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Research Article

The Influence of Network Coverage Image and Digital Marketing Promotion on Churning Intention Mediated by Digital Satisfaction and Moderated by Private Identity: Approach on Telecommunication Customers in Indonesia

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ABSTRACT

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The telecommunications industry is a key sector contributing significantly to the national economy. Amidst intense competition among telecommunications operators, many telecommunications customers tend to switch to other operators (Churning). The objective of this research is to investigate how Network Coverage Image and Digital Marketing Promotion impact Churning Intention, with Digital Satisfaction acting as a mediator and Private Identity as a moderating factor. The research targeted telecommunication customers from all operators in Jakarta who had experienced switching SIM cards to another operator. A total of 386 samples were gathered, and the data were analyzed using SmartPLS 3.0. The study's findings reveal that Network Coverage Image and Digital Satisfaction significantly reduce Churning Intention, whereas Digital Marketing Promotion significantly increases it. Private Identity, however, does not significantly influence Churning Intention as a moderating variable for Network Coverage Image. This research offers a novel contribution by expanding the understanding of the pushpull-mooring (PPM) theory as it relates to customer churn intentions in the telecommunications industry, specifically by examining the effects of network coverage image, digital marketing promotion, digital satisfaction, and customer private identity.

Keywords: Network Coverage Image, Digital Marketing Promotion, Digital Satisfaction, Private Identity, Churning intention

1. INTRODUCTION

One sector of industry ensuring that they will continue to expand in 2021 is the telecommunications industry, with its main driving force remaining the mobile phone industry. In Indonesia's competitive mobile telecommunications industry, several key providers include Hutchison 3 ID, XL Axiata, Indosat, Telekomsell, and SmartFren. According to data from www.hootsuite.com, the telecommunications industry in Indonesia is still growing significantly. The growth in the number of mobile phone subscribers is 1.2%, adding around 4 million subscribers, while the most significant growth is in the number of internet subscribers at 15.5%, adding around 27 million subscribers. This represents a very substantial growth in the number of subscribers for the telecommunications industry.

In a company, it's challenging to acquire new customers, but even harder to retain them. According to Emmett C. Murphy and Mark A. Murphy (2002), It costs five times more to acquire new customers than to retain and satisfy current ones. Additionally, a 2% boost in customer loyalty can lead to benefits like a 10% reduction in costs. Therefore, companies strive to retain their existing customers. Hence, it's essential to pay attention to what is known as the churn rate.

The churn rate is the percentage of a service's customers who end their subscriptions, or the ratio between the number of customers who stop using a product/service within a certain period and the average total number of customers during the same period (Suryo, 2009). Because most customers have many options to choose from, the churn rate helps businesses determine comparisons with their competitors. For example, if one out of 20 high-speed internet service customers cancels their subscription within a year, the annual churn rate for that internet service provider is 5%.

This is the problem or phenomenon in this research: the growth of the telecommunications business, with a high growth rate in the number of customers, still experiences a high churn rate in this industry. For example, Hutchison 3 Indonesia has a churn rate of 4.3%, which equates to losing around 1 million customers in one year. This occurs because telecommunications companies are competing to innovate in offering attractive products to customers. In fact, companies are acquiring each other's customers among different telecommunications companies. Customers terminate their service with one telecommunications company and switch to another. A high churn rate results in a decrease in revenue.

2. LITERATURE REVIEW

Digital Marketing Promotion

The latest advancements in technology, particularly digitalization, have transformed marketing, leading to the rise of digital marketing. This approach involves promoting brands or products through digital platforms or the internet, with the goal of quickly engaging consumers and potential customers. Given the extensive adoption of technology and the internet, digital marketing has become a primary strategy for companies in online promotion. Techniques in digital marketing include SEO (Search Engine Optimization), examples such as online ads on platforms like Facebook and Google, print media promotions, TV and radio advertisements, digital billboards, email marketing, mobile marketing, and other channels.

Ridwan Sanjaya and Josua Tarigan (2009) define digital marketing as a marketing approach, encompassing branding, that leverages a variety of media channels. Examples include blogs, websites, email, Google Adwords, and different social media platforms.8 Kleindl and Burrow (2005) define digital marketing as the process of designing and implementing concepts, ideas, pricing strategies, promotions, and distribution methods. In essence, it involves establishing and sustaining mutually beneficial relationships between consumers and producers via online platforms.

The extensive use of digital marketing by companies proves that it has many advantages and benefits. Here are some advantages of digital marketing compared to conventional marketing:

1. Speed of Dissemination

Digital media marketing strategies can be executed nearly instantly, often within seconds, and enable real-time, accurate measurement.

2. Ease of Evaluation

Utilizing online media enables immediate access to the results of marketing efforts. You can track details such as how long a product is viewed, the number of viewers, and the sales conversion rate for each advertisement. With this information, companies can assess the effectiveness of their ads and identify areas for improvement in future campaigns.

3. Wider Reach

Another benefit is the internet's broad geographical reach, which enables companies to advertise their brand or promotions worldwide with just a few straightforward actions.

4. Cost-Effective and Efficient

Digital marketing is considerably more cost-effective and efficient than traditional methods. Companies can lower costs by using digital media for virtual advertisements rather than relying on physical placements like billboards.

5. Building Brand Name

Digital marketing effectively assists companies in establishing their brand names. A strong online presence is essential for a brand, as the digital landscape has encouraged consumers to seek information online prior to making a purchase.

Digital Satisfaction

Customer satisfaction can be felt after customers compare their experiences in purchasing goods/services from a seller or provider with their own expectations. Customer expectations are shaped by their initial experience with a product or service, feedback from friends and acquaintances, and claims made by marketers and competitors. Marketers aiming to succeed in a competitive market must focus on meeting customer expectations and ensuring satisfaction.

Digital satisfaction is a form of customer experience in enjoying digital products. Customers' digital experience is often closely related to speed, latency, stability, coverage, and service quality of digital products. Here, digital products are more focused on internet-based services. Kotler (2012) defines customer satisfaction as "the feeling of pleasure or disappointment that arises when a product's actual performance is measured against the expected performance. [9]. According to this definition, if a digital product does not meet customer expectations—or if those expectations are set too low—customers are likely to feel dissatisfied and disappointed. Conversely, when a digital product meets their expectations, customers experience satisfaction; if it exceeds those expectations, they will feel delighted and very satisfied.

Richard Oliver's definition of customer satisfaction, as presented by Barnes (2003), is: "Satisfaction is the customer's reaction to the fulfillment of their needs." [11]. This suggests assessing whether a particular feature of a product or service, or the product/service as a whole, provides a level of satisfaction in addressing a need. This includes meeting needs that may fall below or exceed customer expectations.

These two definitions indicate that customer satisfaction is related to the fulfillment of expectations. A customer is considered satisfied with the digital products or services if their expectations have been met or exceeded. In the service sector, customer satisfaction is evaluated based on the overall experiences customers have with the company's digital products. This means it can be measured by the degree of satisfaction that arises from the total experience customers encounter while using a digital product.

Network Coverage Image

Image or reputation refers to the public's perception of a company or its products. This image is shaped by various factors that the company cannot control. A strong image accomplishes three key objectives:

- A. Utilizes the product's characteristics.
- B. Communicates those characteristics in a way that differentiates them from competitors.
- C. Provides an emotional strength that goes beyond just a mental picture.

According to Kotler and Keller (2012), image is defined as the set of beliefs, perceptions, and impressions an individual has regarding a specific object. [10]. Building a strong image demands both creativity and effort. It cannot be established in people's minds overnight or solely through mass media. Instead, it needs to be communicated through all available channels and maintained consistently. To successfully attract and retain customers, a company must emphasize showcasing its products with a favorable brand image. A favorable brand image can boost consumer trust in the product and foster greater loyalty over time. An image reflects the community's perception (among consumers/customers) of the company's reputation, whether positive or negative.

Coverage image refers to customers' perception of mobile service coverage. In this context, the service coverage that a mobile operator can provide is determined by its BTS (Base Transceiver Stations); naturally, the more BTS there are, the wider the service coverage will be. Additionally, the distribution of BTS is also crucial to determining the extent of the area that can be served.

Private Identity

In the current digital age, data is paramount. When individuals use a digital service for free, they are essentially paying for it with their data, often without realizing it. One of the simplest ways to determine if a digital company views data as a form of 'payment' for its services is to review the app permissions. For instance, Facebook requests nearly 40 different types of access on Google Play for users intending to download the app, which includes permissions to take photos and videos, record audio, access precise location data, and make calls to numbers in the contact list.

It is crucial to recognize that there are three types of data that can be collected by others: voluntarily provided data, observed data, and inferred data. As the name implies, voluntarily provided data refers to information that individuals willingly share with an online platform, such as during registration for a service. Observed data is collected from a person's online activities, like browsing history and GPS location. Inferred data, on the other hand,

combines the first two types. In Indonesia, the general public does not yet view personal data as a significant concern, which poses a problem as digital services have permeated nearly every aspect of life. This lack of digital literacy is exploited by some individuals who steal and misuse personal data that does not belong to them.

Churning Intention

Churning, or brand switching, refers to the behavior of consumers changing brands or services for specific reasons. It can also be described as the tendency of consumers to switch to a different brand. [4]. Brand switching behavior is a complex phenomenon influenced by various factors, such as a desire for diversity, the availability of alternative products, or problems experienced with a previously purchased item. [3]

Churning or switching is a situation where a brand loses loyal customers who choose a competitor instead **[2]**. In other words, a customer will alter their purchasing habits, intentionally opting for a different brand instead of their usual choice. It's important to note that this differs from brand-agnostic customers, who frequently switch between various products within a specific category. In their case, there is no risk of losing loyalty since they never established it in the first place.

For a company to thrive in the business world, brand switching is a crucial concept that must be addressed. It is widely recognized that gaining new customers usually incurs higher costs than keeping existing ones. By discouraging current customers from switching brands, a company can save both time and resources. This allows the budget to be redirected toward attracting new customers or other areas of development. [7]. Brand switching is the opposite of brand loyalty, meaning a client stops buying from a company and chooses another brand with similar products.

3. RESEARCH METHODOLOGY

Type and Research Method

This study employs a descriptive analysis approach using quantitative methods. The descriptive method is characterized as a means of tackling the research problems by outlining the state of the subject or object under investigation, which can encompass individuals, organizations, communities, or other entities based on current facts. This definition is corroborated by Ferdinand (2014). [5]. The descriptive method is employed to outline or examine the results of a study, but it does not seek to make broader generalizations. As noted by Sugiono (2014), the descriptive analysis method is a statistical technique that evaluates data by displaying or depicting the gathered information in its original form, without aiming to draw conclusions applicable to the wider population or to generalize the findings. [15].

This research aims to clarify the relationships among the variables being studied and to analyze the impact of one variable on another. In other words, it seeks to investigate how the independent variables (Network Coverage Image and Digital Marketing Promotion) affect the dependent variables, which are Digital Satisfaction, Private Identity, and Churning Intention.

Population and Sample

The research object is the customers using SIM card products from all operators in the Jakarta area who have switched services (churning). Customers who have switched services are more likely to have strong reasons for why they churned to another operator's service. Therefore, their intention to churn is more valid compared to those who have never switched to another operator. Data collection through questionnaires began by distributing questionnaires to customers using SIM card products in the Jakarta area. The researcher waited and handed out the questionnaires directly to customers using SIM card products. Customers were asked to fill out the questionnaires and return them to the researcher upon completion. The distribution of the questionnaires was conducted over a period of two months.

The research design incorporates a sample of 300 respondents, determined with a 0.95 confidence level and an alpha of 0.05. This sample size was calculated based on the proportion formula with a 5% margin of error. According to the table, 300 respondents meet the minimum sample size requirement, ensuring that the sample meets the established criteria. [13].

Data Analysis Technique

This study examines the impact of Network Coverage Image, Digital Marketing Promotion, Digital Satisfaction, Private Identity, and Churning Intentions by tabulating questionnaire responses. To assess these variables, average values were calculated using relevant formulas. The resulting averages were then aligned with scale ranges, incorporating interval data as outlined by Sekaran and Bougie (2016). [14].

| Answer Alternative | Value | | | | | | |
|--------------------|--------|-----|--------|--|--|--|--|
| Strongly Disagree | 1,00 | s/d | ≤ 1,80 | | | | |
| Disagree | > 1,80 | s/d | ≤ 2,60 | | | | |
| Undecided | > 2,60 | s/d | ≤ 3,40 | | | | |
| Agree | > 3,40 | s/d | ≤ 4,20 | | | | |
| Strongly Agree | > 4,20 | s/d | ≤ 5,00 | | | | |

Table 1, Measurement of Scale Ranges

Source: Sekaran and Bougie (2016)

Data Analysis Method

In this research, data analysis is conducted using Partial Least Squares (PLS). PLS is a component-based or variance-based Structural Equation Modeling (SEM) technique that serves as a multivariate statistical method for examining the relationships between various dependent and independent variables. [1]. PLS is a variance-based SEM statistical method developed to address multiple regression challenges that may arise from specific data-related issues, such as small sample sizes, missing data, and multicollinearity. This approach represents a transition from a covariance-based SEM methodology to a variance-based one.

4. RESULTS AND DISCUSSION

Inferential Statistical Analysis

This research utilizes the SEM method grounded in Partial Least Squares (PLS) for data analysis, using SmartPLS software version 3.o. The analysis consists of two measurement phases: the Measurement Model (Outer Model) and the Structural Model (Inner Model). The Measurement Model focuses on evaluating the relationships between indicators and constructs or latent variables. Validity and reliability are assessed using several approaches, including convergent validity, discriminant validity, composite reliability, and Cronbach's alpha.

Convergent Validity

Convergent Validity seeks to assess the validity of the connections between indicators and their corresponding latent variables. This is measured by examining the outer loading values, where an indicator is deemed valid if its outer loading coefficient exceeds 0.60 to 0.70. The calculated results for these outer loading values are displayed in the image below:

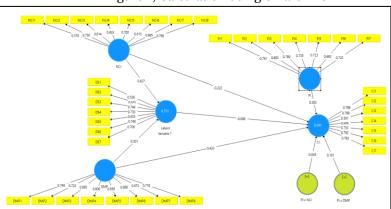


Figure 1, Calculation using Smart PLS

Source: Author's data analysis using SmartPLS (2024)

According to the outer loading values, several items, such as NCI1, DS1, and CI3, had values below o.6. After removing these three items, the results showed that the convergent validity for the variables—network coverage image, digital marketing promotion, churning intention, digital satisfaction, and private identity—was confirmed as valid. Moreover, the average variance extracted (AVE) values improved after eliminating the invalid indicators. The findings of the convergent validity test, based on the AVE values, are shown below:

Table 2, Measurement of AVE values

| Variabel | AVE | Keterangan |
|-----------------------------------|-------|------------|
| Digital Marketing Promotion (DMP) | 0.503 | Valid |
| Network Coverage Image (NCI) | 0.505 | Valid |
| Private Identity (PI) | 0.558 | Valid |
| Digital Satisfaction (DS) | 0.502 | Valid |
| Churning Intention (CI) | 0.611 | Valid |

Source: Author's data analysis using SmartPLS (2024)

Discriminant Validity

Discriminant validity seeks to establish whether a latent construct can predict the measurements of a variable more accurately than other constructs. This is evaluated by comparing the Square Root of the Average Variance Extracted ($\sqrt{\text{AVE}}$) to the correlation values among the variables within the model. The findings from the convergent validity test are presented in the table below:

Table 3, Measurement of Average Variance Extracted (√AVE)

| | Churning Intention | Digital Marketing Promotion | Digital Satisfaction | Network Coverage Image | Private Identity |
|-----------------------------|-----------------------|-----------------------------------|-------------------------|------------------------------|---------------------|
| Churning Intention | 0.782 | | | | |
| Digital Marketing Promotion | 0.330 | 0.709 | | | |
| Digital Satisfaction | 0.078 | 0.631 | 0.786 | | |
| Network Coverage Image | 0.036 | 0.543 | 0.708 | 0.711 | |
| Private Identity | 0.322 | 0.622 | 0.521 | 0.478 | 0.747 |

Source: Author's data analysis using SmartPLS (2024)

The table above shows that all indicators for each variable in this study meet the criteria for discriminant validity, as their ($\sqrt{\text{AVE}}$) values are greater than the correlations between the constructs.

Composite Reliability and Cronbach Alpha

Reliability testing is conducted to assess the dependability of the research constructs. This evaluation involves analyzing both composite reliability and Cronbach's alpha. An item is considered reliable if its composite reliability and Cronbach's alpha values are above 0.6. The results of the reliability test for the constructs in this study are as follows:

Table 4, Measurement of Composite reliability and Cronbach's alpha

| | Cronbach's Alpha | Composite Reliability | Keterangan |
|-------------------------|---------------------|--------------------------|------------|
| Churning Intention (CI) | 0.871 | 0.903 | Valid |

| Digital Marketing Promotion (DMP) | 0.835 | 0.876 | Valid |
|-----------------------------------|-------|-------|-------|
| Digital Satisfaction (DS) | 0.8 | 0.857 | Valid |
| Network Coverage Image (NCI) | 0.806 | 0.859 | Valid |
| Private Identity (PI) | 0.868 | 0.898 | Valid |

Source: Author's data analysis using SmartPLS (2024)

The table above shows that all items in the research instruments evaluating market orientation, entrepreneurial orientation, adaptive marketing capabilities, and marketing performance have composite reliability and Cronbach's alpha values of 0.6 or greater. This indicates that all instrument items are reliable for measuring their respective variables.

R-Square (R2)

R-Square (R²) reflects the extent of influence that the independent variable exerts on the dependent variable, as well as the overall strength of the research model. According to Ghozali and Latan (2015), an R-Square value of 0.67 signifies a strong model, 0.33 indicates a moderate model, and 0.19 represents a weak model. The R-Square values for this study are displayed in the table below:

Table 5, Measurement of R-Square

| | R Square | R Square Adjusted |
|---------------------------|----------|-------------------|
| Digital Satisfaction (DS) | 0.677 | 0.675 |
| Churning Intention (CI) | 0.207 | 0.194 |

Source: Author's data analysis using SmartPLS (2024)

The table above indicates that the R-Square value for the Digital Satisfaction variable is 0.675, classifying it as a strong model. This means that 67.7% of Digital Satisfaction is accounted for by the Network Coverage Image and Digital Marketing Promotion variables, while the remaining 32.3% is attributed to other factors not covered in this study. Conversely, the Churning Intention variable has an R-Square value of 0.207, placing it in the moderate model category. Therefore, it can be concluded that the variables of Network Coverage Image, Digital Marketing Promotion, Digital Satisfaction, and Private Identity contribute to 20.7% of Churning Intention, with the remaining 79.3% explained by external variables that are not part of the model.

Q-Square Predictive Relevance (Q2)

Q-Square Predictive Relevance (Q²) assesses the ability of observations to generate results for the research model. The Q-Square value ranges from 0 to 1, with values closer to 0 indicating a less effective model and values closer to 1 suggesting a more effective one. According to Ghozali and Latan (2012), the criteria for evaluating model strength based on Q-Square are as follows: a Q-Square value of 0.35 indicates a strong model, 0.15 represents a moderate model, and 0.02 signifies a weak model. The Q-Square value calculated in this study is as follows:

$$Q_2 = 1 - (1 - R_{12})(1 - R_{22}) = 1 - (1 - 0.677)(1 - 0.207) = 0.744$$

The calculated Q-Square value of 0.744 categorizes the model in this study as strong. This indicates that 74.4% of the variation in the endogenous variable (Churning Intention) can be predicted by the exogenous variables (Digital Marketing Promotion, Network Coverage Image, Digital Satisfaction, and Private Identity). The remaining 25.6% is attributed to other factors not included in this research model.

Goodness of Fit (GoF)

Goodness of Fit (GoF) measures the overall accuracy of the model and serves as a combined metric derived from evaluations of both the outer and inner models. The GoF value ranges from 0 to 1; values closer to 0 indicate lower accuracy, while those nearer to 1 suggest higher accuracy. According to Ghozali and Latan (2015), the criteria for determining the strength of the research model based on GoF measurements are as follows: a value of 0.36 is

considered large (GoF large), 0.25 is classified as medium (GoF medium), and 0.10 is deemed small (GoF small). The Goodness of Fit is validated through calculations, with the resulting value obtained from the following computations:

$$GoF = \sqrt{AVE} \times R2 \ GoF = \sqrt{0.536} \times 0.442 \ GoF = \sqrt{0.237} \ GoF = 0.487$$

The calculated GoF value is 0.487, indicating that the model is generally valid. Following the evaluation of the inner model, it can be concluded that the model is fully valid, which makes it appropriate for hypothesis testing and capable of effectively explaining empirical data.

Hypothesis Testing

Hypothesis testing is carried out to assess the impacts of market orientation and entrepreneurial orientation on marketing performance, both directly and indirectly through the mediation of adaptive marketing capabilities. In PLS analysis, hypotheses are tested by evaluating the results of the t-statistic test and their associated probability values. A hypothesis is accepted if the probability value is below 0.05 (5% significance level) or if the t-statistic value exceeds the t-table value of 1.96. The t-statistic test in PLS analysis is conducted using the bootstrapping method. The results of the hypothesis testing are presented in the table below:

Table 6, Measurement of Hypothesis testing

| Hipotesis | Variabel | Koefisien Jalur | T Statistics | P Values | Keterangan |
|-----------|---|--------------------|-----------------|-------------|------------|
| H1 | Network Coverage Image -> Churning Intention | -0.172 | 4.109 | 0,008 | Accept |
| H2 | Digital Marketing Promotion -> Churning Intention | 0,379 | 4.689 | 0,006 | Accept |
| Нз | Network Coverage Image -> Digital Satisfaction | 0.623 | 14.939 | 0,009 | Accept |
| H4 | Digital Marketing Promotion -> Digital Satisfaction | 0.290 | 6.638 | 0,007 | Accept |
| Н5 | Digital Satisfaction -> Churning Intention | -0.183 | 2.215 | 0.027 | Accept |
| Н6 | Network Coverage Image -> Digital Satisfaction -> Churning Intention | -0.114 | 2.138 | 0.033 | Accept |
| Н7 | Digital Marketing Promotion -> Digital Satisfaction -> Churning Intention | -0.053 | 2.08 | 0.038 | Accept |
| Н8 | Network Coverage Image x Private Identity -> Churning Intention | -0.062 | 1.452 | 0.147 | Reject |
| Н9 | Digital Marketing Promotion x Private Identity -> Churning Intention | 0.122 | 2.763 | 0.006 | Accept |

Source: Author's data analysis using SmartPLS (2024)

Mediation Test

The mediation test carried out in this study seeks to assess the mediating role of Digital Satisfaction in the relationship between Network Coverage Image and Digital Marketing Promotion in relation to Churning Intention. This test aims to identify both direct and indirect effects. In this research, the mediation test is conducted using SmartPLS software with the bootstrapping method.

T P **Original** Sample Standard Deviation **Statistics** Sample Mean **Values** Network Coverage Image -> Digital -0.096 -0.101 0.044 2.185 0.029 Satisfaction -> Churning Intention Digital Marketing Promotion -> Digital -0.044 -0.046 0.021 2.064 0.039 Satisfaction -> Churning Intention

Table 7, Measurement of mediation test

Source: Author's data analysis using SmartPLS (2024)

The bootstrapping results obtained from SmartPLS regarding the impact of Network Coverage Image on Churning Intention through Digital Satisfaction indicate that the t-statistic value for the indirect effect is 2.185, exceeding the 1.96 threshold at the 5% significance level. This implies that Digital Satisfaction acts as a mediator in the relationship between Network Coverage Image and Churning Intention. The P Value is 0.029, indicating a significant effect at a confidence level of α =0.05, as it is less than 0.05. Additionally, the bootstrapping results for the impact of Digital Marketing Promotion on Churning Intention via Digital Satisfaction reveal a t-statistic value of 2.064 for the indirect effect, exceeding 1.96 at the 5% significance level. This further confirms that Digital Satisfaction mediates the connection between Digital Marketing Promotion and Churning Intention. The P Value for this effect is 0.039, which also signifies a significant effect at the α =0.05 confidence level, as it is below 0.05.

CONCLUSION

- **Network Coverage Image contributes to Churning Intention.** This means that Network Coverage Image can reduce Churning Intention. Players in the telecommunications industry understand that a better perception of service coverage will decrease their intention to switch to another operator.
- **Digital Marketing Promotion contributes to Churning Intention.** Digital Marketing Promotion can increase Churning Intention; the better the Digital Marketing Promotion conducted by other operators, the more it adds to their intention to switch.
- Network Coverage Image contributes to Digital Satisfaction. A good Network Coverage Image ensures that users have smooth access to digital services. Strong network availability allows users to access apps, websites, and other digital services quickly and without interruptions, thus increasing Digital Satisfaction.
- **Digital Marketing Promotion contributes to Digital Satisfaction.** Digital Marketing Promotion can enhance Digital Satisfaction. Effective Digital Marketing Promotion ensures that users receive relevant and valuable information about promotions. If marketing campaigns provide useful knowledge or offers, users will feel more satisfied with their interactions with the product.
- **Digital Satisfaction contributes to Churning Intention.** Digital Satisfaction can significantly reduce Churning Intention. Users in the telecommunications industry feel that greater satisfaction with digital products and services provided by operators will decrease their intention to switch.
- Network Coverage Image, through the mediation of Digital Satisfaction, contributes to Churning Intention. This indicates that Digital Satisfaction may serve as a mediator in the connection between Network Coverage Image and the reduction of Churning Intention.

- Digital Marketing Promotion, through the mediation of Digital Satisfaction, contributes to Churning Intention. Digital Satisfaction can mediate the influence of Digital Marketing Promotion in reducing Churning Intention.
- Network Coverage Image, using Private Identity as a moderator, does not contribute to Churning Intention. Private Identity does not moderate the effect of Network Coverage Image on reducing Churning Intention. This means that Private Identity does not significantly influence how network perception affects customers' intentions to switch providers.
- Digital Marketing Promotion, using Private Identity as a moderator, contributes to Churning Intention. Private Identity can moderate or strengthen the influence of Digital Marketing Promotion in reducing Churning Intention.

5. Suggestion

- **a.** Telecommunications industry players need to enhance their information-gathering efforts regarding changes in consumer needs, competitors, and the market. They should take appropriate actions based on the information gathered as part of effectively implementing Network Coverage Image, Digital Marketing Promotion, Digital Satisfaction, and Private Identity. This is expected to help reduce customer Churning Intention.
- **b.** Telecommunications industry players should adopt customer-oriented strategies to reduce churning. This includes increasing focus on innovative technology developments to enhance the products offered, being more proactive in seeking opportunities to anticipate future demand and being more willing to take risks to achieve higher profits.

REFERENCES

- [1] Abdillah, W., Hartono. (2015). Partial Least Square (PLS). Penerbit Andi. Yogyakarta.
- [2] Al-Mashraie. Mohammed, Sung Hoon Chung, Hyun Woo Jeon. (2020). Customer switching behavior analysis in the telecommunication industry via push-pull-mooring framework: A machine learning approach. Journal Computers & Industrial Engineering 144. https://doi.org/10.1016/j.cie.2020.106476
- [3] [Calvo-Porral, C., and Levy-Mangin, J.-P. (2015). Switching behavior and customer satisfaction in mobile services: analyzing virtual and traditional operators. Comput. Human Behav. 49, 532–540. doi: 10.1016/j.chb.2015.03.057
- [4] Dharmmesta, Basu S. (1999). Perilaku Berbelanja Konsumen Era 90'an dan Strategi Pemasaran. Jurnal Ekonomi dan Bisnis Indonesia. September. h. 29-40
- [5] Ferdinand, Agusty. (2014). Metode Penelitian Manajemen. Badan Penerbit Universitas Diponegoro. Semarang.
- [6] Ghazali, E., Nguyen, B., Mutum, D.S. and Mohd-Any, A.A. (2016), "Constructing online switching barriers: examining the effects of switching costs and alternative attractiveness on e-store loyalty in online pure-play retailers", Electronic Markets, Vol. 26 No. 2, pp.157-171.
- [7] Hsieh, J.-K., Hsieh, Y.-C., Chiu, H.-C., and Feng, Y.-C. (2012). Post-adoption switching behavior for online service substitutes: a perspective of the push-pull-mooring framework. Comput. Human Behav. 28, 1912–1920. doi: 10.1016/j.chb.2012.05.010
- [8] Kleindl, B.A. & Burrow, J.L. (2005). E-Commerce Marketing. United States of America: South Western
- [9] Kotler, Philip and Kevin Lane Keller. (2016). Marketing Management 15th Global Edition. Harlow: Pearson.
- [10] Kotler, Philip and Gary Amstrong. (2017). Principles of Marketing 17th Global Edition. Harlow: Pearson.
- [11] Ritz, W., Wolf, M., & McQuitty, S. (2019). Digital marketing adoption and success for small businesses. Journal of Research in Interactive Marketing, 13(2), 179–203.
- [12] Ridwan Sanjaya Dan Josua Tarigan. (2009). Creative digital marketing: Teknologi berbiaya murah, inovatif, dan berdaya hasil gemilang. Elex Media Komputindo, Jakarta.
- [13] Sekaran, Uma. (2017). Research Methods For Business. Salemba Empat. Jakarta
- [14] Sekaran & Bougie. (2016). Research Methods for Business: A Skill Building Approach Seventh Edition. United States of America: Wiley
- [15] Sugiyono. (2017). Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: CV Alfabeta

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