Model Service Quality : Case Study Indonesian Domain

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Abstract: Domain Internet Indonesia this study aims to determine the price for the loyalty of .id domain users name, the quality of user loyalty, and brand image on the loyalty of .id domain users name. The sample of this study amounted to 93 taken from the Lemeshow formula with an alpha of 5% of the total customers who did not renew the .id domain name at the Indonesian Internet Domain name manager This research method uses quantitative methods with Structural Equation Modeling (SEM): Partial Least Square (PLS). This research was conducted by developing a model to analyze the effect of price, brand image, and product quality on consumer loyalty for .id domain names. The researcher describes the results found, then proceeds with discussing the conclusions of acceptance or rejection of the hypothesis as well as various theoretical and managerial implications that arise and will present the limitations of the research and future agenda that can be carried out as a continuation of research on the .id domain.

Keyword: Price, Quality, Brand Image, User Loyalty, Domain Name

INTRODUCTION

In 2013 the Internet Corporation for Assigned Names and Numbers (ICANN) as the administrator of the internet, both domain names and internet addresses in the world, has launched a new generic Top-Level Domain (New gTLD) program so that the currently circulating high-level domain names are not only domain names that are representing countries such as .id for Indonesia, .sg for Singapore, .au for Australia and generic domain names such as .com, .net and others. Until 2020 the new gTLD has circulated in the world more than 1,200 high-level domain names (Newgtlds.icann.org, 2020). Domain name competition is getting tougher so it is estimated that domain name users who will switch from other domain names will be easier and make the loyalty of domain name users to be maintained. Policy in determining prices in the internet business (Ford, 2021). Price here plays a role in getting customers and consumers. In the policy of determining prices for providers, pay attention to other providers. (Lee, 2021).

The .id domain name represents the State of Indonesia on the internet. A domain name on the internet is an address that can be accessed to view information from an organization or

person who owns the domain name. The domain name itself can be interpreted as a company brand on the internet. Domain name registration as the first step in getting to an organization or who wants to use a domain will be online. Domain names that have been registered nationally and internationally using a domain by the order will be acknowledged (Kah Leng, 2010). Domain names become part of the unique Internet protocol (IP) address of a site. Indonesian Internet Domain Name Manager is an organization that manages .id domain names in Indonesia. The .id domain name itself is divided into several categories, such as for companies using co.id, universities using ac.id, the government using go.id, military agencies using mil.id and for personal use can use .id, my.id or web.id.

As a subscriber of a national domain name, you should build a brand image or foster interest in selling your organization to the national, but many national organizations are more likely to use international domain names such as .com, the lack of consumer loyalty from Indonesia that uses domain.id, requires a review to date. . The .id domain name is still a dilemma for online consumers in Indonesia who want to build a brand image, and build consumer or customer loyalty. Internet penetration in Indonesia in 2018 grew very significantly from 143.26 million users from 262 million population or 54.68% in 2019 to 171.17 million users from 264.16 million population or 64.8% in 2019 (Apjii.or.id, 2019). The number of .id domain names in August 2020 was only 330,307 domain names (PANDI, 2020) which are not comparable to the very large population in Indonesia.

A domain name is an organizational or individual identity that uses for business purposes or provides information to reinforce what is currently in business strategy or consumer goals. There are various domain names around the world, in Indonesia which is managed by PANDI (an organization that manages .id domains). Domain names are used for life for various types. (Zeng et al., 2021). The development of trading in cyberspace has made it easier for several reasons, such as prices being flexible, both in the field and online (Brynjolfsson & Smith, 2000). A successful brand image for an organization comes from identity, this will be seen at an early stage. (Sääksjärvi & Samiee, 2011). The formation of the image of consumers who use domain.id expects something that can sell as much information as possible, of course apart from the id, there are other factors such as the appearance of the website, the content of the website material, attractive appearance of colors, and improvisation in a continuous-time change.

Loyalty will be formed from the existence of customers or consumers who continue to buy and do not move to other producers, loyalty can be formed from a short period as long as the product can convince consumers, and can satisfy them. Customer loyalty is formed from performance(Kim et al., 2007). Customer satisfaction is defined as the customer's overall assessment of the disconfirmation between expected and perceived service performance (Anderson & Sullivan, 1993); (Ramaswamy, 1996). Customer loyalty is defined as a customer's attitude to service (Ramaswamy, 1996); (Stank et al., 1999). Domain names as a means for investors of their domains to earn profits. An attractive domain name that generates traffic and interest will have a large number of potential customers visiting the domain (Salvador & Nogueira, 2011).

METHOD

This research method uses a quantitative method with Structural Equation Modeling (SEM): Partial Least Square (PLS). The sampling technique in this study uses a non-probability sampling technique using convenience sampling, namely, the respondent sample is selected directly from the existing population, the authors take a sample of 93 respondents according to the Lemeshow method. The scale used in this study is the Likert scale. Data was collected through questionnaires distributed using the Internet via electronic mail (e-mail) or online forms.

Table 1. Comparison of Number of High-Level Domain Names in 2020

Domain Name	Country	Total
.com	Global (USA)	144.295.410
.net	Global (USA)	13.237.550
.org	Global (USA)	10.083.878
.id	Indonesia	340.141
.my	Malaysia	187.240
.sg	Singapore	175.208
.cn	China	14.275.759
.us	USA	1.814.537
.au	Australia	2.926.602

Source: https://research.domaintools.com (accessed September 2020)

In August 2020 the Indonesian Internet Domain Name Manager changed the price of the .id domain name from the previous Rp. 105,000 to Rp. 180,000, this is inversely compared to other domain names such as .com which are sold on average in Indonesia for Rp. 100,000 to Rp. 130,000 (masterweb.com, 2020). In addition to the increase in the price of the .id domain name, PANDI has also started to apply the Lowest Retail Price (HET) which can be sold by the registrar and reseller of the .id domain name for Rp. 180,000 (PANDI, 2020). Some literature shows that price changes can affect customer loyalty (Hortamani et al., 2013).

Table 2. Comparison High-Level Domain Name Price 2020

Domain Name	Country	Prince (Rupiah)
.com	Global (USA)	133.200
.net	Global (USA)	194.700
.org	Global (USA)	194.700
.id	Indonesia	250.000
.my	Malaysia	720.000
.sg	Singapore	427.500
.cn	China	104.850
.us	Amerika Serikat	126.300
.au	Australia	224.700

Source : (tld-list.com, 2020)

Table 3. Data on the Number of Domain Names Not Renewing Domain Names 2019 and 2020

Month	Year	Total

|		
September	2019	4.858
October	2019	5.198
November	2019	5.195
December	2019	5.084
January	2020	5.059
February	2020	4.573
March	2020	4.762
April	2020	5.413
May	2020	5.792
June	2020	5.614
July	2020	5.237
August	2020	5.618
September	2020	4.851
October	2020	7.740

Source : (PANDI, 2020)

Table 3 shows the number of domain names that did not renew from September 2019 to August 2020 as many as 62,403 domain names out of a total of 330,607 domain names in August 2020, around 18.87% of the domain name population. This number is quite a lot, resulting in the slow growth of domain names. The quality of a product is a parameter so that users of the service or product have loyalty and extend the use of the product. (Dimyati, 2015). A domain name can be interpreted as a product, organization, or personal brand on the internet. The domain name most used by consumers today is .com, it is reflected in the number of domain names in Table 1.

Brand image is very influential on the perception of quality and user loyalty of a product or service (Chi et al., 2009) so that an effort is needed to improve the brand image to users and the public. This applies to .id domain names whose brand image is currently still under the .com domain name in Indonesia based on the number of domain names. Product Quality on Interest in Buying.ID Domains, (Mendrofa, 2016), in this study price, quality, and brand image affect the decision to purchase .id domain names. In this case, the author has another point of view, namely to see the reasons for people who already use the .id domain name but do not renew. And the emergence of a new generic top-Levell Domain (new gTLD) has made the competition even tougher and the potential for .id domain name user loyalty has decreased due to; 1) Indonesian Internet Domain Name Managers increase the price of .id domain names amid intense competition from Rp. 105,000 to Rp. 180,000, 2) The perception of the quality of the .id domain name needs to be researched to be able to increase the loyalty of .id domain name users, 3) The .id domain name brand image is still lacking when compared to other domain names such as .com, this can be seen from the number of scattered domain names.

RESULTS AND DISCUSSION

Data collection was carried out by distributing questionnaires. The sample taken in this study was 92.59 and rounded up by 93 respondents according to the Lemeshow method, with an error rate of 5% recorded in the .id domain thewhere the selected respondents are respondents who do not renew the domain name. Results of Data Analysis with PLS Technical, Partial Least Square (PLS) Model Scheme is a variant-based structural equation analysis (SEM) that can simultaneously test and test structural models, test hypotheses using analytical techniques with the smartPLS 3 programs. Furthermore, (Ghozali, 2015) explained that PLS is an analytical method that is soft modeling because it does not assume the data must be with a certain scale measurement, which means the number of samples can be small (under 100 samples). The data is used for the analysis of each independent variable, namely: price (X_1), quality (X_2), and brand image (X_3), and the dependent variable is customer loyalty (Y).

The following is a schematic of the PLS program model
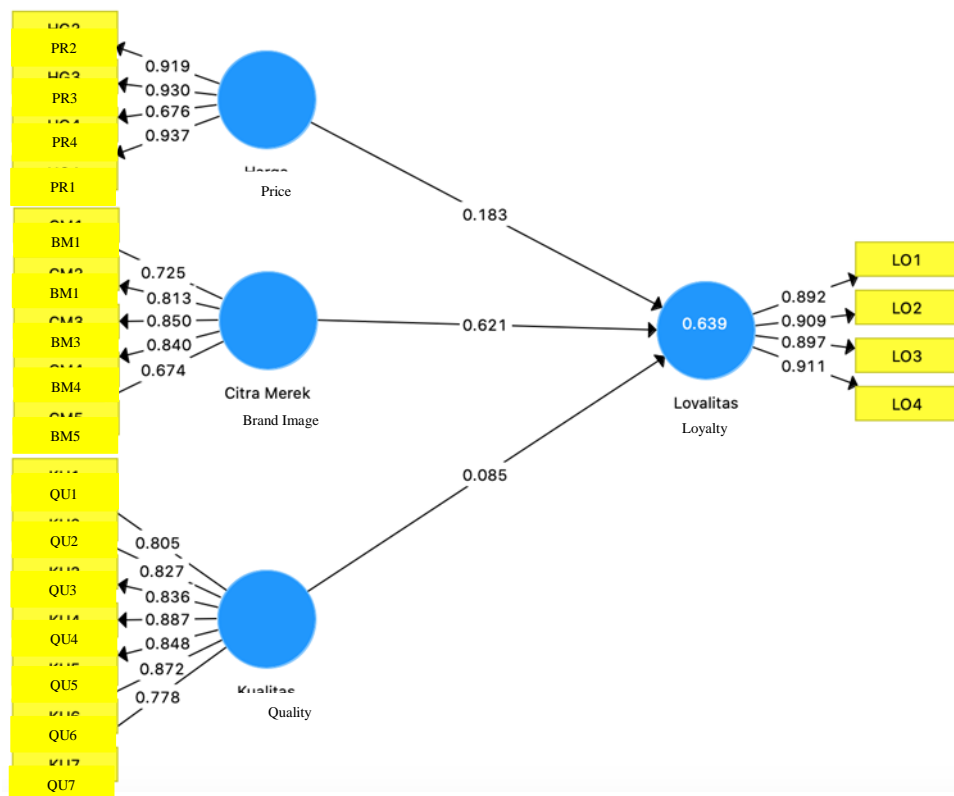
Convergent Validity

To test convergent validity, the outer loading or loading factor values are used. An indicator is declared to meet convergent validity in the good category if the outer loading value is > 0.7. The following is the value of the outer loading of each indicator on the research variable:

Table 4. *Outer Loading*

Variable	Indicator	*Outer Loading*
Brand Image	BM1	0,725
	BM 2	0,813

(X₃)	BM 3	0,850
	BM 4	0,840
	BM 5	0,674
Price (X₁)	PR1	0,937
	PR2	0,919
	PR3	0,930
	PR4	0,676
Quality (X₂)	QU1	0,805
	QU2	0,827
	QU3	0,836
	QU4	0,887
	QU5	0,848
	QU6	0,872
	QU7	0,778
Loyalty (Y)	LO1	0,892
	LO2	0,909
	LO3	0,897
	LO4	0,911

Based on the table above, it is known that several variable indicators have an outer loading value below 0.7. According to Chin as quoted by (Ghozali, 2015), the outer loading value between 0.5 - 0.6 is considered sufficient to meet the convergent validity requirements. The data above shows that there is no variable indicator whose outer loading value is below 0.5, so all indicators are declared feasible or valid for research use and can be used for further analysis.

Discriminant Validity

In this section, the results of the discriminant validity test will be described. The discriminant validity test uses the cross-loading value. An indicator is declared to meet discriminant validity if the value of thecross-loadingg indicator on the variable is the largest compared to other variables. The following is thecross-loadingg value of each indicator:

Table 5. Cross Loading

	Brand Image	Price	Quality	Loyalty
BM1	0,725	0,493	0,571	0,465
BM2	0,813	0,334	0,528	0,689
BM3	0,850	0,380	0,696	0,618
BM4	0,840	0,317	0,644	0,686
BM5	0,674	0,525	0,583	0,549

PR1	0,452	0,937	0,470	0,504
PR2	0,379	0,919	0,437	0,434
PR3	0,392	0,930	0,423	0,415
PR4	0,506	0,676	0,543	0,504
QU1	0,747	0,526	0,805	0,593
QU2	0,606	0,423	0,827	0,453
QU3	0,726	0,455	0,836	0,594
QU4	0,621	0,437	0,887	0,586
QU5	0,553	0,393	0,848	0,464
QU6	0,596	0,474	0,872	0,562
QU7	0,617	0,478	0,778	0,580
LO1	0,735	0,567	0,653	0,892
LO2	0,663	0,552	0,605	0,909
LO3	0,670	0,400	0,529	0,897
LO4	0,735	0,433	0,593	0,911

Based on the data presented in the table above, it can be seen that each indicator in the research variable has the larges t cross-loading value, compared to the cross - loading value of other variables. The results obtained, it is stated that the indicators in this study have *discriminant validity* good discriminant validity in compiling their respective variables. In addition to observing the value of cross loading, discriminant validity can also be known through other methods, namely by looking at the average variance extracted (AVE) value for each indicator, it is required that the value must be > 0.5 for a good model.

Tabel 6. Average Variance Extracted (AVE)

Variable	*Average Variance Extracted (AVE)*
Brand Image	0,614
Quality	0,761
Prince	0,700
Loyality	0,814

From the table it is known that the brand image, quality, price and loyalty variables have an AVE value of more than 0.5 so it can be stated that each variable has good discriminant validity.

CONCLUSION

Afteresearchingon the hypotheses proposed in the previous discussion, it can be concluded; 1) There is an influence between the price of the .id domain name on the customer loyalty of the .id domain name. The price increase made by the Indonesian Internet Domain Name Manager influenceson customer loyalty for .id domain names. Previous research that supports this is research from (Hortamani et al., 2013) entitled "Studying Impact of price Satisfaction on Loyalty: a Case Study in Electric Generating Plant Snowa" which states that

pricinfluenceson customer loyalty, 2) There is no influence between the quality of the .id domain name on the customer loyalty of the .id domain name. This ibyth the information obtained that the perception of quality between .id domain names and other domain names does not differ in terms of both quality and servie, so that .id domain name users do not assume that qualitdoes not affecton the loyalty of .id domain name users. which states that service quality has no significant effect on customer loyalty.

Previous research that supports this result is the research of (Mahmud & Kamaruzaman Jusoff, 2013) entitled "The Effect of Service Quality and Price on Satisfaction and Loyalty of Customer of Commercial Flight Service Industry" which states that service quality has no significant effect on customer loyalty, 3) There is an influence of brand image on customer loyalty domain name. en. Brand image is a factor that affects the loyalty of .id domain name users, the perception of domain name users to the domain name brand image is a factor that greatly influences people to determine and use a domain name. As it is known that a domain name is an address as well as a brand on the internet, so it is very natural that the brand is the main factor in influencing the loyalty of domain name users. Id, another study from (Wasiman, 2017) entitled "The Effect of Brand Image, Price and Service Quality on Consumer Loyalty in Property Companies in Batam Cityh states that brand image affects customer loyalty, 3) Mutual influence between price, quali,ty and brand image of .id domain names on customer loyalty of .id domain names by 63.9%, where the remaining 34.1% comes from other variables. but with the same independent variable on a different dependent variable, namely buying interest into the loyalty of .id domain name users. The difference from the previous research is that in one variable, quality on buying interest is influential, while in the author's research, quality does not affect the loyalty of .id domain name users.

REFERENCES

Anderson, E. W., & Sullivan, M. W. (1993). The antecedents and consequences of customer satisfaction for firms. Marketing Science, 12(2), 125–143. https://doi.org/https://doi.org/10.1287/mksc.12.2.125

Apjii.or.id. (2019). Asosiasi Penyelenggara Jasa Internet Indonesia. https://apjii.or.id/survei

Basneldi, B., Firdiansyah Suryawan, R., Setiadi, B., & Muchdir, M. (2019). The Model of Student Satisfaction. Opción, 35(88), 860-887. Recuperado a partir de https://produccioncientificaluz.org/index.php/opcion/article/view/30982

Brynjolfsson, E., & Smith, M. D. (2000). Frictionless commerce? A comparison of Internet and conventional retailers. Management Science, 46(4), 563–585. https://doi.org/https://doi.org/10.1287/mnsc.46.4.563.12061

Chi, H. K., Yeh, H.-R., & Chiou, C.-Y. (2009). The impact of brand awareness on consumer purchase intention: The mediating effect of perceived quality and brand loyalty. Journal of International Management Studies, 14(2), 230–236. http://203.72.2.146/handle/987654321/27167

Dimyati, M. (2015). The Role Of Customer Satisfaction In Mediating Marketing Communication Effect On Customer Loyalty. Researchers World : Journal of Arts Science & Commerce, VI, 75–87. https://doi.org/10.18843/rwjasc/v6i4(1)/09

Ford, G. S. (2021). Confusing relevance and price: Interpreting and improving surveys on internet non-adoption. Telecommunications Policy, 45(2), 102084. https://doi.org/https://doi.org/10.1016/j.telpol.2020.102084

Ghozali, I. (2015). Aplikasi Analisis Mulitivariate Dengan Program IBM SPSS. Universitas Diponegoro.

Hortamani, A., Ansari, A., Akbari, M., & others. (2013). Studyithe g impact of price satisfaction on loyalty: A case study in electric generating plant snowa. International Journal of Academic Research in Accounting, Finance and Management Sciences, 3(4), 46–50.

Indupurnahayu, Edhie Budi Setiawan, Lira Agusinta, Ryan Firdiansyah Suryawan, Prasadja Ricardianto, Mustika Sari, Sri Mulyono, Reza Fauzi Jaya Sakti, Changes in Demand and Supply of the Crude Oil Market During the COVID-19 Pandemic and its Effects on the Natural Gas Market, International Journal of Energy Economics and Policy, 2021, 11(3), 1-6.

Kah Leng, T. E. R. (2010). Internet domain name disputes: From the Singapore perspective. Computer Law & Security Review, 26(2), 210–218. https://doi.org/https://doi.org/10.1016/j.clsr.2010.01.012

Kim, K.-J., Jeong, I.-J., Park, J.-C., Park, Y.-J., Kim, C.-G., & Kim, T.-H. (2007). The impact of network service performance on customer satisfaction and loyalty: High-speed internet service case in Korea. Expert Systems with Applications, 32(3), 822–831. https://doi.org/https://doi.org/10.1016/j.eswa.2006.01.022

Lee, I. (2021). Pricing Models for the Internet of Things (IoT): Game Perspectives. Internet of Things, 15, 100405. https://doi.org/https://doi.org/10.1016/j.iot.2021.100405

Mahmud, A., & Kamaruzaman Jusoff, S. H. (2013). The effect of service quality and price on satisfaction and loyalty of customer of commercial flight service industry.

masterweb.com. (2020). Beli Domain Indonesia ID Rp180.000/tahun - Masterweb. https://www.masterweb.com/domain-indonesia

Mendrofa, K. J. (2016). Pengaruh Harga, Citra Merek dan Kualitas Produk Terhadap Minat Beli Domain. Id. Universitas Mecu Buana Jakarta.

Newgtlds.icann.org. (2020). Delegated Strings ICANN New gTLDs. https://newgtlds.icann.org/en/program-status/delegated-strings

PANDI. (2020). Catatkan Prestasi, .id Juarai Pertumbuhan Nama Domain Se-Asia Tenggara. https://pandi.id/catatkan-prestasi-id-juarai-pertumbuhan-nama-domain-se-asia-tenggara/

Ramaswamy, R. (1996). Design and management of service processes: keeping customers for life. Prentice Hall.

Ryan Firdiansyah, Monizaihasra Mohamed, Mohd Yusoff Yusliza, Jumadil Saputra and Zikri Muhammad, A Review of Green Marketing Strategy Literature: MiniReview Approach, Proceedings of the 11th Annual International Conference on Industrial Engineering and Operations Management Singapore, March 7-11, 2021

Ryan Firdiansyah Suryawan, Basneldi, Mochammad Fatchoelqorib, Renil Septiano, Laynita Sari, Sri Widodo, Sri Yanthy Yosepha, Sugianto, Nurwulan Kusuma Devi, Two Meta-heuristic Algorithms for Solving Multi-objective Model for the Service Quality and Price in the Digital Supply Chain, Industrial Engineering & Management Systems Vol.21 No.3 pp.440-448, DOI : https://doi.org/10.7232/iems.2022.21.3.440

Sääksjärvi, M., & Samiee, S. (2011). Relationships among Brand Identity, Brand Image and Brand Preference: Differences between Cyber and Extension Retail Brands over Time. Journal of Interactive Marketing, 25(3), 169–177. https://doi.org/https://doi.org/10.1016/j.intmar.2011.04.002

Salvador, P., & Nogueira, A. (2011). Analysis of the internet domain names re-registration market. Procedia Computer Science, 3, 325–335. https://doi.org/https://doi.org/10.1016/j.procs.2010.12.056

Suharto Abdul Majid, Prasadja Ricardianto, Yosi Pahala, Euis Saribanon, Sonya Sidjabat, Mochamad Arif Hernawan, Abdullah Ade Suryobuwono, Ryan Firdiansyah Suryawan, Determining Optimal Marketing based on Market Attraction and Market Based Strategies by Considering Customer Life Time Network Value, Industrial Engineering & Management Systems Vol.21 No.2 pp.401-408, DOI : https://doi.org/10.7232/iems.2022.21.2.401

Stank, T., Crum, M., & Arango, M. (1999). Benefits of interfirm coordination in food industry supply chains. Journal of Business Logistics, 20(2), 21. https://www.proquest.com/openview/6c0823da4c4682b2f00f16dab5b80129/1?pq-origsite=gscholar&cbl=36584

tld-list.com. (2020). Promo Codes TLD List. https://tld-list.com/promo-codes

Wasiman. (2017). Pengaruh Citra Merek, Harga dan Kualitas Pelayanan terhadap Loyalitas Konsumen pada Perusahaan Property di Kota Batam. Jurnal Ilmiah Manajemen Universitas Putera Batam, 5(2), 231193.

Zeng, Y., Yun, X., Chen, X., Li, B., Tsang, H., Wang, Y., Zang, T., & Zhang, Y. (2021). Finding disposable domain names: A linguistics-based stacking approach. Computer Networks, 184, 107642. https://doi.org/https://doi.org/10.1016/j.comnet.2020.107642