CHAPTER III

RESEARCH METHOD

3.1   Research Design

Paradigm is the basis of a belief that can lead a researcher to find facts through research conducted (Rivaldi, 2018). Researcher believe scientific research is needed because it will give the research the fact about the subject of the research (Khaldi, 2017). The researcher will use post-positivism paradigm because it can give a better explanation where the is human involvement occurred (Khaldi, 2017). Post-positivism will give the researcher the study of human expression although it was not completely assessed, knowledge constructing will become more valuable for the research to see because it will reveal the shape in the social connection (Rahman, 2016). Post-positivism paradigm will be use in this research because it will help the research in figuring the bank consumer's intention, and because this research is using quantitative methods, the post-positivism paradigm can minimize the bias of this study.

In this research, the researcher is using the quantitative method because as mentioned before that post-positivism is relevant with the quantitative method and the researcher want to remove any prejudice that could affect the results the research by processing the data using a statistical measurement, and the last is the researcher want this research to conduct in an effective time which is supported by the method of gathering data using questionnaires which are fast and incurred lest cost for the researchers (Sekaran & Bougie, 2019).

This has a look at makes use of a information evaluation approach the use of the Structural Equation Modeling (SEM) approach, that's presently used to cowl the weaknesses that exist withinside the regression approach. To take a look at the speculation and convey a possible model, the analytical procedure on this has a look at the author makes use of Variant Based Structural Equation Modeling wherein the information processing makes use of the Partial Least Square (PLS) software program program with the research design using hierarchical components using reflective-reflective measurement models. In this study, there are exogenous variables, namely (1) bank's marketing activities, (2) bank's personal competence, (3) perceived ease of use (4) perceived usefulness. And there are endogenous variables, namely (1) intention to use digital banking applications.

3.2   Research Object

The research object of this research is the digital banking adoption of Bank's customers, where the researcher wants to find what can cause the intention to use Digital Banking of customers by the variables that was forecasted. The subject of this research are several Bank's customers which have Bank's accounts. The subjects were able to become the respondent of this research data gathering because they have the capability to answer the effect of bank's marketing activities, bank's personal competence, perceived ease of use and perceived usefulness towards intention to use digital banking.

3.3 Population and Sample

The small portion that consists inside the population is called sample, which in this research the sample will be used as a representation of the population, because it is very inefficient and impractical to conduct this research by using population as the source of data for the questionnaire (Sekaran & Bougie, 2019). Sample can be defined as a smaller portion of a group that can be more manageable rather than the whole population (Sekaran & Bougie, 2019).

The right population that was chosen by the researcher must have the same characteristics and correlation with the research purpose, in this research the researcher chooses the population of Indonesian banking customers. The sampling technique is a sampling technique for determining the sample in the study, with several sampling techniques in used. The sampling technique can be grouped into probability and non-probability sampling (Sugiyono, 2018). Non-opportunity sampling manner that the complete populace on this international don't have the equal quantity of equality to be blanketed because the sample, whilst opportunity sampling manner all of the human beings that consist in the populace will get hold of the equal quantity of equality in turning into the sample (Muhammad & Kabir, 2016). Non probability sampling is a sampling manner so one can now no longer bid a basis for any view of opportunity that factors withinside the whole thing can have a hazard to be blanketed withinside the take a look at sample. We are going to peer from numerous techniques of 5 one-of-a-kind sampling regarding the non-random methods, that is quota sampling, unintentional sampling, judge mental

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sampling or purposive sampling, professional sampling, snowball sampling, modal on the spontaneous sampling. Based on the indexed, it has to intentionally choose objects to be sample. This form of sampling is highly-priced in application (Etiken & Bala, 2017).

According to Sugiyono (2017), in quantitative research, the sample is the amount of the numerals and attributes contained by the population. The sampling technique used in this study is purposive sampling, which uses self-consideration by deliberately selecting members of the customer of foreign banks in Indonesia in which individuals that has exposure in digital banking applications. Hence, the sampling respondent who are considered to be able to provide the information needed by the authors, which in this study were respondents with the intention to use digital banking (Sugiyono, 2017).

In determine the reasonable size for the sample, The amount of sample that needs to be taken to fulfill the research purpose must consider some rules, which are if the researcher are doing a pre-testing then more than 30 peoples are required as the sample for the pilot test, and for the real data testing the researcher is suggested to have a minimum of 30 peoples and maximum 500 peoples (Sekaran & Bougie, 2019), and also from the indicators perspective the researcher is suggested to have 10:1 ratio of samples compared to the indicators which means that for every one indicators the researcher is suggested to gain data from 10 samples (Hair et al., 2017).

A total of 225 (45 indicators x5) samples will be obtain by the researcher in conducting this research because the researcher wants to meet the suggested requirement for determining the sample size which is 30 as the minimum samples and 500 as the maximum sample, and also in this research a total of 45 indicators are being used so a minimum of 225 samples are required in conducting this research. And the last step is to execute the sample size, in this step the denominated samples will be performed in order for the researcher to collect the data for the purposes of the research.

3.4 Operational Variables

3.4.1. Bank's Marketing Activities

Bank marketing activities defined as the ability of bank marketing activities to improve their revenue and services to meet customer expectation and satisfaction. The instruments used in the questionnaire about bank marketing activities are arranged based on the dimensions and indicators of the research variables as follows:

Table 3.1 Item scales of Bank's Marketing Activities

Variable	Definition	Dimension	Indicator
Bank Marketing Activities	The ability of bank marketing activities to improve their revenue and services to meet customer expectation	Client orientation	Knowledgeable about clients' needs
			Understand the change of clients' needs
			Deals with customer's inquiry and complaint courteously
Adapted From Al-Alak in Saibil, (2020)			Deals with customer's inquiry and complaint expeditiously
			Resolves customer's inquiry or complaint
			Treats customer equally

Variable	Definition	Dimension	Indicator
	and satisfaction	Relational orientation	Helps customer make a decision
			Devotes time for customer
			Constant contact with customer (phone, fax, e-mail, letter, etc)
			Provides information about new events or activities
			Invite customer to attend special events from a bank employee
		Mutual disclosure or mutual openness	Customers ask questions to employees of banks widely
			The bank's employees help customers dealing with new technology services
			Bank employees troubleshoot customer in transaction errors
			Customer expressed dissatisfaction with the employees in the service
		Services provider	The bank's employees are professional in providing services and very satisfying
			Employees of the bank have adequate knowledge and skills services bank
			The bank's employees have self-development to provide better service
			Bank employees are competent in providing services
			The bank's employees seem to have a lot of experience
			Bank employees who seem to have an excellent career record
			Bank's employees have a professional appearance
			Bank employee well-dressed
			Bank's employees have no manners

Source: Al-alak (2014)

3.4.2. Bank's Personal Competence

Bank personal competence defined as the ability of bank employees to promote digital banking, and deliver services related to the digital banking to their

customers. The instruments used in the questionnaire about bank human capabilities are arranged based on the dimensions and indicators of the research variables as follows:

Table 3.2 Item scales of Bank's Personal Competence

Variable	Definition	Dimension	Indicator
Bank Personal Competence Adapted From Marneros et al., (2020); Alberton et al., (2020)	The ability of bank employees to promote digital banking, and deliver services related to the digital banking to their customers	Knowledge	Able to create creativity in improving services to guests
			Think logically and quickly in dealing with guest complaints
			Correctly understand standard operating procedures and services
		Skills	Able to respond quickly to guest needs and requests
			Communicate well in conveying messages to guests, superiors and coworkers
			Able to handle and provide appropriate and fast problem solving of guest complaints;
		Attitude	Show a strong work ethic and enthusiasm at work
			Maintain good relations with others within and among departments
			Providing an assistance voluntarily to others without being asked

Source: Marneros et al., (2020); Alberton et al., (2020)

3.4.3. Perceived Ease of Use

Perceived ease of use defined as a person's belief construct that the use of a particular technology would be able to improve their performance. The instruments used in the questionnaire about perceived ease of use are arranged based on the dimensions and indicators of the research variables as follows:

Table 3.3 Item scales of Perceived Ease of Use

Variable	Definition	Dimension	Indicator
Perceived Ease of Use Adapted From Khairi & Baridwan, (2015)	Khairi & Baridwan, (2015) defined the perceived usefulness as a person's belief construct that the use of a particular technology would be able to improve their performance	Clear and understandable	The system is clear and understandable to use
		Does not require a lot of mental effort	Using system does not require a lot of mental effort
		Easy to get the system to do	Easy to get the system to do what he / she wants to do
		Easy to use	Overall, the system is easy to use

Source: Khairi & Baridwan (2015)

3.4.4. Perceived Usefulness

Perceived usefulness defined as believed usability that would be received whilst the man or woman use the facts technology. The instruments used in the questionnaire about perceived usefulness are arranged based on the dimensions and indicators of the research variables as follows:

Table 3.4 Item scales of Perceived Usefulness

Variable	Definition	Dimension	Indicator
Perceived Usefulness Adapted From Khairi & Baridwan, (2015)	Perceived usefulness is believed usability that could be obtained when the individual use the information technology	Improves job performance	The use of system allowed user to complete the job faster
		Increases productivity	Using system increases user's productivity
		Enhances effectiveness	Using system improves user's job performance
		The system is useful	Overall, the system is useful

Source: Khairi & Baridwan (2015)

3.4.5. Intention to Use

Intention to use described as how difficult humans are inclined to attempt to how a lot determination they are. The instruments used in the questionnaire about

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intention to use are arranged based on the dimensions and indicators of the research

variables as follows:

Table 3.5 Item scales of Intention to Use

Variable	Definition	Dimension	Indicator
Intention to Use Adapted From (Rahi & Yasin, 2017)	Intention is simply defined as how hard persons are willing to try and how much determinations they are.	Planning	Expect to use internet banking in the future
			Plan to use internet banking in the next months.
		Intention	Intend to consult the balance of the account on the platform of Internet banking
			Intend to perform a transfer on the platform of Internet banking

Source: Rahi & Yasin (2017)

3.5   Measurement Scale

This study uses 5 Likert scales. The variables to be measured are interpreted

into dimensions, from dimensions to indicators and from indicators to sub-

indicators that can be measured. This sub-indicator is used as a benchmark for

making questionnaire questions that need to be answered by respondents.

The answer to the questionnaire given to the respondent is by clicking on

the answer column available through the google form or manual questionnaire by

choosing one of 5 choices of questions on the Likert scale and using an interval

measurement scale to measure the attitude of the respondent towards an answer in

the following table:

Table 3.6 Likert Scale

No	Description	Scale
1	Absolutelty Agree	5
2	Agree	4

No	Description	Scale
3	Neutral	3
4	Disagree	2
5	Absolutelty Disagree	1

3.6 Validity and Reliability of Pre-Test (n=30)

3.6.1. Validity Test

Validity states accuracy or precision. The better the accuracy of the records that happens withinside the item of studies with the records mentioned via way of means of the researcher, the better the validity of the records. The take a look at is finished the use of the Pearson Product Moment Correlation. If the validity value > r table is interpreted as valid. If r arithmetic > r table with df = n-2 (28) obtained a value of 0.361 with = 0.05 then the correlation coefficient is significant.

Table 3.7 Validity of Pre-Test

Variable	Indicators	Pearson	r Table	Conclusion
Bank Marketing Activities	BMA1	0.660	> 0.361	Valid
	BMA2	0.742	> 0.361	Valid
	BMA3	0.851	> 0.361	Valid
	BMA4	0.727	> 0.361	Valid
	BMA5	0.761	> 0.361	Valid
	BMA6	0.851	> 0.361	Valid
	BMA7	0.780	> 0.361	Valid
	BMA8	0.922	> 0.361	Valid
	BMA9	0.857	> 0.361	Valid
	BMA10	0.873	> 0.361	Valid
	BMA11	0.801	> 0.361	Valid
	BMA12	0.906	> 0.361	Valid
	BMA13	0.721	> 0.361	Valid
	BMA14	0.823	> 0.361	Valid
	BMA15	0.771	> 0.361	Valid

Variable	Indicators	Pearson	r Table	Conclusion
	BMA16	0.938	> 0.361	Valid
	BMA17	0.876	> 0.361	Valid
	BMA18	0.947	> 0.361	Valid
	BMA19	0.804	> 0.361	Valid
	BMA20	0.890	> 0.361	Valid
	BMA21	0.848	> 0.361	Valid
	BMA22	0.889	> 0.361	Valid
	BMA23	0.870	> 0.361	Valid
	BMA24	0.835	> 0.361	Valid
Bank Personal Competence	BPC1	0.795	> 0.361	Valid
	BPC2	0.796	> 0.361	Valid
	BPC3	0.603	> 0.361	Valid
	BPC4	0.782	> 0.361	Valid
	BPC5	0.739	> 0.361	Valid
	BPC6	0.882	> 0.361	Valid
	BPC7	0.796	> 0.361	Valid
	BPC8	0.790	> 0.361	Valid
	BPC9	0.719	> 0.361	Valid
Perceived Ease of Use	PEOU1	0.810	> 0.361	Valid
	PEOU2	0.783	> 0.361	Valid
	PEOU3	0.912	> 0.361	Valid
	PEOU4	0.879	> 0.361	Valid
Perceived Usefulness	PEU1	0.923	> 0.361	Valid
	PEU2	0.908	> 0.361	Valid
	PEU3	0.928	> 0.361	Valid
	PEU4	0.876	> 0.361	Valid
Intention to Use	ITU1	0.823	> 0.361	Valid
	ITU2	0.864	> 0.361	Valid
	ITU3	0.891	> 0.361	Valid
	ITU4	0.719	> 0.361	Valid

Source: IBM SPSS Version 26.0 (2021)

Based on the validity testing results as shown in Table 3.7, it can be seen that all indicators have a validity value above 0.361. Thus, all variables consisting of a total of forty-five statement indicators are declared valid.

3.6.2. Reliability Test

Reliability is associated with the consistency and predictability take a look at of a measuring instrument. The take a look at is performed via way of means of evaluating the Cronbach Alpha numbers in which the provisions of the Cronbach Alpha cost are as a minimum 0.6 or 0.6. If the cost generated from the SPSS calculation consequences is extra widespread than 0.6, then the questionnaire is reliable, whereas otherwise, it is not reliable.

Table 3.8 Reliability of Pre-Test

Variables	Cronbach's Alpha	Threshold	Conclusion
Bank Marketing Activities	0.765	> 0.600	Reliable
Bank Human Capabilities	0.779	> 0.600	Reliable
Perceived Ease of Use	0.828	> 0.600	Reliable
Perceived Usefulness	0.842	> 0.600	Reliable
Intention to Use	0.822	> 0.600	Reliable

Source: IBM SPSS Version 26.0 (2021)

Based on the reliability test in Table 3.8, all variables, the Cronbach's Alpha values are 0.765, 0.779, 0.828, 0.842 and 0.822, and all are above 0.6. Thus, all variables are declared reliable.

3.7   Data Analysis Method

The records obtained in this study will be analyzed in order to analyzed so that it will acquire facts and conclusions may be drawn successfully and successfully. Thus, it's far important to research the records according with the

goals of the studies that has been formulated, in addition to to check the established hypotheses. There are numerous analytical strategies so one can be used on this take a look at in this study.

3.7.1 Validity Instrument Test

According to Sugiyono (2017), a legitimate tool manner that the measuring tool used to acquire data (degree) is legitimate. Valid manner that the tool can degree what it is meant to degree. A valid meter can measure length carefully because the meter is a tool to measure length. The test validity was tested using the AMOS program by looking at the output estimate table by comparing the p-value with an alpha of 0.05, if the result of the p-value is denoted by *** or 0.05 then the indicator is declared valid. Meanwhile, each question item will be said to be valid if it has a loading factor > 0.5. Question items that have a factor loading of 0.5 or more are considered to have strong enough validity to explain latent constructs.

3.7.2 Reliability Instrument Test

The data reliability test aims to determine how big the level of data consistency is. To test the level of data reliability using the Cronbach Alpha indicator. The data will be considered to have a high level of reliability if the value of the coefficient is between 0.7 - 0.9 and vice versa the data will be considered to have a low level of reliability if the value of the coefficient is less than 0.5. If the value of the reliable data coefficient is closer to 1, it will be considered to have a better reliable value (Sekaran & Bougie, 2016).

3.7.3 Hypothesis Test And Data Analysist

Data evaluation is the system of simplifying statistics right into a shape this is less complicated to examine and implement. Data evaluation and interpretation in studies pursuits to reply numerous studies questions so as to show positive social phenomena. The approach selected to research the statistics ought to be according with the studies sample and the variables to be studied. In undertaking this statistic evaluation, the usage of SEM or Structural Equation Modeling that's operated thru the AMOS program. SEM is a statistical modeling approach that has been extensively used withinside the behavioral sciences, which permits the exam of a exceedingly complicated set of relationships. There are 2 theories of analysis, namely Confirmatory Factors on SEM and Regression Weights. Confirmatory issue in SEM is an analytical technique used to affirm the maximum dominant elements in a collection of variables. Meanwhile, regression weights are used to examine the units of variable magnitude. According to Ghozali (2017), there are 7 stages that should be carried out when using SEM:

a. Development of theoretical models

In developing the SEM model, the first step that must be done is to develop or search for a model that has a strong theoretical justification. Next, the model will be empirically validated through computational SEM program. So that a researcher is required to be able to carry out

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several series of literature reviews in order to obtain evidence from the theoretical model that is being developed.

b. Flowchart development

The path diagram will make it more comfortable for researchers to notice the basis relationships to be experimented with. Usually, the researcher will do his work with a "construct" or "factor" which contains many theoretical concepts by explaining various forms of relationships. There are two groups of constructs, namely endogenous constructs and exogenous constructs.

c. Convert flowcharts into equations

After the theoretical model is described and implemented in the form of a path diagram, the researcher can start converting the model into a series of equations. There are 2 equations that can be built including the equation of the measurement model specification and the structural equation.

d. Input matrix selection and model estimation

SEM uses input data that only uses a variance/covariance matrix or a correlation matrix for the overall estimate made. The use of the variance/covariance matrix when testing the theory because it meets the assumptions of the methodology where the standard error shows a more accurate number than using the correlation matrix.

e. Possible identification problems

The identification problem is principally a problem regarding the inability of the developed model to produce a unique estimate. If every time an estimation is made an identification problem arises, then the model should be reconsidered by developing more constructs.

f. Evaluation of goodness of fit criteria

Goodness of fit is an indicator of the comparison of the specified model with the cobarian matrix between indicators. There are un indexes used to test the feasibility of a model are as follows:

1) RMSEA (The root mean square error of approximation), which shows the expected goodness of fit when the model is estimated in the population. The RMSEA value which is less than or equal to 0.08 is an index for the acceptance of the model which shows a close fit of the model based on the degree of freedom.

2) GFI (Goodness of Fit Index) is a non-statistical measure that has a range of values between 0 (poor fit) to 1.0 (perfect fit). A high value in the index indicates a better fit.

3) AGFI (Adjusted Goodenss of Fit Index), which the recommended level of acceptance is if AGFI has the value equal to or greater than 0.09.

4) CMIN/DF is the minimal pattern discrepancy feature divided via way of means of the degree of freedom. The chi-square divided via way of means of the DF is referred to as the relative chi-square. If the relative

chi-square cost is much less than 2.0 or 3.0, it's far a demonstration of a suitable healthy among the version and the data.

5) TLI (Tucker Lewis Index), is an incremental index that compares a examined version to a baseline version, wherein a version 0.95 and a cost near 1 shows a superb fit.

6) CFI (Comparative Fit Index), which if it's miles near 1, it shows the best stage of fit. The encouraged cost is CFI 0.94.

Thus, the indices used to check the feasibility of a version are as withinside the following table:

Table 3.8 Goodness Of Fit's Criteria

Goodness of fit index	Cut off value
RMSEA	≤ 0,08
GFI	≥ 0,09
AGFI	≥ 0,09
CMIN/DF	≤ 2,00
TLI	≥ 0,95
CFI	≥0,94

g. Model interpretation and modification

After completing the calculations using Structural Equation Modeling, the researcher will interpret the calculated results.