

IndiHome's Innovation and New Product Strategy to Improve Company Performance

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Abstract. In recent years, the telecommunications industry has rapid changes with the emergence of new technologies and increasing customer demand. Telkom Group, through its IndiHome product business, has played an important role in providing telecommunications services in Indonesia including broadband internet, cable TV, and telephone. To competitive in the market, IndiHome needs to innovate and develop new products that are relevant to market needs. Technological innovation and new product development are key factors in driving business success in the telecommunications sector, especially for Telkom Group. This study is to analyze the influence of IndiHome's innovation and new product development strategies on Telkom Group's performance, by increasing revenue, with the increasing number of IndiHome customers. This study uses quantitative and qualitative research through a questionnaire survey to 63 IndiHome customers. Based on the results of the analysis of the research conducted, identifies key initiatives implemented by IndiHome to drive revenue growth, increase customer loyalty, and expand market share. This study highlights the importance of a technology-based approach, including IT Maturity and product diversification as key elements in creating competitive advantage. This article also provides strategic recommendations that Telkom Group can adopt in strengthening innovation and new product development in the future.

Keywords: IndiHome, innovation, new product, Telkom Group, company performance.

Introduction

In the increasingly advanced digital era, the public's need for internet, entertainment, and communication services is increasing. Telecommunication companies are required to continue to innovate and present products and services that are able to meet the increasingly complex and dynamic needs of consumers. In Indonesia, Telkom Group, through its IndiHome service, acts as an integrated provider of internet, interactive TV, and landline services. IndiHome is not only a household internet service, but also offers various digital services that include entertainment, education, and various other needs that continue to develop in accordance with technological developments and market needs.

The increasingly tight competition in the telecommunications industry, both from local and global service providers, requires Telkom Group to innovate continuously. Innovation is needed to maintain market share and improve business performance. IndiHome, as one of the main pillars of Telkom Group's business, has a great responsibility in making a significant contribution to the company's growth. In this context, the implementation of innovation strategies and the development of new products is very important so that IndiHome can continue to be relevant in the market, meet consumer expectations, and support the increase in Telkom Group's competitiveness.

IndiHome also faces challenges in the form of increasingly high consumer expectations, especially in terms of service quality and internet speed. Customers not only demand high internet speed, but also stable connections and additional features that are relevant to modern lifestyles, such as parental control, exclusive content access, and smart home technology. In an effort to optimize Telkom Group's business performance, an innovation strategy is needed that can improve service quality and offer new products that have added value for customers.

On the other hand, the digital era also offers great opportunities for IndiHome to grow. By utilizing the latest technologies such as AI (*Artificial Intelligence*) and the IoT (*Internet of Things*), IndiHome can create more personal and interactive services, thereby increasing customer satisfaction and loyalty. The implementation of effective innovation strategies and new product development is expected to increase the competitive value of Telkom Group in both national and international markets.

Based on the above, this study aims to explore the innovation strategy and development of new IndiHome service products that can support Telkom Group's business performance. The focus of this study is how service innovation and product diversification can make a positive contribution to the company's competitiveness and growth.

Based on the background that has been described, this mini research aims to examine the influence of innovation strategies and new product development implemented by IndiHome on customer satisfaction and customer desire to recommend services to others, as well as the influence of customer satisfaction on customer recommendations to others. Some of the problem formulations raised in this research are as follows:

1. How does the innovation strategy implemented by IndiHome affect customer satisfaction?
2. How does the development of new IndiHome products affect the level of customer satisfaction?
3. Does the innovation strategy have a significant influence on customer desire to recommend IndiHome services to others?
4. Do new products developed by IndiHome have a positive impact on customer recommendations?
5. Does the influence of IndiHome customer satisfaction have a significant influence on customer desire to recommend services to others?

Methods

This research or mini research uses a quantitative method in the form of a survey conducted by providing a questionnaire to IndiHome customers in the form of an electronic google form that presents questions and answer choices that can be selected by respondents. Meanwhile, in terms of the time of the research, using cross-sectional, where data is collected, processed, analyzed, and then conclusions are drawn in a certain time period to describe or measure variables in one population

1.1. Object and Subject Research

The research object in this study is the IndiHome service managed by the Telkom Group. IndiHome is an integrated digital service that provides internet access, interactive television and home telephones for customers throughout Indonesia. This service is designed to meet society's digital needs which continue to develop in the era of modern technology. As one of the Telkom Group's main products, IndiHome plays a strategic role in supporting the company's business performance in the telecommunications and digital services sectors. In the midst of intense competition from other internet service providers, IndiHome is required to continue to innovate in providing quality services and meeting customer needs. Therefore, the focus of this research is how innovation strategies and new product development at IndiHome can support improving the overall business performance of the Telkom Group. Innovation in IndiHome services does not only involve technical aspects, such as increasing internet speed and network stability, but also non-technical aspects, such as developing additional features (parental control, smart home, etc.) and more responsive customer service. By focusing on innovation and developing new products, IndiHome is expected to increase its competitiveness in the market and provide more value for customers.

1.2. Research Methodology

The research subjects in this study include innovation strategies and new product development implemented in IndiHome services, as well as their impact on customer satisfaction and customer recommendations. Innovation strategy refers to Telkom Group's efforts to create or adapt new services that are relevant and in accordance with customer needs. New product development involves the activities of designing, creating, and launching new services or features designed to improve customer experience and meet market demand.

This study also focuses on two dependent variables, namely:

1. Customer Satisfaction

The level of satisfaction felt by customers with IndiHome services, which includes aspects of network quality, additional services, and overall user experience.

2. Customer Recommendations

The tendency of customers to recommend IndiHome services to others. These customer recommendations can be important indicators of customer loyalty and the company's positive image in the eyes of the public.

Positive Customer Satisfaction and Customer Recommendations will increase the number of IndiHome customers, and with good customer ARPU (Average Revenue Per Unit), it will increase the company's revenue, and increase EBITDA and overall net income from the company.

The independent variables for this research are:

1. Innovation Strategy

Refers to IndiHome's efforts to create or implement new ideas that can improve the quality and attractiveness of services. This includes innovations in technology, features, and more responsive and proactive customer service.

2. New Products

Refers to activities carried out by IndiHome to launch new products or features that are able to meet the evolving needs of customers. Examples include the addition of features such as parental control, access to exclusive entertainment content, or additional services that support smart homes.

Through this approach, this study aims to analyze whether the innovation strategy and new products implemented by IndiHome have a significant influence on customer satisfaction and their tendency to recommend services to others. Thus, the results of this study are expected to provide insight into the role of innovation strategies and new products in supporting Telkom Group's business performance.

1.3. Population and Survey Time

Population is a group of objects or people or conditions that have common characteristics. The population of this mini research is 63 IndiHome customers and was conducted in the period of 21-26 October 2024. The distribution of questionnaires to respondents was carried out by sending a prepared Google Form link via email and WhatsApp blast. Researchers also monitored and contacted respondents directly to ensure that respondents had filled out the questionnaire provided.

1.4. Research Framework

The framework of this mini research can be described as follows:



Figure 2.1. Research Framework

From Figure 2.1 above, based on the results of a survey of 63 IndiHome customers, the influence of variables related to Innovation strategies and New Product development on Customer Satisfaction variables, as well as on Customer Recommendation variables, will be tested. The influence of Customer Satisfaction variables on Customer Recommendation variables will also be tested.

1.5. Research Hypothesis

The hypothesis of this research are grouped in relation to customer satisfaction and customer recommendations namely Ho as Null Hypothesis and H1 as Alternative Hypothesis

Hypothesis on Customer Satisfaction

a. Hypothesis for Innovation Strategy

H0: There is no significant difference in customer satisfaction based on innovation strategy.

H1: There is a significant difference in customer satisfaction based on innovation strategy.

b. Hypothesis for New Product

H0: There is no significant difference in customer satisfaction based on new product type.

H1: There is a significant difference in customer satisfaction based on new product type.

c. Hypothesis of Interaction between Innovation Strategy and New Product

H0: There is no significant interaction between innovation strategy and new product on customer satisfaction.

H1: There is a significant interaction between innovation strategy and new product on customer satisfaction.

Hypothesis on Customer Recommendation

a. Hypothesis for Innovation Strategy

H0: There is no significant difference in customer recommendation based on innovation strategy.

H1: There is a significant difference in customer recommendation based on innovation strategy.

b. Hypothesis for New Product

H0: There is no significant difference in customer recommendation based on new product type.

H1: There is a significant difference in customer recommendation based on new product type.

c. Hypothesis of Interaction between Innovation Strategy and New Product

H0: There is no significant interaction between innovation strategy and new product on customer recommendation.

H1: There is a significant interaction between innovation strategy and new product on customer recommendation.

d. Hypothesis for Customer Satisfaction

H0: There is no significant difference in customer recommendation based on customer satisfaction

H1: There is a significant difference in customer recommendation based on customer satisfaction.

Result and Discussion

1.6. Research Result

This research was conducted by surveying 63 IndiHome customers through a Google Form questionnaire (list of questions and detailed results as in the Appendix Chapter).

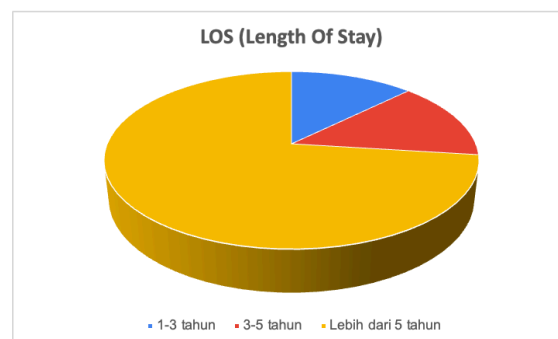




Figure 3.1. IndiHomCustomer Survey Respondent Profile

From Figure 3.1 above, IndiHome customer respondents are grouped based on how long they have subscribed to IndiHome services or *Length Of Stay* (LOS), customer packages, customer location, and customer age.

- LOS: 13% (1-3 years), 14% (3-5 years), 73% (more than 5 years)
- Customer packages: 27% (Internet and TV), 33% (Internet only), 33% (Internet, TV, Telephone), 6% (other bundling packages)
- Customer location: 8% (rural), 85% (big cities), 6% (small cities)
- Customer age: 11% (15-30 years), 17% (31-40 years), 62% (more than 40 years)

From the survey data of 63 IndiHome customers, validity and reliability tests were conducted to ensure that the measuring instrument or mini research instrument produces accurate (validity) and consistent (reliability) data, so that the research results can be trusted, interpreted correctly and are useful in decision making or theory development. The processing of survey data using SPSS software version 27 and then the data is entered into Data View according to Variable View as follows.

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	LOS	String	19	0		None	None	19	Left	Nominal	Input
2	CURRENT_P...	String	37	0		None	None	37	Left	Nominal	Input
3	LOCATION	String	15	0		None	None	15	Left	Nominal	Input
4	AGE	String	19	0		None	None	19	Left	Nominal	Input
5	CURRENT_S...	Numeric	8	0		None	None	8	Right	Scale	Input
6	CURRENT_S...	Numeric	8	0		None	None	8	Right	Scale	Input
7	CURRENT_S...	Numeric	8	0		None	None	8	Right	Scale	Input
8	CURRENT_S...	Numeric	8	0		None	None	8	Right	Scale	Input
9	CURRENT_S...	Numeric	8	0		None	None	8	Right	Scale	Input
10	INNOVATIO...	Numeric	8	0		None	None	8	Right	Scale	Input
11	INNOVATIO...	Numeric	8	0		None	None	8	Right	Scale	Input
12	INNOVATIO...	Numeric	8	0		None	None	8	Right	Scale	Input
13	INNOVATIO...	Numeric	8	0		None	None	8	Right	Scale	Input
14	NEW_PROD...	Numeric	8	0		None	None	8	Right	Scale	Input
15	NEW_IMPRO...	String	190	0		None	None	190	Left	Nominal	Input
16	NEW_PROD...	Numeric	8	0		None	None	8	Right	Scale	Input
17	NEW_PROD...	Numeric	8	0		None	None	8	Right	Scale	Input
18	IPB_SATISFA...	Numeric	8	0		None	None	8	Right	Scale	Input
19	IPB_SATISFA...	Numeric	8	0		None	None	8	Right	Scale	Input
20	IPB_SATISFA...	Numeric	8	0		None	None	8	Right	Scale	Input

Figure 3.2. Survey Result Data using SPSS 27

1.7. Validity and Reliability Test

Validity Test Results for each Variable as follows :

Correlations

		INNOVATION_1	INNOVATION_2	INNOVATION_3	INNOVATION_TOTAL
INNOVATION_1	Pearson Correlation	1	.218	.116	.448**
	Sig. (2-tailed)		.085	.366	.000
	N	63	63	63	63
INNOVATION_2	Pearson Correlation	.218	1	.158	.835**
	Sig. (2-tailed)	.085		.215	.000
	N	63	63	63	63
INNOVATION_3	Pearson Correlation	.116	.158	1	.541**
	Sig. (2-tailed)	.366	.215		.000
	N	63	63	63	63
INNOVATION_TOTAL	Pearson Correlation	.448**	.835**	.541**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	63	63	63	63

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		NEW_PRODUC_T_1	NEW_PRODUC_T_2	NEW_PRODUC_T_TOTAL
NEW_PRODUCT_1	Pearson Correlation	1	.191	.777**
	Sig. (2-tailed)		.133	.000
	N	63	63	63
NEW_PRODUCT_2	Pearson Correlation	.191	1	.766**
	Sig. (2-tailed)	.133		.000
	N	63	63	63
NEW_PRODUCT_TOTAL	Pearson Correlation	.777**	.766**	1
	Sig. (2-tailed)	.000	.000	
	N	63	63	63

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		IPB_SATISFACTION_1	IPB_SATISFACTION_2	IPB_SATISFACTION_3	IPB_SATISFACTION_TOTAL
IPB_SATISFACTION_1	Pearson Correlation	1	.492**	.651**	.859**
	Sig. (2-tailed)		.000	.000	.000
	N	63	63	63	63
IPB_SATISFACTION_2	Pearson Correlation	.492**	1	.436**	.806**
	Sig. (2-tailed)	.000		.000	.000
	N	63	63	63	63
IPB_SATISFACTION_3	Pearson Correlation	.651**	.436**	1	.813**
	Sig. (2-tailed)	.000	.000		.000
	N	63	63	63	63
IPB_SATISFACTION_TOTAL	Pearson Correlation	.859**	.806**	.813**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	63	63	63	63

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		RECOMMENDATION_1	RECOMMENDATION_2	RECOMMENDATION_TOTAL
RECOMMENDATION_1	Pearson Correlation	1	.812**	.974**
	Sig. (2-tailed)		.000	.000
	N	63	63	63
RECOMMENDATION_2	Pearson Correlation	.812**	1	.923**
	Sig. (2-tailed)	.000		.000
	N	63	63	63
RECOMMENDATION_TOTAL	Pearson Correlation	.974**	.923**	1
	Sig. (2-tailed)	.000	.000	
	N	63	63	63

** . Correlation is significant at the 0.01 level (2-tailed).

Figure 3.3. Validity Test Results for each Variable

Summary of Validity Test results as follows:

	r hitung	r tabel	Hasil	Interpretasi
INNOVATION 1	0,448	0,248	r hitung > r tabel	Valid
INNOVATION 2	0,835	0,248	r hitung > r tabel	Valid
INNOVATION 3	0,541	0,248	r hitung > r tabel	Valid
NEW PRODUCT 1	0,744	0,248	r hitung > r tabel	Valid
NEW PRODUCT 2	0,855	0,248	r hitung > r tabel	Valid
IPB SATISFACTION 1	0,859	0,248	r hitung > r tabel	Valid
IPB SATISFACTION 2	0,806	0,248	r hitung > r tabel	Valid
IPB SATISFACTION 3	0,813	0,248	r hitung > r tabel	Valid
RECOMMENDATION 1	0,974	0,248	r hitung > r tabel	Valid
RECOMMENDATION 2	0,923	0,248	r hitung > r tabel	Valid

Figure 3.4. Summary of Validity Test Results r count and r table

With the number of respondents (n=63), df=61 (63-2), r table = 0.248 was obtained with the calculated r results (SPSS processing results) for all variables being greater than r table, so it can be concluded that all items in this mini research measurement instrument are valid for use in research, because they meet the validity requirements based on the correlation test.

The Reliability Test Results as follows:

Item-Total Statistics					→ Reliability
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	
INNOVATION_1	28.92	15.558	.240	.820	
INNOVATION_2	26.19	15.060	.518	.802	
INNOVATION_3	24.92	13.816	.421	.808	
NEW_PRODUCT_1	25.90	14.217	.493	.799	
NEW_PRODUCT_2	26.05	14.756	.375	.810	
IPB_SATISFACTION_1	26.16	11.974	.691	.773	
IPB_SATISFACTION_2	26.24	12.184	.560	.794	
IPB_SATISFACTION_3	25.59	12.666	.689	.775	
RECOMMENDATION_1	25.33	12.935	.623	.783	
RECOMMENDATION_2	28.56	15.186	.408	.808	

Scale: ALL VARIABLES				
Case Processing Summary				
		N	%	
Cases	Valid	63	100.0	
	Excluded ^a	0	.0	
	Total	63	100.0	

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha	N of Items
.815	10

Figure 3.5. The Reliability Test Results

From Figure 3.5 above, it can be explained as follows:

- **N of Items:** The number of items in this instrument is 10, meaning that the reliability value is calculated based on 10 items in the research instrument, which represent variables related to innovation strategy, new product development, customer satisfaction and customer recommendations.
- **Cronbach's Alpha:** The Cronbach's Alpha value of 0.815 indicates that the instrument or item in this study has a high level of reliability.

In general, a Cronbach's Alpha value above 0.6 is considered adequate to indicate good internal consistency. Therefore, a value of 0.815 indicates that this instrument is reliable and consistent in measuring the variables studied.

1.8. Research Hypothesis Testing

Data processing for hypothesis testing using 2-way ANOVA using SPSS 27 with the results as follows.

1.8.1. Hypothesis Testing on Customer Satisfaction

Tests of Between-Subjects Effects						
Dependent Variable: IPB_SATISFACTION_TOTAL						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	132.595 ^a	9	14.733	5.856	.000	.499
Intercept	1808.222	1	1808.222	718.723	.000	.931
INNOVATION_TOTAL	22.487	2	11.244	4.469	.016	.144
NEW_PRODUCT_TOTAL	51.681	4	12.920	5.135	.001	.279
INNOVATION_TOTAL * NEW_PRODUCT_TOTAL	5.657	3	1.886	.750	.527	.041
Error	133.342	53	2.516			
Total	6526.000	63				
Corrected Total	265.937	62				

a. R Squared = .499 (Adjusted R Squared = .413)

Figure 3.6. The 2-Way ANOVA Results on Customer Satisfaction

Based on Figure 3.6, IPB_SATISFACTION_TOTAL is a dependent variable that shows *Customer Satisfaction*, while INNOVATION_TOTAL, NEW_PRODUCT_TOTAL are independent variables that show *Innovation Strategy* and *New Products*. The following is the interpretation of the SPSS output results:

- a. INNOVATION_TOTAL (*Innovation Strategy*)
 - This variable has a significant effect on IPB_SATISFACTION_TOTAL (Sig. value = 0.016, less than 0.05), H_0 is rejected, which indicates that variations in innovation strategy significantly affect customer satisfaction levels.
 - The Partial Eta Squared value of 0.144 indicates a moderate effect size, so the effect of innovation is quite significant on customer satisfaction.
- b. NEW_PRODUCT_TOTAL (*New Product Strategy*)
 - This variable also has a significant effect on IPB_SATISFACTION_TOTAL (Sig. value = 0.001, less than 0.05), H_0 is rejected, indicating that variations in new product strategies significantly affect customer satisfaction levels.
 - The Partial Eta Squared value of 0.279 indicates a fairly large effect size, indicating that new product strategies have a significant effect on customer satisfaction.
- c. Interaction between INNOVATION_TOTAL and NEW_PRODUCT_TOTAL
 - The interaction between these two variables is not significant (Sig. value = 0.527, greater than 0.05), H_0 is accepted. This means that there is no significant joint effect between innovation strategy and new products on IPB_SATISFACTION_TOTAL.
 - The Partial Eta Squared value of 0.041 indicates a very small effect size, indicating that this interaction does not have a significant effect.
- d. Overall Model

- The R Squared value of 0.499 indicates that this model is able to explain about 49.9% of the variance in IPB_SATISFACTION_TOTAL. The Adjusted R Squared of 0.413 indicates that most of the variables in this model are strong enough to explain the variation in overall satisfaction.
- Overall, these results indicate that both innovation strategy and new product strategy have a significant influence on customer satisfaction, while the interaction between the two does not have a significant influence.

1.8.2. Hypothesis Testing on Customer Recommendation

Tests of Between-Subjects Effects						
Dependent Variable: RECOMMENDATION_TOTAL						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	7.776 ^a	9	.864	1.816	.087	.236
Intercept	253.816	1	253.816	533.643	.000	.910
INNOVATION_TOTAL	3.065	2	1.532	3.222	.048	.108
NEW_PRODUCT_TOTAL	1.402	4	.350	.737	.571	.053
INNOVATION_TOTAL * NEW_PRODUCT_TOTAL	1.070	3	.357	.750	.527	.041
Error	25.208	53	.476			
Total	1033.000	63				
Corrected Total	32.984	62				

a. R Squared = .236 (Adjusted R Squared = .106)

Figure 3.7. The 2-Way ANOVA Results on Customer Recommendation

Based on Figure 3.7, RECOMMENDATION_TOTAL is a dependent variable that shows *Customer Recommendations*, while INNOVATION_TOTAL and NEW_PRODUCT_TOTAL are independent variables that show *Innovation Strategies* and *New Products*. The following is the interpretation of the SPSS output results:

- INNOVATION_TOTAL (*Innovation Strategy*)
 - This variable has a significant effect on RECOMMENDATION_TOTAL (Sig. value = 0.048, less than 0.05), Ho is rejected, which means there is a significant difference in the level of recommendations based on variations in innovation strategies.
 - The Partial Eta Squared value of 0.108 indicates a moderate effect size, which means that the effect of innovation on recommendations is quite significant.
- NEW_PRODUCT_TOTAL (*New Product Strategy*)
 - This variable does not have a significant effect on RECOMMENDATION_TOTAL (Sig. value = 0.571, greater than 0.05), Ho is accepted, which means that variations in new product strategies do not have a significant impact on the level of recommendation.
 - The Partial Eta Squared value of 0.053 indicates a small effect size, which strengthens the conclusion that new product strategies do not significantly affect recommendations.
- Interaction between INNOVATION_TOTAL and NEW_PRODUCT_TOTAL
 - The interaction between these two variables is not significant (Sig. value = 0.527, greater than 0.05), Ho is accepted, which means that there is no significant joint effect between innovation strategy and new products on RECOMMENDATION_TOTAL.
 - The Partial Eta Squared value of 0.041 indicates a very small effect size, which supports the conclusion that this interaction does not have a significant effect.
- Overall Model

- The R Squared value of 0.236 indicates that this model is able to explain about 23.6% of the variance in RECOMMENDATION_TOTAL. The lower Adjusted R Squared value (0.106) indicates that some variables in the model may not be strong enough to explain the overall variance.
- Overall, these results indicate that innovation strategy has a significant effect on the recommendation rate, while new product strategy and the interaction between the two strategies do not have a significant effect.

1.8.3. Hypothesis Testing on Customer Satisfaction on Customer Recommendations

Tests of Between-Subjects Effects						
Dependent Variable: RECOMMENDATION_TOTAL						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	14.045 ^a	10	1.405	3.856	.001	.426
Intercept	414.428	1	414.428	1137.870	.000	.956
IPB_SATISFACTION_TOTAL	14.045	10	1.405	3.856	.001	.426
Error	18.939	52	.364			
Total	1033.000	63				
Corrected Total	32.984	62				

a. R Squared = .426 (Adjusted R Squared = .315)

Figure 3.8. The 2-Way ANOVA Results of Customer Satisfaction with Customer Recommendations

Based on Figure 3.8 above, RECOMMENDATION_TOTAL is a dependent variable that shows IndiHome Customer Recommendations to others, while IPB_SATISFACTION_TOTAL in the test in this section functions as an independent variable, which is IndiHome customer satisfaction. The following is the interpretation of the SPSS processing output results:

- IPB_SATISFACTION_TOTAL
 - This variable has a significant effect on RECOMMENDATION_TOTAL (Sig. value = 0.001, less than 0.05), H_0 is rejected, which indicates that the level of customer satisfaction has a significant impact on recommendations.
 - The Partial Eta Squared value of 0.426 indicates a large effect size, indicating that the influence of satisfaction on recommendations is quite strong.
- Overall Model
 - The R Squared value of 0.426 indicates this model is able to explain around 42.6% of the variance in RECOMMENDATION_TOTAL. Adjusted R Squared of 0.315 indicates that this model remains strong enough to explain the variation, even considering the complexity of the model.
 - Overall, these results indicate that the level of customer satisfaction significantly affects the level of recommendation. This model is strong enough to explain most of the variance in recommendations based on satisfaction.

1.9. Implementation of Object Study

The object studied in this study is the IndiHome service managed by Telkom Group, while the research subjects include innovation strategies and new product development to improve customer satisfaction and recommendations. The implementation of the previously discussed theoretical and conceptual studies to IndiHome services can be seen through the following strategies and approaches.

1.9.1. Service Product Innovation

Product innovation in IndiHome services includes the development of new services or the addition of features to existing products. IndiHome can implement product innovation by increasing network speed and stability, adding new features such as parental control or smart home services, and providing more varied and quality entertainment access. The application of this innovation aims to meet the increasingly complex needs of customers and provide added value compared to competitors. Several implementation programs related to product innovation in IndiHome services are as follows:

- **High-Speed Internet Packages**
IndiHome can launch internet packages with higher speeds to meet the needs of customers who require large bandwidth, such as students, remote workers, and gamers.
- **Exclusive Entertainment Content**
By working with streaming platforms, IndiHome can provide exclusive content to enhance the customer entertainment experience.
- **Smart Home Integration**
Presenting features that support the smart home ecosystem, such as CCTV monitoring or household device control, to increase customer convenience.

1.9.2. New Product Development

Developing new products that suit customer needs will increase their satisfaction and encourage loyalty. IndiHome can adopt a strategy to respond to the specific needs of customers in various segments, such as household customers, students, professionals, and business people. By providing more personalized and flexible packages, IndiHome can attract various groups and strengthen its customer base. Some of the new product development implementation programs are as follows:

- **Education and Productivity Packages**
IndiHome can design special packages for students and remote workers that include fast internet access and additional services such as educational applications or access to digital libraries.
- **Business and Enterprise Packages**
Providing services that support the needs of small to medium businesses, for example with more stable connections, cloud solutions, and priority customer service.
- **Entertainment Packages**
Adding services such as music streaming, video-on-demand, or online games in an integrated package to attract entertainment-focused customers.

1.9.3. Implementation of Emerging Technology

The use of the emerging technology, such as AI (*Artificial Intelligence*), Big Data, and IoT (*Internet of Things*), can help IndiHome provide better and more efficient services to customers. AI, for example, can be used to personalize services or respond to customer inquiries automatically. Meanwhile, Big Data can help IndiHome understand customer needs and adjust more relevant services. Some of the latest technology implementation programs are as follows:

- **AI-Driven Customer Service**
Using chatbots or AI systems to improve customer service, respond to complaints, and provide quick solutions to customer problems.
- **Big Data Analytics**
Collecting and analyzing customer usage data to identify evolving customer trends, preferences, and needs, and developing appropriate products.
- **IoT Integration**
Presenting smart home services through IoT, such as home security systems, room temperature control, and energy management, which can be accessed through the IndiHome application.

1.9.4. Innovation Strategy to Increase Customer Satisfaction and Recommendations

Customer satisfaction and recommendations are two important factors in improving the business performance of Indihome and Telkom Group. With the right innovation strategy, IndiHome can create a better customer experience, so that customers feel satisfied and motivated to recommend services to others. To achieve this, IndiHome can implement an approach that focuses on improving service quality, improving customer service, and adjusting services according to customer needs. Some implementation programs related to innovation strategies to increase customer satisfaction and recommendations are as follows:

- **Network Quality Improvement**
Maintaining stable internet connections and ensuring services function optimally, especially in remote areas, to reduce customer complaints.
- **Responsive Customer Service**
Providing training to customer service teams to improve their ability to respond and resolve customer problems quickly and effectively.
- **Loyalty Program**
Holding a loyalty or reward program for loyal customers to increase customer retention and encourage them to recommend the service to others.

1.9.5. Collaboration with Content Providers and Strategic Partners

Collaboration with third parties, such as digital content providers, streaming platforms, and technology companies, can also increase the added value of IndiHome services. By collaborating with partners who have complementary products or services, IndiHome can enrich the customer experience and offer them more choices. Some implementation programs related to this collaboration are as follows:

- **Partnership with Streaming Platforms** Working with streaming platforms such as Netflix or Disney+ to provide exclusive access or discounts for IndiHome customers.
- **Integration with Third-Party Applications** Allowing customers to access third-party applications, such as health or education applications, through the IndiHome platform.
- **Bundle Packages with Technology Products** Working with smart device manufacturers to offer bundled internet services and smart home devices, such as security cameras or smart speakers.

1.10. Problem Solving Solution

From the hypothesis results test in the discussion in point 3.3, can be summarized:

- a. **Innovation Strategy**
 - Innovation strategy significantly affects the level of customer satisfaction.
 - Innovation strategy significantly affects the level of customer recommendations.
- b. **New Products**
 - New product strategy significantly affects the level of customer satisfaction.
 - New product strategy does not significantly affect the level of customer recommendations.
- c. **Interaction of Innovation Strategy and New Products**
 - The interaction of innovation strategy and new products does not affect the level of customer satisfaction.
 - The interaction of innovation strategy and new products does not significantly affect the level of customer recommendations.
- d. **Customer Satisfaction**
 - Customer satisfaction significantly affects the level of customer recommendations

Action Plan to solve the problem according to the summary of the hypothesis results, as follows:

a. Innovation Strategy

Solution	Action Items	Target	Unit In Charge
Improving innovation strategy to significantly impact customer satisfaction and recommendations	Identify customer needs through surveys or FGD	Month 1-2	Market Research & Development Team
	Launch "Innovation Challenge" program internally	Month 3	Innovation Development Team
	Communicate innovation to customers through email, social media, and website	Month 4-5	Marketing & Communication Team
	Evaluate the impact of innovation on customer satisfaction and recommendations on a regular basis	Every Quarter	Market Research & Development Team

Table 3.1. Solutions and Action Plans related to Innovation Strategy

b. New Product Strategy

Solution	Action Items	Target	Unit In Charge
Adjust new product strategy to be more relevant to customer needs and increase satisfaction	Segment customers for new products	Month 1-2	Market Research Team
	Launch beta testing program for new products	Month 3	Product Development Team
	Training for sales and service teams related to new products	Month 4	HR & Training Team
	Evaluate the impact of new products on customer satisfaction	Every Quarter	Market Research Team

Table 3.2. Solutions and Action Plans related to New Products

c. Interaction between Innovation and New Product Strategy

Solution	Action Items	Target	Unit In Charge
Develop innovation and new product strategies independently without expecting consistent synergy effects	Create separate roadmaps for innovation and new product strategies	Month 1	Innovation & Product Development Team
	Conduct independent evaluation for each strategy	Every Quarter	Innovation & Product Development Team
	Flexible collaboration between innovation and new product teams as needed	As Needed	Innovation & Product Development Team

Table 3.3. Solutions and Action Plans related to the Interaction of Innovation Strategy & New Products

d. Customer Satisfaction

Solution	Action Items	Target	Unit In Charge
Focus on improving customer satisfaction to increase recommendations	Launch customer loyalty program	Month 2	Customer Experience Team
	Customer Delight campaign for an exceptional customer experience	Month 3-4	Marketing & Customer Experience Team
	Conduct regular customer satisfaction surveys and follow-up actions	Every Quarter	Market Research Team

Table 3.4. Solutions and Action Plans related to Customer Satisfaction

e. Monitoring and Evaluation

Solution	Action Items	Target	Unit In Charge
Perform regular monitoring and adjustments to ensure the effectiveness of each strategy	Monthly and quarterly performance reports	Every Month and Quarter	Market Research & Product Management Team

	A/B Testing for innovations and new products	Every Quarter	Product Development Team
	Benchmarking against competitors to maintain strategy relevance	Every 6 Months	Market Research & Development Team

Table 3.5. Monitoring and Evaluation

From table 3.1 – 3.5 above, the following can be summarized as a solution to the problem solving results of the research related to IndiHome services:

1. The importance of innovation for Customer Satisfaction and Recommendations
2. Alignment of New Product Strategy
3. Separate management between Innovation and New Products
4. Focus on Increasing Customer Satisfaction as a Long-Term Strategy
5. Periodic Monitoring and Evaluation to Maintain Strategy Effectiveness
6. Clear Division of Tasks and Focus on Inter-Team Cooperation

The action plan above focuses on innovation strategies, new products, and customer satisfaction as the main pillars for improving customer experience and recommendations. This plan is supported by continuous monitoring and a clear division of tasks according to the UIC (*Unit In Charge*), which allows the company to continue to adjust the strategy according to the results obtained and changes in customer needs.

Analysis of Telkom Group Business Performance

Based on the 2023 Financial Report overview, Telkom Group's business performance can be seen in the following table.

No	Produk	Pelanggan
1	Consumer	10,1 juta
2	Mobile	
	a. Selular	159,3 juta
	i. Prabayar	151,8 juta
	ii. Pascabayar	7,5 juta
	b. Broadband	127,1 juta
3	Enterprise	
	a. Grup BUMN, BUMD, BLU	524
	b. Pelanggan Swasta	1.694
	c. Pelanggan UKM	618.854
	d. Pelanggan Institusi Pemerintah	714
4	Wholesale & International Business	
	a. Other Licensed Operator (OLO)	7
	b. Pelanggan Internet Service Provider	382
	c. Pelanggan Transponder & Closed User Group	26
	d. Pelanggan Global Partner	593
5	Lain-lain	
	a. Pengguna Aktif Digital Music (RBT, Music Streaming, Langit Music)	17,7 juta
	b. Pengguna Berbayar Digital Games	15,6 juta
	c. Pengguna Berbayar Edutainment (OTT Video)	10,5 juta

Table 3.6. Products and Customers (*source: Telkom Financial Report 2023*)

The number of IndiHome customers based on the table above is 10.1 million customers, with an ARPU of 252.700 rupiah, and there is still an opportunity to increase the number of customers, especially fixed broadband in Indonesia. From the data of internet users worldwide, the number of internet users in Indonesia has reached 215.6 million (or around 78.8 percent of the total population of Indonesia) and is ranked 4th in the world. This is a very good opportunity for TELKOM through the IndiHome product, especially to target markets that have never used internet access, by providing high-speed internet access, both for downloading and uploading.

Specifically for the IndiHome service, the amount of revenue generated can be formulated:

$$\text{Revenue} = \text{Number of Customers} \times \text{ARPU}$$

The greater the number of IndiHome customers, the greater the revenue generated for the Telkom Group. Likewise, the greater the ARPU (*Average Revenue Per Unit*) generated, the greater the revenue obtained.

According to the research results conducted by the researcher, a careful, fast and precise Innovation and New Product Strategy is expected to increase Customer Satisfaction and IndiHome Customer Recommendations to others, thus having an impact on increasing the number of customers which will significantly increase the company's revenue. In addition to efforts to increase the number of customers, the company must also be able to increase ARPU through programs that are retention, acquisition and penetration, in order to increase the utilization of IndiHome customer use, which will have an impact on increasing the company's revenue. Revenue as a component of the company's top line performance is expected to continue to increase through IndiHome service products, and accompanied by efforts to carry out company efficiency, so that in the end it will have a total impact on increasing EBITDA (*Earnings Before Interest, Tax, Depreciation, and Amortization*) and the company's Net Income.

Conclusion

Conclusion

1. By implementing innovation in products and services, developing relevant new products, utilizing the latest technology, and collaborating with strategic partners, IndiHome is expected to increase customer satisfaction and recommendations.
2. Increasing IndiHome customer satisfaction will reduce the churn rate and increase customer LOS (*Length Of Stay*), so that with a certain ARPU (*Average Revenue Per Unit*), it will maintain the company's revenue
3. Increasing IndiHome Customer Recommendations to others will have great potential to increase the number of IndiHome customers, and with a certain ARPU value, it will increase the company's revenue.
4. The implementation of this strategy aims to strengthen Telkom Group's position as a market leader and increase customer loyalty to IndiHome services.

Suggestion

1. It is hoped that research or mini research related to IndiHome services like this can be expanded with other variables, to explore other potential so that it can become an opportunity for improving IndiHome services to boost company performance.
2. Research can also be expanded by increasing the population spread throughout Indonesia, to explore more varied customer needs for the development of service products in the future.

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Appendix

1. Questionnaire Questions

IndiHome - Strategi Inovasi & Produk Baru

B I U ↻ ✕

Berikut adalah beberapa pertanyaan survey yang dapat digunakan untuk mengumpulkan umpan balik dari pelanggan terkait **Strategi inovasi dan Pengembangan produk baru layanan IndiHome**.

Nama : *

Teks jawaban singkat

Bagian 1: Profil Responden *

1. Berapa lama Anda telah menggunakan layanan IndiHome?

- Kurang dari 1 tahun
- 1-3 tahun
- 3-5 tahun
- Lebih dari 5 tahun

2. Paket layanan IndiHome apa yang saat ini Anda gunakan? *

- Internet saja
- Internet dan TV kabel
- Internet, TV kabel, dan telepon rumah
- Paket bundling lainnya

3. Dimana Anda tinggal?

- Kota besar
- Kota kecil
- Daerah pedesaan

4. Berapa Usia Anda ? *

- Kurang dari 15 tahun
- 15-30 tahun
- 31-40 tahun
- Lebih dari 40 tahun

6. Seberapa puas Anda dengan kualitas TV kabel IndiHome? *

- Sangat puas
- Puas
- Cukup puas
- Tidak puas
- Sangat tidak puas

Bagian 2: Pengalaman dengan Layanan IndiHome *

5. Seberapa puas Anda dengan kecepatan internet IndiHome yang Anda gunakan?

- Sangat puas
- Puas
- Cukup puas
- Tidak puas
- Sangat tidak puas

7. Seberapa mudah Anda mengakses layanan pelanggan IndiHome jika terjadi masalah? *

- Sangat mudah
- Mudah
- Cukup mudah
- Sulit
- Sangat sulit

8. Seberapa sering Anda menggunakan aplikasi MyIndiHome untuk memeriksa tagihan, pembayaran, atau melaporkan masalah?

- Sangat sering
- Sering
- Kadang-kadang
- Jarang
- Tidak pernah

10. Jika Anda menggunakan layanan smart home IndiHome, bagaimana penilaian Anda terhadap fitur-fitur yang tersedia?

- Sangat baik
- Baik
- Cukup baik
- Buruk
- Sangat buruk
- Saya tidak menggunakan layanan smart home

Bagian 3: Inovasi Teknologi *

9. Apakah Anda mengetahui layanan **smart home** yang disediakan oleh IndiHome?

- Ya
- Tidak

11. Seberapa penting bagi Anda inovasi dalam teknologi yang ditawarkan oleh IndiHome, seperti peningkatan kecepatan internet, keamanan jaringan, atau layanan berbasis IoT?

- Sangat penting
- Penting
- Cukup penting
- Tidak penting

Bagian 4: Produk Baru dan Pengembangan Layanan

12. Apakah Anda merasa IndiHome menawarkan produk atau layanan baru secara berkala yang relevan dengan kebutuhan Anda?

- Sangat setuju
- Setuju
- Netral
- Tidak setuju
- Sangat tidak setuju

14. Apakah Anda tertarik dengan produk baru yang ditawarkan IndiHome seperti **IndiHome Study** untuk pendidikan atau **IndiHome Games** untuk gaming online?

- Sangat tertarik
- Tertarik
- Cukup tertarik
- Tidak tertarik
- Tidak tahu

13. Layanan apa yang menurut Anda paling penting untuk ditingkatkan atau ditambahkan oleh IndiHome? (Pilih semua yang sesuai)

- Peningkatan kecepatan internet
- Layanan TV kabel dengan lebih banyak konten lokal
- Paket khusus untuk pelajar atau pekerja
- Layanan cloud untuk penyimpanan data

Bagian 5: Kepuasan terhadap Inovasi dan Produk Baru *

15. Seberapa puas Anda dengan inovasi yang telah dilakukan oleh IndiHome dalam beberapa tahun terakhir?

- Sangat puas
- Puas
- Cukup puas
- Tidak puas

16. Seberapa sering Anda merasa bahwa produk atau layanan baru dari IndiHome sesuai dengan kebutuhan Anda?

- Sangat sering
 - Sering
 - Kadang-kadang
 - Jarang
 - Tidak pernah
-

17. Menurut Anda, bagaimana kualitas produk baru yang ditawarkan oleh IndiHome dibandingkan dengan pesaing lain di industri telekomunikasi?

- Jauh lebih baik
- Lebih baik
- Sama saja
- Lebih buruk
- Jauh lebih buruk

Bagian 6: Rekomendasi

18. Berdasarkan pengalaman Anda, seberapa besar kemungkinan Anda merekomendasikan layanan IndiHome kepada teman atau keluarga?

- Sangat mungkin
 - Mungkin
 - Netral
 - Tidak mungkin
 - Sangat tidak mungkin
-

19. Terkait Inovasi dan Produk baru, apakah Anda pernah merekomendasikan layanan Indihome kepada orang lain ? *

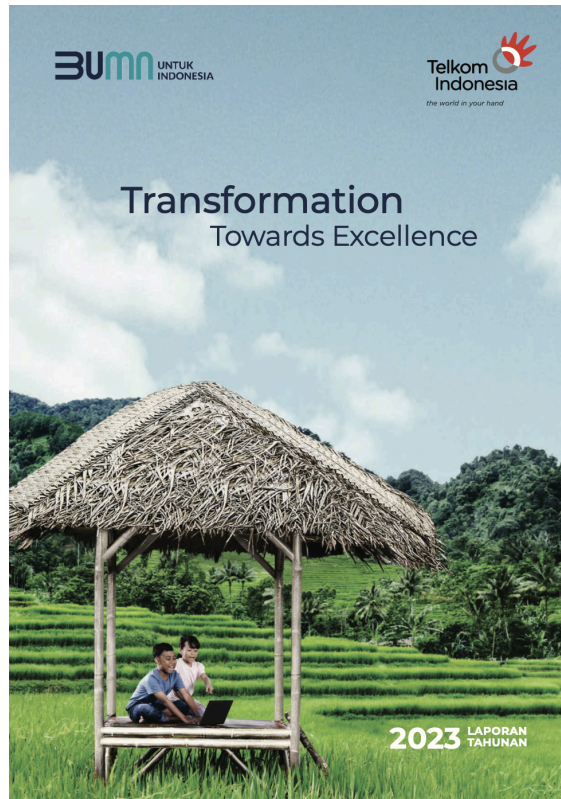
- Ya
 - Tidak
-

20. Apakah Anda memiliki saran untuk inovasi atau produk baru yang dapat meningkatkan layanan IndiHome?

2. Questionnaire Answers

Timestamp	Bagian 1: Profil Responden 1. Berapa lama Anda telah menggunakan lay	2. Paket layanan IndiHome apa yang saat ini	3. Dimana Anda tinggal?	4. Berapa Usia Anda ?	Bagian 2: Pengalaman dengan Layanan I 5. Seberapa puas Anda dengan kecepata
22/10/2024 6:46:58	Lebih dari 5 tahun	Internet, TV kabel, dan telepon rumah	Kota besar	Lebih dari 40 tahun	Puas
22/10/2024 8:41:55	3-5 tahun	Paket bundling lainnya	Kota besar	Lebih dari 40 tahun	Puas
22/10/2024 8:46:59	3-5 tahun	Internet, TV kabel, dan telepon rumah	Kota besar	Lebih dari 40 tahun	Cukup puas
22/10/2024 9:14:07	Lebih dari 5 tahun	Internet saja	Kota besar	Lebih dari 40 tahun	Cukup puas
22/10/2024 9:20:36	3-5 tahun	Internet dan TV kabel	Kota besar	Lebih dari 40 tahun	Puas
22/10/2024 9:22:33	Lebih dari 5 tahun	Internet, TV kabel, dan telepon rumah	Kota besar	Lebih dari 40 tahun	Cukup puas
22/10/2024 10:00:07	Lebih dari 5 tahun	Internet saja	Kota besar	Lebih dari 40 tahun	Cukup puas
22/10/2024 10:10:54	Lebih dari 5 tahun	Internet, TV kabel, dan telepon rumah	Kota besar	Lebih dari 40 tahun	Cukup puas
22/10/2024 10:12:31	Lebih dari 5 tahun	Internet dan TV kabel	Kota besar	Lebih dari 40 tahun	Puas
22/10/2024 10:35:21	Lebih dari 5 tahun	Internet, TV kabel, dan telepon rumah	Kota besar	Lebih dari 40 tahun	Cukup puas
22/10/2024 10:51:15	Lebih dari 5 tahun	Internet dan TV kabel	Kota besar	Lebih dari 40 tahun	Puas
22/10/2024 10:53:40	Lebih dari 5 tahun	Internet dan TV kabel	Kota besar	15-30 tahun	Puas
22/10/2024 10:54:55	Lebih dari 5 tahun	Internet saja	Kota besar	15-30 tahun	Cukup puas
22/10/2024 10:56:52	Lebih dari 5 tahun	Internet, TV kabel, dan telepon rumah	Kota besar	15-30 tahun	Tidak puas
22/10/2024 10:59:23	Lebih dari 5 tahun	Internet saja	Kota besar	Lebih dari 40 tahun	Puas
22/10/2024 11:01:23	3-5 tahun	Internet dan TV kabel	Kota besar	31-40 tahun	Cukup puas
22/10/2024 11:02:22	Lebih dari 5 tahun	Internet, TV kabel, dan telepon rumah	Kota besar	Lebih dari 40 tahun	Sangat puas

3. Telkom Financial Report 2023



TEMA

Transformation Towards Excellence

Di tengah teknologi dan digitalisasi yang semakin berkembang, PT Telkom Indonesia (Persero) Tbk (Telkom) terus berupaya melakukan inovasi dalam mengembangkan layanannya. Perkembangan digitalisasi yang semakin pesat menghadirkan tantangan dan peluang bagi Telkom sebagai perusahaan telekomunikasi terbesar di Indonesia. Semakin meningkatnya permintaan akan layanan digital membuka peluang bagi Telkom untuk mengembangkan dan memperluas berbagai layanan digital yang dapat ditawarkan untuk memenuhi kebutuhan pelanggan. Sementara akses internet yang masih belum merata di seluruh wilayah Indonesia menjadi salah satu tantangan terbesar di era digitalisasi ini. Untuk itu, kami berkomitmen mendukung upaya Pemerintah Indonesia dalam mendorong peningkatan pertumbuhan sektor telekomunikasi dan mengakselerasi transformasi digital nasional. Kami akan terus berinovasi dan mengutamakan kualitas layanan kami untuk mendukung transformasi menuju ekonomi digital Indonesia yang unggul, serta meningkatkan penciptaan nilai bersama (*creating shared value*) bagi seluruh pemangku kepentingan.

