

The Influence of Service Quality on Satisfaction, Loyalty, and Word of Mouth of Patients at Bali Mandara Hospital, Bali Province, Indonesia

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ABSTRACT : *Competition in the hospital industry in the global era is getting tighter. One of the issues that still hinders the progress of the hospital is the lack of service quality, human resources. Though the quality of service will greatly determine patient satisfaction. If patient satisfaction can be achieved, it is not impossible that customers will be loyal and participate in recommending health services provided by Bali Mandara Hospital. The purpose of this study was to analyze the effect of service quality on patient satisfaction, loyalty, and word of mouth. This research includes explanatory research with a quantitative approach. The population of this study were all customers registered at the Bali Mandara Regional Hospital, with a sample of 70 people. The sampling technique was carried out by combining purposive sampling with convenience sampling. Data were collected through a questionnaire which was then analyzed using the SEM-PLS analysis technique. The results showed that service quality had a positive and significant effect on patient satisfaction, loyalty, and word of mouth at Bali Mandara Hospital, Bali Province, but satisfaction was not a significant mediator on the effect of service quality on loyalty and word of mouth, but loyalty was a mediator that significant effect on the quality of service on word of mouth.*

KEYWORDS - service quality, customer satisfaction, loyalty, word of mouth

I. INTRODUCTION

Each manufacturer tries to design meaningful differences to differentiate its products from products offered by competitors, so that each product has its own characteristics that differentiate it from its competitors [1].

The difference between the product and its competitors is also seen in hospital service companies. Hospital as a company engaged in health services strives to provide good and quality health services. Good and quality service by itself will bring patient satisfaction and at the same time will provide benefits for the hospital.

Hospital is one of the services which in carrying out its activities, cannot be separated from the development of science and technology. Both of these things increase public awareness and demands for better health services. This also causes the value of society to change towards higher quality health services. This change is a challenge for the hospital who is faced with a changing business environment.

The level of competition which is getting tougher among the hospital businesses requires competitiveness for the hospital in order to win the existing competition. One form of competitiveness that must be created by hospital businesses is the quality of service. Hospitals must strive to improve the quality of services continuously. The higher the level of public understanding of the importance of health to maintain the quality of life, the more critical the user community will be in receiving service products. Therefore, it is necessary to continuously improve the quality of hospital services.

Various indicators that are often used to measure service quality are intangibility, perishability, customer contact, variability, physical distribution chain [2]. The same opinion is expressed by [1] that there are five dimensions of service quality, namely: tangibles reliability, responsiveness, assurance, and empathy.

According to Parasuraman in [3], a patient's assessment of quality is determined by two things, namely the patient's expectations of quality (expected quality) and the patient's perception of quality (perceived quality). Based on these considerations, the measurement of the success of a hospital service company is more determined by the patient's assessment and perception of the quality of service provided.

The patient's perception of service plays a very important role. The quality of service will be fulfilled if the service delivery process from the service provider to the patient is in accordance with what is perceived by the patient. Furthermore, Welch in [1] states that service quality is the best guarantee for creating and maintaining consumer loyalty and a bulwark in the face of global competition [4] states that customer loyalty has five dimensions, namely trust, psychological commitment (psychological commitment), changing costs (switching costs), publicity behavior (word-of-mouth), and cooperation. [5] in the results of his research found that service quality affects consumer loyalty. Furthermore, [6] concluded in his research that people's perceptions of the quality of health services and their effect on the utilization of health services are the main indicators of the success of health services. [7] stated that service quality is a concept consisting of five dimensions, namely tangible, reliability, responsiveness, assurance and empathy. These five dimensions are very important in shaping the level of customer loyalty.

The tangible dimensions that the company provides to customers such as physical facilities, equipment, employee friendliness will affect the level of customer loyalty. The more consumers feel the tangible value provided by the company, the more it increases customer loyalty. The results of research by [8] concluded that the physical appearance (tangible) provides clues about service quality and will influence customers in assessing the service, so it is necessary to consider the nature of physical evidence for customers. Dimensions of reliability (reliability) of services provided by the company in the form of speed, accuracy and satisfactory will have an impact on the high level of their loyalty to the company's products. The same thing is stated by [8] which states that there needs to be a match between the services provided and what is needed from time to time. Dimensions of the responsiveness (responsiveness) of company employees in serving customers. When good service is provided by employees, family relationships will be formed. This will have an impact on the level of customer loyalty to the company. The dimension of assurance includes knowledge, ability, politeness and trustworthiness of employees towards consumers. The value that is delivered will form customer loyalty. The results of research by [9] who concluded that the assurance dimension has a relationship and influence on loyalty.

The dimension of empathy (empathy) includes the relationship between communication, attention and understanding of consumer needs. If consumers feel that company employees can provide empathy to consumers, they will no longer hesitate to continue consuming the services provided. This will form the level of customer loyalty. The research results of [10] concluded that there is a unidirectional relationship between the dimensions of empathy and patient loyalty.

The health service industry such as hospitals is growing rapidly in line with globalization and the increasing demand for health services. This also results in competition from hospitals in improving the quality of services to the community. The number of hospitals operating in Bali Province is 56 both public and private hospitals, and 10 accredited hospitals, of which 4 are government hospitals with plenary levels. One of the hospitals owned by the government of Bali Province, namely the Bali Mandara Regional General Hospital, which has international standards, serves the poor people of the Bali Region at a very young age because it has only been operating for a few years to be able to reach a position of complete accreditation level which requires various efforts towards this. is to improve hospital performance through quality services that can provide satisfaction to patients. Demands for service quality in relation to satisfaction in each segment of the region are relatively different. However, the Bali Mandara Hospital, which has international standards and serves the poor of Bali, is certainly a gateway and a model for the quality of services of a company, including Bali Mandara Hospital. Good quality service at Bali Mandara Hospital can be a role model for providing services to all hospitals in Bali, especially both government and private hospitals.

Companies often claim to be doing their best for customers. What the company has done is not always in accordance with customer expectations, resulting in a gap between company and customer perceptions in assessing service quality. For this reason, this study also intends to see how the Bali Mandara Hospital patient's satisfaction is in receiving the services that have been provided.

Customer satisfaction is very important, but not merely a marketing goal. Satisfaction is a stepping stone with the goal of developing a relationship that is based on a long-term benefit structure. Therefore, the research will also look at the relationship between service quality, satisfaction, trust, and WoM, as well as the relationship between these variables.

The purpose of this study was to analyze the effect of service quality on patient satisfaction, loyalty, and word of mouth at Bali Mandara Hospital, Bali Province. In addition, this study will also analyze the role of patient satisfaction in mediating the effect of service quality on patient loyalty and word of mouth at Bali Mandara Hospital, Bali Province.

II. LITERATURE REVIEW

1.1 Quality of Service

Quality of Service Quality of service was first developed by [11]. The service quality dimension model formed by [11] highlights the main requirements in providing the expected service. This research identified five gaps that cause service delivery failure. The gap between perceived services and expected services is related to the customer perspective on the five dimensions of service quality, namely physical evidence, reliability, responsiveness, assurance, and empathy [12]. Service quality can be identified through the following indicators [13]: (1) Tangibles (physical evidence), for example where employees look neat at work, so that customers feel comfortable seeing and interacting with employees when using services. (2) Reliability, namely the ability of employees to provide services immediately, accurately and satisfactorily. (3) Responsiveness, namely the response of employees to consumer complaints. 4) Guarantee, is the ability to provide confidence and trust in consumers

1.2 Customer Satisfaction

Customer satisfaction is the fulfillment of customer expectations. This general definition refers to the expectancy disconfirmation paradigm [14]. Expectations will be the standard for assessing the actual performance of a product or service. If what the customer hopes are met, there will be a confirmation, or the customer is satisfied. If what the customer expects is not fulfilled, there will be disconfirmation, either positive disconfirmation, or negative disconfirmation [14].

The indicators used to measure the satisfaction variable are referenced from the research of [15]. The indicators used are:

- 1) The right choice, namely the feeling of the customer in choosing the company as a partner is the right choice.
- 2) Conformity of expectations, namely customer feelings about the company's ability to meet expectations.
- 3) Facility satisfaction is customer satisfaction with the complete facilities provided by the company.

1.3 Loyalty

According to [16], "Consumer loyalty is consumer loyalty to companies, brands and products. [17] defines loyalty as a liking attitude towards a brand which is presented in a consistent purchase of that brand over time. According to [3], "consumer loyalty is a customer commitment to a brand, store or supplier based on very positive traits in long-term purchases". From this understanding it can be interpreted that brand loyalty is obtained because of a combination of satisfaction and complaints. Meanwhile, customer satisfaction comes from how much the company's performance is to cause this satisfaction by minimizing complaints so that long-term purchases made by consumers are obtained

According to [18] consumer loyalty is the commitment of a consumer to a market based on a positive attitude and is reflected in consistent repurchases. Indicators of consumer loyalty are:

Trust is a consumer trust response to the market.

- 1) Emotion commitment is consumer psychology commitment to the market.
- 2) Switching cost is the consumer's response to the load received when a change occurs.
- 3) Cooperation is consumer behavior that shows an attitude of cooperating with the market.

1.4 Word of Mouth

Word of Mouth According to [19], Word of mouth Communication (WoM) or word of mouth is a communication process in the form of giving recommendations both individually and in groups to a product or service that aims to provide personal information. Word of mouth is a communication channel that is often used by companies that produce goods and services because word of mouth is considered very effective in smoothing the marketing process and is able to provide benefits to the company.

[20] argues that word of mouth (WoM) communication is an interpersonal communication that occurs between one individual and another based on the experience each individual has with a company or a product in the form of goods or services.

Based on [21] opinion, word of mouth consists of two types, namely:

- 1) Organic word of mouth is talk that springs naturally from the positive qualities of your company.
- 2) Amplified word of mouth is talk started by a deliberate campaign to get people talking.

In research conducted by [22], the indicators of word of mouth used are: (1) Talking about; (2) Promote; (3) Recommend. Whereas in [23] research, the indicators of Word of mouth used were: (1) talkers; (2) topics; (3) tools; (4) talking part; (5) tracking. [24] in their research measuring word of mouth with the following indicators: (1) the willingness of consumers to discuss positive things about the quality of company services to others; (2) Recommendation of company services to others; (3) Encouragement of friends or relatives to make purchases of company services.

III. METHOD

This research was conducted at Bali Mandara Hospital, Bali Province, which is located at Jalan By Pass Ngurah Rai. The selection of the locus was due to the quality of services at the Bali Mandara Regional Hospital, Bali Province, which became the Role Model for services in hospital hospitals in Bali, both government and private hospitals.

Analysis of the impact of service quality on patient satisfaction, loyalty, and word of mouth at Bali Mandara Regional Hospital will be carried out using SEM analysis. Where previously the data will be collected using a questionnaire instrument. The research concept framework is shown in Figure 1.

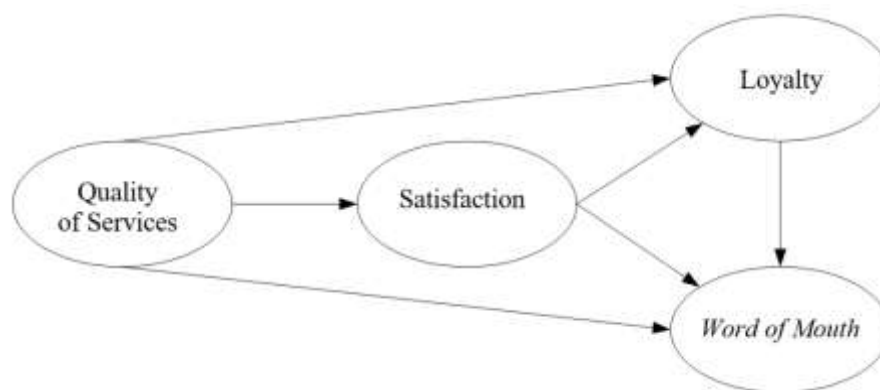


Figure 1: Research Concept Framework

This study uses primary data types, by collecting data from Bali Mandara Hospital patients, so that the population in this study is all patients who enjoy the service, and are registered. The sample size used is five times the number of indicators (5 x 14 indicators = 70 samples). The sampling process or sampling technique was carried out in two stages, namely by combining purposive sampling technique with convenience sampling.

IV. RESULTS AND DISCUSSION

4.1 Evaluation of Outer Model Analysis

An indicator can be said to be valid if it has a loading factor above 0.6 and AVE above 0.5 to the intended construct. The results of algorithmic testing that show automatic loading are shown in Figure 5.2, while the complete convergent validity test results are presented in table 1.

Table 1: Convergent Validity Test Results

Output	Indicator	Variable			
		Quality of Services (X1)	Customer Satisfaction (X2)	Loyalty (Y1)	Word of Mouth (Y2)
Outer Loading	Tangibles (X11)	0,819			
	Reliability (X12)	0,600			
	Responsive (X13)	0,785			
	Assurance (X14)	0,600			
	Empathy (X15)	0,676			
	Medical Services (X21)		0,653		
	Supporting facilities (X22)		0,666		
	General facilities (X23)		0,632		
	Administration services (X24)		0,631		
	Attitude of employee (X25)		0,831		
	Trust (Y11)			0,793	
	Confidence (Y12)			0,699	
	Price suitability (Y13)			0,765	
	Cooperating (Y14)			0,710	
	Desire to talk about (Y21)				0,824
	Frequency of talking (Y22)				0,551
	Recommendation (Y23)				0,771
	Encouragement against others (Y24)				0,781
AVE		0,500	0,500	0,552	0,547

Table 1 shows that all research indicators have constructs above 0.6 with their constructs. Likewise, the Average Variance Extracted (AVE) value is greater than 0.5, it can be said that all research indicators are valid.

Table 2: Discriminant Validity Test Results

Indicator	Variable			
	Quality of Services (X1)	Customer Satisfaction (X2)	Loyalty (Y1)	Word of Mouth (Y2)
Tangibles (X11)	0,819	0.199	0.252	0.436
Reliability (X12)	0,545	0.132	0.102	0.066
Responsive (X13)	0,785	0.261	0.318	0.422
Assurance (X14)	0.576	0.173	0.065	0.224
Empathy (X15)	0.676	0.100	0.178	0.165
Medical services (X21)	0.104	0.653	0.133	0.235
Supporting facilities (X21)	0.208	0.666	0.152	0.190
General facilities (X23)	0.137	0.632	0.034	0.066
Administration services (X24)	0.206	0.631	0.023	0.136
Attitude of employee (X25)	0.239	0.831	0.201	0.347
Trust (Y11)	0.244	0.287	0.793	0.337
Confidence (Y12)	0.287	0.-003	0.699	0.375
Price suitability (Y13)	0.264	0.119	0.765	0.298
Cooperating (Y14)	0.086	0.150	0.710	0,346
Desire to talk about (Y21)	0.479	0.202	0.425	0.824
Frequency of talking (Y22)				
Recommendation (Y23)	0.111	0.153	0.186	0.551
Encouragement against others (Y24)	0.293	0.172	0.340	0.771
	0.338	0.399	0.342	0.781

Table 2 shows that the correlation of the construct indicators has a higher value than the correlation of these indicators with other constructs, so it is said that the construct has high discriminant validity.

Cronbach's Alpha measures the lower limit of the reliability value of a construct, whereas Composite Reliability measures the true value of the reliability of a construct [25]. Role of thumb, the value of Cronbach's Alpha or Composite Reliability must be greater than 0.7, but if the results obtained are close to 0.7 (such as 0.6), this is still acceptable in exploratory studies [26]. The results of the construct reliability test can be seen in Table 3.

Table 3: The value of Cronbach's Alpha and Composite Reliability

Variable	Cronbach's Alpha	Composite Reliability
Quality of services (X1)	0,729	0,815
Customer satisfaction (X2)	0,740	0,815
Loyalty (Y1)	0,729	0,831
Word of Mouth (Y2)	0,729	0,825

Table 3 shows the value of Cronbach's Alpha and Composite Reliability of each construct with a value greater than 0.70 so that it can be said that the measure used in this study is reliable.

4.2 Inner Model/Structural Model Evaluation

The structural model in PLS needs to be evaluated using the R-square for the dependent variable and its significance value is based on the t-value for each path.

Table 4: R-square value

Variable	R-square
Quality of services (X1)	
Customer satisfaction (X2)	0,072
Loyalty (Y1)	0,105
Word of Mouth (Y2)	0,347

Table 4 shows an R-square value of 0.072 for the patient satisfaction construct. This means that the variability of the patient satisfaction construct can be explained by the construct of service quality by 7.20 percent, the remaining 92.80 percent is explained by other factors. Furthermore, the construct of loyalty is explained by the construct of service quality and customer satisfaction by 10.50 percent, the remaining 89.50 percent is explained by factors other than both. While the variability of the word of mouth construct is explained by the constructs of service quality, customer satisfaction, and loyalty by 34.70 percent, and the remaining 65.30 percent is explained by other factors. Based on R^2 in Table 5, the Q^2 or Stone Geiser Q-Square test can be calculated, namely:

$$\begin{aligned} Q^2 &= 1 - \{(1 - 0,072) (1 - 0,105) (1 - 0,347)\} \\ &= 1 - \{(0,928) (0,895) (0,653)\} \\ &= 0,458 \end{aligned}$$

The result of Q^2 calculation is 0.458, so it can be said to have moderate predictive prevalence, so the resulting model is not suitable for predicting. The figure of 0.458 means that the variation in word of mouth of 45.80 percent can be explained by variations in service quality, customer satisfaction, and loyalty variables, while the remaining 54.20 percent is explained by other variables outside the model.

To determine the effect between variables, it is necessary to analyze the direct effect, indirect effect, and total influence between the research variables. The results of the analysis related to the influence between research variables are presented in Table 5.

Table 5: Path Coefficient

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Quality of services (X1) → Customer satisfaction (X2)	0.269	0.319	0.101	2.650	0.008
Quality of services (X1) → Loyalty (Y1)	0.275	0.291	0.111	2.465	0.014
Quality of services (X1) → Word of mouth (Y2)	0.303	0.317	0.124	2.444	0.015
Customer satisfaction (X2) → Loyalty (Y1)	0.113	0.133	0.147	0.769	0.442
Customer satisfaction (X2) → Word of mouth (Y2)	0.181	0.192	0.107	1.686	0.092
Loyalty (Y1) → Word of mouth (Y2)	0.332	0.318	0.128	2.600	0.100

Where: *) Non-Sig ($\alpha=0.05$)

Table 6: Results of Indirect Effect Analysis

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Quality of services (X1) → Loyalty (Y1)	0.030	0.040	0.045	0.681	0.496
Quality of services (X1) → Word of mouth (Y2)	0.150	0.166	0.064	2.322	0.021
Satisfaction (X2) → Word of mouth (Y2)	0.037	0.038	0.049	0.756	0.450

Table 7: Summary of Direct, Indirect, and Total Effect Among Variables

Independence Construct	Dependence Construct								
	Customer Satisfaction (X2)			Loyalty (Y1)			Word of Mouth (Y2)		
	DE	IDE	TE	DE	IDE	TE	DE	IDE	TE
Quality of services (X1)	0.269		0.269	0.275	0.030	0.305	0.303	0.150	0.453
Customer satisfaction (X2)				0.113		0.113	0.181	0.037	0.150
Loyalty (Y1)							0.332		0.332

Where : DE = Direct Effect

IDE = Indirect Effect

TE = Total Effect

4.3 Discussion

The results showed that service quality has a positive and significant effect on patient satisfaction, loyalty, and word of mouth at Bali Mandara Regional Hospital, Bali Province, but satisfaction is not a significant mediator on the effect of service quality on loyalty and word of mouth, but loyalty is a mediator that significant effect on the quality of service on word of mouth.

The results of interviews with several patients who have been treated at the Bali Mandara Regional Hospital, Bali Province who were randomly selected to support data interpretation showed that in general, the

quality of service of staff at the Bali Mandara Hospital, Bali Province was good, but patient satisfaction was unable to significantly mediate the effect of service quality loyalty and word of mouth, the source of the problem is satisfaction. Theoretically there are two possibilities, maybe the satisfaction variable as a moderating variable or satisfaction as an independent variable.

V. CONCLUSION

Based on the research results, it can be concluded that: (1) Service quality has a positive and significant effect on patient satisfaction, loyalty, and word of mouth at the Bali Mandara Regional Hospital, Bali Province; (2) Patient satisfaction has a positive and significant effect on loyalty, and word of mouth at the Bali Mandara Regional Hospital, Bali Province; (3) Loyalty has a positive and significant effect on word of mouth at Bali Mandara Regional Hospital, Bali Province; (4) Patient satisfaction is not able to significantly contribute to the effect of service quality on patient loyalty and word of mouth at Bali Mandara Hospital, Bali Province.

In accordance with the results of the study, it is suggested that Bali Mandara Regional Hospital, Bali Province need to make efforts to improve the quality of employee service so that it can directly increase patient satisfaction, loyalty, and word of mouth. Given that word of mouth is a promotional medium that does not require additional costs and does not have risks. Further research is needed to determine the factors that affect patient satisfaction at Bali Mandara Hospital, Bali Province.

REFERENCES

- [1] P. Kotler, *Manajemen Pemasaran* (Jakarta: PT. Prehalindo, 2002).
- [2] G. Armstrong, and P. Kotler, *Dasar-Dasar Pemasaran* (Jakarta: Intermedia, 1996).
- [3] F. Tjiptono, *Strategi Pemasaran* (Yogyakarta: Andi, 1999).
- [4] S. Baloglu, Dimensions of Customer Loyalty, *European Journal of Marketing*, 2002, 1372-1388.
- [5] A. Caruana, Service loyalty: The effects of service quality and the mediating role of customer satisfaction, *European Journal of Marketing*, (36/97/8), 2002, 811-828. DOI: 10.1108/03090560210430818
- [6] H. A. Rifai, A test of the relationships among perceptions of justice, job satisfaction, affective commitment and organizational citizenship behavior, *Gadjah Mada International Journal of Business*, 7(2), 2005, 131-154
- [7] A. Parasuraman, V. A. Zeithaml, and L. B. Leonard, Reassessment of Expectation as a Comparison Standard in Measuring Service Quality: Implications for Further Research, *Journal of Marketing*, 58 (January), 1994.
- [8] C. Lovelock, and K. W. Lauren, *Pemasaran Jasa* (Jakarta: Gramedia.Sabihaini's, 2005).
- [9] J. J. Cronin Jr., M. K. Brady, dan G. T. Hult, Assessing the Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments, *Journal of Retailing*, 76, 2000, 193-218.
- [10] E. Haryono, H. Kusnanto, and M. S. Nusyirwa, Hubungan Persepsi terhadap Kualitas Pelayanan dengan Minat Pemanfaatan Pelayanan Rawat Inap Puskesmas dan Balai Pengobatan Swasta di Kabupaten Tapanuli Tengah, *Working Paper Series*, No.4, Universitas Gadjah Mada, 2006.
- [11] L.L. Berry, A. Parasuraman, and V. A. Zeithaml, Service Quality Can Often Make The Difference Between a Business's Success and Failure. But What Causes Problems, and What Can Business Do To Eliminate Them? The Answers Are Here, *Journal of Marketing*, 2001, 35-43.
- [12] F. Tjiptono, *Manajemen Jasa* (Yogyakarta: Andi Offset, 2000)
- [13] V.A. Zeithaml, M.J. Bitner, D.D. Gremler. *Services Marketing Integrating Customer Focus Across The Firm*, 5th edition (McGrw: Hill Irwin, 2009).
- [14] I.L. Darsono, Hubungan perceived service quality dan loyalitas: peran trust dan satisfaction sebagai mediator. *Tesis*, The 2nd National Conference UKWMS, Surabaya, Unika Widya Mandala Surabaya, 2008.
- [15] L. Terrence, and G.H.G. McDougall, Determinants of customer satisfaction in retail Banking, *International Journal of Bank Marketing*, 14/7, 1996, 12-20.
- [16] F. Rangkuti, *Measuring Customer Satisfaction* (Jakarta: Penerbit PT Gramedia Pustaka Utama, 2002).
- [17] Sutisna, *Perilaku Konsumen & Komunikasi Pemasaran*, Cetakan Ketiga (Bandung: PT Remaja Rosdakarya, 2003).

- [18] A.A. Hidayat, *Metode Penelitian Kebidanan Teknik Analisis Data* (Jakarta: Salemba Medika, 2009).
- [19] P. Kotler, and Keller, *Manajemen Pemasaran*, Jilid I, Edisi Kedua belas (Jakarta: PT. Indeks, 2013).
- [20] G. Silverman, *The Secret of Word of Mouth Marketing: How to Trigger Exponential Sales Through Runaway Word of Mouth* (United States Of America: Amacam, 2001).
- [21] Sernovitz, *Word of Mouth Marketing* (Jakarta: Gramedia Pustaka Utama, 2009).
- [22] R. Rachman, and T.W. Abadi, Komunikasi Word of Mouth dan Keputusan Pembelian Batik Bangkalan, *Jurnal ASPIKOM*, 3(2), 2017, 285-295.
- [23] D.N.E. Putra, Pengaruh Word Of Mouth Terhadap Keputusan Pembelian Pada Cafe Roti Gempol Dan Kopi Anjis. *eProceeding of Management*, 2(1), 2015
- [24] B.J. Babin, Y.K. Lee, E.J. Kim, and M. Griffin, Modeling consumer satisfaction and word of mouth: restaurant patronage in Korea, *Journal of services marketing*, 19(3), 2005, 133-139.
- [25] W.D. Salisbury, W.W. Chin, A. Gopal, and P.R. Newsted, Research Report: Better Theory through Measurement Developing a Scale to Capture Consensus on Appropriation, *Information System Research*, 13, 2002, 91- 103.
- [26] J.F. Hair, W.C. Black, B.J. Babin, R.E. Anderson, and R.L. Tatham, *Multi-Variance Data Analysis* (New Jersey: Pearson Prentice Hall).