# INNOVATION ADOPTION PROCESS IN CREATING CUSTOMER VALUE PT.PLN

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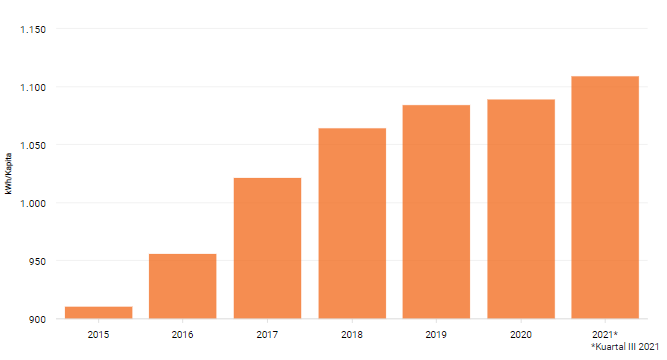
**ABSTRACT**

The consumer adoption process is a process where consumers assimilate information, use, and verify what has been done by many innovations implemented in the PT. PLN company which will certainly have a value impact in front of customers. In its implementation, the process of consumer adoption of the scheme or innovation implemented by PT. PLN. With the innovation carried out by PLN, namely the use of the PLN mobile application, will it become a problem between previous habits becoming new habits, which of course PLN customers must adapt to these habits. This research certainly wants knowledge between the allegations, namely Product Quality, Product Design and Product Benefits, on the adoption of the PLN process, which affects customer assessment. The method used in this study uses the Correlational Research Method where the researcher converts qualitative data into quantitative data by using primary data in obtaining data and using the slovin method as a data sample selection. The analysis technique uses structural equation modeling to obtain accurate hypotheses and uses validity and reliability tests using variant extracts and construct reliability to determine the consistency of the data that has been obtained by the researcher. And this research ensures the fit of the model test by using the Goodness of fit test and finally the researcher gets the weighted regression results for the hypothesis results. The results obtained by researchers in this study that product quality which is part of product attributes has a significant and positive effect on the assessment while product design which is also one of the variables of product attributes does not have a significant relationship with customers and product benefits/usage as well. does not have a significant relationship with PLN's products.

***Keyword :*** *Product Quality, Product Design and Product Benefits, Product Attributes and Customer Value*

1. **INTRODUCTION**

One of the State-Owned Enterprises (BUMN) which plays an important role in providing public services related to meeting the electricity needs of the community is PT. PLN (Persero). Electrical energy is a very important requirement for human survival. Without electricity, humans cannot carry out their activities perfectly. Therefore, PT. PLN (Persero) focuses on providing public services related to meeting electricity needs in each city.



Gambar 1.1

Konsumsi Listrik Indonesia (2015-2021\*)

Sumber : (databoks.katadata)

Indonesia's current electricity consumption is estimated to reach 1,109 kilowatt/hour (kWh) per capita in the third quarter of 2021. This is 92.2% of the 1,203 kWh per capita target set for 2021, according to the Ministry of Energy and Natural Resources (ESDM). ). Since 2015, electricity consumption per capita in Indonesia has continued to increase. The highest growth rate was 6.8% in 2017 and the lowest growth rate in 2020 was 0.4%.

Table 1

KWh Increase Per Year

| No | Years | Value / KWh/Capita |
| --- | --- | --- |
| 1 | 2015 | 910 |
| 2 | 2016 | 956 |
| 3 | 2017 | 1.021 |
| 4 | 2018 | 1.064 |
| 5 | 2019 | 1.084 |
| 6 | 2020 | 1.089 |
| 7 | 2021\* | 1.109 |

Source : (databoks.katadata)

The government has developed a number of strategies to create new demand by encouraging the use of electric vehicles and electric stoves, according to the Department of Energy and Natural Resources' electricity director. The number of SPKLU reached 187 units spread across 155 sites throughout Indonesia. Regarding the number of customers of 4,444 customers, the Department of Energy and Mineral Resources found that the number of electricity customers exceeded the target of 81,229 million customers in September 2021. This number is equivalent to 102.6 of our 2021 target of 79,187,000 subscribers, this means an increase in power consumption. (databox.katadata, n.d.)

However, the current development of the electricity system is no longer able to keep up with the increasing demand for power. This causes an electricity crisis and the government needs to step in to solve this problem, it is the government that can make it happen.

As a state-owned enterprise, BUMN will become one of the country's foreign exchange-generating assets and public service institutions that play an important role in meeting the needs of its citizens. With the reform of SOEs, the government is expected to strengthen the role of SOEs as part of national development and make public services safer.

PT. PLN as the basis for providing electrical energy in Indonesia from January 25, 2017 to February 7, 2018 has received various awards both nationally and internationally with various types of awards, ranging from the Award from the Ministry of State-Owned Enterprises (BUMN), PR Indonesia Award 2017 , Indonesia Green Awards (IGA) 2017 (The La Tofi School of CSR), Asia Responsible Entrepreneurship Award (AREA) 2017 (Enterprise Asia) in Bangkok, Thailand, Occupational Safety and Health (K3) Award 2017 (Ministry of Manpower), Award from Presidential Working Unit for the Development of Pancasila Ideology (UKP-PIP), Social Business Innovation Award 2017 (Warta Ekonomi), Jamboree PR Indonesia (PR Indonesia Magazine), Nusantara CSR Awards 2017 (The La Tofi School of CSR), Indonesia Climate Change Forum & Expo 2017, Indonesia Business Development Expo 2017 (Ministry of SOEs), Asian Power Awards 2017 in Bangkok, Thailand, The 3rd ASEAN Coal Awards (ASEAN Center for Energy), I ndonesia Corporate Public Relations Excellence Award 2017 (Warta Ekonomi), Nusantara Film Festival Award (FFN), Indonesia GCG Award –III- 2017 (IGCGA-II-2017), SOE Financial Transformation and Innovation Award 2017 (Ministry of BUMN), Media Humas Award 2017 (Public Relations Coordination Agency), Indonesian CSR Award 2017 (National Standardization Agency), Indonesia's Appreciation for BUMN 2017 (Warta Ekonomi), State Organizers Wealth Report Award (Corruption Eradication Commission), PLN Generator Wins 1 Gold Proper And 15 Green Proper In 2017 (Ministry of Environment and Forestry), Indonesia Trusted Companies Good Corporate Governance Award 2017 (IICG and SWA Magazine), Public Information Disclosure Award (KIP) (Central Information Commission), National Registration System for Climate Change Control (Ministry of Environment Life and Forestry), SMK3 & K3 (Ministry of Manpower) Field Awards and finally The 7th SPS Indonesia Inhouse Magazine Award (InMA) 2018. (web.pln, n.d.) Of course, all these awards are based on innovation implemented by PT. PLN in all kinds aspects of its business, so it is suspected that there will be very significant changes, especially for its customers.

With changes or innovations or better known as the transformation of services carried out by PT. PLN to customers, it will certainly affect the company's performance and even the reputation of the company will increase. However, the researcher's question is whether the many innovations implemented in the PT. PLN company will also have a good impact in the eyes of consumers, meaning that it has value in front of customers.

In practice, it means that there is a change in a process of consumer adoption of the scheme or innovation imposed by PT. PLN. One of the innovations made by PLN is the use of the PLN mobile application, for services such as: New Connections, Changes in Power/Migration, Temporary Connections, Postpaid, Information (Customer Application Status, Confirmation Code Entry, Bank Info). (web.pln, n.d.) So that there is a change in the administrative scheme that PLN does to customers from the conventional initial method to the digital method. In conclusion, the explanation above shows that there is a gap between previous habits and new habits, which of course PLN customers must get used to adapting to these habits, so that researchers identify the process of change in the customer's view. So the researcher intends to examine whether there is a positive change in the value of the customer towards the innovations carried out by PT. PLN.

1. **LITERATUR REVIEW**

According to Roger, (1983: 164) in research (Thamrin, 2003). The consumer adoption process is the process by which consumers assimilate information, use it, and verify what has been done. The process is a knowledge which is an important part for consumers to get information about the existence of products/ products of innovation. This process is the first process in the adoption process. If persuasion causes consumers to develop a liking/ dislike attitude towards the product/ product innovation, in this situation the company is very careful with advertising creativity to gain consumer empathy. Accepting innovative products/ products This process is the key to understanding the products that consumers consume, because it leads to the consumer's decision to accept or reject. Implementation is the process by which the consumer uses the product/ product innovation regularly/ permanently, and finally the affirmative consumer reviews the decisions he has made and at this stage the consumer experiences conflicting experiences or checks whether he has received the information. Reality responds and adoption decisions can be reversed.

Competitive advantage can be generated through differentiation of product attributes or product features. Two products that have the same functional characteristics in the eyes of the producer are not necessarily the same from the consumer's point of view. As a result, consumers are happy with products with certain attributes or characteristics that they consider more valuable.

**Product Attributes To Customer Rating**

The definition of product attributes according to Kotler and Armstrong (2006: 167) in research (Thamrin, 2003) is all parts of the product that have the ability and provide benefits and can satisfy needs. Indicators of product attributes consist of product quality, product characteristics, product design.

1. Product quality. In carrying out its function (Fatmaningrum et al., 2020) Quality is a holistic understanding of durability, reliability, precision, comfort, maintenance and repair, and all other attributes. From this it can be concluded that consumers are more likely to choose quality products because the higher the product quality, the higher the profit for the company.
2. Product characteristics. According to (Mohamad et al., 2017) is a competitive tool that distinguishes the company's products from the products of its competitors. (Ow et al., 2022) also added, every company always makes products that are different from other manufacturers. The purpose of distinguishing the characteristics of the finished product in this way is to make it yourself.
3. Product design. According to (Sugangga et al., 2020) are product features and styles. It is a design process that develops into products that are attractive, economical, safe, easy to use and maintain. Product attributes shape people's perceptions. The different attributes of the two products produce different perceptions in the eyes of consumers. (Kotler, Philip & Armstrong, 2010) He said decisions about existing attributes have a significant impact on how consumers react to products. According to Zeithaml (1998) identifies customer value as a comprehensive assessment of the usefulness of the product based on perceptions of what to maintain and what to sacrifice. (Kinoti & Meru, 2021)

**=** The higher consumer preferences based on product quality, the greater the rating perceived by PLN customers

**=** The higher consumer preferences based on product design, the greater the rating felt by PLN customers

**Product Uses Against Customer Rating**

The usefulness of a product or service is related to its ability to meet consumer needs. Product benefits can be divided into three types (Kettler, 2021), is:

1. **Experiential benefits**, are the benefits felt when using the product (related to product related attributes),
2. **Functional benefits**, which are benefits that are more intrinsically felt, for example car products with diesel engines are fuel efficient,
3. **Symbol benefits**, in other words, the high perception of product usefulness in the eyes of consumers is an indication of high product quality as well. Therefore, product quality is one of the determinants of customer value, and product usability leads to high customer value. In general, as perceived quality increases, so do other factors of consumer value perception. Even if the price is high, the impression of quality is an important factor that determines the value of the brand to customers. Delivering high customer value should be the primary goal of any business, as customers make decisions based on the value they receive. Customers buy products and services from companies they believe provide high customer value.

**=** The higher the perceived usefulness/ benefit of a product, the higher the rating felt by PLN customers.

1. **METHOD**

Primary data is research data obtained directly from the original source by using a developed questionnaire. The questionnaire used in this study consisted of two main parts. The first part discusses the social profile and identification of respondents and contains respondent data related to the identity of respondents. The highest social conditions such as age, occupation and education. The second part is based on the results and discussion, respondents' statements, in the form of answers according to field information obtained according to the distribution of field information to customers. The questions on the field information include the variables of Product Attributes, Product Benefits, Customer Ratings.

**Population and Research Sample**

The population in this study are PLN customers. Furthermore, the researcher uses purposive sampling (Judgmental), which is a non-probability sample that conforms to certain criteria or characteristics.

**Table 2**

**Variable Operation**

| **Variable** | **Dimension** | **Indicator** |
| --- | --- | --- |
| Product attribute | X1 = Product quality  X2 = Product and Packaging Design | 1. Performance 2. Durability Conformance to specifications 3. Features 4. Reliability 5. Aesthetics 6. Quality 7. Serviceability 8. Self service 9. Consumer offluence. 10. Company and brand image 11. Inovational opportunity |
| Product Use | X3 = Benefits | 1. Work more quickly 2. Makes job easier 3. Job performance 4. Increase productivity |
| Customer Rating | Y = Quality Value is proportional to Price | 1. The value of the sacrifice compared to the money spent 2. Value Quality and price with similar products |

Source : Nuruni Ika dan Sri Muljaningsih UPN “veteran” East Java

**Analysis Techniques**

The primary data that has been collected which is qualitative in nature will be converted to quantitative, then tested for validity and reliability and then analyzed using Structural Equation Modeling (SEM) analysis techniques.

**Data Analysis**

**Validity and Reliability Test**

To test the validity and reliability of the data in the SEM analysis used Variace Extract and Construct Reliability. The results of the calculation are as follows:

**Table 3**

***Construct Reliability & Variance Extrated***

| Variabel | Indikator | Standar Loading (Loading Factor) | Standard Loading² | Measuremen Error (1-Std Loading²) | Consruct Reliability | Variace Extracted |
| --- | --- | --- | --- | --- | --- | --- |
| Product quality | X1.1 | 0.744 | 0.554 | 0.446 | 0.918 | 0.590 |
| X1.2 | 0.799 | 0.638 | 0.362 |
| X1.3 | 0.776 | 0.602 | 0.398 |
| X1.4 | 0.444 | 0.197 | 0.803 |
| X1.5 | 0.774 | 0.599 | 0.401 |
| X1.6 | 0.846 | 0.716 | 0.284 |
| X1.7 | 0.848 | 0.719 | 0.281 |
| X1.8 | 0.833 | 0.694 | 0.306 |
| Σ | 6.064 | 4.719 | 3.281 |
| Σ² | 36.772 |  |  |
| Design Produk | X2.1 | 0.851 | 0.724 | 0.276 | 0.888 | 0.666 |
| X2.2 | 0.800 | 0.640 | 0.360 |
| X2.3 | 0.861 | 0.741 | 0.259 |
| X2.4 | 0.748 | 0.560 | 0.440 |
| Σ | 3.260 | 2.665 | 1.335 |
| Σ² | 10.628 |  |  |
| Manfaat Produk | X3.1 | 0.845 | 0.714 | 0.286 | 0.927 | 0.761 |
| X3.2 | 0.928 | 0.861 | 0.139 |
| X3.3 | 0.917 | 0.841 | 0.159 |
| X3.4 | 0.792 | 0.627 | 0.373 |
| Σ | 3.482 | 3.043 | 0.957 |
| Σ² | 12.124 |  |  |
| Penilaian Pelanggan | Y1.1 | 0.759 | 0.576 | 0.424 | 0.755 | 0.606 |
| Y1.2 | 0.798 | 0.637 | 0.363 |
| Σ | 1.557 | 1.213 | 0.787 |
| Σ² | 2.424 |  |  |

|  |  |  |
| --- | --- | --- |
| **Acceptable limit** | **≥ 0.70** | **≥ 0.50** |

Source: Processed Data

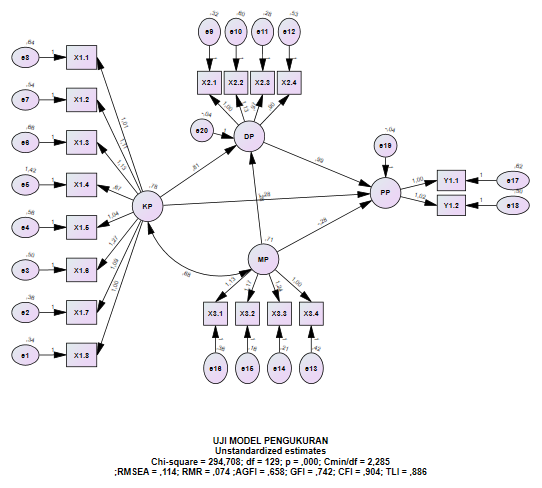
The results of the calculation of Variance Extract and Construct Reliability for each research variable indicate that the six variables studied have a reliability value of 0.7 and variance extracted 0.5 so it can be concluded that these variables meet the criteria of validity and reliability.

1. **RESULT AND DISCUSSION**

**Full Model Structural Equation Modeling (SEM) Analysis**

**Before Revision**

Analysis of the results of data processing at the full stage of the SEM model was carried out by conducting conformity tests and statistical tests. The results of data processing for the full SEM model analysis are shown in Figure:

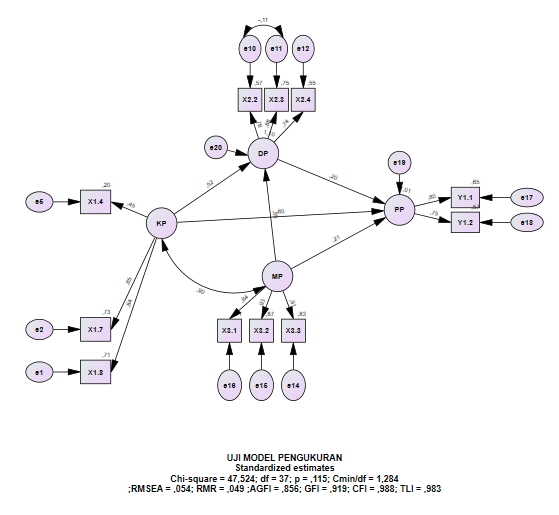


**Figure 2**

**Full Model Analyst**

**After Revision**

The results of data processing at the full stage of the SEM model were carried out by conducting conformity tests and statistical tests. The results of data processing for the full analysis of the SEM model, the researchers think are not suitable in the discovery of the model, so it is necessary to improve the model and the results are as shown below:

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**Figure 3**

**Full Model Revision Analyst**

**Test the suitability of the Model Goodness of Fit Test**

The model suitability indices used are the same as in the confirmatory factor analysis. SEM model testing is intended to see the suitability of the model. The results of the processing carried out are presented in Table 4 below.

**Table 4**

**Conformity test Model-Goodness of Fit Test**

| Statistik Uji | Sebelum Revisi | | |
| --- | --- | --- | --- |
| Nilai | Hasil Uji | Kriteria |
| Chi Square | 47.524 |  | Lebih Kecil |
| Degree of Freedom | 37 |  |  |
| p-value | 0.115 | Fit | > 0.05 |
| Cmin/DF | 1.284 | Fit | < 2.00 |
| RMSEA | 0.053 | Fit | < 0.08 |
| *Goodness of Fit Index (GFI)* | 0.919 | Fit | > 0.90 |
| *Adjusted Goodness of Fit (AGFI)* | 0.856 | Tidak Fit | > 0.90 |
| *Comparative Fit Index (CFI)* | 0.988 | Fit | > 0.90 |
| *Tucker Lewis Index (TLI)* | 0.983 | Fit | > 0.90 |

Source: Processed

From the results of the Goodness Of Fit test above, the majority of the GOF test scores meet the criteria. However, there is one criterion that does not fit, namely AGFI where the resulting value is < 0.90. According to Kusnendi, if the majority of the GOF criteria meet the Fit requirements, the model is considered to be suitable. So the revised model is used.

**SEM Assumptions**

**Sample Size**

The sample size that must be met is 100 and then uses a comparison of observations for each parameter estimate. In this research model there are. Based on PLN sources, PLN customers in West Java have around 15,450,000 customers. So that the population set in this study is N = 15,450,000, and the sample is taken with a determination of = 10%, then the researcher uses the Slovin formula to get the expected sample value, as follows:

**Normality Evaluation**

The critical value set by the researcher is based on a significance level of 10%, to evaluate normality the researcher uses Kormogorov-Smirnov and Shapiro-Wilk, the results of the calculation are as follows:

**Table 5**

**Normality test**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Var** | **Kolmogorov-Smirnova** | | | **Shapiro-Wilk** | | |
| **Statistic** | **df** | **Sig.** | **Statistic** | **Df** | **Sig.** |
| X1.4 | .164 | 100 | .000 | .899 | 100 | .000 |
| X1.7 | .289 | 100 | .000 | .859 | 100 | .000 |
| X1.8 | .207 | 100 | .000 | .900 | 100 | .000 |
| X2.2 | .236 | 100 | .000 | .831 | 100 | .000 |
| X2.3 | .216 | 100 | .000 | .892 | 100 | .000 |
| X2.4 | .229 | 100 | .000 | .901 | 100 | .000 |
| X3.1 | .234 | 100 | .000 | .893 | 100 | .000 |
| X3.2 | .224 | 100 | .000 | .883 | 100 | .000 |
| X3.3 | .223 | 100 | .000 | .894 | 100 | .000 |
| Y1.1 | .212 | 100 | .000 | .893 | 100 | .000 |
| Y1.2 | .206 | 100 | .000 | .886 | 100 | .000 |
| a. Lilliefors Significance Correction | | | | | | |

Source: Data in Process

The results of the calculation of both Kormogorov-Smirnov and Shapiro-Wilk produce a value of > 0.10 so that the data collected can be said to be normal.

**Hypothesis test**

**Table 6**

**Causality Hypothesis Test**

***Regression Weight***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Estimate | S.E. | C.R. | P | Label |
| PP | <--- | MP | ,212 | ,316 | ,672 | ,502 | par\_8 |
| PP | <--- | KP | ,659 | ,261 | 2,529 | ,011 | par\_9 |
| PP | <--- | DP | ,198 | ,272 | ,730 | ,465 | par\_10 |
| DP | <--- | MP | ,566 | ,161 | 3,502 | \*\*\* | par\_12 |
| DP | <--- | KP | ,574 | ,180 | 3,186 | ,001 | par\_13 |

Source: Data in Process

**Hypothesis Testing 1**

Hypothesis 1 states that there is a significant positive relationship between product quality and customer value, where Prob. causality is 0.011 0.10 so that this hypothesis can be accepted, because the conceptual model is based on a strong theory in this study. This can be formed because of the interesting innovation features, the impression of the quality of service in the form of complete information and the speed / convenience provided by the innovations carried out by PLN. The existence of product quality in a product will shape people's perceptions, where different product quality in two products will cause different perceptions in the eyes of consumers. Two products have the same function in the eyes of producers, not necessarily the same in the eyes of consumers. Consumers will feel more satisfied with products that have certain product qualities that they consider more valuable. Thus, product quality significantly affects customer value.

**Hypothesis Testing 2**

Hypothesis 2 states that there is an insignificant and positive relationship between product design and customer value, where Prob. causality is 0.465 0.10 so that this hypothesis cannot be accepted, because the conceptual model is based on a theory that is less strong and accurate. So that the product design on a product will not shape people's perceptions, before the product design can reflect the benefits and quality of the product. For example, two products have different functions in the eyes of producers, not necessarily different according to consumers' views. Consumers will not feel more satisfied with a product that has a product design that they deem to be of no value. Thus, product design does not significantly affect customer value.

**Hypothesis Testing 3**

Mention the insignificant and positive relationship between the usefulness or benefits of the product to customer value, where the causal probability is 0.502 0.10 so that this hypothesis cannot be accepted, because perhaps the conceptual model is not based on a strong theory in this study. The usefulness/benefit of a product/service refers to the ability of the product/service to meet consumer needs. Basically, the use/benefit of a product must reflect the benefits of the product, in accordance with what is expected by consumers. That high usability/benefit is one of the important factors to create high customer value. In other words, a high perception of product usefulness/benefit in the eyes of consumers is an indication of a high customer assessment of the product. Because the usability/benefit of the product is not one of the determinants of customer value, the high usability of the product will not directly result in high customer value.

**CONCLUSION**

* 1. The results of this study prove that the quality of the product empirically has a significant and positive effect on customer ratings. This shows the importance of manufacturers to improve the quality of their products by daring to innovate so that the value of customers increases as well.
  2. Empirically the product design cannot prove a significant and positive influence on this PLN company. Maybe customers don't pay too much attention to the designs formed by PLN which have the main goal of the company. Where the main goal is to become an icon of electricity service providers in Indonesia, but in fact there is no similar business in the field. This is because PLN has a monopoly on the industry in its field so it has no value in the eyes of customers.
  3. Finally, empirically, the benefits of PLN's products cannot be proven to have a significant and positive effect. Researchers suspect this is because the benefits are general, and must/absolutely be used for daily needs, where the need for electricity feels like there is no more benefit. In addition, researchers suspect that there is a high value/price for the purchase of electricity, so that the benefits seem to be forced because it is based on needs.

**BIBLIOGRAPHY**

1. Databoks.Katadata. (N.D.). *Konsumsi Listrik Per Kapita Indonesia Capai 1.109 Kwh Pada Kuartal Iii 2021*. Retrieved October 29, 2022, From Https://Databoks.Katadata.Co.Id/Datapublish/2021/12/10/Konsumsi-Listrik-Per-Kapita-Indonesia-Capai-1109-Kwh-Pada-Kuartal-Iii-2021
2. Fatmaningrum, S. R., Susanto, & Fadhilah, M. (2020). Pengaruh Kualitas Produk Dan Citra Merek Terhadap Keputusan Pembelian Minuman Frestea. *Jurnal Ilmiah Mea*, *4*(1).
3. Kettler, T. (2021). A Diferentiated Approach To Critical Thinking In Curriculum Design. In *Modern Curriculum For Gifted And Advanced Academic Students*. Https://Doi.Org/10.4324/9781003236696-8
4. Kinoti, M. W., & Meru, A. K. (2021). *Competencies For Green Marketing Success In Emerging Markets*. Https://Doi.Org/10.1007/978-3-030-73007-9\_8
5. Kotler, Philip & Amstrong, G. (2010). Principles Of Marketing. In *Pearson Education*.
6. Mohamad, N., Ishak, M. S., & Rashid, S. M. (2017). Pengaruh Ciri-Ciri Produk Kepada Kesetiaan Pelanggan: Pengalaman Pelanggan Sebagai Faktor Penyederhana. *Journal Of Business And Social Development*, *5*(2).
7. Ow, A. L., Ooi, Z. J., Sathiaseelan, P., Pang, K., Ka, S., & Madhan, S. (2022). Have You Touched? A Case Study Of Touch N Go E-Wallet. *International Journal Of Accounting & Finance In Asia Pasific (Ijafap)*, *5*(1).
8. Sugangga, R., Tinggi, S., Ekonomi, I., & Malang, I. (2020). Pengembangan Produk Menggunakan Design Thinking Pada Masa Pandemi Covid-19. In *Akademika* (Vol. 18, Issue 2).
9. Thamrin, D. S. (2003). Studi Mengenai Proses Adopsi Konsumen Pasca Masa Tayang Iklan Produk “Xon-Ce” Di Surabaya. *Studi Mengenai Proses Adopsi Konsumen Pasca Masa Tayang Iklan Produk “Xon-Ce” Di Surabaya*, *2*(2).
10. Web.Pln. (N.D.). *Inovasi Dan Penghargaan*. Retrieved October 29, 2022, From Https://Web.Pln.Co.Id/Pelanggan/Layanan-Online/Simulasi-Pasang-Baru