

## THE IMPACT OF DIGITAL APPLICATION USAGE ON CUSTOMER EXPERIENCE, SATISFACTION, AND LOYALTY IN A LIFE INSURANCE COMPANY

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**Abstract:** Since 2016, XYZ Insurance has measured customer satisfaction using a CXI value, but it has not shown the relationship of using self-servicing digital application to customer satisfaction. This research will examine the impact of usage of digital applications on customer experience, customer satisfaction, and customer loyalty at XYZ Insurance. The research is used non-probability sampling with the quota sampling method by taking survey from 203 respondents who have used the features in the eXYZ application at least 2 times. The specified sample criteria are customers who have used the eXYZ application at least twice since downloading the application. In this research, with an expected error rate of 5%, the number of samples required is 349, from a population of 3800 customers. then the data is processed using SEM PLS. From this research it was concluded that usage of digital applications has a significant relationship and has a positive impact on customer experience, customer experience has a significant and a positive impact on customer satisfaction, customer experience does not have a direct positive impact on customer loyalty but it has indirect impact through customer satisfaction, and customer satisfaction has a significant and a positive impact on customer loyalty. The most important factors for customers when using digital applications are digital application innovation, the convenience, and perceived value to customers.

**Keywords:** customer experience, customer loyalty, customer satisfaction, digital applications, insurance

**Abstrak:** Sejak tahun 2016, Asuransi XYZ telah mengukur kepuasan pelanggan dengan menggunakan nilai CXI, namun hasil ini belum menunjukkan hubungan antara penggunaan aplikasi digital ini dengan kepuasan pelanggan. Penelitian ini akan mengkaji dampak penggunaan aplikasi digital eXYZ terhadap pengalaman pelanggan, kepuasan pelanggan, dan loyalitas pelanggan pada Asuransi XYZ". Penelitian ini menggunakan metode non-probability sampling dengan quota sampling dengan cara mengambil survey dari 203 responden yang telah menggunakan fitur-fitur pada aplikasi eXYZ minimal 2 kali, kemudian data tersebut diolah menggunakan SEM PLS. Dari penelitian ini disimpulkan bahwa penggunaan aplikasi digital memiliki hubungan yang signifikan dan berpengaruh positif terhadap pengalaman pelanggan, pengalaman pelanggan berpengaruh signifikan dan positif terhadap kepuasan pelanggan, pengalaman pelanggan tidak berpengaruh positif langsung terhadap loyalitas pelanggan. tetapi berpengaruh tidak langsung melalui kepuasan pelanggan, dan kepuasan pelanggan berpengaruh signifikan dan positif terhadap loyalitas pelanggan. Faktor terpenting bagi pelanggan saat menggunakan aplikasi digital adalah inovasi aplikasi digital, kenyamanan dan nilai yang dirasakan pelanggan.

**Kata kunci:** aplikasi digital, asuransi kepuasan pelanggan, loyalitas pelanggan, pengalaman pelanggan

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## INTRODUCTION

The usage of information and communication technology is one of the factors that encourage development of innovation in service-based industries such as insurance companies (Barrett et al. 2015). This was triggered by the usage of cellular phones which increased by 62.41% in 2018, followed by the growth of computer ownership by 20.05% and internet access in households by 66.22%. Internet usage has also increased during the period 2014-2018, as indicated by the increase in percentage of population accessing the internet in 2014 from 17.14% to 39.90% in 2018 (BPS, 2018).

Technological developments have transformed the traditional insurance business into a digital-based business also known as digital transformation, which started from insurance offerings and sales to after-sales services. Digital technology has a positive contribution to the success of business operations (Schryen, 2013).

However, the implementation of technology needs to pay attention to customer needs and preferences. Forrester Consulting (2018) stated that the company's ability to create a pleasant customer experience can increase the company's revenue in the long term. The advance in digital technology makes very tight competition to acquire and retain customers. Customers are becoming smarter, more price conscious, demanding, less forgiving, and more approachable by many companies with the same or better offerings (Kotler and Armstrong, 2010).

The increasing awareness of innovation from digital technology causes insurance companies to adopt digital applications in business activities (Bohnert et al. 2018). Bohnert et al. (2018) examined 41 publicly traded European insurance companies for the time period from 2007-2017. The results showed there is a very strong positive relationship between digital applications and business performance. The factors in digital applications that affect customer experience according to research conducted by Mbama and Ezepeue (2018) on customers who use digital banking in the UK include perceived value, convenience, functional quality, service quality, brand/trust, employee-customer engagement, perceived risk, perceived usability and digital application innovation. Providing the best service for customers will create a pleasant experience and lead to customer satisfaction. Research conducted by Girsang et al.

(2021) in one banking in Indonesia shown that there is direct influence of self-service technology on customer satisfaction and customer loyalty.

Customer satisfaction can become an indicator of whether a company will continue to grow and develop. Satisfied customers will share the pleasant experience with other customers without being asked. On the other hand, dissatisfied customers can make the company get a bad image from negative remarks spread by customers. According to Kotler (2016) customer dissatisfaction is one of the factors that causes brand switching because dissatisfied customers will seek information about other products, and may stop buying products from a company and even influence other people not to buy the product. For this reason, company must understand and pay attention to the expectations and preference of customers. However, trying to meet or exceed customer expectations or create a satisfying experience is a challenge for almost all companies in all sectors (Kotler et al. 2012), especially in the financial sector such as insurance whose products are intangible and the awareness to improve service quality and provide the best customer experience to retain customers is increasing (Al-Amri et al. 2012).

Measurement of customer satisfaction is considered a reliable input because it provides a direct and clear picture of customer expectations and preferences. Everyone in the company must be willing to be involved and responsible for customer satisfaction, for that customer satisfaction must be translated into parameters related to everyone's work (Deschamps and Nayak, 1995). Satisfied customers tend to become loyal and make repeat purchases in the future and are often willing to pay a premium price for these purchases (Fornell et al. 2006). Loyal customers have higher retention rates, provide higher profits for the company, and are more likely to recommend others to become company customers (Reichheld and Sasser, 1990). Loyalty is developed over a consistent period of time from meeting expectations and sometimes even exceeding customer expectations (Teich, 1997). True customer loyalty is created when customers become supporters of an organization without any incentives (Oliver, 1999).

Liu and Wang (2017) found that service quality positively affects customer loyalty and customer loyalty increases the performance of insurance companies. The positive relationship between customer satisfaction

and company profits has been confirmed by a number of researchers (Fornell, 1992; Anderson and Mittal, 2000; Reichheld et al. 2000). This means that satisfied customers will become loyal customers and loyal customers will increase the company's revenue.

One of the insurance companies that has utilized digital technology in running its business is XYZ Insurance. The company has created a digital sales application for its agents and has also developed e-Commerce through a website and created a customer's self-service application that can be downloaded via smartphones. The entire insurance offer process starts from making a proposal (quotation), filling out the Life Insurance Application Form, uploading all required documents and paying insurance premium were done through the digital application. The company also provides the "eXYZ" application which can be accessed by customers to see the benefits of their insurance or to see the investment value. This application can also be used to get discounts from well-known stores in Indonesia and get points that can be redeemed directly at stores in cooperation with XYZ Insurance.

Since the time of starting its operation, XYZ Insurance has put customer satisfaction as one of the most important measures of the company's performance. The company has measured customer satisfaction starting from 2016 to 2019 using the Customer Experience Index (CXI), which measures customer satisfaction on a scale of 0-100. The CXI score obtained in the 3rd and 4th years decreased from the first and second years of measurement even though the use of digital applications in customer service had been carried out and the CXI measurements did not specifically ask about customer satisfaction related to the use of the eXYZ application. Since its launch in 2017 until now, the use of the eXYZ application has never been reviewed and evaluated for its benefits to customers and also its effect on customer experience, satisfaction, and loyalty. Therefore, research on "The Effect of Digital Applications Usage on Customer Experience, Satisfaction, and Loyalty in XYZ Insurance" needs to be accomplished.

The aims of this research are: Examining the effect of digital applications usage on customer experience; Examining the effect of customer experience on customer satisfaction; Examining the effect of customer experience on customer loyalty; Examining the effect of customer satisfaction on customer loyalty.

## METHODS

This research was conducted at XYZ INSURANCE located in Jakarta, in September-October 2020. It used non-probability sampling with the quota sampling method. The specified sample criteria are customers who have used the eXYZ application at least twice since downloading the application. In this research, with an expected error rate of 5%, the number of samples required is 349, from a population of 3800 customers. However, only 203 respondents filled out the survey. Based on the rule of thumb from Hair et al. (2011) for research using SEM PLS, the minimum number of samples that must be met in this research is 20 samples (ten times the largest number of structural paths directed at certain latent constructions in the structural model), the total sample of 203 respondents who answered the survey are already sufficient and valid to continue this research.

The data used are primary data and secondary data. Primary data was obtained by survey method by distributing questionnaires via electronic mail and WhatsApp application to customers. The questionnaire was created using the survey monkey application that asked about customer experience, satisfaction and loyalty related to the use of eXYZ digital application. It consisted of 3 (three) parts, which are customer verification of XYZ insurance, customer characteristics and 44 questions related to this research. All questions are measured on a Likert scale (1-5). Further testing is carried out to ensure that there are no errors. The secondary data used is customer satisfaction data from 2016-2019 and literature from previous studies that are relevant to this research.

The research data was processed by descriptive statistical methods and inferential statistics with SEM PLS using the SmartPLS 3.0 application. Descriptive analysis was used to determine the characteristics of the respondents, while inferential analysis was used to test the instruments and H1-H4 hypotheses. Variables and indicators are used in this research shown in Table 1.

Based on research conducted by Mbama and Ezepue (2018) on customers who use digital banking in the UK, the researchers made the following hypothesis:

H1: Digital applications usage has a positive impact to customer experience. Mbama and Ezepue (2018) research showed several dimensions of digital

applications have positive and significant impact on customer experience.

- H2: Customer experience has a positive impact on customer satisfaction. Mbama and Ezepue (2018) research showed that customer experience has a positive impact on customer satisfaction.
- H3: Customer experience has a positive impact on customer loyalty. Mbama and Ezepue (2018) research showed that customer experience has a positive impact on customer loyalty.
- H4: Customer satisfaction has a positive impact on customer loyalty. Research by Mbama and Ezepue

(2018) showed customer experience has a positive impact on customer loyalty, the same results were also shown by the research of Fathollahzadeh et al. (2011) in Iran, Keisidou et al. (2013) in Greece, and also Klaus and Maklan (2013).

The explanation of the above hypothesis is shown in Figure 1, which say digital applications usage has a positive impact to customer experience, customer experience has a positive impact on customer satisfaction and customer loyalty and finally customer satisfaction has a positive impact on customer loyalty.

Table 1 Definition of operational variables

Variable & Definition	Reference	Indicator	Definition
<b>Digital Application</b>			
Digital applications are applications on the internet with specific functions and can be accessed from any computer with an internet connection or a general term refers to all application software which can be used in computers, mobile devices, or tablets to perform useful tasks (Raman and Rathakrishnan 2019).	Mbama and Ezepue (2018); Keisidou et al. (2013); Klaus and Maklan, (2013); Parasuraman et al., (1988); Amin (2016)	X1.1. Digital Application Innovation	Better service, research and development to improve customer experience through innovation
		X1.2. Perceived value	What is gained saves money and time, usability, pleasure, and better conducted online
		X1.3. Functional Quality	Interactive, easy to navigate, simple and intuitive.
		X1.4. Convenience	Comfortable, hassle free
		X1.5. Service Quality	Customers get exceeds expectations, has easy accessibility and reliability
		X1.6. Brand Trust	Staying loyal because of trust in brand
		X1.7. Employee Customer Engagement	Online interactive support and understanding of existing requirements from the staff
		X1.8. Perceived risk	Security against cyberattacks, or fraud
		X1.9. Perceived usability	Ease felt by customers, user-friendly, flexible, and simple
<b>Customer Experience</b>			
Several interactions (rational, emotional, sensory, physical, and spiritual) between the customer, the product and the company, as well as the value created through these interactions (Meyer and Schwager 2007).	Mbama and Ezepue (2018), Klaus and Maklan (2013), Garg et al. (2014)	Y1.1. Overall customer experience	Fulfil all needs & requirement of services
		Y1.2. Meeting service needs	Fulfil all needs of services
		Y1.3. Meeting requirement	Fulfil all requirement of services
<b>Customer Satisfaction</b>			
Customer satisfaction is a response to the fulfillment of customer expectations, when getting a pleasant experience in using a product or service (Oliver 1997).	Mbama and Ezepue (2018), Fathollahzadeh et al. (2011), Keisidou et al. (2013), Klaus and Maklan 2013), Amin (2016)	Y2.1. Overall satisfaction with interface	Customer feels satisfied with overall digital application features
		Y2.2. Overall satisfaction with product	Customer feels satisfied with overall insurance product
		Y2.3. Overall	Customer feels satisfied

Table 1 Definition of operational variables

Variable & Definition	Reference	Indicator	Definition
<b>Customer Loyalty</b>			
Customer loyalty is a deeply held commitment to buy or support or reuse a preferred product or service in the future (Kotler and Keller 2016).	Mbama and Ezepue (2018)	Y3.1. Staying longer	Customer will stay and not move to other company in next 3 years
	Keisidou et al. (2013), Klaus and Maklan (2013), Amin (2016),	Y3.2. Buy more products	Customer will buy another product from company
		Y3.3. Recommending friends	Customer will ask their friends and relatives to buy products from company

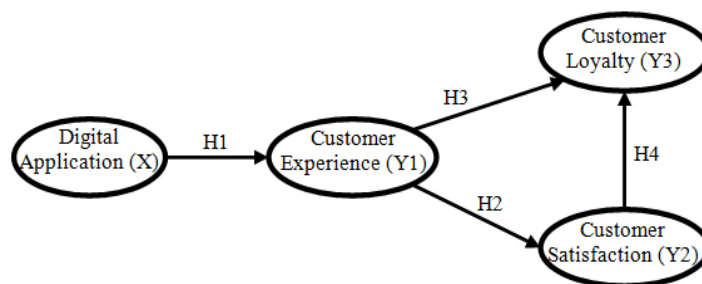


Figure 1. Research Model

## RESULTS

### Characteristics of Respondents

Characteristics of respondents are descriptions of respondents in terms of age, gender, marital status, number of children, employment status, level of position, and expenditure. From 203 respondents, the ratio of male and female is quite balanced, 53% female and 47% male. The complete characteristics shown in Table 2.

If the responses of each respondent characteristic is observed in each of the variables, the respondents who have the most positive response to all variables are in the age range of 20-29 years, gender female, undergraduate education, unmarried group, staff and director level or equivalent, and expenses above 70 million per month. Meanwhile, the lowest response is in the age range of 30-39, gender male, high school education level & diploma, married group, supervisory position level or equivalent with an expenditure of Rp.3.000.001-Rp.7.000.000 per month.

### Measurement Model: Convergent Validity, Discriminant Validity, and Reliability

Convergent validity testing is carried out by looking at the loading factor (LF) and average variance extracted (AVE) values obtained from the results of the algorithm calculations on SEM-PLS. It is valid if the LF value is greater than 0.7 (Ghozali 2014). In this research, it was found that the LF value on all indicators of variables was greater than 0.7, so it can be said that all indicators in this research are valid as seen in Table 3.

Apart from the LF value, the construct can be said to be valid if the AVE value is greater than 0.5 (Ghozali 2014). In this research, all variables have AVE values above 0.5 where X=0,878, Y1=0,836, Y2=0,881 and Y3=0,809. Thus, from the LF and AVE values that have been met, means that this model has passed the convergent validity test and can be continued in the next test, which is the discriminant validity.

At the indicator level, discriminant validity testing is done by measuring the value of cross loading (CL). According to Ghozali (2014) the CL value between the manifest indicator and the latent variable must be greater than the indicator CL value against other latent variables and the CL value must be greater than 0.7 in the same variable. In this research, the above criteria are met as shown in Table 2.



Table 2, Characteristics of respondents

Characteristics	Category	Total respondent	Proportion (%)
Age	20-29	23	11%
	30-39	96	47%
	40-49	80	39%
	>=50	4	2%
Gender	Male	95	47%
	Female	108	53%
Last Education	High School & Diploma	22	11%
	S1	155	76%
	S2	26	13%
Marital status	Not yet/unmarried	142	70%
	Married	61	30%
Level of position	Owner & others	23	11%
	Staff or equal level	25	12%
	Supervisor or equal level	50	25%
	Manager or equal level	99	49%
	Director or equal level	6	3%
Expenditure	Less than Rp3,000,000	1	0%
	Rp3,000,001 - Rp7,000,000	38	19%
	Rp7,000,001 - Rp15,000,000	72	35%
	Rp15,000,001 - Rp30,000,000	56	28%
	Rp30,000,001 - Rp70,000,000	29	14%
	More than Rp70,000,000	7	3%

Table 3. Measurement result of Loading Factor (LF) and Cross Loading (CL)

Indicator	(X)	(Y1)	(Y2)	(Y3)
X1	0.897	0.810	0.763	0.692
X2	0.907	0.811	0.760	0.690
X3	0.907	0.819	0.749	0.656
X4	0.915	0.814	0.756	0.676
X5	0.941	0.892	0.832	0.736
X6	0.821	0.736	0.692	0.632
X7	0.908	0.870	0.832	0.742
X8	0.866	0.805	0.779	0.711
X9	0.929	0.888	0.822	0.731
Y1.1	0.879	0.917	0.826	0.749
Y1.2	0.837	0.930	0.852	0.782
Y1.3	0.874	0.964	0.861	0.778
Y2.1	0.847	0.860	0.942	0.801
Y2.2	0.779	0.845	0.939	0.875
Y2.3	0.810	0.840	0.936	0.808
Y3.1	0.689	0.740	0.804	0.907
Y3.2	0.652	0.687	0.738	0.902
Y3.3	0.776	0.817	0.869	0.933

At the variable level, discriminant validity testing is carried out using the Fornell-Larcker criteria, which is to compare the AVE square root value of a variable with the correlation of that variable with all other variables (Santosa, 2018). The criteria are met if the square root value of the AVE on the variable against itself is greater than that of the other variables. In Table 4, it can be seen that the square root value of the AVE variable written in bold has the largest value compared to other variables, except for digital applications, so the discriminant validity at the variable level has not met for digital applications.

If we look at the loading factor (LF) value for digital application in Table 2, there are 2 indicators with the lowest significant LF values compared to other indicators, which are X6, trust in the brand (0.821) and X8, the perceived risk (0.866), if these 2 indicators are removed and then the square root value of AVE recalculated, the AVE square root value met the requirements for all variables as shown in Table 5.

The LF, AVE and CL values were also then recalculated by eliminating X6 and X8 on the digital application variables and all the results met the criteria. Figure 2 shows the value that meets the requirements after the 2 indicators are removed.

Table 4. Measurement result of square root of AVE

Variable	(X)	(Y1)	(Y2)	(Y3)
Digital Application (X)	<b>0.899</b>	0.921	0.865	0.775
Customer Experience (Y1)		<b>0.937</b>		
Customer Satisfaction (Y2)		0.903	<b>0.939</b>	0.883
Customer Loyalty (Y3)		0.822		<b>0.914</b>

Table 5. Measurement result of square root of AVE after removing X6 and X8

Variable	(X)	(Y1)	(Y2)	(Y3)
Digital Application (X)	<b>0,921</b>	0,918	0,857	0,765
Customer Experience (Y1)		<b>0,937</b>		
Customer Satisfaction (Y2)		0,903	<b>0,939</b>	0,882
Customer Loyalty (Y3)		0,822		<b>0,914</b>

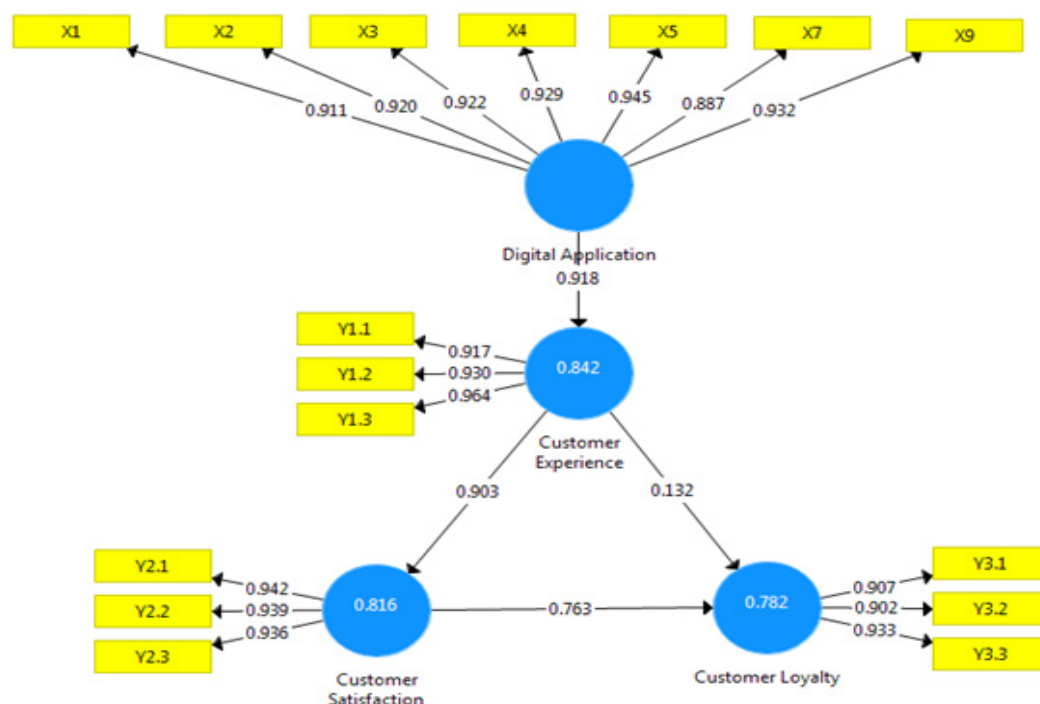


Figure 2. Calculation results algorithm measurement model

After the values on the convergent validity and discriminant validity tests are matched, then a reliability analysis is carried out. To analyze the reliability of each factor and measure the internal consistency of each factor, the Cronbach coefficient and composite reliability values were used. The reliability test is met if the Cronbach's alpha value is greater than 0.6 and the composite reliability value is greater than 0.7 (Ghozali, 2014). The reliability value in this research was met as seen in Table 6.

The measurement model that has met the requirements for testing convergent validity, discriminant validity and reliability values show that all indicators in this research can explain their latent variables.

### Structural Model: Significance Test and Hypothesis Testing

The tests on the structural model are carried out by measuring the coefficient of determination (R square) which shows the size of the variance of the endogenous variables caused by all exogenous variables connected to it (Santosa, 2018) and the t-statistic value obtained from bootstrapping calculations. The value of R square ranges from 0 to 1, category R square value is 0.75; 0.50; or 0.25 for endogenous latent variables in the structural model described as large, moderate, or small, respectively (Hair et al. 2011). Measurement result of R square value in Table 7.

Direct effect analysis is useful for testing the hypothesis of the direct effect of an influencing variable on the affected variable with the path coefficient and p-value as the criteria. Furthermore, a significance test was carried out by bootstrapping (Chin, 1998 in Hair et al. 2019). Level of the significance can be seen from the p-value. If the p-value <0.05, it can be said that the effect of this variable on other variables is significant. Next, hypothesis testing is done by comparing the value of t-statistics (t-count) with the value of t-table. At an error rate of 5%, the t-table value determined in this research was 1.96. If the t-statistic value is greater than the t-table value, which is 1.96, then H1 is accepted and H0 is rejected (Ghozali, 2014). The result of significance and hypothesis testing is shown in Table 8.

The result of first hypothesis analysis shows H1 is accepted and H0 is rejected, means the usage of digital applications has an impact to customer experience. This can be seen from the respondents' answers to each indicator which gives a good average score for all. The most positive response is on the indicator "digital application innovation", respondents feel that the eXYZ digital application they use is innovative because eXYZ application always adds features from time to time consistently following technological developments and customer needs.

Table 6. Cronbach's alpha value and composite reliability

	Cronbach's Alpha	Composite Reliability
Digital Application (X)	0.970	0.975
Customer Experience (Y1)	0.930	0.956
Customer Satisfaction (Y2)	0.933	0.957
Customer Loyalty (Y3)	0.902	0.938

Table 7. Measurement result of R square value

Variable	R Square	Prediction
Digital Application (X)	0.849	High
Customer Experience (Y1)	0.782	High
Customer Satisfaction (Y2)	0.816	High
Customer Loyalty (Y3)	0.782	High



Table 8. Testing results of research hypothesis

Testing	Original Sample	Sample Mean	Standard Deviation	t-Statistics	P Values	Conclusion
X → Y1	0.918	0.918	0.013	69.616	0.000	H1 accepted
Y1 → Y2	0.903	0.903	0.044	20.337	0.000	H1 accepted
Y1 → Y3	0.132	0.176	0.141	0.929	0.353	H1 rejected
Y2 → Y3	0.763	0.719	0.137	5.578	0.000	H1 accepted

Respondents also gave a very positive response to the perceived value indicator where respondents could feel the usefulness of the eXYZ application because it saves their money and time and respondents also felt that using the eXYZ application online was a much better choice than perform manual transactions such as filling out and sending forms to insurance which of course would take longer time, more effort, and require shipping costs. According to Mbama and Ezepeue (2018), there is a significant positive relationship between “perceived value”, “functional quality”, “digital banking service quality”, “employee customer engagement”, “perceived risk”, “perceived usefulness” on digital banking applications with “customer experience”. Similar results were also obtained in the study of Keisidou et al. (2013) in several Greek banks. This showed that customers generally look for value in products and services.

Another indicator which also received a very positive response was “convenience” felt by respondents because this application is very easy to use. Respondents feel more comfortable when they can check the required information by themselves wherever and whenever they want. “Convenience” positively affects customer satisfaction (Keisidou et al. 2013; Jun and Palacios, 2016) and customer experience (Garg et al. 2014). However, contrary to this study, Mbama and Ezepeue (2018) found that “convenience”, “brand trust” and “digital banking innovation” were not significant predictors of customer satisfaction.

On the “perceived usability”, respondents also said that the eXYZ application was very useful because apart from being able to check policy information and carry out insurance transactions, respondents could also get points and discounts from famous stores in Indonesia. The higher the perceived usefulness of digital applications by respondents, the greater the impact on the customer experience. Although it is only an added value and not the main service in insurance, it turns out that respondents really appreciate the points and discounts provided by the eXYZ application as a perceived usefulness.

“Functional quality” in the eXYZ digital application is also very important for respondents because the features in the eXYZ application are very easy to understand, anyone can use the eXYZ application without any guideline. In another financial industry such as banking, functional quality also affects the digital banking experience and customer satisfaction and loyalty (Mbama and Ezepeue, 2018). Other studies have shown that service quality affects customer satisfaction and loyalty on internet banking in Saudi Arabia (Amin, 2016) and on mobile banking services in the United States (Jun and Palacios, 2016).

On the other hand, according to the research by Keisidou et al. (2013), functional quality has no effect on customer satisfaction but relational quality is found to have a positive influence. Keisidou et al. (2013) measured relational quality, while this study does not measure relational quality because it focuses more on customer experience when using the eXYZ digital application. Keisidou et al. (2013) said this happens because customers think that all banks provide the same level of functional quality, while personal relationships vary according to the staff who serve customers at the bank. Sari et al. (2018) also found out relational quality, in the form of customer relationship management has significant effect on customer satisfaction and customer relationship.

In this second hypothesis, the research results show customer experience has a positive influence on customer satisfaction. Respondents feel that overall, the eXYZ application has provided a pleasant customer experience because comparing to the respondent’s experience or the experience of respondents’ acquaintances in other insurances, the features in the eXYZ application are much more complete and provide a new and enjoyable experience in insurance.

In the third hypothesis, the result shows H1 is rejected, means customer experience does not have a direct positive impact on customer loyalty. In general, respondents’ answers to questions on indicators of

customer experience and customer loyalty variables show a good response, but it turns out that a good customer experience does not have a direct positive impact on customer loyalty, meaning a pleasant experience does not automatically make customers loyal. Respondents said they get value when using the eXYZ application but this is not strong enough to make customers loyal. This study is also in line with the results obtained by Keisidou et al. (2013) who did not find a positive relationship between perceived value and customer loyalty.

However, after measuring the indirect effect using SEM PLS, the results obtained that the t-statistic was greater than the t-table, which 6.4 versus 1.96 with a p-value of 0.0 means customer experience indirectly has positive and significant impact to customer loyalty. The indirect effect is through the customer satisfaction variable, meaning that a pleasant customer experience affects customer satisfaction and customer satisfaction affects customer loyalty.

In this fourth hypothesis, the research results show customer satisfaction has a positive impact on customer loyalty. Customer satisfaction is described by indicators of overall satisfaction with the application interface, overall product satisfaction and overall service satisfaction. Most of the respondents feel very satisfied when using the services on the eXYZ application. Respondents also felt that their decision to use the eXYZ application was the right decision. They also felt satisfied with the product purchased.

Respondents' answers also indicate that they are loyal to the XYZ Insurance brand by saying they will continue to use XYZ insurance products and will not switch to another insurance in next 3 years, respondents also want to be informed if XYZ insurance releases a new product. Respondents are willing to buy other products that will be issued by XYZ Insurance and when discussing insurance, respondents will gladly share the benefits of XYZ insurance with their acquaintances. This relationship between customer satisfaction and loyalty is in line with the findings of Mbama and Ezepue (2018) in a study of digital banking in the UK, Jun and Palacios (2016) in a study of mobile banking in the US, a study by Amin (2016) on internet banking in Saudi Arabia.

## Managerial Implication

The use of digital applications has a positive and significant impact on customer experience. It provides benefits not only to customers but also to companies. The most important indicator for customers is digital application innovation because continuous innovation prevents customers from feeling bored when using the application and give them a feeling of waiting for the next innovation that will be provided by the application that suits the customer's needs. Another indicator received a very positive response was convenience. When customer feels comfortable with the application, the customer will use it more often. Customers also consider important indicators of perceived value, one of the main benefits of using digital application is the time efficiency, therefore, the faster the service can be accessed, the more customers will feel the fulfillment of their expectations.

The implication is that company management must pay attention to the factors affect customer experience when using the eXYZ application. Knowing the indicators that are considered important by customers and greatly affect the customer experience when using digital applications, managers should include all the indicators mentioned above when creating the plans. Managers must also ensure that the company has made the right efforts when it comes to executing or implementing the plans. This will help the company increase customer satisfaction and retain customers; then make them a loyal customer.

Customer experience has a positive impact on customer satisfaction, customer experience does not have a direct positive effect on customer loyalty but has an indirect positive impact on customer loyalty through customer satisfaction, and customer satisfaction have a positive impact on customer loyalty. In order to improve customer experience, companies must offer value-added services (provide time and cost savings to customers, reciprocal interaction, create pleasure and joy for customers), improve service quality, functional quality and security. This can be done by listening to customer needs, and then creating products and services that match their needs and expectations, then also checking and validating them regularly from time to time to ensure the products and services provided still meet customer expectations, these are also important to ensure the digital application services remain relevant to customer expectations because rapidly changing technology also affects customer tastes.

This research is limited to one of multinational life insurance company in one country that being has been operated for 8 years when the research conducted. Replication of our research in other countries or in the multiple companies or in more established companies might be led to the different result, but it would enable us to generalize the results. This research did not go to further study of the impact of customer loyalty to financial performance which will provide more stronger and comprehensive theory, to show that the efforts performed by the company to increase their customer experience, customer satisfaction and customer loyalty is worth with the result shown by company financial performance or profitability.

## CONCLUSION AND RECOMMENDATION

### Conclusion

After conducting this research it was concluded the usage of digital applications has a significant relationship and has a positive impact on customer experience, customer experience has a positive impact on customer satisfaction, customer experience does not have a direct positive effect on customer loyalty but has an indirect positive impact on customer loyalty through customer satisfaction, and customer satisfaction have a positive impact on customer loyalty.

### Recommendation

Based on the results of this research, it is recommended to continue research by looking at the direct relationship between customer satisfaction and loyalty to the company's financial performance in a few years in a row so that more comprehensive results can be obtained. The company is advised to improve the features of digital applications by considering all indicators that are considered important by customers, namely digital application innovation, convenience and perceived value. In digital application innovation, company can add features by applying the latest technology such as Artificial Intelligence (AI) to have automatic suggestion features such as suggestions to add investment amount based on customer risk preferences, suggestions to increase customer's sum assured according to the age and income of the customer, discount and redemption points suggestions in shops that match to the customer behavior. On the convenience indicator, improvements can be made by increase the response time of the

application pages to make customers become more comfortable, improving the application interface by removing unnecessary pages, reducing number of clicks so customers can reach the intended page faster. In the perceived value indicator, a feature of customer investment value historical graph can be added and automate funds switching suggestion according to market value movement to create more profitable account for customers.

## REFERENCES

- Al-Amri K, Gattoufi S, Al-Muharrami S. 2012. Analyzing the technical efficiency of insurance companies in GCC. *The Journal of Risk Finance* 13(4):362-380.
- Amin M. 2016. Internet banking service quality and its implication on e-customer satisfaction and e-customer loyalty. *International Journal of Bank Marketing* 34(3):280-306.
- Anderson EW, Mittal V. 2000. Strengthening the satisfaction profit chain. *Journal of Service Research* 3(2):107-120.
- [BPS] Badan Pusat Statistik. 2018. *Statistik Telekomunikasi Indonesia*. Jakarta: BPS.
- Barrett M, Davidson E, Prabhu J, Vargo SL. 2015. Service innovation in the digital age: Key contributions and future directions. *MIS Quarterly* 39(1). doi:10.25300/MISQ/2015/39:1.03.
- Bohnert A, Fritzsche A, Gregor S. 2018. Digital agendas in the insurance industry: the importance of comprehensive approaches. *Geneva Pap Risk Insur Issues Pract*. doi:10.1057/s41288-018-0109-0.
- Chin WW. 1998. The partial least squares approach to structural equation modeling. *Modern Methods for Business Research*:295-336.
- Deschamps JP, Nayak PR. 1995. *Product Juggernauts*. Massachusetts: Harvard Business School Press.
- Fathollahzadeh M, Hashemi A, Kahreh MS. 2011. Designing a new model for determining customer value satisfaction and loyalty towards banking sector of Iran. *European Journal of Economics, Finance and Administrative Science* 28(1):126-138.
- Fornell C. 1992. A national customer satisfaction barometer: The Swedish experience. *The Journal of Marketing* 56(1):6-21.
- Fornell C, Mithas S, Morgeson III FV, Krishnan MS.

2006. Customer satisfaction and stock prices: High returns, low risk. *Journal of Marketing* 70(1). doi: 10.1509/jmkg.2006.70.1.3
- [FR] Forrester Research. 2018. *How Customer Experience Drives Business Growth*. Massachusetts: Forrester Research.
- Garg R, Rahman Z, Qureshi MN. 2014. Measuring customer experience in banks: Scale development and validation. *Journal of Modelling in Management* 9(1):87-117.
- Ghozali I. 2014. *Structural Equation Modeling Metode Alternatif dengan Partial Least Square*. Ed ke-4. Semarang: Universitas Diponegoro.
- Girsang RKS, Djawahir SAH. 2021. The influence of self-service technology and customer relationship marketing on customer loyalty mediated by customer satisfaction. *Jurnal Aplikasi Manajemen* 19(1):217-228.
- Hair JF, Anderson RE, Tatham RL, Black WC. 2011. *Multivariate Data Analysis*. Ed. ke-5. New York: Prentice-Hall, Englewood Cliffs, NJ.
- Hair JF, Risher JJ, Sarstedt M, Ringle CM. 2019. When to use and how to report the results of PLS-SEM. *European Business Review* 31(1):2-24
- Jun M, Palacios S. 2016. Examining the key dimensions of mobile banking service quality: An exploratory research. *International Journal of Bank Marketing* 34(3):307-326
- Keisidou E, Sarigiannidis L, Maditinos DI. 2013. Customer satisfaction, loyalty and financial performance: A holistic approach of the Greek banking sector. *International Journal of Bank Marketing* 31(4):259-288.
- Klaus P, Maklan S. 2013. Towards a better measure of customer experience. *International Journal of Market Research* 55(2):227-246.
- Kotler P, Keller L, Hassan S, Baalbaki I, Shamma H. 2012. *Marketing Management, Arab World ed*. Harlow: Pearson Education Limited.
- Kotler P, Keller KL. 2016. *Marketing Management*. Ed. ke-15. Essex: Pearson Education Limited.
- Kotler P, Armstrong G. 2010. *Principles of Marketing*. Ed. ke-13. Essex: Pearson Education Limited.
- Liu CM, Wang TY. 2017. A research on the effect of service quality on customer loyalty and corporate performance in financial industry. *Problems and Perspectives in Management* 15(2):355-363.
- Mbama CI, Ezepue PO. 2018. Digital banking, customer experience and bank financial performance. *International Journal of Bank Marketing* 36(2):230-255.
- Meyer C, Schwager A. 2007. Understanding customer experience. *Harvard Business Review* 85(2):1-13.
- Oliver RL. 1999. Whence consumer loyalty. *Journal of Marketing* 63:33-44.
- Parasuraman A, Zeithaml VA, Berry LL. 1988. SERVQUAL: A multiple-item scale for measuring consumer perception of service quality. *Journal of Retailing* 64(1):12-40.
- Raman A, Rathakrishnan M. 2019. *Redesigning Higher Education Initiatives for Industry 4.0*. Pennsylvania: IGI Global.
- Reichheld FF, Sasser E. 1990. Zero defections: quality comes to services. *Harvard Business Review* 68(5):105-111.
- Reichheld FF, Markey Jr RG, Hopton C. 2000. The loyalty effect – the relationship between loyalty and profits. *European Business Journal* 12(3):134-139
- Santosa PI. 2018. *Metode Penelitian Kuantitatif: Pengembangan Hipotesis dan Pengujiannya Menggunakan SmartPLS*. Yogyakarta: Andi.
- Sari NP, Daryanto HK, Saptono IT. 2018. Effect of customer relationship management on satisfaction and loyalty of the customers of PT Bank BNI. *Jurnal Aplikasi Manajemen dan Bisnis* 4(1):129-137.
- Schryen G. 2013. Revisiting is business value research: what we already know, what we still need to know, and how we can get there. *European Journal of Information Systems* 22(2):139-169.
- Teich I. 1997. Holding on to customers: The bottom-line benefits of relationship building. *Bank Marketing* 29(2):12-13.