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Analysis of Indices of Quality of Relationships (Trust, Commitment, and Satisfaction) on Customers' Loyalty in Pishraft Darman Company

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Abstract: The current research aims to analyze effect of indices of quality of relationships on customers' loyalty in Pishraft Darman Company. The statistical population of this study includes all customers in Pishraft Darman Company in 2017 and 150 customers were chosen as statistical sample using unlimited population sampling technique. In this survey, indices of quality of relations (trust commitment and satisfaction) were considered as independent variables and customers' loyalty was assumed as dependent variable. The current research is included in applied studies and it is deemed as a descriptive survey in terms of method. The librarian method was utilized in this study for data collection. The data collection technique was of librarian type and questionnaire was adapted as a tool for data collection. All hypotheses were analyzed at significance level ($p < 0.01$) for which SPSS software (v.20) was employed for execution of all statistical operations. The research findings indicated that the indices of relationship quality might affect customers' loyalty in Pishraft Darman Company. Trust, commitment, and satisfaction affect the relationship in loyalty of customers in Pishraft Darman Company.

Keywords: Relationship Quality, Trust, Commitment, Satisfaction, Loyalty of Customers

INTRODUCTION

Creation of loyalty in customers is a concept which has been addressed in modern businesses more than ever because loyal customers have been converted into a main element in organizational achievement. (Elahi & Heidari, 2011) The loyal customer is someone who purchases frequently goods and services from the same seller and takes positive attitude toward the given vendor and for this reason s/he also persistently recommends all of the related persons to purchase goods and services from that vendor. (Rezaei & Salehi, 2014) Quality of customer's relationship is one of the foremost factors in creating loyalty in customer. The conducted studies during recent decades show that the subject of relationship quality has important position in social studies.

Today, following to further intensification of competition in servicing sectors, the customer's loyalty has play more prominent role than the past. According to modern attitude, marketing includes growth and paying attention to satisfaction, quality based on customer's attitude, loyalty, and effective relationship with customer. As a result, modern organizations try to have loyal customers. (Arasly, 2012) Given there are wide

interpersonal relations among service provider and customers in servicing sector, role of loyalty is especially important in this sector. Loyalty of customers has led to improve market share, capital return rate, and higher profitability for the servicing enterprises. (Balagu, 2012) Modern enterprises have found that keeping of the existing customers has much less cost than attraction of new customers. Therefore, customers and referents have become extraordinarily important than the past. In this regard, providing and improvement of satisfaction for customers has been converted into a very important operational objective in most of enterprises. Thus, enterprise should always observe and address their interaction with their customers and propose valuable goods and services to them by proper recognition and perception of requirements and values considered by the customers so that to create loyalty in them by satisfying them. However the extraordinary importance of customers has become the requirement for modern paradigm namely relationship-based marketing and this necessitates for employing of suitable relationship-based links to keep and maintain the customers. Similarly, in order to maintain customers, it requires establishing close and strong relationship with them to ensure from their commitment. High quality relationship is one that also creates trust and commitment rather than satisfaction with such a relationship. (Rahman & Ramli, 2016) In their studies, Rahman and Ramli (2016) indicated that indices of relationship quality (trust, commitment, and satisfaction) might lead to improvement of customers' satisfaction. Therefore we have dealt with the effect of indices of relationship quality (trust, commitment, and satisfaction) on commitment of customers in Pishraft Darman Company in this investigation.

Theoretical Foundations and Research Background

With the expansion of competition, saturation of many markets, continuous changes in the environment, and population composition, companies are faced with the fact that today, as in the past, they are no longer faced with a growing economic system and growing markets. Today, each customer has its own unique value and organizations must fight to gain more or less share in a steady or declining market. Marketers were thinking about finding a customer until yesterday, and sales teams were seeking to attract new customers, but in today's view, marketing means growing customer, paying attention to satisfaction, and effective communication with him, and quality from his point of view. In this regard, reducing costs and customers' risks to access products can be an important step in customer loyalty.

One of the most important factors that make companies pay more attention to customer loyalty, which is a concept beyond buying, is that keeping current customers is much cheaper than attracting new customers to companies. Some believe that communication with customers will always be profitable for the company, while in some industries and businesses, some customers are actually harmful to the company (Grönroos et al., 1994).

Due to the fact that customers' expectations are constantly rising, organizations are required to meet their expectations beyond the basic need of customer. They also have to focus their attention on customer satisfaction to build loyalty and trust through long-term, bilateral and profitable communication for both sides (Elahi and Heydari, 2005).

If customers do not face any unexpected risks or unexpected circumstances, trust will arise. When the customer trusts the service provider, the customer is expected to increase his satisfaction and loyalty towards the vendor. In general, if the consumer does not trust the supplier based on past experience, the customer will probably not be satisfied with the supplier. Research has proven that trust affects long-term satisfaction. When the customer's trust in the supplier is built, his satisfaction will be strengthened over time. On the other hand, gaining customer trust is a major factor in customer loyalty. Since trust can reduce the risk in the process of creating an exchange relationship, customers tend to show their partnership with the trusted service provider with evidence of their loyalty. This means that when customers trust the service provider, they constantly use the service and even recommend the service to others (Disk & Basu, 1994).

Over time, organizations that were able to meet customers' satisfaction with the highest level of facilities and resources, standard services, and the lowest costs can increase customer satisfaction. On the other hand, due to the positive relationship between satisfaction and loyalty, organizations should seek to increase high-value service delivery (Ballugo, 2002).

Marketers are of the opinion that creating loyal customers can bring positive benefits to the company. Some of these benefits include: increased sales, reduced costs, and predictable corporate profits. Some researchers

have identified customer loyalty as a key source of corporate competitive advantage over competitors, and they see it as a key to the survival and growth of the company (Jans and Taylor, 2007).

Toumaj and Sabaghpour (2016) introduced the overall quality of customer relationship that includes customer satisfaction, trust and commitment as the most important factors of customer loyalty. Ahmadi and Asgari (2015) showed that service quality, satisfaction and trust have a positive effect on customer loyalty. Darvish (2012) have shown that trust, commitment, and quality of perceived services (components of customer relationship quality) also have a positive impact on customer loyalty. Rahman and Ramil (2016) investigated the impact of customer relationship quality on customer loyalty. According to the studies, the results of the research indicated that the quality indices of the relationship (trust, commitment, satisfaction) lead to increased customer loyalty.

Toumaj and Sabaghpour (2016) examined the impact of customer relationship quality on customer loyalty. This paper reviews the studies conducted on marketing to investigate the impact of customer relationship quality on customer loyalty. The quality of customer relationship has many dimensions. Most of the research carried out believe that it involves satisfaction, trust and commitment of customers. Unlike many marketing research that only consider customer satisfaction with the goods or services received as a factor of customer loyalty, this research has introduced the overall quality of customer relationship that includes customer satisfaction, trust, and commitment as the most important factor in customer loyalty.

Ahmadi and Asgari (2015) examined the relationship between customer service quality, customer satisfaction, trust and loyalty at passenger terminals. All of these variables have a significant impact on the performance of travel companies. Data were collected through a questionnaire designed by the researchers. These questionnaires were distributed among customers of passenger terminals in Tehran. The confirmatory factor analysis and structural equation modeling were used to evaluate and test the hypotheses. All hypotheses were approved. This research also has useful practical applications in areas such as service quality, satisfaction, trust and loyalty. The results of the research showed that the quality of service, satisfaction and trust have a positive effect on customer loyalty.

Dervish (2012) examined the effect of customer relationship quality factors on customer loyalty of Saipa's after sales service dealers. According to the results obtained in this research, the service provider should pay more attention to the quality of the relationship with customers in order to make their customers loyal. This research also shows that trust, commitment, and the quality of perceived services (components of customer relationship quality) also have a positive impact on customer loyalty. According to the results of a research carried out at Saipa's after sales service departments in Tehran, only one component of customer relationship quality (satisfaction) has not had any effect on customer loyalty. In this study, the quality of perceived service, trust, and then commitment has the most effect on loyalty, respectively.

Amer and Mahmoud (2017) examined the effectiveness of developing a marketing strategy in Indonesia's insurance industry. The results of their research indicated that organizational image, service quality, trust and customer satisfaction are positively and significantly related to customer loyalty.

Rahman and Ramil (2016) investigated the impact of customer relationship quality on customer loyalty. According to the results, the results of the research indicated that the quality indices of the relationship (trust, commitment, satisfaction) lead to increased customer loyalty.

Eikru and Mat (2008) examined the effect of six variables of the quality of perceived services, perceived value, customer satisfaction, organization image, commitment and trust on customer loyalty in South Thailand Bank. Their research results showed that, firstly, only the image of the organization has a direct impact on customer loyalty. Secondly, the quality of perceived service has a positive effect on customer satisfaction. Thirdly, the image of organization and trust have a positive impact on commitment.

Kakres and Paparoidamis (2007) examined the relationship between functional quality, technical quality, and satisfaction with communication, commitment, and loyalty. Their research results showed that functional quality and technical quality have a significant impact on customer satisfaction. Second, satisfaction has a strong impact on trust, commitment and loyalty. Third, trust and commitment have an important mediating role in the relationship between satisfaction and loyalty. Trust has a significant impact on commitment.

Dimetrads (2006) states that customer satisfaction has a positive impact on trust and commitment. Also, trust is tangibly linked to commitment. Commitment is also recognized as the most important predictor of customer loyalty. Therefore, trust and commitment play an important role in enhancing the relationship between customer satisfaction and customer loyalty.

Methodology

The present research is of applied type in terms of objective and of survey type in terms of descriptive execution. Data are collected in this study by two types of librarian and field methods. In fact, in librarian method data are utilized for codification of subject literature and formulation of theoretical framework in study. Also in the field method, researcher collects data using questionnaire as one of the most prevalent tools through gathering of information. The statistical population comprises of all customers of Pishraft Darman Company in 2017. The unlimited population sampling has been employed to determine sample size by means of Cochran's formula we use it as follows:

n- Sample size

p- Success ratio of hypotheses; and

q- Failure ratio of hypotheses

e- Estimation error of sample

Z- Percent of standard error with reasonable reliability.

$$n = \frac{z^2 \alpha}{\frac{2pq}{e^2}} \quad n = \frac{1.96^2 \times 0.5 \times 0.5}{0.80^2} = 150$$

The statistical population of study includes 150 customers of Pishraft Darman Company. In this regard, 200 questionnaire forms were distributed and out of them 150 questionnaire forms were received.

Research variables

Loyalty:

In order to measure variable of customer's loyalty, a scale has been designed by Chen and Cho (2009) and it was translated by Vazifehdoost and Memaarian (2014) and this scale will be utilized. This part of questionnaire includes 6 items. This questionnaire will be answered by the respondents by LIKERT 5-scale spectrum (ranging from strongly disagree 1 through strongly agree 5) and the scores derived by application of LIKERT spectrum for this questionnaire form as the basis for analyses.

Trust:

In order to measure variable of trust in customers, a scale is utilized that it was designed by Chen and Cho (2009) and this scale was translated and localized by Vazifehdoost and Memaarian (2014) and it is employed for this measurement, this part of questionnaire includes 8 items. This questionnaire will be answered by the respondents by LIKERT 5-scale spectrum (ranging from strongly disagree 1 through strongly agree 5) and the scores derived by application of LIKERT spectrum for this questionnaire form as the basis for analyses.

Commitment:

To measure variable of commitment in customers, a scale was employed that it was designed by Roman and Roiser (2005) and it was translated by Pejman and Kazemi Mahyari (2015) and it will be utilized in this analysis. This part of questionnaire comprises of 5 items. This questionnaire will be replied by the respondents by LIKERT 5-scale spectrum (ranging from strongly disagree 1 through strongly agree 5) and the scores derived by application of LIKERT spectrum for this questionnaire form as the basis for analyses.

Satisfaction of relationship:

A questionnaire has been utilized in this study for analysis and measurement of satisfaction of customer's relationship that has been translated and drawn up by Moghimi and Ramezan (2013). This part of questionnaire includes 6 questions. This inventory will be replied by the respondents based on LIKERT 5-scale spectrum (ranging from strongly disagree 1 through strongly agree 5) and the scores derived by application of LIKERT spectrum for this questionnaire form as the basis for analyses.

Conceptual model

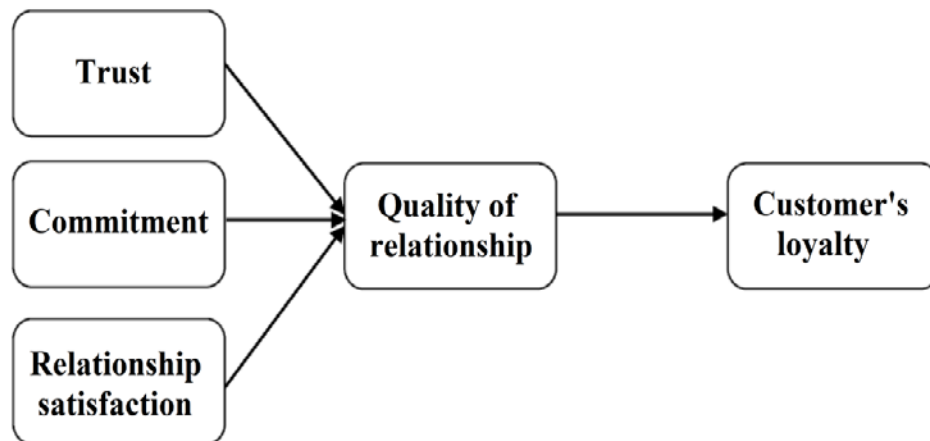


Figure 1. Research model (Rahman & Ramil, 2016)

Research hypotheses

Major hypothesis

- The indices of relationship quality affect the customers' loyalty in Pishraft Darman Company.

Minor hypotheses

- Trust affects the loyalty of customers in Pishraft Darman Company.
- Commitment affects the loyalty of customers in Pishraft Darman Company.
- Relationship satisfaction affects the loyalty of customers in Pishraft Darman Company.

Research findings

With respect to the following table, indices of descriptive statics are shown for main variable of research.

Table 1. Descriptive statistics of research variables

	Quantity	Minimum	Minimum	Mean		Standard deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Standard deviation	Statistic	Statistic
Customers' loyalty	150	1	5	3.6911	0.05670	0.69444	0.482
Relationship quality	150	1.23	4.78	2.8486	0.04190	0.51319	0.263
Trust	150	1	5	2.8833	0.06660	0.81753	0.665
Commitment	150	1.20	4	3.0078	0.04984	0.61041	0.373
Satisfaction	150	1	5	2.7444	0.05852	0.71671	0.514
Valid N (listwise)	150						

Test of normality of data (Kolmogorov-Smirnov (K-S))

In order to identify type of used test for research hypotheses, we have firstly analyzed normality or abnormality of the given data relating to hypotheses by Kolmogorov-Smirnov (K-S) test and then the suitable parametric or non-parametric statistical methods have been utilized for the test. Therefore, hypotheses will be given as follows:

$$\left\{ \begin{array}{l} H_0 = \text{Distribution of given observations is normal.} \\ H_1 = \text{Distribution of given observations is not normal} \end{array} \right.$$

Table 2. Kolmogorov-Smirnov (K-S)

		Customers' loyalty	Relationship quality	Trust	Commitment	Satisfaction
Quantity		150	150	150	150	150
Normal indices	Mean	2.6911	2.8486	2.8833	3.0078	2.7444
	Standard deviation	0.69444	0.51319	0.81573	0.61041	0.71671
The maximum intensity of difference	Absolute	0.135	0.104	0.140	0.272	0.234
	Positive	0.135	0.104	0.140	0.272	0.234
	Negative	-0.099	-0.081	-0.102	-0.262	-0.150
Kolmogorov- Smirnov z-value		1.452	1.274	1.113	1.482	1.212
Significance level		0.059	0.078	0.106	0.055	0.90

a. Test distribution is normal.

b. Calculated from data.

Analysis on above-said table:

According to the results of Table (4-8) with respect to significance levels (0.05) for variables of customers' loyalty, relationship quality (0.07), trust (0.10), commitment (0.05), and satisfaction (0.09) have been calculated and since these values are greater than ($\alpha=1\%$) i.e. ($\text{sig}<\alpha$) thus one can find that null hypothesis (H_0) is verified and H_1 is rejected. Therefore hypothesis of normality is confirmed for distribution of observations and statistical parametric tests can be utilized.

Test of research minor hypotheses:

Pearson's correlation test:

Given that hypotheses are of relational type and in order to make variables as normal, Pearson's correlation coefficient has been adapted to test hypotheses. The Pearson's correlation test is used for determination of rate and intensity of relation between two variables in which the output of this test is derived by means of SPSS (v.20) as follows.

Major hypothesis:

H_0 : The indices of relationship quality do not affect customers' loyalty in Pishraft Darman Company.

H_1 : The indices of relationship quality affect customers' loyalty in Pishraft Darman Company.

Table 3. The rate of correlation between indices of relationship quality in customers' loyalty

		Relationship quality	Customers' loyalty
Quality of relationship	Pearson's correlation	1	0.570 **
	Significance level		0.000
	Quantity	150	150
Customers' loyalty	Pearson's correlation	0.570 **	
	Significance level	0.000	
	Quantity	150	150

** Correlation at significance level 1%

Result of hypothesis:

According to Table (3), the correlation value amounts to $r=0.570$ where with respect to significance level ($\text{Sig}=0.000$) and this value is smaller than ($\alpha=1\%$) i.e. ($\text{Sig}<\alpha$) it can be found that null hypothesis (H_0) is disproved and H_1 is confirmed. Namely, it can be concluded that parameters of relationship quality affect customers' loyalty in Pishraft Darman Company at confidence level (99%).

Minor hypotheses:

Hypothesis 1:

H₀: Trust does not affect loyalty of customers in Pishraft Darman Company.H₁: Trust affects loyalty of customers in Pishraft Darman Company.**Table 4.** The correlation value of trust in loyalty of customers

		Relationship quality	Customers' loyalty
Trust	Pearson's correlation	1	0.386 **
	Significance level		0.000
	Quantity	150	150
Customers' loyalty	Pearson's correlation	0.386 **	
	Significance level	0.000	
	Quantity	150	150

** Correlation at significance level 1%

Result of hypothesis:

According to Table 4, correlation value is 0.386 thus with respect to significance level (0.000) whereas this value is smaller than ($\alpha=1\%$) i.e. ($\text{Sig}<\alpha$) thus it can be found that null hypothesis (H₀) is rejected and H₁ hypothesis has been verified. Namely, it can be concluded that variable of trust has affect customers' loyalty in Pishraft Darman Company at confidence level of 99%.

Hypothesis 2:H₀: Trust does not affect loyalty of customers in Pishraft Darman Company.H₁: Trust affects loyalty of customers in Pishraft Darman Company.**Table 5.** The correlation value of commitment in loyalty of customers

		Relationship quality	Customers' loyalty
Commitment	Pearson's correlation	1	0.312 **
	Significance level		0.000
	Quantity	150	150
Customers' loyalty	Pearson's correlation	0.312 **	
	Significance level	0.000	
	Quantity	150	150

** Correlation at significance level 1%

Result of hypothesis:

According to Table 5, correlation value amounts to 0.312 where with respect to significance level (0.000) and since this value is smaller than ($\alpha=1\%$) namely ($\text{Sig}<\alpha$) thus one can find that null hypothesis (H₀) has been rejected and H₁ hypothesis is confirmed. Namely, it can be concluded that variable of commitment has affected loyalty of customers in Pishraft Darman Company at significance level 99%.

Hypothesis 3:H₀: Satisfaction does not affect loyalty of customers in Pishraft Darman Company.H₁: Satisfaction affect loyalty of customers in Pishraft Darman Company.**Table 6.** The correlation value of commitment in loyalty of customers

		Relationship quality	Customers' loyalty
Satisfaction	Pearson's correlation	1	0.242 **
	Significance level		0.000
	Quantity	150	150
Customers' loyalty	Pearson's correlation	0.242**	
	Significance level	0.000	
	Quantity	150	150

** Correlation at significance level 1%

Result of hypothesis:

According to Table 6, the correlation value is 0.242. With respect to significance level (0.003) this value is smaller than ($\alpha=1\%$) namely ($\text{Sig}<\alpha$) thus it can be found that null hypothesis (H_0) has been disproved and H_1 hypothesis is confirmed. Namely, it can be concluded that variable of satisfaction affects loyalty of customers in Pishraft Darman Company at significance level of 99%.

Table 7. Conclusion for testing of research hypotheses:

Row	Hypothesis	Dependent variable	Independent variable	Correlation coefficient (R)	Error level (α)	Significance level (Sig)	Test result
1	Major hypothesis 1	Loyalty of customers	Relationship quality	0.570	0.01	0.000	H_1 confirmed
2	Minor hypothesis 1	Loyalty of customers	Trust	0.386	0.01	0.000	H_1 confirmed
3	Minor hypothesis 2	Loyalty of customers	Commitment	0.312	0.01	0.000	H_1 confirmed
4	Minor hypothesis 3	Loyalty of customers	Satisfaction	0.242	0.01	0.003	H_1 confirmed

Multiple regression test

If effects of independent variables on dependent variable is analyzed simultaneously different results may be derived. The multiple regression has been utilized to determine effect of these factors at the same time and with respect to verification of correlation between independent and dependent variables, we analyze the quantitative relationship among independent and dependent variables to present them as a model. Similarly, effect of independent variables on dependent variable is examined by multivariate regression technique. Before presentation of multivariate linear regression model, we should analyze hypotheses of the model that include the following cases:

Hypotheses of regression model:

- 1- **Normality of dependent variable (loyalty of customers):** The Kolmogorov-Smirnov (K-S) test has been employed to determine normality of a variable where the results in Table 4-8) have shown data normality.
- 2- **Linear relationship among dependent and independent variables (Fisher f-test):** The Analysis of Variance (ANOVA) can be used for determination of linear relationship between two variables for this purpose. The total statistical hypotheses of regression model are as follows:

H_0 = There is no linear relationship between two variables.
 H_1 = There is linear relationship between two variables.

Table 8. Table of Analysis of Variance (ANOVA)

Model	Sum of squares	Degree of freedom	Square mean	F-statistic	Significance level
Regression	18.250	3	6.083	16.569	0.000 ^b
1 residual	53.605	146	0.367		
Total	71.855	149			

a. Dependent variable: Loyalty of customers

b. Predictor variables: Satisfaction, commitment, and trust

Analysis of table at above:

According to Table 8, given that significance level amounts to 0.000 and since this value is smaller than ($\alpha=1\%$) namely ($\text{sig}<\alpha$), one can find that null hypothesis (H_0) is rejected and H_1 hypothesis is approved. Therefore, linearity hypothesis of relationship is approved between independent variables and dependent variable.

Correlation coefficient and multivariate determination coefficient:

Based on research data, the problem of multivariate correlation coefficient with determination coefficient in this study are as follow according to Table (4-14): The value of multivariate correlation coefficient shows 0.504 generally how much the intensity of relationship between independent variables with dependent variable i.e. loyalty of customers and determination coefficient (0.254) indicates variation (bias) in dependent variable that can be explained by their regressive equation.

Table9: The multiple correlation and determination coefficients

Model	R	R2	Adjusted R2	Standard deviation	Durbin- Watson
1	0.504 ^a	0.254	0.239	0.60593	1.745

- Predictor variables: Satisfaction, commitment, and trust
- Dependent variable: Loyalty of customers

Errors independence test (residuals)

Durbin-Watson (d) test: Independence of errors from each other (difference between real and predicted values by regression model) is one of the assumptions which are considered in regression. If errors independence hypothesis is rejected and errors are correlated with each other, it is impossible to use regression. Durbin-Watson test is employed to determine independence of errors from each other if this value is placed within range (1.5-2.5), H_0 test (no correlation between errors) is accepted otherwise H_0 is rejected (there is correlation between errors). To achieve this important point, Durbin-Watson test can be adapted. The value of this test has been calculated in the following table. Whereas these statistics are place within range (1.5-2.5) so it can be concluded that the errors are independent from each other and regressive model can be utilized to test hypotheses.

Table 10: Durbin-Watson test

Test	Favorable value	Given value	Status
Durbin-Watson	$1.5 \leq d \leq 2.5$	1.745	No correlation between errors

Given that the aforesaid statistic is placed within range (1.5-2.5) therefore lack of correlation among errors is accepted.

Presentation of multivariate linear regression

We use table of coefficients to propose multivariate regression model $y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3$ after analysis on table relating to correlation coefficient for this model in which the introduced variables in this regressive model of this study are as follows:

y: Loyalty of customers

X1: Trust

X2: Commitment

X3: Satisfaction

Table 11: Results of analysis of multivariate regression

Model		Non-standard coefficients		Standard coefficients	t	Significance level	Colinearity statistic	
		Beta	Standard error	Beta			Tolerance	VIF
1	Fixed	0.461	0.337		1.366	0.174		
	Trust	0.267	0.063	0.313	4.239	0.000	0.935	1.069
	Commitment	0.278	0.084	0.244	3.308	0.001	0.937	1.069
	Satisfaction	0.228	0.069	0.235	3.281	0.001	0.994	1.006

- Dependent Variable: Loyalty of customers

According to results of ANOVA in Table 9, with respect to calculated significance level (0.000), the following results are derived at confidence level 99% ($\alpha=1\%$):

The variables of trust, commitment, and satisfaction are significant for prediction of customers' loyalty at confidence level 99% ($\alpha=1\%$) (Sig<0.01).

The column of coefficients is used to determine effects of three existing variables in regressive model on dependent variable. Therefore the regressive equation is derived in this study as follows:

$$y = 0.461 + 0.26x_1 + 0.27x_2 + 0.22x_3$$

The given results from coefficients of regressive equation indicate that the variable of trust justifies 26% of variance for variable of customers' loyalty and also 27% of variable of commitment, and 22% of satisfaction are justified by this variance. With respect to the coefficients, it can be implied that variable of commitment has the maximum effect in loyalty of customers compared to other independent variable.

Determination of presence of multicollinearity:

Collinearity is a status that shows an independent variable is a linear function of other independent variables. If level of collinearity is high in a regressive equation this means that there is high correlation between independent variables and the model may not be highly reliable despite high value of R^2 . In other words, while the model may seem as good but it lacks significant independent variables and these variables may affect each other. The results of this test are given as following table in which tolerance index and Variance Inflation Factor (VIF) are presented. As tolerance rate is smaller (close to zero), there is fewer information about variables and some problems may emerge in using of regression. Variance Inflation Factor (VIF) is also reciprocal of tolerance and as this factor increases it makes variance of regressive coefficient as unsuitable for prediction.

With respect to the last column of Table (4-16), VIF value is lesser than 5 ($VIF < 5$) for all independent variables. Therefore, there is no collinearity between independent variables. Thus, the fitted model is reliable.

Analysis of error (residual):

The normality of residuals can be used for determination of accuracy of prediction of dependent variable by independent variables. Two diagrams including histogram of residuals and residuals normal line diagram (cum probe) can lead us to this objective:

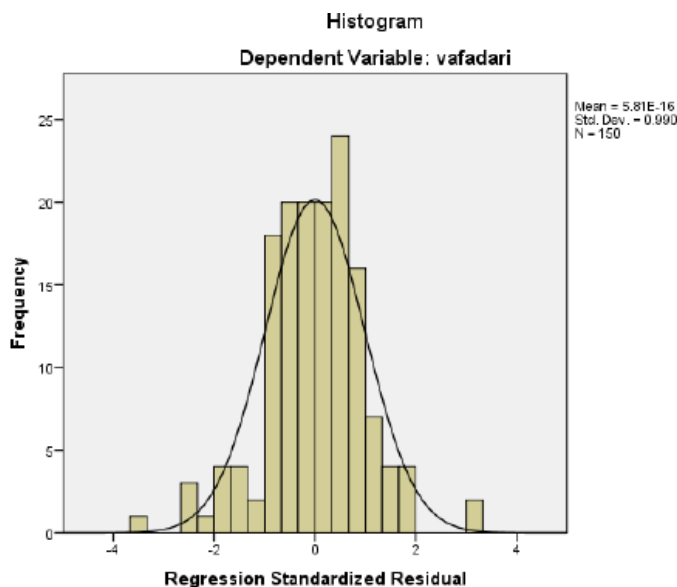


Diagram 1. Histogram of residuals (errors)

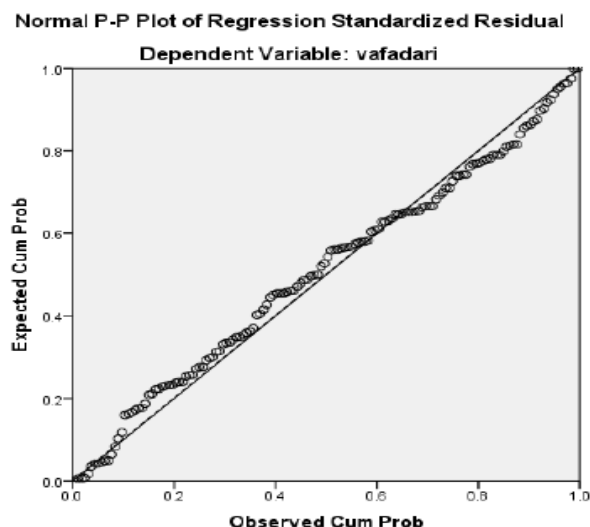


Diagram 2. Normal line of residuals/ errors (cum probe)

Conclusion and discussion

1. With respect to result of testing major hypothesis that denotes 'the indices of relationship quality affect loyalty of customers in Pishraft Darman Company', the servicing sector should be led to increase level of perceived quality of services with focus in establishing relations with customers and creating high level of trust, satisfaction, and commitment by execution of relevant marketing activities.
2. Given the result of testing first hypothesis: 'trust affect loyalty of customers in Pishraft Darman Company' thus it is suggested to the directors to look for the reasons and roots of non-honest climate among organization and to plan for such a sense. The customers may feel they could not trust in members of company to establish honest relations. Therefore, it is suggested to directors to identify reasons for creating of non-confidence in customers and to tend for improvement of trust.
3. With respect to result of testing the second hypothesis: 'commitment affects loyalty of customers Pishraft Darman Company', thus higher level of quality for relationship with customer and commitment of customers to service provider, satisfaction with the received services, and maintenance of created relation with customers are led to loyalty of the satisfied customers. Therefore, servicing sector should move toward making customers loyal and further profitability with focus in creating of relations of quality.
4. Given the result of third hypothesis; namely, 'satisfaction with relationship affects loyalty of customers in Pishraft Darman Company', thus it seems necessary for strengthening and improving foundations for satisfaction with relationship in order to achieve further loyalty before customers. The close and long-term relationship for perception and recognition of customers' requirements may lead to customer's satisfaction and trust and finally to create their loyalty more than ever. Therefore, organization should look for establishment of such a close and long-term relationship by taking appropriate strategies.

The purpose of this study was to investigate the effect of relationship quality indicators on customer loyalty of Pishraft-Darman Company. The population of this research included all clients of Pishraft-Darman Company in 2017. Accordingly, 150 clients were selected using the unlimited population sampling method. In this research, relationship quality indices (trust, commitment and satisfaction) were independent variables and customer loyalty was dependent variable. The present research is an applied research and descriptive-survey in terms of its methodology. In this research, library method and a questionnaire were used to collect data and information. All hypotheses have been analyzed at a significance level of $p < .01$. For all statistical operations, SPSS software version 20 has been used.

The research results are as follows:

Relationship quality indicators affect customer loyalty in Pishraft-Darman Company. The results of the research are consistent with the results of Ahmadi and Asgari (2015), Darvish (2012), Rahman and Ramil (2016). Trust affects customer loyalty in Pishraft-Darman Company. The results of the research are consistent with the results of Rahimnia and Harandi (2012), Moradi (2011), Sadrayi (2008), and Geranmaye (2007). Commitment affects customer loyalty in Pishraft-Darman Company. The results of the study are in line with the results of Amer and Mahmoud (2017), Rahman and Ramil (2016), Paparoidamis (2007) and Dimetrads (2006). Satisfaction with the relationship affects customer loyalty in Pishraft-Darman Company. The research results are consistent with the results of Eikru and Mat (2008), Paparoidamis (2007) and Dimetrads (2006).

Suggestions for future studies

- It is suggested to conduct a study about this subject but with different statistical population and with respect to classification in directors and specific group of personnel and their results to be compared with findings of current research.
- It is suggested to determine order preference in indices of quality of effective relationship in loyalty of customers in various companies.

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