Usage of Information Communication Technology and Its Effect on Customer Loyalty.
The Study Of Banking Industries In Jaffna Srilanka.
(A Comparative Study Of State Banks & Private Banks)

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Abstract
Purpose: To inspect the effect of information communication technology (ICT) on customer loyalty.
Design/methodology/approach: A questionnaire derived from previous studies and the relevant literature was completed by 200 customers of both state & private banks in Jaffna district, SriLanka. Correlation analysis assessed to find out the association between the level of information communication technology and customer loyalty. Usage of ICT has been measured with the help of operational cost reduction, time & speed, internal system efficiency, security & risk, working environment and communication &decision making. Apart from that customer loyalty has been evaluated with the help of switching cost, corporate image and trust. Regression analysis was carried out to examine the impact of the usage of ICT on customer loyalty. And also independent sample T-test and independent sample one way ANOVA were utilized to find out the significant mean different in customer loyalty among personal demographic variables.
Findings: information communication technology contributes significantly to customer loyalty and predicts 36.9 percent of the variation found. Operational cost, time & speed, internal system efficiency and communication & decision making in the information communication technology contribute significantly to customer loyalty compared with job and working environment. And also we can conclude that there is a significant mean different in customer loyalty among state banks and private banks. But there is no significant mean different in customer loyalty among different age groups. Overall association between information communication technology and customer loyalty is moderate positively correlated.
Research Limitations/Implications: This research focuses on banking services in one particular district of the country. Therefore further research in other sectors maybe necessary before generalization can be made on the entire service industry.
Practical implications: Based on the finding of the study, there are a few key points that can be used to conclude this research paper. It is very important that the information communication technology in banking service providers in Jaffna peninsula contributes to the customer loyalty. Mainly operational cost, time & speed, internal system efficiency and communication & decision making dimensions in the information communication technology contribute to the customer loyalty for acquiring new customers in the target market in the long period of time.
Originality/value: Reinforces and refines the body of knowledge relating to customer loyalty in service industries.
Keywords: Information Communication Technology, Customer Loyalty and Banking service providers.
Paper type: Research paper

1. Introduction

Information communication technology is a major competitive tool in business sector. Banking Sector is also no exception from this. All banks have realized that information communication technology is an important aspect in banking. Today, Information Communication Technology (ICT) plays a very important role in banking. The range of customer services provided by banks has increased as a result of improving Information communication technology. Banks now use ICT to transmit information, receive instructions and transact business. The quality, range and price of electronic services are an important part of any bank's competitiveness in the global market place of today's business environment. The impact of ICT on the banking industry is immense; banks rely on ICT for most of its operations and transactions. The way banks operate has been changed rapidly since the introduction of computer technology.

The banking industry is totally dependent on the use of ICT for its delivery of a cost effective service and therefore, ICT has become an integral part of every bank's business operations. The breakdown of the computer system, even for short period, is likely to prove enormously costly to any bank. Information Communication Technology has improved the speed and efficiency of banking operations particularly routine banking transactions and as a result has shaped the nature of the services provided to customers. The flexibility provided by ICT has help banks develop new products and improve the quality of current services offered to customers like as mobile cash.ICT provide the tangible and intangible benefits to banks cannot be over emphasized.

However, the investment in ICT is continuous and banks are concerned that customers may have tolerated the full or at least a sizable proportion of ICT cost. The rapid pace at which Information communication Technology is developing means that employees need to be constantly re-trained properly to meet this change; banks have to keep up with this pace to stay competitive in the banking industry.

ICT is one of the most important concepts in contemporary business world to survive in the market place. Because nowadays every marketers are facing lot of challenges due to technological competence, high competition, market fragmentation and market proliferation. So every organization is putting the customer first, anticipating needs and being nice to the customer. In today's fast paced and increasingly competitive market, the bottom line of a firm's marketing strategies and tactics is to make profits and contribute to the growth of the company. In particular personal are instrumental in so doing their needs to "care" for the customer. Customer satisfaction, relationship, customer loyalty and retention are global issues that affect all organizations be it large or small, profit or non profit, global or local. Many companies are interested in studying, evaluating and implementing marketing strategies. Those are aimed at improving information communication technology and maximizing share of customers in view of the beneficial effects on the financial performance of the firm.

2   Research Problem

In northern part of the SriLanka, especially in Jaffna district, after the thirty year ethnic war, banking service providers are highly penetrated to the market through the opening of branches in several places of Jaffna peninsula. Meanwhile, they are facing more difficulties such as high competiveness, high level preliminary expensive etc .they use different formation of strategies to compete in the highly competitive market. In case of private banks such as Commercial banks, Hatton National Bank and Sampath bank, Seylan bank, Pan Asia bank, Nations Trust Bank, Nation development bank and union bank have been using the ICT mostly for their activities compare than government banks. Government banks such as Bank of Ceylon, People's bank and National Saving bank are using IT less compare with private banks activities. In present situation in Jaffna district private banks are automated fully. But Government banks have not done fully automated their all branches yet. So the banks have to differentiate their services from other bank. Because of customers have different kind of attitude towards their banking services.

In Sri Lanka, generally all customers in any banks agree that the business and work environments need to be improved and change through ICT. The technological changes move much faster than human and organization are changing the power of hardware. Software has grown much more rapidly than the ability of organization to apply and use this technology. In many banks actually need to be use computers to simplify communication and coordination, eliminate unnecessary work and eliminate the inefficiencies of employees.

The research problem focused here is that the "Use of ICT in banks leads to change the customer loyalty level" use of ICT in banks is the one of the factor that could affect the level of loyalty among customers. So each and every bank tries to change the customer satisfaction through ICT for becoming loyal customers. An employee work with computer is assumed to be performed efficiency than the employees work without computer. This research also will aim to identify the change of customer loyalty level based on usage of ICT in banks.

RQ: What extent the ICT influences on customer loyalty in banking service providers in Jaffna district, SriLanka.

3.   Objectives

The main objectives of the study are to find out the impact of ICT on customer loyalty in banking service providers in Jaffna district, SriLanka and secondary objectives are:
- To identify the level of ICT in banking services in Jaffna.
- To recognizes the level of customer loyalty in banking services in Jaffna.
- To find out the relationship between ICT and customer loyalty.
- To find out the significant difference between personal characteristics on customer loyalty.
- To suggest the service providers to keep customer loyalty.

4.   Review of Literature
4.1. Information communication technology

A customer is one who patronizes a business, someone who gives his custom to store or business. A majority of organizations serve multiple types of customers. Among the major distinctions are internal and external customers. Internal customers are the recipients of products or services within an organization that play a role in creating the overall service experience. External customers are those outside the company to whom products and services are provided on behalf of the company (Beazley, Harden, Boenisch, 2002). We have also found it needful to offer some definitions below although they are not part of our key words.

(A) Usability/ Time & Speed
 Navigation, product information, and site design are critical to e-satisfaction (Szymanski & Hise 2000). Thus, a key to building a usable Website is to create good links and navigation mechanisms (Mannix 1999; Radosevich

1997). An advantage of the ICT is its capacity to support interactivity for users (Palmer 2002), and online consumers are influenced by the interactivity of the Website (Alba et al. 1997; Jarvenpaa & Todd 1997). Fast, interactive, uncluttered, and easy-to-navigate sites with quality searching capabilities should be perceived more favorably by consumers. The features evaluated within the attribute of usability and site design are: (1) providing a user-friendly interface, (2) an interactive site, and (3) possessing adequate searching capabilities.

(B) Product Value / Operational cost

Minimizing product cost and maximizing product quality are major factors in ICT success (Keeney 1999). Total cost includes product cost, taxes, shipping, Internet, processing cost, staff cost, maintenance cost and travel costs (Keeney 1999). Quality is an intrinsic property of a product. Product quality is the expected standard of product or service excellence (Jarvenpaa & Todd 1997). Brands and retailers that are well known and well regarded from the traditional channels may translate to quality on an online channel. The question becomes how consumers will assess product quality when they are unfamiliar with the retailer or the product brand (Jarvenpaa & Todd 1997). Kalakota and Whinston (1996) stress the need to provide independent evaluations of goods and services to convince consumers of the quality of the merchandise sold by the Internet merchant on the web. Thus, the end result for the consumer should be a feeling of gratification with the purchase once completed. Torkzadeh and Dhillon (2002) combine these two objectives (product cost and product quality) into an value of ICT measure (used in this study). The features of the product value attribute to be evaluated are: (1) post purchase feeling of customer gratification, (2) perceived product quality, and (3) overall product cost.

(C) Confidence / Security

Trust is defined as the dimension of a business relationship that determines the level to which each party feels they can rely on the integrity of the promise offered by other. The trust is identified as being an antecedent to commitment, being the motivation to stay within the relationship and an important element of relationship marketing (Ahasanul Haque and Ali Khatibi, 2007). Some authors suggest that for a customer to enter into a transaction's must feel confident that the merchant will deliver, making trust an order qualifier for purchase decisions. Online buyers have fewer security worries, appreciate the quickness and flexibility of online buying and see the web as making buying easier. Web sites must be made simple and easy to use, because non-users are not very confident that they can buy online successfully (Ahasanul Haque and Ali Khatibi, 2007).

(D) Communication and decision making

Communication & decision making is the users' ability to customize products according to personal preferences (Zhu & Kraemer 2002). For example, configuring a computer and related product features directly on a merchant's Website. Customization is one of the great advantages of online shopping (Van Slyke et al. 2004), allowing what some have termed a segment of one, where each customer is unique in his or her tastes, choices, and acquisitions. The features of the product customization attribute to be evaluated in this study are: (1) offering a customizable product, (2) offering online configuration capabilities, and (3) the number of options that are available for the product.

(E) Job and working environment

Expertise or product knowledge and expert in processing of the product is the understanding of the attributes in a product or service class and knowledge about how various alternatives stack up on these alternatives. Customers' expertise facilitates their learning of new and more complex types of information (Ahasanul Haque and Ali Khatibi, 2007). The two major components of customer expertise are expertise and familiarity. The customers who are more innovative and knowledgeable with regard to the internet and its uses are more likely to buy online from the computer industry in Malaysia than less innovative and knowledgeable customers (Ahasanul Haque and Ali Khatibi, 2007).

(F) Internal system efficiency

Commentary, that it is often repeated in terms of gaining benefits from the internet is in terms of marketing logistic, whereby online buyers gain temporal advantage by ordering online and delivered over internet (Adam Stewart, 2002). Electronic marketing broaden the marketing scope of internet users and allow buyers to make transaction online with the help of information communication technology. Some researchers, specifies that specific knowledge of the impact of attribute performance on loyalty is, therefore, a basic requirement (Adam Stewart, 2002).

4.2. Customer Loyalty

Loyalty is developed over a period of time from a consistent record of meeting, and sometimes even exceeding customer expectations (Teich, 1997). Kotler et al. (1999) states the cost of attracting a new customer may be five times the cost of keeping a current customer happy. Gremler & Brown (1996) offers one definition of customer loyalty that is related to our purpose in this study: the degree to which a customer exhibits repeat purchasing behavior from a service provider, possesses a positive attitudinal disposition toward the provider, and considers using only this provider when a need for this service exists.

According to Bloemer & Kasper (1995), loyalty is interpreted as true loyalty rather than repeat purchasing behavior, which is the actual re-buying of a brand, regardless of commitment. Zeithaml et al. (1996) states loyalty is a multi-dimensional construct and includes both positive and negative responses. However, a loyal

customer may not necessarily be a satisfied customer. Colgate et al. (1996) also noted that it is not always the case that customer defection is the inverse to loyalty, while Levesque and Mc Dougall (1993) suggested that, "even a problem is not solved, approximately half of the customers would remain with the firm". This may be due to switching costs, lack of perceived differentiation of alternatives, location constraints on choice, time or money constraints, habit or inertia which are not related to loyalty (Bitner, 1990; Ennew & Binks, 1996).

Customer loyalty is special kind of customer behavior towards the organization. It is kind of future prediction about the intentions of the customer to do business with the firm. (Zeithaml, Berry, &Parasuraman, 1996). It is the overall behavior of customer regarding product, service or any other aspect of the organization in which customer is involved makes the term customer loyalty. (Oliver, 1999). Loyalty is generally explained in terms of attitude and behavior. (Uncles et al., 2003). Customer brand loyalty is an old term playing vital role for many years. Loyalty is a marketing strategy used by majority of marketers to enhance the profit but some people think that it is very tough to make it possible. Consumer faith can be recognized if marketers try to understand the facts which affect the loyalty.

This will also benefit in building the customer reliability. (Mao, 2010). It was observed that customer's services play an important role in increasing the customer loyalty and customers highly consider the price of these services. (Haroon, 2010). Customers loyalty based behaviours are dependent on numerous factors. If firms want to optimize the loyalty behaviors of customer, they must balance and manage different aspects of customer experience. (Prof.Gopalkrishnan et al., 2011).

(A) **Switching Cost**: Switching cost is defined as the cost that incurs when a consumer change one service provider to another service provider (Porter, 1998). According to Jackson (1985), it is the sum of economic, psychological and physical costs. Switching cost can be considered as sunk cost that appears when customer changes his/her brand. Examples are the costs of closing an account with one bank and opening another with a competitor, the costs of changing one's long-distance telephone service or the costs of changing one's GSM service provider. It can happen for the lack of loyalty when a firm fails to satisfy and anticipate its customer's expectations and perceptions. Switching cost is also defined as the investment of time, money and effort that, in customers' perception, made it difficult to switch (Gremler and Brown, 1996). In other words, it is the customer's estimate of the personal loss or sacrifice in time, effort and money associated with the customer changing to another service provider (Hellier, Rickard, Carr, and Geursen, 2002).

(B) **Corporate image**: First of all, image is defined as the perceptions of an organization reflected in the associations held in consumer memory (Keller, 1993). In the service marketing literature it is considered as an important factor in the overall evaluation of the service and the company (Bitner, 1991; Grönroos, 1984; Gummesson and Grönroos, 1988). And Bitner (1990) proposes corporate image as an important factor in the overall evaluation of a firm and is argued to be what comes to the mind of a customer when they hear the name of a firm (Nguyen, 2006). In another case, corporate image is described as the overall impression made on the minds of the public about a firm (Barich & Kotler, 1991). A firm has to devise strategies to get into customer mind. In other words, a company has to anticipate the customer's cognition in various certain ways to get its corporate image. Which is the result of a process (MacInnis & Price, 1987). The process stems from ideas, feelings and consumption experiences with a firm that are retrieved from memory and transformed into mental images (Yuille & Catchpole, 1977). Even though customers have no information about the firm but they can get information from another sources like the word of mouth, advertisements etc. which will influence the process of forming a corporate image. Fishbein and Ajzen (1975) argue that attitudes are functionally related to behavioral intentions, which predict behavior. Therefore, corporate image as an attitude must be related with the consumer behavior. Every customer has unique perceptions and expectations not only about the firm but also about the service quality provided by the firms and customer's perceptions about this service quality directly affect the perception of corporate image.

Corporate image can be treated as an outcome forms an accumulated attitude that is derived from experience and/or direct or indirect market communication (Andreassen & Lindestad, 1998). If the ICT perceived by the customers as positive or negative, it then directly affects its corporate image (Keller, 1993).

(C) **Trust**: The concept trust has a wide range of use in many areas and has various definitions (Lewicki et al., 1998). Trust has an impact on the vulnerability of the trustor (Bigley and Pearce, 1998; Singh and Sirdeshmukh, 2000), because trust becomes irrelevant if there is no vulnerability of the trustor upon the trustee. In business studies, trust has been found to be important for building and maintaining long-term relationships (Geyskens et al., 1996; Rousseau et al., 1998; Singh & Sirdeshmukh, 2000). Lewis and Weigert (1985) argue that trust is not mere predictability but confidence in the face of risk. Trust not only can predict the quality of the service or talk about the other important features associated with service but it also can negate the uncertainty involved in purchasing certain service or product. So trust can build confidence among the consumers. While there have been numerous conceptualizations of

trust in the marketing literature, one of the more popular is that offered by Morgan and Hunt (1994, p. 23): trust exists "when one party has confidence in an exchange partner's reliability and integrity". Similarly, Moorman et al. (1993, p. 82) define trust as "a willingness to rely on an exchange partner in whom one has confidence".

4.3 ICT and Customer Loyalty in banking service sector.

A number of empirical studies have provided evidence on the impact of ICT on behavioral loyalty which affects customer retention (Bolton, et al., 2000; De Wulf et al., 2001; Verhoef, 2003). Loyal customer relationships have been found to increase profitability for a firm over time (Reichheld, 2001; Mishra & Li, 2008). Some scholars have highlighted the importance of ICT for firms to compete effectively (Perrien, Filiatrault, and Richard, 1992). Sin and colleagues (2005) find that ICT yields a significant impact on the determination of the firms' performance. Successful ICT improve customer loyalty and firm performance through stronger relational bonds (e.g., De Wulf, Odekerken-Schröder, and Iacobucci, 2001; Sirdeshmukh, Singh, and Sabol, 2002). ICT represents a strategic response by firms to gain competitive advantage (Takala and Uusitalo, 1996). This response is based on the theory that appreciation of the interdependence of market players, and mutual effort based on trust and corporate image , would allow firms to remain competitive (Veloutsou et al., 2002). In an ever expanding and rapidly changing environment, companies cannot maintain attitudes characterized by attracting customers or expanding in new markets. The key success factor to survive in mature markets relies on sustaining long-term relationships with stakeholders (De madariaga and Valor, 2007). ICT has been found to be successful at building trust and corporate image with external stakeholders to create those loyal customer relationships (Morgan & Hunt, 1994). Several studies in the past decade have indicated that ICT has a positive impact on firms' business performance. For example, Smith (1991) studies direct marketing in the insurance sector and finds that relationship marketing helps maximize long-term profitability. it help to escalate the customer base - Using firms in China, Sin and colleagues (2005) develop and validate a scale made up of six subscales- operational cost, time speed, internal system efficiency, security, job & working environment and decision making and find that ICT yields a significant impact on the determination of the firms' performance." Sin et al. (2005) suggest that the benefits of relationship marketing are many (Arnett and Badrinarayanan, 2005), including improvements in competitive advantages in the marketplace (Barclay and Smith 1997; Day 2000; Hunt 1997), superior financial performance (Boles et al., 2000; Kalwani and Narayandas, 1995; Walter and Gemuenden, 2000), and increased levels of customer satisfaction (Abdul-Muhmin, 2002)**.** But in most cases in both developed and developing countries ICT in banking service sector is positively related to the customer loyalty. In SriLanka, service sector is considered as main recipient in recent economic downturn. Better formation of strategies in service sector is the needed one especially in the recent information technology era. As a result of the continuing movement towards deregulation and the associated increase in competition, Maintaining a long term customer relationship leads to get a moderate or greater share of market and of a corporation's business (Abeysekera et al., 2010). In an Iran context, Taleghani et al. (2011 a) suggested that banking service providers should be trustworthy and committed to the service ethic, should communicate timely and accurately, and must resolve conflicts in a manner that will eliminate unnecessary loss and inconvenience to customers. However, much of the work and understanding of the knowledge of ICT to date focuses on the Western perspective, and hardly any work has been done in the Asian context (Nguyen, 2006).And also there are possible influences of personal demographical factors on ICT dimensions and customer loyalty. Studies have suggested that Women tended to be more loyal than Men; older people have more level of loyalty than younger age groups. Moreover, higher – income customers to receive better attention from banking service providers in Malaysia (Ndubisi, 2005). Therefore, it is important, to empirically examine the actual impact of ICT on customer loyalty. Such understanding or finding will help to banking service providers in Jaffna peninsula, SriLanka, to establish the better management of ICT for escalating their business activities and also creating the loyal customers.

5. Conceptualization

Based on the research question, the following conceptual model has been constructed. This model of ICT in banking service organization introduces new constructs and uniquely combines them in specifying that the customer loyalty is a function of operational cost reduction, time & speed, internal system efficiency, security & risk, working environment and communication &decision making in the ICT. In which, personal demographical factors are used as a moderating variable.
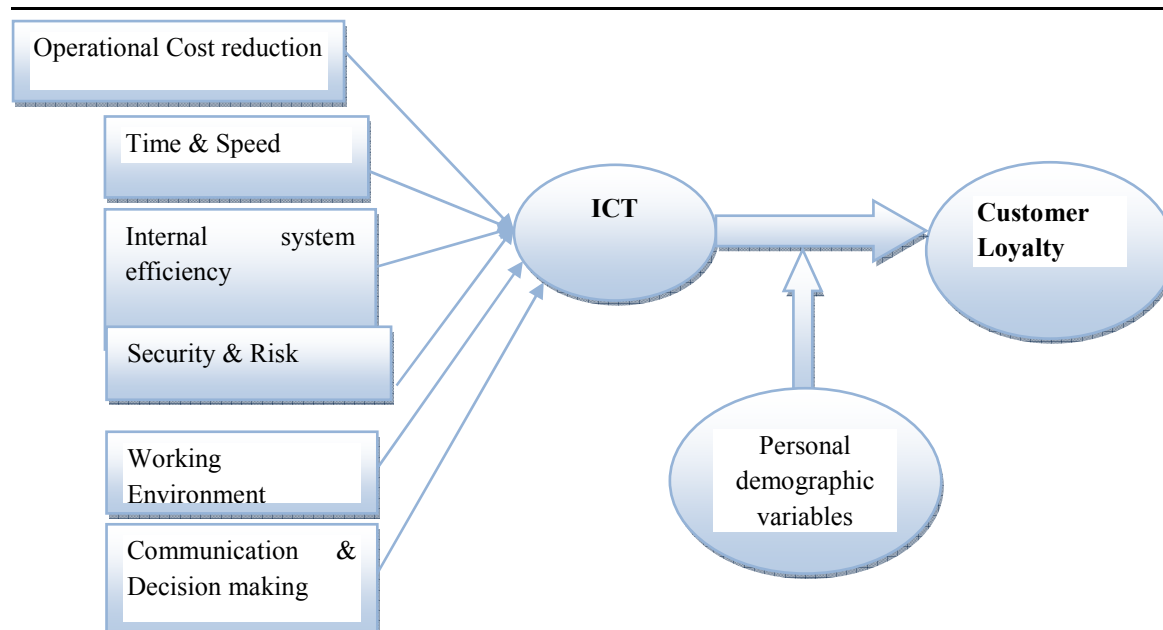
FIGURE NO 01: Conceptualization model.

6. Hypotheses of the study

The following hypotheses are formulated for the study.

H1: There is a positive relationship between ICT and customer loyalty.

H2: There is an impact of ICT on customer loyalty.

H3: There is a significant mean difference in the level of customer loyalty across the state Banks and Private Banks.

H4: There is no significant mean difference of customer loyalty across the three levels of Age group.

7. Methodology

7.1 Data Collection

Primary and secondary data are used for this study. Primary data are collected through the questionnaire, and secondary data are collected from texts, journals and magazines.

7.2 Sample

A survey instrument in the form of close-ended questionnaire was developed for the purpose of collecting the main data for the study. This study was conducted in banking service providers in Jaffna peninsula. Factors such as precision, confidence, time and cost constraints were taken into consideration in selecting sample size.

TABLE NO 01: Number of Respondents by Personal Characteristics

Characteristics		Frequency	Percentage
Age group	18-30	67	33.5%
	31-45	89	44.5%
	46-60	44	22%
Gender	Male	115	57.5%
	Female	85	42.5%
Occupation	Students	62	31%
	Non government staff	84	42%
	Government staff	54	27%
Service Organization	State bank	100	50%
	Private bank	100	50%

The study is limited to customers of banking service providers in Jaffna peninsula. Convenience sampling method has been adopted to select respondents. Researchers issued two hundred and twenty (220) questionnaires to the selected customers and out of which hundred (200) only returned with their responses. The above table gives details about the distribution of questionnaires.

7.3. Instrument development

The instrument used in this study is composed of 3 parts .The part 1 includes a number of demographic questions such as age, gender, occupation. The second part deals with ICT in the banking service sector. This is measured

by six dimensions from (Szymanski & Hise 2000), namely (1) Operational Cost (2) Time & Speed (3) Internal system efficiency (4) Security & Risk (5) Working Environment and (6) Communication & Decision making which comprised eighteen items. Part 3 includes customer loyalty in banking service. This is measured by using three dimensions from Prof.Gopalkrishnan et al., 2011 and Zeithaml namely (1) Trust (2) Switching cost and (3) Corporate image which comprised twelve items. All items were measured by responses on a five-point Likert scale of agreement with statements, ranging from 1 = strongly disagree to 5 = strongly agree.

7.4 Data analysis method

Various statistical methods have been employed to compare the data collected from 200 respondents .these methods include (1) descriptive statistics which involves in collecting, summarizing and presenting data .this analysis is given information for the data through the frequency distribution, central tendency, and the dispersion. (2) Inferential statistics which involves in drawing conclusions about a population based only on sample data. It includes single linear regression analysis, independent sample one-way ANOVAs (f-test), independent sample t-test (t-test). Single linear regression analysis is used to find out the significant impact of ICT on customer loyalty. And t-test and f-test are used to identify the significant mean different between the levels of customer loyalty across the personal demographic factors.

8.   Results and Analysis

8.1. Reliability

The internal consistency of the research instrument should be tested by reliability analysis (Ndubisi, 2006). Nunnally (as cited in Ahsan et al., 2009) suggested that the minimum alpha of 0.6 sufficed for early stage of research. The cronbach's alpha in this study were all much higher than 0.6, the constructs were therefore deemed to have adequate reliability. The descriptive statistics of the variables and reliability estimates are shown in table No 02.

TABLE NO 02: Descriptive statistics and reliability estimates

Dimension	Mean	Standard deviation	Cronbach's alpha value
Operational cost reduction	4.0533	0.43499	0.715
Time and Speed	4.0500	0.46754	0.725
Internal System Efficiency	4.0033	0.43441	0.631
Security and Risk	3.9250	0.44763	0.526
Working Environment	4.0033	0.45940	0.652
Communication and Decision making	4.2500	0.48362	0.575
Customer Loyalty	4.2350	0.47253	0.731

8.2   Correlation analysis

From this analysis we can summarize that, the ICT of banking organization has significant influence on customer loyalty regarding their services. Because the coefficient of correlation is 0.610 at 0.01 significant level which is nears the strong relationship.

8.3   Regression analysis

The purpose of regression analysis is to find out the significant impact or influence of independent variable on dependent variable (Ndubisi, 2006).In this study, ICT is considered as independent variable or predictor variable, and the customer loyalty is considered as dependent variable. Table No 03 presents the results of the regression analysis.

TABLE NO 03: Single linear regression analysis

Multiple R	R Square	Adjusted R Square	Standard Error	Beta (β)	t	Sig.F
0.650	0.372	0.369	0.24915	0.643	7.111	0.000

NOTE: Significant at 0.05 levels.

The results of the regression analysis summarized in table no 03 show that ICT contributes significantly to customer satisfaction predicts 36.9 percent of the variation found. Therefore every service organizations more concentrate on better ICT practices for keeping their existing customers as well as attracting new one.

8.4   Independent samples t-test.

In this study, t-test is utilized to find out the significant mean different in customer loyalty between state banks and private banks. Table no 04show the results of t-test.

TABLE NO 04: Results of T-test

Independent sample T - test

		Levene's Test for Equality of Variances		T-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed	Mean Differenc	Std. Error Difference		Lower	Upper
CUSTOMER Loyalty	Equal variances Assumed	9.3	0.003	-5.424	198	0.000	0.22500	0.04148		0.030681	0.14319
	Equal variances Not assumed			-5.424	177.849	0.000	0.22500	0.04148		0.30686	0.04314

Group Statistics

Classification of bank		N	Mean	Std. Deviation	Std. Error Mean
Loyalty	State bank	100	3.8017	0.033913	.3391
	Private bank	100	4.0267	0.23892	.2389

According to the above group statistics, the mean customer loyalty score were 3.8017 (SD = 0.033913) for state bank services and 4.0267 (SD = 0.23892) for private bank services. The customer loyalty scores of state banks and private banks were compared using an independent sample t-test. The results shows that there was a significant different between the customer loyalty of state bank and private bank services in banking industry. Because the significance value is less than 0.05 (Sig = 0.003).Therefore we can conclude that private bank customers have higher level of customer loyalty rather than state bank customers' level of customer loyalty towards their business.

8.5   Independent sample one –way ANOVA test.

One- way ANOVA test can be used to find out the significant mean different in customer loyalty among different age groups. Generally it is used when a researcher has one independent and one continues dependent variable and the independent variable specifies three or more groups for an example, age group at 18-30, 31-45 and 46-60). It was used to find out whether there is any significant mean difference of customer loyalty across the three level of age group.

TABLE NO 05 – Results of ANOVA

Descriptive

CUSTOMER Loyalty

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
18-30	67	3.8413	.37441	.05777	3.7246	3.9579	2.50	4.58
31-45	89	3.9685	.25181	.04140	3.8845	4.0524	3.42	4.83
46-60	44	3.9643	.26163	.05709	3.8452	4.0834	3.50	4.33
Total	200	3.9142	.31437	.03144	3.8518	3.9765	2.50	4.83

Test of Homogeneity of Variances

Customer Loyalty

Levene Statistic	df1	df2	Sig.
3.028	2	97	.043

ANOVA

Customer Loyalty

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.385	2	.193	1.987	.143
Within Groups	9.399	97	.097		
Total	9.784	99			

The above descriptive statistics represent that the mean customer loyalty score were 3.8413 (SD = 0.37441) for 18-30 age group, 3.9685 (SD = 0.25181) for 31-45 age group and 3.9643 (SD = 0.26163) for 46-60 age group. The customer loyalty scores of three level of age group were compared using an independent sample one way ANOVA. The results shows that there is a significant different between the customer loyalty of three level of age group. Because the significance value is less than 0.05 (Sig = 0.043).Therefore we can conclude that 31-45 age group people are having higher level of customer loyalty regarding their usage of banking services from both state bank and private bank rather than other age groups.

8.6 Hypotheses testing

NO	Hypotheses	Results	Tools
H1	There is a positive relationship between ICT and customer loyalty.	Accepted	Correlation
H2	There is an impact of ICT on customer loyalty.	Accepted	Regression
H3	There is a significant mean difference in the level of customer loyalty across the state bank services and private bank services.	Accepted	T - test
H4	There is no significant mean difference of customer loyalty across the three levels of age group.	Rejected	ANOVA

9. Conclusion and Recommendation

Based on the finding of the study, there are a few key points that can be used to conclude this research paper. It is very important that the ICT in the banking service providers in Jaffna peninsula contributes to the customer loyalty. Mainly operational cost reduction, time & speed, internal system efficiency and communication & decision making in the ICT contribute to the customer loyalty. Therefore the every banking service providers should strive to reduce their operational cost as well as operational lapses for creating trust by giving and keeping promises, showing concern for the security of customer transactions, providing quality services, showing respect for customers, fulfilling obligations to customers, and striving always to enhance customers' confidence. Furthermore, Effective communication predisposes customers to stay with a provider of banking services. Loyalty can also be nurtured by providing timely and reliable information. In contrast, customer loyalty is not significantly contributed by the job and working environment in the ICT in this study. But this dimension is important predictor variables to predict the customer loyalty (Ndubisi, 2006; Taleghani et al., 2011).At the same time mean value of this dimension is in a low level compare with the mean value of other dimensions in this study.

Therefore, the service providers should have proper strategy to improve their ICT knowledge by trying to avoid potential conflict, trying to solve manifest conflicts before they create problems and holding the ability to openly discuss solutions when problems arise. Furthermore, the security and risk is another critical factor to build the customer loyalty. So that service providers should concentrate on security through offering the personalized and flexible services. Lastly, in the moderating effect of personal demographic variables, service providers should concern the age wise segmentation. Persons who are 18-30 years old have lowest level of customer loyalty. Lot of expectations in the banking service technological aspects might be the reason for the least level of satisfaction among customers who are 18-30 years old. Therefore the service providers should provide innovative and enthusiastic services to especially the persons who are 18-30 years old. In today's technologically advanced world and due to arrival of internet, it's much more difficult to retain a Customer. Several strategies have been attempted to retain customers (Afsar et al., 2010).Nguyen, (2006) recommended the strategies to develop the capability of ICT in the banking service sector especially in the Asian context.

1. Strategy development: It is imperative to develop an overall approach to managing customers. There is a need to link back to the overall corporate and marketing strategy of the company.

2. Customer information strategy (CRM): There is a need for detailed data identification, collection, analysis and interpretation of customer information to enable the detailed strategy to be implemented with confidence in the banking service sector.

3. Reduce the customer list: There is a need to differentiate customers by value which will allow a firm to priorities its marketing efforts, allocating more resources to high value customers, while minimizing the resources applied to low value customers.

4. Planning and internal marketing: There is a need to draw together all the analyses of the different departments to produce a case for changing the way to manage customers plus the associated investment and profit implications, and developing a project plan to manage and monitor.

5. Technology: it can be used to speed up the routine aspects of business, freeing up people for more complex issues and increasing their job satisfaction. Consumers are happy because of the increased speed of response and the capability to access information as required.

10   Limitation and future research

This research focuses on banking services in one particular district of the country; therefore further research in other sectors may be necessary before generalization can be made on the entire service industry. For the purpose of practicability and manageability, Convenience sampling method has been adopted to select respondents. Factors such as precision, confidence, time and cost constraints were taken into consideration in selecting sample size. Furthermore, this research mainly conducted based on the data collection, through the questionnaire. The other data collection methods had not been considered.

As a result they may not be 100% accurate. In this study, ICT contributes significantly to customer loyalty and predicts 36.9 percent of the variation found. Remaining 63.1 percent of the variation should be found. Due to that, an important future research direction is to find out the key factors to determine the ICT in the banking sector in Jaffna peninsula through the factor analysis. Furthermore, ICT research may include other less widely acknowledged ICT variables, for example, online customer satisfaction, customer expertise and familiarity, product customization and confidence level. Impact of the ICT underpinnings can be investigated on other dependent variables such as customer satisfaction, customer retention, customer life time value and profitability.

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