International Journal of Integrative Sciences (IJIS)
Vol.2, No.9, 2023: 1445-1458

Analysis of the Effect of Customer Satisfaction of Internet Service Providers Using Structural Equation Modeling

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A R T I C L E I N F O

Keywords: Quality, Price, Service Quality

Received : 12 July
Revised : 20 August
Accepted: 21 September

A B S T R A C T

Service Quality Variable (X1) significantly affects Customer Satisfaction because the probability of t count is smaller than the probability value of 0.05 (0.005 <0.05). Service_Quality Variable (X1) has a direct effect on_Customer_ Satisfaction of 0.365. Product Quality Variable (X2) significantly influences Customer Satisfaction because the probability of t arithmetic is smaller than the probability value of 0.05 (0.005 <0.05). Product Quality Variable (X2) has a direct influence on Customer_Y Satisfaction of 0.432. Quality_X1_Quality Variable, Product_X2_Quality has a 31.7% role to Customer_Y Satisfaction

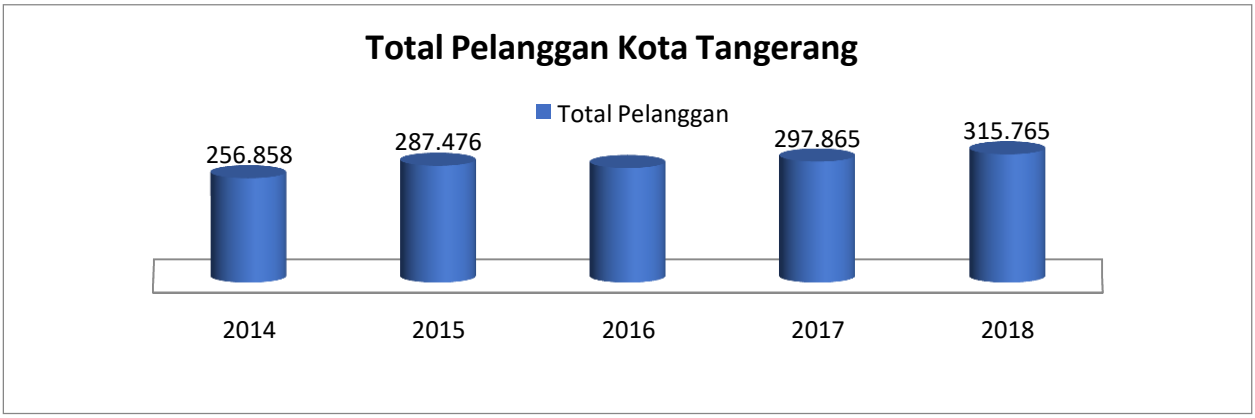
DOI: https://doi.org/10.55927/ijis.v2i9.5998
ISSN-E: 2985-905
https://journal.formosapublisher.org/index.php/ijis

INTRODUCTION

With the good quality of service in a company, it will create satisfaction for its customers. After consumers are satisfied with the product or service it receives, consumers will compare the services provided. If consumers feel really satisfied, they will buy back and give recommendations to others to buy in the same place. Therefore companies must start thinking about the importance of more mature customer service through service quality, because it is now increasingly recognized that service (customer satisfaction) is a vital aspect in order to stay in business and win the competition (Tjiptono, 2012: 145).

The communication media that are currently much needed by the public, namely the Internet. The internet is one example of a form of communication as a means that makes it easy to communicate, and even creates a fundamental phenomenon in providing information in various layers of the real world that is amazing for every layer of society. Especially the scientific community who often look for various data and information, even for the time being children's knowledge about the internet is sometimes superior to adults.

The internet is the heart of the so-called information age mother of all networks, because the internet is a computer network throughout the world that connects hundreds or even thousands of smaller networks, for example educational, commercial, non-profit, military and even individual networks. The internet was present more than 35 years ago, but one important thing that popularized the internet, besides e-mail, was the world wide web or abbreviated www. The web is defined as an internet computer interconnection system (called a server) that supports multimedia formatted documents. The word multimedia, which means a lot of media, is related to technology that presents information on more than one media, such as text, still images, moving images and sound. In other words, the web provides information in various forms. Internet access service providers, commonly called Internet Service Providers / ISPs, have networks both domestically and internationally so that the number of ISP providers in Indonesia is growing more rapidly. PT. Link Net Tbk is one of the ISP providers in Indonesia, or better known as First Media.



Source: PT. Firstmedia

Figure 1. Customer Data Firstmedia Kota Tangerang'

In meeting the needs for telecommunications and multimedia services, customers become more careful andcareful in deciding or using a product to meet their needs. The large diversity of goods or products and services offered makes its own appeal for consumers. Following is the data of PT. First Media, Tbk:

The service complaint data for the past five years in Firstmedia Tangerang City are as follows:

Table 1. Product Quality Complains Report

Type of complaint	Year 2014	2015	2016	2017	2018
The internet network is always disrupted in 2017-2018	14,563 Customer	26,327 Customer	28,556 Customer	39,181 Customer	47,951 Customer
There are channels that can't be opened	10,351 Customer	25,232 Customer	27,192 Customer	32,198 Customer	41,367 Customer

Source: Firstmedia Tangerang City

From the customer complaint data above it can be seen that each year customer complaints have increased, meaning there are problems regarding customer complaints, Therefore, this study will try to analyze customer satisfaction with internet service providers PT. Tangerang City Fistmedia to determine the relationship between variables that affect customer satisfaction, using structural equation modeling (SEM). The results of this study are expected to be a recommendation.

Based on the above problems, the objectives of this study are:

1. To determine the effect of service quality on Firstmedia customer satisfaction in the City of Tangerang.
2. To determine the effect of product quality on Firstmedia customer satisfaction in the City of Tangerang.

To determine the effect of service quality and customer satisfaction together on Firstmedia customer satisfaction in the City of Tangerang

LITERATURE REVIEW

1. Service Quality

According to Fajar Laksana (2013: 88) argues that "Service quality is the magnitude of the difference between the expectations and desires of consumers with their level of perception". According to this opinion a quality of service or as advantages provided by the company in order to meet customer desires.

2. Product Quality

According to Private Bashu and Irawan (2011: 65) stated "Quality refers to the actual technical superiority of the product as a whole or the superiority of whether the product is received or not.

3. Customer Satisfaction

According to Supranto (2010) argues "Customer satisfaction is determined by the quality of goods / services that customers want so that quality assurance is a top priority for every company, which at this time is specifically used as a measure of the company's competitive advantage".

4. Research Hypothesis

While testing the formed hypothesis is as follows: H1: Service Quality affects customer atisfaction. H2: Product quality affects customer satisfaction

METHODOLOGY

Manage the Spinned Words as You Want

The analysis technique used in this study is structural equation modeling (SEM).With documentation The Poplulation were 100 people. The number of samples used in this study were 100 people.

RESULTS AND DISCUSSIONS

Data Normality Test

Table 2. Assessment of Normality (Group Number 1)

Variable	min	max	skew	c.r.	kurtosis	c.r.
Y10	1,000	5,000	-,162	-,659	-,630	-1,286
Y9	1,000	5,000	-,071	-,291	-,374	-,763
Y8	1,000	5,000	-,123	-,502	-,052	-,105
Y7	1,000	5,000	-,570	-2,328	,395	,806
Y6	1,000	5,000	,244	,996	-,437	-,892
Y5	1,000	5,000	,055	,226	-,537	-1,096
Y4	1,000	5,000	,009	,038	-,410	-,837
Y3	1,000	5,000	-,321	-1,310	-,040	-,081
Y2	1,000	5,000	-,332	-1,354	,034	,070
Y1	1,000	5,000	-,214	-,872	-,352	-,719
X2_10	1,000	5,000	-,796	-3,250	,944	1,926
X2_9	1,000	5,000	-,265	-1,083	-,001	-,001

X2_8	1,000	5,000	-,248	-1,012	-,532	-1,087
X2_7	1,000	5,000	,208	,850	-,535	-1,091
X2_6	1,000	5,000	-,320	-1,305	-,184	-,376
X2_5	1,000	5,000	-,215	-,878	-,141	-,287
X2_4	1,000	5,000	-,572	-2,334	,162	,330
X2_3	2,000	5,000	-,346	-1,411	-,547	-1,117
X2_2	1,000	5,000	-,164	-,671	-,167	-,340
X2_1	1,000	5,000	-,532	-2,171	,265	,541
X1_10	1,000	5,000	,100	,408	-,581	-1,187
X1_9	2,000	5,000	,155	,634	-,365	-,745
X1_8	2,000	5,000	,061	,251	-,582	-1,188
X1_7	2,000	5,000	-,060	-,244	-,766	-1,564
X1_6	2,000	5,000	-,052	-,212	-,922	-1,883
X1_5	2,000	5,000	,028	,114	-,938	-1,914
X1_4	1,000	5,000	-,248	-1,012	-,057	-,117
X1_3	2,000	5,000	-,049	-,199	-,701	-1,431

Variable	min	max	skew	c.r.	kurtosis	c.r.
X1_2	2,000	5,000	-,313	-1,279	-,171	-,349
X1_1	1,000	5,000	-,306	-1,248	-,158	-,323
Multivariate					24,909	2,842

Normal data = c.r. -2.58 <2,842> 2.58z Data is not normal because it meets these requirements. Then Univariate Normality is used p1 or p2> 0.05

Table 3. Observations Farthest from the Centroid (Mahalanobis Distance) (Group Number 1)

Observation number	Mahalanobis d-squared	p1	p2
40	54,378	,004	,342
41	52,155	,007	,167
3	47,056	,025	,447
8	46,842	,026	,258
98	42,983	,059	,706
47	40,904	,089	,886
30	40,680	,092	,827

58	39,766	,109	,868
42	39,753	,110	,781
97	39,561	,114	,712
43	38,778	,131	,773
75	38,771	,131	,671
9	38,669	,133	,583
12	38,579	,135	,491
57	38,246	,144	,470
63	37,901	,152	,457
10	37,710	,157	,405
100	37,195	,172	,452
4	36,932	,179	,428
20	36,888	,180	,344

Observation number	Mahalanobis d-squared	p1	p2
71	36,781	,184	,284
89	36,679	,187	,230
83	36,492	,192	,202
34	36,206	,201	,199
14	35,750	,216	,240
32	35,540	,224	,222
87	34,824	,249	,350
19	34,803	,250	,277
1	34,695	,254	,235
6	34,418	,264	,241
21	34,410	,265	,180
26	34,272	,270	,156

24	34,209	,273	,121
68	34,144	,275	,092
50	33,817	,288	,106
18	33,650	,295	,096
72	33,487	,302	,086
35	33,468	,303	,060
49	33,363	,307	,048
65	32,786	,332	,091
38	32,621	,339	,084
37	32,574	,341	,062
23	32,525	,344	,045
59	32,391	,350	,038
45	32,144	,361	,041
95	32,062	,365	,032
84	31,793	,377	,036
31	31,546	,389	,040
56	30,733	,429	,128
67	30,521	,439	,131
Observation number	Mahalanobis d-squared	p1	p2
51	30,328	,449	,130
69	29,722	,480	,241
93	29,200	,507	,360

60	29,152	,510	,306
62	28,765	,530	,382
17	28,144	,563	,564
36	27,624	,590	,699
29	27,059	,620	,824
25	27,059	,620	,767
85	26,521	,648	,867
61	26,500	,649	,824
5	26,433	,653	,788
7	26,324	,658	,762
11	25,870	,682	,842
52	25,869	,682	,787
39	25,832	,684	,734
66	25,812	,685	,668
79	25,765	,687	,608
27	25,055	,722	,799
55	25,035	,723	,740
16	24,707	,739	,784
77	24,471	,750	,794
86	24,280	,759	,790
82	24,029	,771	,804
22	23,576	,791	,869
80	23,513	,794	,831

2	23,420	,798	,794
15	22,938	,818	,865
99	22,670	,829	,875
54	22,519	,835	,856
Observation number	Mahalanobis d-squared	p1	p2
73	22,380	,840	,830
94	22,337	,842	,771
33	22,224	,846	,725
90	22,118	,850	,669
64	21,654	,866	,742
28	21,037	,887	,842
91	20,853	,892	,815
46	20,569	,901	,810
96	20,568	,901	,714
78	20,460	,904	,636
13	20,231	,910	,593
81	20,222	,911	,458
48	19,949	,918	,416
53	18,614	,948	,732
88	17,097	,971	,932
44	16,715	,976	,905
74	16,207	,981	,875

70	16,128	,982	,721
76	14,154	,994	,869
92	11,841	,999	,884

Normal data because it meets these requirements, namely p1 or p2> 0.05

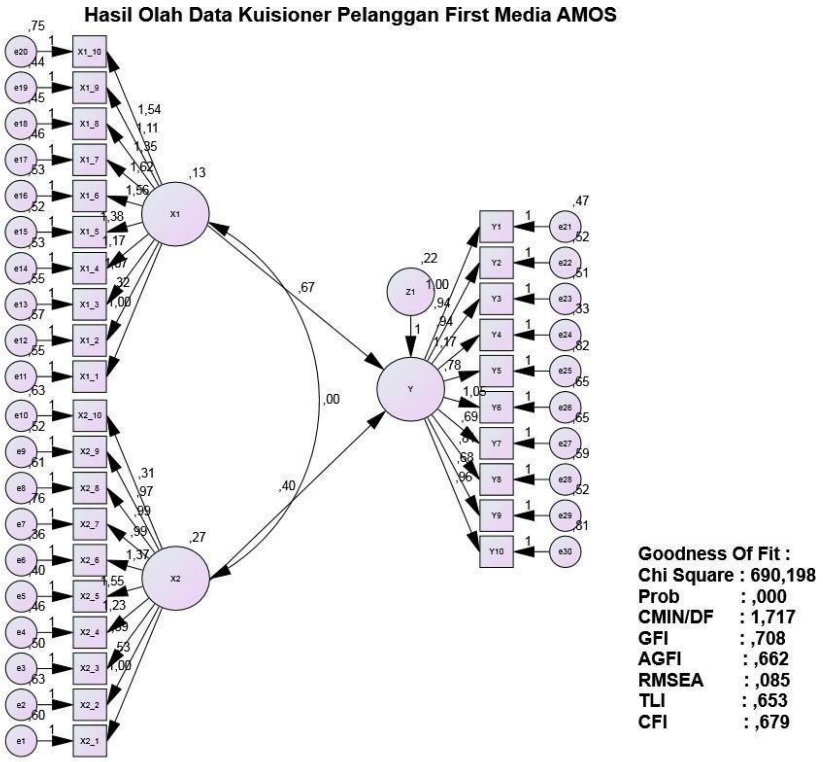


Figure 2. Structural Model Testing

Table 4. Goodness of Fit Measurement Model Results

Indeks	Cut off Value	Hasil	Evaluasi Model
Chi square	Near 0	690,198	Good (Marginal)
Probability	≥ 0,05	0,000	Good (Marginal)
CMIN/DF	≤ 2,00	1,717	Good (Marginal)
GFI	≥ 0,90	0,708	Good (Marginal)
RMSEA	≤ 0,08	0,085	Good (Marginal)

AGFI	≥ 0,90	0,662	Good (Marginal)
TLI	≥ 0,90	0,653	Good (Marginal)
CFI	≥ 0,90	0,679	Good (Marginal)

Table 5. Evaluation of the Regression Weight of the Causality Test

			Estimate	S.E.	C.R.	P	Label
Customer Satisfaction_Y	<--	Service Quality_X1	,665	,238	2,799	,005	par_28
Customer Satisfaction_Y	<--	Product Quality_X2	,401	,142	2,826	,005	par_29

Further explanation of the regression weight evaluation analysis can be described and explained as follows:

A. Service_X1 Variable Variable significantly influences Customer Satisfaction because the probabilityof t arithmetic is smaller than the probability value of 0.05 (0.005 <0.05).
B. Product_X2 Quality Variable significantly influences Customer_ Satisfaction because the probabilityof t arithmetic is smaller than the probability value of 0.05 (0.005 <0.05).

Table 6. Direct Effects, Indirect Effects and Total Effects

Variabel	**DirectEffect**	**Indirect Effects**	**Total Effects**
Cutomer Satisfaction_Y <-- Service Quality_X1	0,365	0,000	0,365
Cutomer Satisfaction_Y <-- Product Quality_X2	0,432	0,000	0,432

A. Service_X1 Variable Variable has a direct effect on Customer_ Satisfaction of 0.365
B. Product_X2 Quality Variable has a direct effect on Customer_Satisfaction of 0.432

Table 7. Coefficient of Determination

Variables That Affect	Variables Affected	Effectiveness
Servce Quality_X1, Product Quality_X2	Cutomer Satisfaction_Y	0,317

Service_X1 Quality Variable, Product_X2 Quality has a role of 31.7% of Customer_Satisfaction

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

From the results of testing the Amos model hypothesis are:

a. Service quality variable (X1) significantly influences customer satisfaction because the probability of t is smaller than the probability value of 0.05 (0.005 <0.05). Service_X1 Quality

Variable has a direct effect on Customer_ Satisfaction of 0.365. As Santoso (2014) did in his research, it concluded that service quality has a positive and significant effect on customer satisfaction.

b. Product_X2 Quality Variable significantly influences Customer_ Satisfaction because the probability of t arithmetic is smaller than the probability value of 0.05 (0.005 <0.05). The Product_X2 Quality Variable has a direct effect on Customer_ Satisfaction of 0.432. This is in accordance with research conducted by Marheni (2015) which in his research resulted in the conclusion that product quality has a positive and significant effect on customer satisfaction.
c. Service_X1 Quality Variable, Product_X2 Quality has a role of 31.7% to Customer_Y Satisfaction. This is in accordance with research by Lohana and Sharma (2012) studying the satisfaction of Hyundai Car owners in Nanded City with the aim of identifying consumer choices and parameters about Hyundai cars. The results show that 50% of consumers are satisfied with the overall performance of their cars.

Recommendations

Based on the data analysis and previous discussion, the following suggestions can be made:

1) For companies
a. In order to improve the quality of service by providing training for employees in serving patients.
2) For academics

For those who wish to conduct similar research, it is advisable to examine variables other than brand equity and service quality. Because from this research it is known that 26.4% of there are still other factors that can influence the customer loyalty variable.

FURTHER STUDY

Clients commonly count on that the products or services they consume may be acquired or loved with accurate or pleasant carrier. In different words, customers want the exceptional of carrier supplied to be appropriate and fulfilling. Agencies need to pay attention to the best of offerings (carrier excellent) and the services provided by way of the employer. In this case, the employer without a doubt strives to provide precise service or provider (carrier satisfactory) to its clients. This is the employer's effort to be extraordinary from its competitors.

In step with Tjiptono (2009): "nice of provider or fine of provider which defines as a dynamic situation related to, services, human resources, techniques and environment that meet or exceed expectancies.

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