0.88	-0.18
CCS			0.48	0.19	0.14	0.86

Source: Data has been extracted from SPSS 21 and PROCESS Hayes

The bootstrapping results with samples 5000, given that zero value, is not included in the 95% confidence interval reveals partial moderated mediation for Customer Satisfaction. Hence, these results support all the hypotheses.

Discussion

The study aims to test proposed hypotheses drawn by a literature review to explain the relation between untact technology & customer reconciliation, through the mediating role of customer satisfaction and moderating role of customer's voice & customer-centric strategies. A good level of support is observed for all the hypotheses of this research.

The findings for hypothesis 1a (There is a significant relationship between (Usage of) Untact Technology and Customer Satisfaction) is supported, as $\beta = .60$, $p < 0.05$ and the value of LLCI (.10) and ULCI (1.09) are having the same signs. The findings for hypothesis 1b (Customer Satisfaction mediates the relationship between (Usage of) Untact Technology and Customer Reconciliation) is supported, there is a positive significant relationship between them, as $\beta = .86$, $p < 0.05$ and the value of LLCI (.82) and ULCI (.91) are having the same signs. Untact technology is the new trend and is focused in almost every industry for delivering services in a better (Zhang et al., 2019) and more convenient way. Companies have adopted this latest trend to satisfy the customers and to increase customer reconciliation (Dash et al., 2021).

The findings for hypothesis 2 (Customer's Voice moderates the relationship between (Usage of) Untact Technology and Customer Satisfaction) is supported, there is a significant relationship between them as $\beta = -0.59$, $p < 0.05$ and LLCI (-.90) and ULCI (-.27) have same signs. The interaction value of customer's voice and untact technology has a negative coefficient, which shows all customers are not being heard. Customer satisfaction is increased when the customers feel that they are heard and valued as an important asset (Fradkin et al., 2017) of the company. Untact technology motivates customer's voice and creates a platform for every customer to have a say about their opinions and preferences (Naous & Legner, 2021).

The findings for hypothesis 3 (Customer-Centric Strategies moderates the relationship between (Usage of) Untact Technology and Customer Satisfaction) is supported, there is a significant relationship between them as $\beta = 0.55$, $p < 0.05$ and LLCI (.21) and ULCI (.90) have same signs. A customer-centric company has more potential to satisfy the customers than a product-centric company (Crecelius et al., 2019).

Customer-centric strategies influence customer satisfaction since a customer tops the company’s priority list (Kreuzer et al., 2020).

Graphical moderation plotting of Untact Technology and Customer Satisfaction further clarify understanding of the moderating effects of Customer’s Voice and Customer-Centric Strategies. Even with low or moderate usage of untact technology, the moderators tend to increase customer satisfaction.

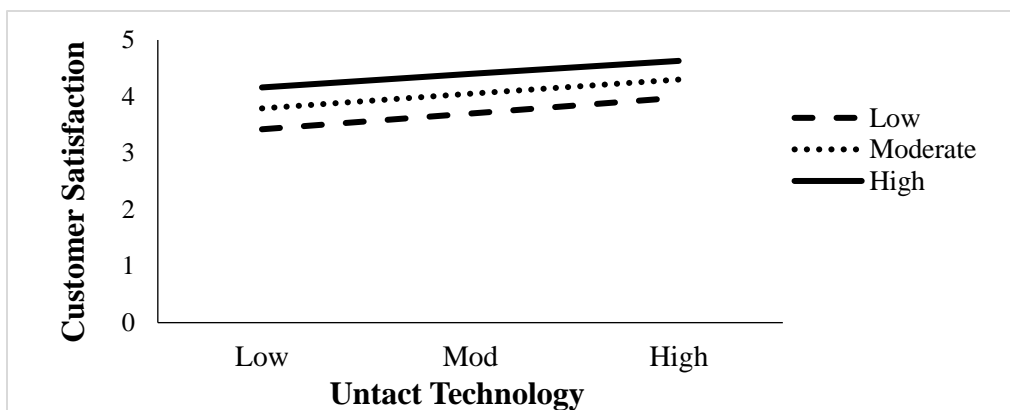


Figure 2. Moderation Graph of Customer’ Voice

Source: Data has been extracted from PROCESS Hayes Version 23

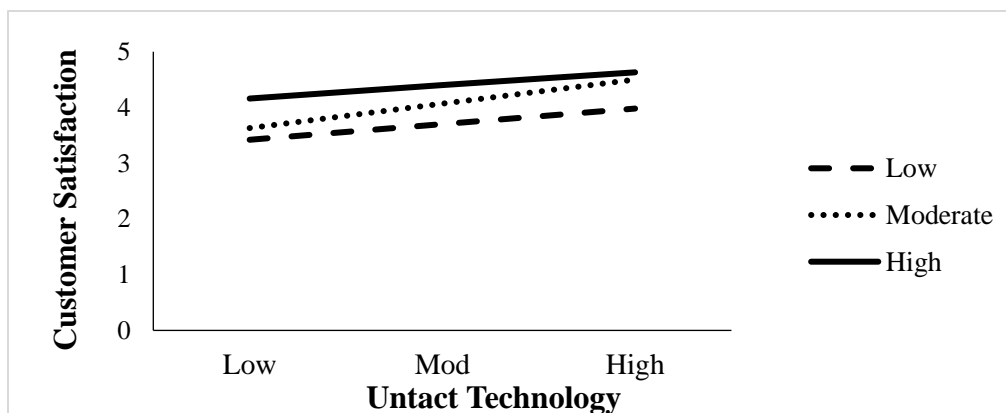


Figure 3. Moderation Graph of Customer-Centric Strategies

Source: Data has been extracted from PROCESS Hayes Version 23

Limitations and Future Research Directions

Although the study provides constructive research that drives customer reconciliation via untact technology; somehow this study has some limitations which creates room for further research:

Firstly, untact technology is a new concept & its theoretical foundation has yet to be developed. Another drawback is Data Limitation because the data was collected only from Bank Alfalah. Also, Area Restriction, since only four branches of Lahore were observed. Further research can review other branches or companies as well which may result in different findings and eventually different conclusions Furthermore, the Nature of the sample, the data was collected from customers only, without any input from the management side. In the future, the employees' and service providers' reviews might also be considered. Also, Time Period, approach for this study is cross-sectional. Later on, a longitudinal study might elaborate on the changing behavior of respondents. Another limitation, the Research Design, a quantitative methodology was used with close-ended questions, whereas detailed experiences of the respondents could also be recorded. Their complaints and suggestions could be of great help for the company particularly in designing strategies. Not considering the Potential Effect of Demographic Characteristics also limits the research. Future researchers could divide the sample into various groups regarding their age, qualification, income resources, etc.

Research Implications

Theoretical Implications

This study has many theoretical implications. First, consumer experiences, decisions, and reviews keep on changing, so the research is always compared with how the dimensions in an industry differently influence customer satisfaction (Yang and Park, 2021). Second, continuous research and feedback aid to select the most appropriate and best stage in the value creation process (Khan, 2020) where technology-based service encounters should be applied, to make the usage of untact technology as convenient as possible. Third, an important shift from ownership to access can be seen in consumer value, a significant future topic (Kim et al., 2018) that has contributed to several marketing disciplines, and made the stage of customer satisfaction achievable as well. Fourth, there is no universal strategy that can be implemented for all kinds of customers so, therefore a company has to adopt different sorts of strategies, this is where customer-centric strategies come in handy (Hult et al., 2019) for gaining customer satisfaction.

Managerial Implications

This study offers many important managerial implications for the service industries, technological-based services, customers benefiting from them, and how customer satisfaction & reconciliation can be increased. First, the companies should make a greater effort to popularize untact technology and should take all the necessary steps to serve the purpose. As now everyone is more dependent on machines, the companies should try to educate their customers regarding analyzing the features and details of the product or service before ordering (Dash et al., 2021) so that the technology is not to be blamed afterward. Second, the companies should ask for regular feedback from all their employees and customers, so no issue goes unreported. Furthermore, if any issue of inconvenience is addressed so necessary measures should be taken for working towards better-operating techniques (Dash et al., 2021) to achieve customer satisfaction. Customer encounters pre and post-sales, should be streamlined for better outcomes (Amar et al., 2019). Numerous companies are spending on a professional team to analyze the reviews and to handle the customers. Third, millions of voices cannot be heard, the whole population cannot be counted as savvy (Piris & Gay, 2021) when talking about technology. Companies should encourage such customers and assist them with untact technology.

The customers who are appreciative of this technology must also be entertained wisely ensuring a smooth experience with the respective websites and apps. However, in Pakistan, it is better if the company provides contact services as well because, at the end of the day, customer reconciliation is all that matters (Shafqat and Byun, 2020). Fourth, local routine routes should be targeted so that the company can reach out and make new followers by providing accessibility and comfort for attaining reconciliation with their valued customers (Khan, 2020). Fifth, it is a bright idea to involve customers' voices whenever redesigning a product or service is considered; this exercise will provide a guideline acknowledging customers' needs and desires, whether they are in favor of it, do they want any changes, and if yes, in which particular departments and what is the reason behind that (Afflerbach & Frank, 2016). Sixth, in this digital age where everyone is relying on technology and considers it safe, cyber scamming can't be ignored. The companies are responsible for making untact technology safe for their users, shielding them from hackers & cybersecurity, and to serve the purpose; companies are supposed to take all preventive measures (Lee et al., 2020).

Conclusion

The study has explained in determining the relation between untact technology & customer reconciliation along with the mediating role of customer satisfaction and the moderating role of customer's voice & customer-centric strategies. Hence, all hypotheses are proved, customer voice & customer-centric strategies influence customer satisfaction and customer satisfaction influences customer reconciliation in response to untact technology. Former researchers have not mainly focused on customers' voices and customer-centric strategies as moderators (Mei et al., 2019). It can be onerous for a company if it does not give due importance to customer's voice & customer-centric strategies. Due to the predisposition of customers towards usage and experience of untact technologies, this avenue can potentially serve as a novel canvas (Lee et al., 2020) for research in the specific field.

Until recently, limited study has been witnessed to analyze the impact of untact technology on customer reconciliation (Lee and Lee, 2020). Defining untact services in the past would be only telephones and call centers (Khan, 2020). The world's first digital kiosk was implanted in the year 2000, which is now rooted in various fields (Hult et al., 2019). This study contributes to the fact that the majority of the businesses can apply untact technology in their procedures but a proportion of it is not capable enough especially in third world countries. Thus it is concluded; some areas, people, and nature of the businesses are not suitable or yet not ready to accept this technology in Pakistan (Shafqat and Byun, 2020). Every other business cannot be entertained just through untact technology but with its support, many stages of that can be cleared perfectly and calmly (Lee, 2018).

References

- Abror, A., Patrisia, D., Engriani, Y., Evanita, S., Yasri, Y., & Dastgir, S. (2019). Service quality, religiosity, customer satisfaction, customer engagement, and Islamic bank's customer loyalty. *Journal of Islamic Marketing*.
- Afflerbach, P., Frank, L. (2016). Customer experience versus process efficiency: towards an analytical framework about ambidextrous BPM, Proceedings of the 37th International Conference on Information Systems (ICIS).
- Afrin, S. (2016). Measuring the level of customer satisfaction on ATM services of ADC center, The City Bank Limited.

- AlMohaimmeed, B. M. (2012). *Customer behavior towards Internet banking: A study of the dormant users of Saudi Arabia* (Doctoral dissertation, University of Birmingham).
- Amar J, Raabe J, Roggenhofer, S. (2019) Customer first: personalizing the customer-care journey. *McKinsey & Company, New York*.
- Austin, T. (2021). Fairness, Emotional Intelligence, and Ethical Decision-Making in Customer Evaluations of Providers.
- Aydın, D. (2014). *Customer perception towards the internet banking services performed by the Turkish banking system* (Doctoral dissertation, Eastern Mediterranean University (EMU)-Doğu Akdeniz Üniversitesi (DAÜ)).
- Belk, R. (2014). “You are what you can access: sharing and collaborative consumption online”, *Journal of Business Research*, Vol. 67(8), 1595-1600.
- Bendapudi, N., & Leone, R. P. (2003). Psychological implications of customer participation in co-production. *Journal of Marketing*, 67(1), 14-28.
- Bhattacharyya, S. K., & Rahman, Z. (2004). Capturing the customer’s voice, the centerpiece of strategy making: A case study in banking. *European business review*.
- Bolton, R.N., and Drew, J.H. (1991) “A longitudinal analysis of the impact of service changes on customer attitudes”, *Journal of Marketing*, Vol. 55, January, pp. 1-9.
- Chan, H., & Wan, L. C. (2008). Consumer responses to service failures: A resource preference model of cultural influences. *Journal of International Marketing*, 16(1), 72–97.
- Chuang, S.C., Cheng, Y.H., Chang, C.J., and Yang, S.W. (2012). “The Effect of Service Failure Types and Service Recovery on Customer Satisfaction: A Mental Accounting Perspective.” *The Service Industries Journal*, 32 (2), 257–271.
- Chwialkowska, A. (2019). The effectiveness of brand-and customer-centric content strategies at generating shares, ‘Likes’, and comments. *Journal of Promotion Management*, 25(2), 270-300.
- Cooper, R. G. (2002). *Top oder Flop in der Produktentwicklung: Erfolgsstrategien: von der Idee zum Launch*. Wiley-VCH.
- Crecelius, A. T., Lawrence, J. M., Lee, J. Y., Lam, S. K., & Scheer, L. K. (2019). Effects of channel members’ customer-centric structures on supplier performance. *Journal of the Academy of Marketing Science*, 47(1), 56-75.

- Dash, G., Kiefer, K., & Paul, J. (2021). Marketing-to-Millennials: Marketing 4.0, customer satisfaction and purchase intention. *Journal of Business Research*, 122, 608-620.
- Fradkin, A., Grewal, E., and Holtz, D. (2017). "The determinants of online review informativeness: evidence from field experiments on airbnb", *working paper, MIT*.
- Frank, L., Poll, R., Roeglinger, M., & Lea, R. (2020). Design heuristics for customer-centric business processes. *Business Process Management Journal*.
- Galbraith, J.R. (2011). *Designing the Customer-Centric Organization: A Guide to Strategy, Structure, and Process*, Jossey-Bass, San Francisco, Calif.
- Gimpel, H., Hosseini, S., Huber, R., Probst, L., Roglinger, M., Faisst, U. (2018). Structuring digital transformation: a framework of action fields and its application at ZEISS, *Journal of Information Technology Theory and Application*, Vol. 19 No. 1, pp. 31-54.
- Gronholdt, L., Martensen, A., Kristensen, K. (2000). The relationship between customer satisfaction and loyalty: cross-industry differences, *Total Qual. Manag.* 11, 509–514.
- Gronroos, C. (2000). *Service management and strategy: Marketing the moments of truth in service competition* (2nd ed.). Lexington, MA: Lexington Books.
- Homburg, C., Workman, J. P., & Jensen, O. (2000). Fundamental changes in marketing organization: the movement toward a customer-focused organizational structure. *Journal of the Academy of Marketing Science*, 28(4), 459–478.
- Hult, G. T. M., Sharma, P. N., Morgeson III, F. V., & Zhang, Y. (2019). Antecedents and consequences of customer satisfaction: do they differ across online and offline purchases?. *Journal of Retailing*, 95(1), 10-23.
- Javornik, A., Filieri, R., & Gumann, R. (2020). "Don't forget that others are watching, too!" the effect of the conversational human voice and reply length on observers' perceptions of complaint handling in social media. *Journal of Interactive Marketing*, 50, 100-119.
- Jeong, C. U., Moon, Y. J., & Hwang, Y. H. (2021). Analysis for Daily Food Delivery & Consumption Trends in the Post-Covid-19 Era through Big Data. *Journal of the Korea Society of Computer and Information*, 26(1), 231-238.
- Johnston, R., & Mehra, S. (2002). Best-practice complaint management. *Academy of Management Executive*, 16(4), 145–154.

- Jung, Y., & Suh, Y. (2019). Mining the voice of employees: A text mining approach to identifying and analyzing job satisfaction factors from online employee reviews. *Decision Support Systems*, 123, 113074.
- Kaplan J, Richter W, Ware, D. (2019). Cybersecurity: linkpin of the digital enterprise. McKinsey & Company, New York.
- Khan, M. A. (2020). Technological Disruptions in Restaurant Services: Impact of Innovations and Delivery Services. *Journal of Hospitality & Tourism Research*, 44(5), 715-732.
- Kim, R., Jeon, M., Lee, H., Choi, J., Lee, J., Kim, S., Lee, S., Seo, Y., Kwon, J. (2018). Trend Korea 2018. Miraebook Publishing Co., Seoul.
- Kreuzer, T., Röglinger, M., & Rupprecht, L. (2020). Customer-centric prioritization of process improvement projects. *Decision Support Systems*, 133, 113286.
- Kuoppakangas, P., Suomi, K., Clark, P., Chapleo, C., & Stenvall, J. (2019). Dilemmas in re-branding a university—“Maybe people just don’t like change”: Linking meaningfulness and mutuality into the reconciliation. *Corporate Reputation Review*, 1-14.
- Lee, D. (2018a). Strategies for technology-driven service encounters for patient experience satisfaction in hospitals. *Technological forecasting and social change* 137, 118–127.
- Lee, J. S., Lee, H. S., & Oh, J. C. (2020). Untact Mobile Order Payment System Using Short-Range Wireless Communication Technology. *The Journal of the Korea institute of electronic communication sciences*, 15(2), 231-236.
- Lee, S. M., & Lee, D. (2020). “Untact”: a new customer service strategy in the digital age. *Service Business*, 14(1), 1-22.
- Mattila, A. S. (2001). “The Impact of Relationship Type on Customer Loyalty in a Context of Service Failures.” *Journal of Service Research* 4(2): 91–101.
- McCullough, M. E., Worthington, E. L., Jr., & Rachal, K. C. (1997). Interpersonal forgiving in close relationships. *Journal of Personality and Social Psychology*, 73, 321–336.
- Mei, X. Y., Bagaas, I. K., & Relling, E. K. (2019). Customer complaint behavior (CCB) in the retail sector: why do customers voice their complaints on Facebook?. *The International Review of Retail, Distribution and Consumer Research*, 29(1), 63-78.
- Mendes-Filho, L., Mills, A.M., Tan, F.B., and Milne, S. (2018). “Empowering the traveler: an examination of the impact of user-

- generated content on travel planning”, *Journal of Travel & Tourism Marketing*, Vol. 35, No. 4, pp. 425-436.
- Min, H. K., & Kim, H. J. (2019). When service failure is interpreted as discrimination: Emotion, power, and voice. *International Journal of Hospitality Management*, 82, 59-67.
- Moon, J., Choe, Y., & Song, H. (2021). Determinants of Consumers’ Online/Offline Shopping Behaviours during the COVID-19 Pandemic. *International journal of environmental research and public health*, 18(4), 1593.
- Moormann, J., and Palvolgyi, E.Z. (2013). “Customer-centric business modeling: setting a research agenda”, *IEEE Conference on Business Informatics*, pp. 173-179.
- Naous, D., & Legner, C. (2021). A preference-based approach to incorporate the " voice of the customer" in mass-market software product design. *ACM SIGAPP Applied Computing Review*, 20(4), 35-49.
- Nikookar, G., Rahrov, E., Razi, S., & Ghassemi, R. A. (2015). Investigating influential factors on word of mouth in service industries: the case of Iran Airline company. *Procedia-Social and Behavioral Sciences*, 177, 217-222.
- Nunnally, J. (1978). *Psychometric methods*, 2nd.
- Piris, Y., & Gay, A. C. (2021). Customer satisfaction and natural language processing. *Journal of Business Research*, 124, 264-271.
- QianTing, L., Chung, H. C., & Chung, N. (2021). A Study on the Factors Affects the Technology Satisfaction on AI-Based Self-service Technology Service Failure in Hotel. In *Information and Communication Technologies in Tourism 2021* (pp. 123-127). Springer, Cham.
- Radu, A. G., Arli, D., Surachartkumtonkun, J., Weaven, S., & Wright, O. (2019). Empathy and apology: The effectiveness of recovery strategies. *Marketing Intelligence & Planning*.
- Radu, A., Surachartkumtonkun, J., Weaven, S., & Thaichon, P. (2020). Examining antecedents of reconciliation following service failure and recovery. *Journal of Strategic Marketing*, 28(5), 417-433.
- Recker, J., Mendling, J. (2016). The state of the art of business process management research as published in the BPM conference, *Bus. Inf. Syst. Eng.* 58(1), 55–72.
- Rita, P., Oliveira, T., & Farisa, A. (2019). The impact of e-service quality and customer satisfaction on customer behavior in online shopping. *Heliyon*, 5(10), e02690

- Rosemann, M. (2014), "Proposals for future BPM research directions", *Asia Pacific Business Process Management*, Springer International Publishing, Cham, pp. 1-15.
- Rosenbaum, S. (2015). The brave new world of customer service. *Forbes*, June 7.
- Rousseau, M., Medini, K., Romero, D., & Wuest, T. (2021). Configurators as a means to Leverage Customer-Centric Sustainable Systems-Evidence from the 3D-Printing Domain. *Procedia CIRP*, 96, 103-108.
- Salvatore, J., Shelton, J.N. (2007). Cognitive costs of exposure to racial prejudice. *Psychol. Sci.* 18 (9), 810–815.
- Schauman, S., Heinonen, K., & Holmlund, M. (2021). Crafting customer insight: What we can learn from the revival of the vinyl record. *Business Horizons*, 64(2), 261-271.
- Semente, E. M. M., Chufama, M., & Silva, J. (2021). Towards a Holistic Framework for Customer-Centric Service, Customer Satisfaction, Trust, and Loyalty: A Conceptual Study. *International Journal of Applied Management Sciences and Engineering (IJAMSE)*, 8(1), 72-88.
- Shafqat, W., & Byun, Y. C. (2020). Enabling "Untact" Culture via Online Product Recommendations: An Optimized Graph-CNN based Approach. *Applied Sciences*, 10(16), 5445.
- Singh, S. (2021). Valuing Wellbeing: A Step Closer to Optimum Customer Engagement. In *Insights, Innovation, and Analytics for Optimal Customer Engagement* (pp. 168-183). IGI Global.
- Trkman, P., Mertens, W., Viaene, S., and Gemmel, P. (2015). "From business process management to customer process management", *Business Process Management Journal*, Vol. 21 No. 2, pp. 250-266.
- Vargo, S. L., & Lusch, R. F. (2008). Service dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1), 1-10.
- Worthington, E. L., Jr., & Wade, N. G. (1999). The social psychology of unforgiveness and forgiveness and implications for clinical practice. *Journal of Social and Clinical Psychology*, 18, 385–418.
- Xia, Q., & Yang, J. J. (2019). Memristive crossbar arrays for brain-inspired computing. *Nature Materials*, 18(4), 309-323.
- Yang, J. P., & Park, S. B. (2021). The Influence of Personality Traits on Airline Untact Check-in: Focusing on Mobile Check-in User. *The Journal of Industrial Distribution & Business*, 12(1), 15-30.

- Yuksel, A., 2001. The expectancy-disconfirmation paradigm: a critique. *Journal of hospitality & tourism research*, 25(2), 107-131.
- Zhang, J., Zhang, J., & Zhang, M. (2019). From free to paid: Customer expertise and customer satisfaction on knowledge payment platforms. *Decision Support Systems*, 127, 113140.