

CHAPTER 3 – RESEARCH METHODS

3.1. Research Model

This chapter will explain the method of research used to examine all developed hypotheses based on previous research and theories. Figure 3.1 is an illustration of how each variable links to one another.

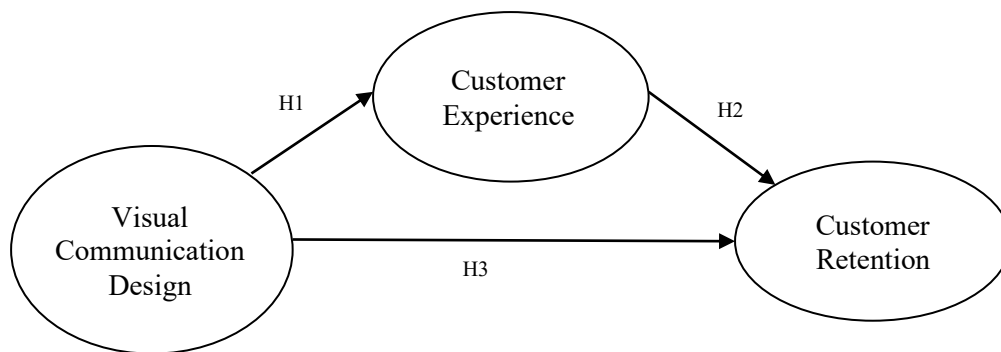


Figure 3.1 Conceptual Framework

In this research, the impact of visual communication design (VCD) and customer experience (CE) on customer retention (CR) in the hotel business are examined. The direct impact of VCD on CE, CE on CR and VCD on CR are analyzed. Furthermore, researcher analyzed the potential of indirect impact of CE as an intervening variable between VCD and CR.

3.2. Research Design

To conduct this study, the researcher takes deductive approaches from a broad to a narrowed perspective. This study is also called scientific research or positivism, in which we could not absolutely be positive about our hypotheses when doing the research and every condition can be observed and measured. Thus, this study aims to test all hypotheses of variables used in this research quantitatively in descriptive methods. In addition, this research will collect primary data from online questionnaires that will be distributed to the sample of a population. It will also be cross sectional data because there are two stages (pilot test and actual data collection). In the long run, statistical methods will be used to assess and analyze collected data

from each variable (Cooper & Schindler, 2014; Creswell & Creswell, 2018). The research design for this study is summarized in the next page.

Table 3.1 Research Design of Study

Sections		Approach
Research Type		Descriptive
Research Philosophy		Positivism
Research Paradigm		Deductive
Research Strategy		Questionnaires
Research Methods	Choice	Quantitative
	Time horizon	Cross-sectional
	Procedure	Data collection and analysis

3.3. Research Context & Unit Analysis

As mentioned in Chapter 1, the context of this research is the hotel industry in Tangerang, Banten Province (Indonesia), specifically at some hotel brands of Accor. Accor is an international hotel chain with the largest rooms in Indonesia. In this research, the hotels are ibis Gading Serpong, Mercure Serpong Alam Sutera and Novotel Tangerang. The unit analysis are the regular FIT or public guests who come from those three Accor hotels. They can be classified as individual, family, businessman, walk-in, tourist, or long staying guest and they are not classified as a group, corporate or government. They can be millennial generation who were born in 1981-1996. The respondent should have a minimum visit at least twice in the last two years. Therefore, they should have the experience about the hotel first.

On the other hand, this research focuses on the VCD in the hotel area which can be printed or digital media whose content about hotel promotion including the product, price and location. There are room as the main product, food and beverages, meetings, and social marketing activities.

Table 3.2 Research Context and Unit Analysis

Research Context	Information
Context	International hotel chain industry in Tangerang

Unit Analysis	Public hotel customers (FIT guests) of 3 Accor hotels in Tangerang (ibis Gading Serpong, Mercure Serpong Alam Sutera and Novotel Tangerang)
Respondents	Minimum of 260 respondents who are millennial generation and have hotel experience at least twice in the last 2 years

3.4. Data Collection

3.4.1. Sampling

3.4.1.1. Sampling Method

Sampling is the activity in choosing certain elements from a population that is representative of it. This quantitative study involves probability sampling to estimate various parameters on larger sample size that could not be found with nonprobability samples. Public hotel customers of three of Accor hotels in Tangerang are the unit analysis of this research.

3.4.1.2. Sampling Procedures

The first phase in the sampling procedure, according to Sekaran and Bougie (2016) is determining the population. As mentioned in section research context, the population of this research are the public hotel customers (FIT) of three of Accor hotels in Tangerang. The second phase is determining the sample frame. A set of samples from the actual world from which a representative sample will be taken is known as a sampling frame. A following section defines the sample frame. The third phase is determining the sampling strategy. This study uses stratified sampling that limits the participants based on certain categories or classes of population that are more relevant with the study. This sampling used to enhance the efficiency, better sufficiency of all data and allows another research method (Cooper & Schindler, 2014). The fourth phase is determining the suitable size of sample. It should be sufficient to generalize the collected data from the respondents. The final phase is executing the sampling process by distributing the questionnaire to the respondents.

Regarding to the sample size, several aspects should be considered since the population of public hotel guests is large and unknown. Those aspects are margin of

error, confidence level and variance of responses (Cochran, 1977; Israel, 1992; Shete et al., 2020; Smith, n.d.).

$$n = \frac{Z^2 pq}{e^2} = \frac{1.96^2 (0.5)(1 - 0.5)}{0.05^2} = \frac{3.8416(0.25)}{0.025} = 384.16$$

Notation “n” represents the necessary sample size of study. Notation “Z” represents the confidence level which its usual levels are 90% - Z Score equals 1.645, 95% - Z Score equals 1.96 and 99% - Z Score equals 2.326. Notation “q” equals 1-p. Notation “p” represents estimated proportion of variance for desired responses or used to be called standard deviation. Notation “e” represents the range of confidence or margin of error. This study uses maximum variability of 0.5. Moreover, this research set the confidence level at 95% and 5% of margin of error. Based on the calculation above, 385 respondents can be involved in this study.

On the other hand, Hair et al (2017) and Memon et al. (2020) suggested another calculation to determine a minimum sample using variable ratio of 5:1 of indicators/observed variables used in the research. The outcome will be more accurate the more samples that are obtained.

$$n = \text{number of indicators} \times \text{estimated parameters}$$

$$n = 52 \times 5 = 260 \text{ respondents}$$

If this research has 52 indicators or observed variables, the minimum sample of 260 is required.

3.4.1.3.Measure Data Collection

According to (Cooper & Schindler, 2014), data is all about information which is collected from various sources. This research will collect primary data (that has not been interpreted by people’s opinion such as official thoughts, interviews, laws, and authoritative sources). The primary data will be collected from a statistical process. Since this research will include online questionnaires, social media and messaging platforms will be used to spread the link to the respondents.

3.4.1.4. Research Samples

Minimum of 260 respondents are obtained from those who are public hotel guests of selected three Accor hotels in Tangerang. This research utilized the online platform to develop and distribute the questionnaires. The questionnaires were developed on Google Forms and the distribution was using social messaging (WhatsApp) and QR codes by sending the questionnaire's URL (Uniform Resource Locator or web address). The researcher used this approach to maintain the health protocols of Covid19 outbreak.

3.4.1.5. Research Instrument

Regarding quantitative descriptive methods that are used in this study, questionnaires would be the main instruments. The questionnaire will be distributed through social networks and supported by Google Form.

Table 3.3 Research Instruments

Constructs/ Variables	Dimensions	Observed variables	Sources
Visual communication design	Informative	4 indicators	Kujur & Singh (2020); Reyna (2013); (Günay, 2021; Schriver, 2010); (Baltezarević & Baltezarević, 2015)
	Entertaining	4 indicators	
	Engagement	4 indicators	
	Credibility	4 indicators	
Customer experience	Sense	4 indicators	(Al-Hashem, 2022; Bustamante & Rubio, 2017; Gahler et al., 2019; Wibowo et al., 2021)
	Feel	4 indicators	
	Think	4 indicators	
	Act	4 indicators	
	Relation	4 indicators	
Customer retention	Word of mouth	4 indicators	(Al-Hashem, 2022; Al-Hawari, 2006; Gengeswari et al., 2013; Simarmata & Ikhsan, 2017; Teicher & Rost, 2003)
	Noncomplaining behavior	4 indicators	
	Repurchase behavior	4 indicators	
	Price insensitivity	4 indicators	

Total	52 indicators/observed variables
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3.4.2. Variables

3.4.2.1. Dependent Variable

The dependent variable in this study is CR. Based on the literature review, which is more relevant with the hotel industry, the operational variable of this research is as follow.

Table 3.4 Dependent Variable

Constructs/ Variables	Dimensions	Observed variables	Target respondents	Level
Customer retention	Word of mouth	4	Minimum of 260 hotel guests from 3 hotel brands in Tangerang.	Customers' perception towards customer retention
	Noncomplaining behavior	4		
	Repurchase behavior	4		
	Price insensitivity	4		

3.4.2.2. Independent Variable

The independent variable which will be analyzed in this study is VCD and CE. In this research, function of CE is intervening variable. Based on the literature review, which is more relevant with the hotel industry, the operational variable of this study is as follows.

Table 3.5 Independent Variables

Constructs/ Variables	Dimensions	Observed variables	Target respondents	Level
Visual communication design	Informative	4	Minimum of 260 hotel guests from 3 hotel brands in Tangerang.	Customers' perception towards visual communication design and customer
	Entertaining	4		
	Engaging	4		
	Credible	4		

Customer experience	Sense	4		experience.
	Feel	4		
	Think	4		
	Act	4		

3.4.2.3. Control Variable

The control variable in this research is about profile of respondents which are not the main objective of this research. Somehow, it supports the analysis of the possibility of variation. It might alter the perception of VCD, CE and CR.

Table 3.6 Control Variables

Variable	Measured variables	Scale	Rationale
Gender	Male	0	This variable can be used to find out if there are variations between gender and age groups.
	Female	1	
Age	Less than 26 years old	0	
	26 to 41 years old	1	
	More than 41 years old	2	
Occupation	Employee	0	This variable can be used to find out if there are variations between occupations
	Entrepreneurship	1	
	Not working yet	2	
Monthly expense	Less than 3,000,000 IDR	0	This variable can be used to find out if there are variations between monthly spending.
	3,000,000 IDR to 5,000,000 IDR	1	
	5,000,000 IDR to 7,500,000 IDR	2	
	More than 7,500,000 IDR	3	
Domicile/ working area	Jabodetabek (Greater Jakarta)	0	This variable can be used to find out if there are variations between monthly spending.
	Non Jabodetabek	1	
Hotel brands	Ibis Gading Serpong	0	This variable can be used to find out if there are variations between hotel brands and the frequency of visiting the hotel.
	Mercure Alam Sutera	1	
	Novotel Tangerang	2	
Frequency of visiting	Two to three times	0	
	Four to five times	1	
	More than five times	2	
Member status	Nonmember of ALL/AccorPlus	0	This variable can be used to find out if there are

	Member of ALL/AccorPlus	1	variations between member status.
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3.4.3. Validity

According to Cooper & Schindler (2014), validity is a major basis to check instruments of measurement. In other words, validity is important to ensure the developed instrument (the questionnaire) which will be used in this study is relatively accurate. A good content validity is when the sample represents the instrument of measurement through the questions. When the developed instrument is already valid, it will be finalized and ready to distribute. The validity test in this research run using SPSS and structural equation modelling.

3.4.4. Reliability

According to (Cooper & Schindler, 2014), reliability is about the consistency of a measurement, avoided from random error. A research instrument might be reliable, but not always valid. In addition, if the instrument is not reliable, it must be not valid. The similar concept also stated by (Creswell & Creswell, 2018) that reliability is how the instruments are consistent and stable over time, especially the items. Since it is frequently employed in research with data from questionnaires, The dependability of each variable is assessed using Cronbach's alpha. To be accepted and regarded as dependable, Cronbach's alpha must be at least 0.7. Additionally, for something to be regarded reliable, the composite reliability value needs to be higher than 0.7.

Table 3.7 Cronbach's Alpha Value

Alpha Coefficient Range	Reliability Assessment
<0.6	Poor
0.6-0.7	Acceptable for exploratory research
0.7-0.8	Good
0.8-0.9	Excellent
0.9-0.95	Somewhat high
≥ 0.95	Too high

Source: (Hair Jr et al., 2014)

3.4.5. Confirmatory Factor Analysis

Through this statistical technique, a researcher will be able to verify the hypothesis which has some relationships between variables. Because it is supported by relevant previous studies or theory to explain the results found. This quantitative study will use statistical software, Lisrel, to test the causal relationship between independent and dependent variables through structural equation modelling as known as SEM.

However, there is no statistically significant difference for p-value, t-value, R-square and correlation coefficient if the researcher uses Lisrel or other software when there are three variables being observed and a large number of respondents (Purwanto et al., 2019). Hair et al. (2014) in (Purwanto et al., 2019) also stated that to know that variables have significant relationships, the t-value should be larger than 1,96 if the confidence level is 95%.

3.4.6. Ethical Consideration

The analysis of the relationship between variables in this study depends heavily on the data. Thus, the objective of the study is also explained in the beginning of the questionnaire section to get the consent first from the respondents. Several concerns of ethical standards for the respondents include physical safety and privacy of the respondents (Cooper & Schindler, 2014). In this study, the research instrument does not require the name or email of the respondent to enforce the ethical consideration and minimize the potential conflict in the future.

3.5. Questionnaire Development

It is anticipated that the surveys would help this study reach its goal. Thus, the researcher came from reviewing relevant literature and indicators of variables to develop simple questionnaires. The questionnaire will also be in Bahasa for all statements or questions in the questionnaires to guarantee that respondents can comprehend it. The questionnaire will be supported by online questionnaire, Google Form. The questionnaire includes several sections:

Section 1: Opening

Section 2: Profile of respondent

Section 3: Visual Communication Design

Section 4: Customer Experience

Section 5: Customer Retention

Section 6: Closing

Fifty-two observed variables are used in this research to measure the constructs (VCD, CE and CR) as Table 3.3 shows. Those observed variables are measured by Likert scale. Likert scale is the most frequently used to summarize the rating scale because of the ease and quickness in processing the data. Table 3.3 below shows the rating scales starting from This scale is ranging from one to five, from strongly disagree to strongly agree.

Table 3.8 Likert's Rating Scale

Rating Scales	Weight
Strongly disagree	1 point
Disagree	2 points
Neither agree nor disagree (neutral)	3 points
Agree	4 points
Strongly Agree	5 points

Source: (Cooper & Schindler, 2014)

The questionnaire must be validated and finalized before it is being made available online. Therefore, the questionnaire obtained feedback from minimum 30 people for pilot testing. It is carried out with the use of the SPSS program. After the changes are made to the questionnaire, the final version is ready to be distributed online. The final questionnaire will be distributed to minimum of 260 respondents.

3.6. Data Coding

Table 3.9 Data Coding in This Research

Constructs	Dimensions	Indicators/ Observed variables
Visual	Informative	VCD1, VCD2, VCD3, VCD 4

communication design	Entertaining	VCD5, VCD6, VCD7, VCD8,
	Engagement	VCD9, VCD10, VCD11, VCD12
	Credibility	VCD13, VCD14, VCD15, VCD16
Customer experience	Sense	CE1, CE2, CE3, CE4
	Feel	CE5, CE6, CE7, CE8
	Think	CE9, CE10, CE11, CE12
	Act	CE13, CE14, CE15, CE16
	Relation	CE17, CE18, CE19, CE20
Customer retention	Word of mouth	CR1, CR2, CR3, CR4
	Noncomplaining behavior	CR5, CR6, CR7, CR8
	Repurchase behavior	CR9, CR10, CR11, CR12
	Price insensitivity	CR13, CR14, CR15, CR16

3.7. Data Analysis Method

Collected data from the questionnaires will be analyzed through descriptive and inferential statistical analysis. In descriptive statistical analysis, the researcher collected data from respondents, screened and analyzed the impact between variables. In this research, there are two statistical software used. The researcher used SPSS to analyze the reliability and validity of each variable. Meanwhile, in inferential statistical analysis, the researcher made a generalization to represent the selected population from the sample. In this section, Lisrel is used to analyze the model fit, inner, outer and correlation models among variables by the researcher.