Investigation of Determinants of Customer Satisfaction at PDAM Tirta Moedal Semarang

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ABSTRACT

The problem that occurs in PDAM Tirta Moedal Semarang is that it makes customers feel dissatisfied and this causes complaints, including: water often dies and comes out very little. The purpose of the study was to examine the effect of service quality and reputation of PDAM Tirta Moedal Semarang on customer satisfaction of PDAM Tirta Moedal Semarang, with trust as an intervening variable. The population of this research is the housing community of Graha Mukti Semarang as many as 1,537 people. The number of samples in this study was 99.87 people (rounded up to 100 people, based on the Slovin formula). The method of analysis was carried out with the help of the SPSS 26 program. The variable influence model will be tested by path analysis. The results show that service quality and trust in PDAM Tirta Moedal Semarang have a direct effect on trust in PDAM Tirta Moedal Semarang. The service quality and reputation of PDAM Tirta Moedal Semarang has a direct influence on customer satisfaction of PDAM Tirta Moedal Semarang. Trust has a direct effect on customer satisfaction at PDAM Tirta Moedal Semarang. Trust can be said as an intervening variable on service quality and reputation on customer satisfaction at PDAM Tirta Moedal Semarang.

INTRODUCTION

Regional Drinking Water Companies in carrying out community service activities must pay attention to orientation to their customers, which concerns what must be satisfied. In the Regional Drinking Water Company, the consumers are the community. Kotler & Keller (2012) say satisfaction is a feeling of pleasure or disappointment that arises after comparing the performance (outcome) of the product thought to the expected performance (or result). By paying more attention to the customer orientation aspect, the goals to be achieved by the Regional Drinking Water Company will be achieved.

Many factors affect satisfaction, including reputation (Prayitno, 2015; Panjaitan & Yuliati, 2016; Aryska, 2017). Regional Drinking Water Companies must manage reputation which is one of the most important determining factors. A good reputation and supported by the competencies possessed will be able to increase the competitiveness of universities and will create student satisfaction. Therefore, a good reputation will increase the interest of qualified new students. Aryska (2017) examined the effect of company reputation on patient satisfaction and the results showed that company reputation had an effect on patient satisfaction. The results of this study are also supported by the results of Prayitno's research (2015); Panjaitan & Yuliati (2016) who examined the influence of company reputation on consumer satisfaction which showed the results that company reputation had an effect on customer satisfaction. However, the results of these studies contradict the results of Tarigan's (2014) research which actually states that the company's reputation has no effect on customer satisfaction.

Another factor besides reputation that also affects satisfaction is service quality (Prayitno, 2015; Panjaitan & Yuliati, 2016; Aryska, 2017). Service quality is the expected level of excellence and control over the level of excellence to meet customer desires (Tjiptono, 2011). Generally, dissatisfied customers will share their bad experiences with other people (Kotler & Keller, 2012). The quality of service provided by a business is the most important factor for customer satisfaction. Companies must pay attention to the things that are considered important by their customers so that they are satisfied according to their expectations. Prayitno (2015) states that service quality has a positive and significant effect on customer satisfaction. The results of this study are also
supported by the results of Aryska's research (2017); Panjaitan & Yuliati (2016) who also examined the effect of service quality on satisfaction and the results showed that service quality also affected satisfaction. However, the results of the research above contradict Harini (2016) who examined the effect of service quality on customer satisfaction which showed the results that service quality had no effect on customer satisfaction.

Sekaran (2006) states that if the influence of a variable on other variables is still ambiguous, then the next researcher can include the intervening variable, where the intervening variable must have been tested previously as an independent variable on the dependent variable. Jonraimlal (2015) and Harini (2016) which state that trust has a positive effect on satisfaction. Related to Sekaran's statement (2006) and the results of research from Jonraimlal (2015) and Harini (2016) as well as the results of different previous studies on the results of research on the influence of service quality and company reputation on satisfaction above, the researchers included a new variable, namely trust.) as an intervening variable because trust plays an important role in customer satisfaction according to customer expectations. According to Akbar & Parvez (2009), states that trust only exists when one of the parties believes in a cooperative relationship that is reliable and has integrity. Trust in products/services can only be obtained if marketers can create and maintain positive emotional relationships with consumers. Building and maintaining customer trust is very important, because it is the key to a successful long-term relationship between the company and its customers.

In the city of Semarang currently there is PDAM Tirta Moedal with its facilities and services. One way that is done by a government agency or in this case a Regional Company in increasing maximum customer satisfaction to customers which aims to provide excellent service to all company customers. PDAM in Semarang City. PDAM Tirta Moedal Semarang takes water from the West Flood Canal River, the Jatibarang River and the Kudu (Genuk) water source. In addition, PDAM Tirta Moedal obtains raw materials from groundwater. For now, the services provided by PDAM to the community include: new installations, repairs and bill payments as well as the water service itself. PDAM Tirta Moedal Semarang City. Apparently, there are still many customer complaints to the PDAM, such as: water often dies and comes out very little. These complaints can of course be used as input that needs to be taken seriously. The purpose of the study was to examine the effect of service quality and reputation of PDAM Tirta Moedal Semarang on customer satisfaction of PDAM Tirta Moedal Semarang, with trust as an intervening variable.

Quality of service is the professional attitude of employees who provide a comfortable feeling for consumers who receive products/services. Quality of service is the professional attitude of employees who provide a comfortable feeling for consumers who receive products/services. This attitude is a compensation from service providers in the hope of creating a feeling of trust in consumers. Suhardi (2006) states trust as a perception of reliability from the consumer's point of view based on experience, or rather on a sequence of transactions or interactions characterized by the fulfillment of expectations for product performance. Daruwati, et. al. (2017) resulted in research that service quality has an effect on trust. H1: Service Quality Affects Trust

The company's reputation is the result of an overall evaluation obtained from direct experience during dealing with the company, from the customer's point of view as one of the stakeholders, to the company's products and services including communication activities, and interactions with representatives from the company. Fombrun (1996) argues that company reputation is the view or perception of the company by people both inside and outside the company. Reputation is not only an attribute in a company but also how that reputation will continue to exist in the future. Basically, the company's reputation is an award that is obtained by the company because of the advantages that exist in the company, namely the capabilities possessed by the company so that the company will continue to be able to develop itself to continue to be able to create new things to meet consumer needs. Trust according to Susanti and Hadi (2013) is the willingness of a party to trust another party based on the expectation that the other party will take certain actions that are important to those who trust him. The research results of Prayitno (2015) and Rahmwati (2017) state that there is an influence of company reputation with trust in consumers. H2: Reputation affects Trust

Determination of service quality is strived to meet conformity with expectations. Tjiptono (2011) gives the notion that service quality is the level of perfection that is expected and controlled for that perfection. To fulfill customer desires. If the service received is as expected, then the service quality is perceived as good and satisfactory. If the service received exceeds customer expectations, then the service quality is perceived as ideal. Conversely, if the service received is lower than expected, then the service quality is considered poor. Prayitno (2015); Panjaitan and Yuliati (2016) who examined the effect of service quality on consumer satisfaction and Aryska (2017) examined the effect of service quality on patient satisfaction and the results showed that service quality had an effect on satisfaction. H3: Service quality affects satisfaction
Zeitaml, et al. (2013), the perceived service quality of a product or service is closely related to the reputation associated with the brand name. This means that customers will only associate a product or service with its brand, and therefore the company's reputation can also be measured at the product or service level. The reputation of the company directly shapes customer satisfaction with the products or services of the company concerned so that it will affect customers in making choices (Dick, Chakravarty & Biehal, 1990). Aryska (2017) examined the effect of company reputation on patient satisfaction and the results showed that company reputation had an effect on patient satisfaction. This research is also supported by Prayitno (2015); Panjaitan and Yuliati (2016) which states that the company's reputation affects satisfaction. H4: Reputation affects satisfaction

Satisfaction is influenced by service quality and trust. Satisfaction is related to a person's feeling of trust or distrust that arises after comparing the performance (outcome) of the product thought to the expected performance (or outcome). Consumers are distrustful and dissatisfied if performance is below expectations. But otherwise, consumers will believe and be satisfied if the performance meets expectations (Kotler & Keller, 2011). The results of Daruwati, et al. (2017); Johnraimal (2015); Harini (2016); Mahendra, et al. (2018) and Darwin and Kunto (2014) state that trust has an effect on satisfaction. H5: Trust has an effect on student satisfaction.

RESEARCH METHOD

The Influence of Service Quality and Reputation on Trust

Table 1. Results of regression analysis of the effect of service quality and reputation on trust

<table>
<thead>
<tr>
<th>Model</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant) .680 .287 .622</td>
<td>1,789 .003</td>
<td>7.085 .002</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Trust

From the table above, the equation can be made:

\( T = b_1 SQ + b_2 R + e_1 \)

\( T = 0.680 SQ + 0.287 R + 0.622 \)

The equation shows that:

(a) Trust increases when there is an increase in service quality if other variables are considered unchanged.

(b) Trust increases when reputation increases if other variables are considered unchanged.

(c) \( e_1 \) is a variant of the trust variable which is not explained by service quality and reputation. The magnitude of \( e_1 = (1 - 0.613) = 0.622 \), ii where the number 0.613 (Adjusted R Square) is obtained from a simultaneous test between service quality and reputation for trust as shown in table 2.

Table 2. Simultaneous Test Results Between Service Quality and Reputation on Trust

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>ModelR R Square</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 .805 a .624 .613 .622</td>
<td>1.79763</td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Service Quality, Reputation
The Influence of Service Quality, Reputation and Trust on Satisfaction

Table 3. Results of Regression Analysis of the Effect of Service Quality, Reputation and Trust in Satisfaction

<table>
<thead>
<tr>
<th>Model</th>
<th>Standardized Coefficients</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>2.072</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Service Quality</td>
<td>.450</td>
<td>3.477</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Reputation</td>
<td>.348</td>
<td>4.769</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Trust</td>
<td>.517</td>
<td>6.465</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Satisfaction

From the table above, the equation can be made:

\[ S = b_1 SQ + b_2 R + b_3 T + e_2 \]

\[ S = 0.450 SQ + 0.348 R + 0.517 T + 0.392 \]

The equation shows that:
(a) Customer satisfaction increases when there is an increase in service quality if other variables are considered unchanged.
(b) Customer satisfaction increases when there is an increase in reputation if other variables are considered unchanged.
(c) Customer satisfaction increases when there is an increase in trust if other variables are considered unchanged.
(d) \( e_2 \) is a variant of customer satisfaction variable which is not explained by service quality, reputation and trust.

The magnitude of \( e_2 = (1 - 0.846) = 0.392 \), where the number 0.846 (Adjusted R Square) is obtained from a simultaneous test between service quality, reputation and trust on satisfaction, as shown in Table 4:

Table 4. Simultaneous Test Results Between Service Quality, Reputation and Trust Against Customer Satisfaction

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.965</td>
<td>.858</td>
<td>.846</td>
<td>1.41019</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Trust, Service Quality, Reputation

The Effect of Service Quality on Trust

Table 5. Results of Regression Analysis of the Effect of Service Quality on Trust

<table>
<thead>
<tr>
<th>Model</th>
<th>Standardized Coefficients</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Service Quality</td>
<td>.680</td>
<td>7.08</td>
<td>.002</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Trust

Table 5 states that \( t \) count is 0.085 and beta is 0.680 and the significance is 0.002 <0.05, meaning that service quality has a positive and significant effect on trust, so \( H_a \) is accepted. Therefore, \( H_1 \) which states that service quality affects trust is acceptable. This means that the higher the quality of service, the higher the trust. This study is in accordance with Daruwati, et. al., (2017) and according to the theory of Goeth & Davis (2012) states that quality is a dynamic condition related to products, services, human resources, processes, and the environment that meet or exceed expectations.
Effect of Reputation on Trust

Table 6. Results of Regression Analysis of the Effect of Reputation on Trust

<table>
<thead>
<tr>
<th>Model</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reputation</td>
<td>287</td>
<td>1.18</td>
<td>.028</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Trust

Table 6 states that the t count is 1.183 and the beta is 0.287 and the significance is 0.028 < 0.05, meaning that reputation has a positive and significant effect on trust so that Ha is accepted. Therefore, H2 which states that reputation affects trust is acceptable. This means that the higher the reputation, the higher the customer satisfaction. This research is in accordance with Prayitno (2015) and Rahmawati (2017) and according to the theory by Fombrum (2012) where reputation is the embodiment of one's experience with the product, or service obtained. A good reputation will increase credibility so that consumers are more confident because they will get what was promised to them. Reputation is like a guarantee that consumers will get what they expect.

The Effect of Service Quality on Customer Satisfaction

Table 7. Results of Regression Analysis of the Effect of Service Quality on Customer Satisfaction

<table>
<thead>
<tr>
<th>Model</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Quality</td>
<td>.450</td>
<td>3.47</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Customer Satisfaction

Table 7 states that the t count is 3.477 with a beta of .450 and a significance of 0.000 <0.05, meaning that service quality has a positive and significant effect on customer satisfaction so that Ha is accepted. Therefore, H3 which states that service quality affects customer satisfaction is acceptable. This means that the higher the quality of service, the higher the satisfaction. This research is in accordance with Panjaitan and Yuliati (2016); Prayitno (2015); Ariska (2017) and according to the theory of Goeth & Davis (2012) which states that service quality is a dynamic condition related to products, services, human resources, processes, and the environment that meet or exceed expectations.

The Effect of Reputation on Customer Satisfaction

Table 8. Regression Analysis Results of the Effect of Reputation on Customer Satisfaction

<table>
<thead>
<tr>
<th>Model</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reputation</td>
<td>.348</td>
<td>4.76</td>
<td>.001</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Customer Satisfaction

Table 8 states that the t count is 4.769 with a beta of 0.348 and a significance of 0.001 < 0.05, meaning that reputation has a positive and significant effect on customer satisfaction so that Ha is accepted. Therefore, H4 which states that reputation affects customer satisfaction is acceptable. This means that the higher the reputation, the higher the customer satisfaction. This research is in accordance with Aryska (2017); Prayitno (2015); Panjaitan & Yuliati (2016) and according to the theory of Fombrum (2012) which states that reputation is the embodiment of a person's experience with the product or service they get. A good reputation will increase credibility, making customers more confident that they will get what they have been promised. Reputation is a guarantee that what customers get will match their expectations.
The Effect of **Trust** on Customer Satisfaction

Table 9. Results of Trust Effect Regression Analysis Against Customer Satisfaction

<table>
<thead>
<tr>
<th>Model</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Trust</td>
<td>.517</td>
<td>6.465</td>
</tr>
</tbody>
</table>

Table 9 states that the t count is 5.556/6.465 with a beta of 0.408/0.517 and a significance of 0.000 < 0.05, meaning that trust has a positive and significant effect on customer satisfaction so that Hₐ is accepted. Therefore, the H₅ trust effect on customer satisfaction is acceptable. This study shows that trust has a direct and significant effect on customer satisfaction. This can be interpreted that the higher the trust, the higher the satisfaction customer. This study is in accordance with Mahendra, et al. (2018); Daruwati, et al. (2017); Johnraimal (2010); Harini (2016); Darwin & Kunto (2014) and in accordance with the theory of Barnes (2003) which states that trust is a person's belief in what he wants in others, and not what he fears. Trust involves a person's willingness to behave in a certain way because of the belief that his partner will provide the customer satisfaction he expects and an expectation that a person generally has that other people's words, promises, or statements can be trusted.

**Mediation Test Analysis**

a. Analysis of the total effect of the influence of service quality on customer satisfaction through trust with a total effect of (0.450 + 0.388) = 0.838.

b. Analysis of the total effect of the influence of reputation on customer satisfaction through trust. The total influence arising from reputation on customer satisfaction is equal to (0.348 + 0.164) = 0.512.

c. Based on the results of the above analysis obtained from b₂Mₓ₁ + (b₂Mₓ₂ x b₅Mᵧ) = 0.348 + 0.164 = 0.512 , and service quality total effect is obtained from b₁Mᵧ + (b₁Mₓ₁ x b₅Mᵧ) = 0.450 + 0.388 = 0.838 while the direct influence of reputation on customer satisfaction is 0.348. The direct effect of trust on customer satisfaction is 0.450. Therefore, it can be seen that the total effect > direct effect is the quality of trust (0.838 > 0.450) and reputation (0.512 > 0.348), so trust is able to mediate the effect of service quality and reputation on customer satisfaction.

**Trust Mediates the Effect of Service Quality on Customer Satisfaction**

The influence of service quality on trust and the effect of trust to customer satisfaction obtained coefficient value b₁ = 0.680 and coefficient value b₅ = 0.571 then trust mediates the effect of service quality on customer satisfaction. The indirect influence value is obtained from the b₁Mₓ₁ path coefficient multiplied by the b₅Mᵧ path coefficient to be (0.680 x 0.571) = 0.388, meaning that the indirect effect coefficient value is smaller than the direct influence coefficient value (0.388 < 0.450). This shows that service quality has a positive and significant indirect effect on customer satisfaction through trust. As the quality of service increases, the trust will also increase and with the increasing trust , the customer satisfaction will also increase. This research is in accordance with the research of Purwa & Ardani (2018).

**Trust Mediates the Effect of Reputation on Customer Satisfaction**

The influence of reputation on trust and the effect of trust on customer satisfaction obtained coefficient value b₂ = 0.287 coefficient value b₅ = 0.571 then trust mediate the influence of reputation on customer satisfaction. The value of the indirect effect is obtained from the value of the b₂Mₓ₂ path coefficient multiplied by the b₅Mᵧ path coefficient to be (0.287 x 0.571) = 0.164. The multiplication result shows that the indirect effect coefficient value is smaller than the coefficient value direct effect (0.164 < 0.348). This shows that reputation has a positive and significant indirect effect on customer satisfaction through trust. The higher the reputation, the higher the trust and the higher the customer satisfaction . This study is in accordance with the research of Gul (2014). Trust can be said as a mediating variable on service quality and reputation on customer satisfaction at PDAM Tirta Moedal Semarang because the direct effect < total effect arising from service quality on customer satisfaction and reputation on customer satisfaction So the improvement of service quality and reputation will increase trust which in turn will also have an impact on increasing customer satisfaction at PDAM Tirta Moedal Semarang.
CONCLUSION

Service quality has a positive and significant effect on trust in PDAM Tirta Moedal Semarang, which means that the higher the service quality, the higher the trust in PDAM Tirta Moedal Semarang. Reputation at PDAM Tirta Moedal Semarang has a positive and significant effect on trust in PDAM Tirta Moedal Semarang, which means that the higher the reputation at PDAM Tirta Moedal Semarang, the higher the trust at PDAM Tirta Moedal Semarang. Service quality has a positive and significant effect on customer satisfaction at PDAM Tirta Moedal Semarang, which means that by improving service quality, customer satisfaction at PDAM Tirta Moedal Semarang will increase. Reputation of PDAM Tirta Moedal Semarang has a positive and significant effect on customer satisfaction at PDAM Tirta Moedal Semarang, which means that by increasing reputation, customer satisfaction at PDAM Tirta Moedal Semarang will increase. Trust has a positive and significant influence on customer satisfaction at PDAM Tirta Moedal Semarang, which means that by increasing trust, customer satisfaction at PDAM Tirta Moedal Semarang

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