CHAPTER III
OBJECT AND RESEARCH METHODOLOGY

3.1 OBJECT OF THE RESEARCH

This study applied a marketing management approach, especially regarding the effect of digital sensory marketing (X) on brand experience (M) and its impact on brand love (Y). As for the objects of research, the independent variables were digital sensory marketing with 1) Visual sensory and 2) Auditory sensory as the dimension; and brand experience act as intervening variable with 3) Sensory; 4) Affective; 5) Behavioral; and 6) Intellectual as the dimension. Furthermore, the dependent variable in this research was brand love with 1) passion for a brand; 2) brand attachment; 3) positive evaluation of the brand; 4) positive emotions in response to the brand; 5) declarations of love toward the brand as the dimensions.

The unit of analysis that used as respondents in this study was the members of hijrah community in the city of Bandung. This study used a cross-sectional method because it was carried out in less than one year. This is a research method by studying objects in a certain period (not continuous in the long term). A cross-sectional survey is a survey that is conducted by collecting data one by one at a time (Creswell, 2012). This study used a cross-sectional method because the information from a part of the population was collected directly from the respondents empirically to know some of the population's opinions on the object being studied.

3.2 RESEARCH METHOD

3.2.1 Types of Research and Methods

Based on the explanation and research field, this type of research is descriptive and verification research. This study will find out whether digital sensory marketing affects brand experience and has an impact on brand love in the Hijrah community in Bandung.

Descriptive research is a type of research that is used to describe something, usually the characteristics of a relevant group, such as consumers, sellers, organizations, or market areas (Malhotra, 2015). This research was conducted to ensure and describe each variable's characteristics studied in a situation (Sekaran, 2003). Other researchers suggest that descriptive research has the main objective of describing something in terms of marketing, usually such as market functions or characteristics (Malhotra, 2010).

Through descriptive research, a detailed description of respondents' perspective on digital sensory marketing, which consists of visual and auditory sensory, a brand experience which consists of sensory, affective, behavioral, and intellectual dimensions as well as brand love, which consists of passion for a brand, brand attachment, positive evaluation of the brand, positive emotions in response to the brand and declarations of love toward the brand on the modest fashion of MSMEs' products in Bandung can be obtained.

Verification research is a type of research carried out to test the existing sciences' correctness in the form of concepts, principles, procedures, arguments, and the educational practice itself (Arifin, 2011; Hermawan, 2006). Verification research aims to determine the effect of digital sensory marketing on brand experience and its impact on brand love in the hijrah community in Bandung. Based on the type of research, descriptive and verification research is carried out through field data collection. Thus, the research method that will be implemented in this research is the explanatory survey method.

The explanatory survey method is a research method that aims to explain the position of the variables under study and the influence between one variable and another (Sugiyono, 2008). Explanatory surveys were conducted to explore problem situations, particularly to get ideas and insight into researchers' problems (Malhotra, 2010). The research developed is based on the information from a portion of the population on the object studied. This explanatory survey aims to explore or research through a problem or situation to gain insight and understanding.

The survey was conducted by distributing questionnaires to obtain opinions

from a part of the population regarding the object under study. This study tested the hypothesis's correctness through data collection in the field regarding the influence of digital sensory marketing on brand experience and its impact on brand love in the hijrah community in Bandung.

3.2.2 Operational Variable

In this study, digital sensory marketing acted as independent variables (X), brand experience acted as mediator/intervening variable (M). Meanwhile, the dependent variable was Brand love (Y) (Sekaran, 2003:88). The following is a description of the operational variables in Table 3.1

TABLE 3. 1
OPERATIONAL VARIABLE

Variable/ Subvariable	The Concept of Variable/ Subvariable	Indicator	Measurement	Scale	Item No
1	**2**	**3**	**4**	**5**	**6**
***Digital Sensory Marketing* (X)**	The implementation of theories and concepts taken directly from the growing field of sensory marketing research using digital technologies in online contexts (Petit et al., 2019)				
***Visual Sensory* (X_1)**	Vision (sight) refers to the capability of the eyes to detect and interpret visible light. It is our dominant sense in several contexts. For example, creative	Color	The level of color combinations on the display of the modest fashion MSME's website.	Interval	1
		Design	The level of design quality on the display of the modest fashion MSME's website.	Interval	2

Variable/ Subvariable	The Concept of Variable/ Subvariable	Indicator	Measurement	Scale	Item No
1	2	3	4	5	6
	managers often try to make visually appealing images and messages in the form of logos, colors, and designs understandable to the consumer. (Erenkol, 2015; Hultén, 2020; Hultén et al., 2009; Koszembar-Wiklik, 2019; Krishna, 2012, 2013; Labrecque, 2020; Rathee & Rajain, 2017)	Logo	The level of logo quality on the display of the modest fashion MSME's website.	Interval	3
		Font	The level of appropriateness of the font type and size on the display of the modest fashion MSME's website.	Interval	4
		Picture	The level of image quality on the display of the modest fashion MSME's website.	Interval	5
		Content	The level of readability of the content on the display of the modest fashion MSME's website.	Interval	6
Auditory Sensory (X_2)	Auditory refers to the sense of hearing. Hearing stimuli can form and recall deep nostalgic memories concerning emotional moments accompanied by sounds. In addition, sounds take part in some of the most important rituals,	Music	The level of harmonization of the songs used in product video postings on the modest fashion MSME's website.	Interval	7
		Backsound	The level of harmonization of instrumental audio as back sound on the modest fashion MSME's website.	Interval	8

Variable/ Subvariable	The Concept of Variable/ Subvariable	Indicator	Measurement	Scale	Item No
1	2	3	4	5	6
	such as the music played during weddings, funerals, and graduation ceremonies. Thus, the right music can affect the behavior of buyers.	Voice-over	The quality level of voice-over talent used in product video postings on the modest fashion MSME's website.	Interval	9
***Brand Experience* (M)**	Sensations, feelings, cognitions, and behavioral responses evoked by brand-related stimuli are part of a brand's design and identity, packaging, communications, and environments. (Brakus et al., 2009)				
***Sensory Experience* (M_1)**	It focuses on concern the stimulation of the five human senses. (Brakus et al., 2009)	Visual Experience	The level of the impression when looking at the composition of the display of the modest fashion MSME's website design.	Interval	10
			The level of the impression when reading the product description and information on	Interval	11

Variable/ Subvariable	The Concept of Variable/ Subvariable	Indicator	Measurement	Scale	Item No
1	2	3	4	5	6
			the modest fashion MSME's website.		
		Auditory experience	The level of the impression when listening to Islamic music on the background audio of the modest fashion MSME's website.	Interval	12
			The level of the impression when listening to voice-over's sound production techniques on product videos on the modest fashion MSME's website.	Interval	13
			The level of the impression when listening to voice-over internalization techniques on product videos on the modest fashion MSME's website.	Interval	14
Affective Experience (M_2)	It concerns feelings and emotions that brands can evoke. (Brakus et al., 2009)	Feelings & emotions	The level of experienced feeling when browsing the modest fashion MSME's website	Interval	15
			The level of experienced feeling when	Interval	16

Variable/ Subvariable	The Concept of Variable/ Subvariable	Indicator	Measurement	Scale	Item No
1	2	3	4	5	6
			making transaction for the modest fashion MSME's products		
			The level of experienced feeling when using the modest fashion MSME's products	Interval	17
***Behavioral Experience* (M_3)**	A representation of physical actions and bodily experiences consumers engage in when they interact with brands (Brakus et al., 2009)	Community engagement	The level of engagement in the modest fashion MSME customers' community.	Interval	18
		Repurchase	The level of intensity of repurchasing the modest fashion MSME's products	Interval	19
***Intellectual Experience* (M_4)**	it focuses on creativity, imagination, surprise, intrigue, and provocation. (Brakus et al., 2009)	Creativity	The level of influence of the use of the modest fashion MSME products on the identity formation	Interval	20
		Provocation	The level of influence of using the modest fashion MSME products in increasing confidence to do "hijrah."	Interval	21
***Brand love* (Y)**	Brand love is a level of				

Variable/ Subvariable	The Concept of Variable/ Subvariable	Indicator	Measurement	Scale	Item No
1	2	3	4	5	6
	emotional attachment that is full of consumer satisfaction to own a brand. (Carroll & Ahuvia, 2006)				
The passion of brands (Y_1)	Passion for purchasing a product of a particular brand by consumers. This shows the level of consumer love for a brand. (Carroll & Ahuvia, 2006)	Fanatism toward brand	The level of customer desire in using modest fashion MSME's products as daily wear	Interval	22
			The level of love for every new design and product of the modest fashion MSME's	Interval	23
Brand attachment (Y_2)	The feeling of engagement of consumers to a brand. This makes consumers feel they must have at least more than one product from the brand. (Carroll & Ahuvia, 2006)	The attachment on the brand	The level of customer chemistry with the logo and design of the modest fashion MSME	Interval	24
			The level of customer dependence to use the modest fashion MSME's products as daily wear.	Interval	25
Positive evaluation of brand (Y_3)	After using a product, consumers will usually provide feedback in the	The brand evaluation	The level of love for the display of the modest fashion MSME's website	Interval	26

Variable/ Subvariable	The Concept of Variable/ Subvariable	Indicator	Measurement	Scale	Item No
1	2	3	4	5	6
	form of testimonials about the product. Consumers who have a high level of brand love will provide good testimonials. (Carroll & Ahuvia, 2006)		The level of love for the modest fashion MSME's products	Interval	27
			The level of love for the price of the modest fashion MSME's products	Interval	28
			The level of love for the shopping experience of the modest fashion MSME's products	Interval	29
Positive emotion (Y_4)	Consumers' positive emotions when purchasing products indicate that they have a sense of love for the brand. (Carroll & Ahuvia, 2006).	The consumer's feeling toward the brand	The level of feelings/emotions that consumers have for the modest fashion MSME compared to other brands.	Interval	30
			The level of feelings/emotions that consumers have when using the modest fashion MSME's products compared to other brands	Interval	31
Declarations of love (Y_5)	When consumers declared their feelings of love for a brand, this is evidence of a good indication	The feeling of love toward the brand	The level of happiness when doing a search on the modest fashion MSME's website	Interval	32

Variable/ Subvariable	The Concept of Variable/ Subvariable	Indicator	Measurement	Scale	Item No
1	2	3	4	5	6
	of how consumers feel about the brand itself. (Carroll & Ahuvia, 2006)		The level of love for the modest fashion MSME's	Interval	33
		The commitment with the brand	The level of commitment in the use of the modest fashion MSME's products	Interval	34
			The level of commitment to the modest fashion MSME compared to other brands with a higher value.		35
			The level of commitment in promoting the modest fashion MSME		36

3.2.3 Types and Sources of Data

Data is the result of observations and empirical measurements that reveal facts about a particular symptom's characteristics (Silalahi, 2009). The data in this study are categorized into two, secondary data and primary data. Hermawan (2006) provides the following meaning:

1. Primary data is the data collected directly by researchers to answer problems or research objectives carried out in exploratory or descriptive research using data collection methods in the form of surveys or questionnaires. In this study, the primary data source is a questionnaire distributed to some respondents according to the target and represents the entire population of research data. This is in the form of a survey on the hijrah community in Bandung.
2. Secondary data is the data that has been collected in the form of variables, symbols, or concepts that can assume one of a set of values (McDaniel & Gates, 2015).

Sources of secondary data in this study are works of literature, articles, journals, websites, and various other sources of information.

3.2.4 Population, Sample, and Sampling Technique

Population

The most critical part of research besides data is population because it can be used as a data source. The population is all elements divided into several characteristics to research marketing problems and another understanding, such as the population that is related to all groups of people, events, or objects that are the center of research to be researched (Hermawan, 2006; Malhotra, 2010). Population refers to the entire group of people, events, or interesting things that the researcher wants to research (Sekaran, 2006).

The characteristics that exist in the population must be under the object of research chosen by the researcher. In this study, the population with the same characteristics was consumers who have bought products or goods of modest fashion MSME in Bandung that are also a member of website based hijrah community called SHIFT (Gerakan Pemuda Hijrah) with the amount of 2321 members, which later was treated as unit of analysis.

3.2.4.2 Sample

The sample is a sub-group of the population selected for a research project or participating in a study (Malhotra, 2015). The sample size calculation is an important step in study design to ensure the achievement of quantitative research objectives (Harlan, 2017). The sample's main problem is to answer the question, whether the sample is taken represents the population. An important indicator in testing a sample design is how well the sample represents the population's characteristics. The sample is part of the population (Sekaran & Bougie, 2016).

Hair et al., (2019) outline that along with the development of SEM natures and the enrichment of research on key research design issues is undertaken, it is not relevant anymore to “always maximize your sample size” and “sample sizes of 300 are required”. In addition, Hair et al., (2019) proposed the following suggestions for minimum sample sizes which are based on the model complexity and the characteristic

of basic measurement model: 1) Models containing five or fewer constructs, each with more than three items (observed variables), and with high item communalities (.6 or higher) require minimum 100 sample size; 2) Models with seven constructs or less, at least modest communalities (.5), and no underidentified constructs require minimum 150 sample size; 3) Models with seven or fewer constructs, lower communalities (below .45), and/or multiple underidentified (fewer than three) constructs require minimum 300 sample size; 4) Models with large numbers of constructs, some with lower communalities, and/or having fewer than three measured items require the minimum 500 sample size

Thus, since this study employs fewer than five constructs, each with more than three observed variables, the minimum sample size according to Hair et al., (2019) was 100 samples.

3.2.4.3 Sampling Technique

Sampling is the process of selecting the correct number of elements from the population, thus allowing research samples and an understanding of the traits or characteristics to generalize for these traits or characteristics to population elements (Sekaran & Bougie, 2016). There are some types of sampling techniques, which are probability sampling and nonprobability sampling. Probability sampling is a sampling technique in which each element or member of the population has a known opportunity or possibility to be selected as a sample. Probability sampling varies from simple random sampling, systematic random sampling, stratification sampling, and cluster sampling. Meanwhile, nonprobability sampling is a sampling technique where each element or member in the population has no known or predetermined opportunity to be selected as a sample. Nonprobability sampling consists of convenience sampling, purposive sampling, judgment sampling, and quota sampling (Sekaran & Bougie, 2016:240).

The sampling technique that was used in this study was probability sampling because each member of the population has the same opportunity as the sample. The method used was the simple random sampling method, where each element in the population was known and had an equal probability of selection, each element was

selected independently of every other element, and the sample was taken using a random procedure from a sampling frame that is consisted of 2321 members of *Hijrah* community that are also members of SHIFT website (Malhotra & Birks, 2013).

3.2.5 Data Collection Technique

Data collection techniques are a way of collecting data needed to answer the formulation of research problems. According to Sekaran & Bougie (2016), data collection techniques are an integral part of the research design. The data collection techniques used by the author in this study are:

1. Literature Study

   A literature study is the collection of information related to theories and concepts related to research problems or the variables studied, which are digital sensory marketing, brand experience, and brand love. The literature study was obtained from various sources such as a) Library of the Indonesian Education University (UPI), b) Thesis and Dissertation, c) Journal of Economics and Business, d) Printed media (such as Marketeer and Cosmopolitan Indonesia magazines), e) Electronic media (internet), f) Google Scholar search engine, g) Science Direct Journal Portal, h) Researchgate Journal Portal, i) Emerald Insight journal portal and j) Elsevier Journal Portal.

2. Questionnaire

   The questionnaire is a data collection technique by submitting or sending a list of questions to be filled in by respondents. The data obtained from this technique is primary data, this is because the data obtained is data that is directly obtained from the first source. This data is raw data that needs to be processed and further processed for specific purposes. The questionnaire technique's advantages are that the questionnaire is easy to manage, the data obtained is reliable, and the coding, analysis, and interpretation of data is relatively simple (Hermawan, 2006). This technique's weakness is that the respondent may not be able or willing to provide the expected information, and the preparation of questions so that they are easy to understand is not easy.

3.2.6 Validity and Reliability Testing Results

Data is one of the most important things in a study because the data's correctness can be seen from data collection instruments. A good instrument must meet two important requirements, namely validity and reliability (Hermawan, 2006). Data also determines the quality of research results. Therefore data needs to be tested. To determine whether or not the data (questionnaire) to be distributed is appropriate, it is necessary to carry out the testing phase. That stage is testing the validity and reliability.

This study uses interval data, data that shows the distance from one another and has the same weight, and uses a semantic differential measurement scale. In this study, validity and reliability tests were carried out using the IBM Statistical Product for Service Solutions (SPSS) version 22.0 for Windows software tools or computer programs.

3.2.6.1 Validity Testing Results

Sekaran & Bougie (2016) explain that validity is a test of how well the instruments, techniques, or processes are used to measure the concept in measuring the concept in question. Internal validity (internal validity) or rationale is when the instrument's existing criteria rationally (theoretically) reflect what is being measured. Meanwhile, external validity (external validity) is met if the instrument's criteria are arranged based on existing empirical facts. The formula used to test the validity is the Pearson Product Moment Correlation formula as follows:

$$r_{xy} = \frac{n\sum XY - (\sum X)(\sum Y)}{\sqrt{\{n\sum X^2 - (\sum X)^2\}\{n\sum Y^2 - (\sum Y)^2\}}}$$

Source : (Malhotra & Birks, 2013)

Notes :

r_{xy} = Product moment correlation coefficient
n = Sample Size
$\sum$ = Square of X variable factor
$\sum X^2$ = Square of X variable factor
$\sum Y^2$ = Square of Y variable factor
$\sum$XY = The sum of the multiplication of the correlation factors for the X

and Y variables

Where: r_{xy} = the correlation coefficient between variable X and variable Y, the two variables being correlated.

The decision to test the validity of the respondents used a significant level as follows:

1. The t value was compared with the r table value with dk = n-2 and the significance level α = 0.05
2. The statement item of the research respondent is valid if rcount is greater than or equal to rtable (rcount ≥ rtable).
3. The statement item of the research respondent is not valid if rcount is lower than rtable (rcount <rtable).

The results of the questionnaire validity test for the variables studied are presented in the following table:

TABLE 3. 2
DIGITAL SENSORY MARKETING (X) VARIABLE ITEMS VALIDITY RESULTS

Statement Items	r_{count}	$r_{critical}$	Result
Statement 1	0.638	0.3	Valid
Statement 2	0.672	0.3	Valid
Statement 3	0.752	0.3	Valid
Statement 4	0.789	0.3	Valid
Statement 5	0.777	0.3	Valid
Statement 6	0.754	0.3	Valid
Statement 7	0.657	0.3	Valid
Statement 8	0.487	0.3	Valid
Statement 9	0.648	0.3	Valid

Source: Data Processing (2021)

TABLE 3. 3
BRAND EXPERIENCE (M) VARIABLE ITEMS VALIDITY RESULTS

Statement Items	r_{count}	$r_{critical}$	Result
Statement 10	0.820	0.3	Valid

Statement 11	0.799	0.3	Valid
Statement 12	0.784	0.3	Valid
Statement 13	0.900	0.3	Valid
Statement 14	0.738	0.3	Valid
Statement 15	0.853	0.3	Valid
Statement 16	0.833	0.3	Valid
Statement 17	0.928	0.3	Valid
Statement 18	0.851	0.3	Valid
Statement 19	0.831	0.3	Valid
Statement 20	0.843	0.3	Valid
Statement 21	0.802	0.3	Valid

Source: Data Processing (2021)

TABLE 3. 4
BRAND LOVE (Y) VARIABLE ITEMS VALIDITY RESULTS

Statement Items	r_{count}	$r_{critical}$	Result
Statement 22	0.525	0.3	Valid
Statement 23	0.698	0.3	Valid
Statement 24	0.749	0.3	Valid
Statement 25	0.661	0.3	Valid
Statement 26	0.604	0.3	Valid
Statement 27	0.498	0.3	Valid
Statement 28	0.573	0.3	Valid
Statement 29	0.628	0.3	Valid
Statement 30	0.667	0.3	Valid
Statement 31	0.804	0.3	Valid
Statement 32	0.766	0.3	Valid
Statement 33	0.683	0.3	Valid
Statement 34	0.790	0.3	Valid
Statement 35	0.787	0.3	Valid
Statement 36	0.766	0.3	Valid

Source: Data Processing (2021)

Based on tables 3.2, 3.3, and 3.4 regarding the validity of the three research variables. It can be seen that all statement items from the three variables above are

valid. Therefore, all statements in the questionnaire in this study are feasible to be employed in the study.

3.2.6.2 Reliability Testing Results

Reliability indicates the extent to which the data is error-free to guarantee consistent measurements over time in all instruments. It can be seen that reliability is an indication of the stability and consistency of the instrument for measuring concepts and helps to judge the goodness of the measure (Malhotra, 2015; Sekaran & Bougie, 2016). Reliability is assessed by determining the relationship between the scores obtained from different administrative scales. If the association is high, the scale will produce consistent results so that it can be said to be reliable.

This study tested the reliability using the alpha formula or Cronbach's alpha (α) because the questionnaire used was a range between several values, in this case using a Likert scale of 1 to 5. According to Sekaran & Bougie (2016), Cronbach's alpha is a reliability coefficient that shows how well the items in a set are positively correlated with each other. Cronbach alpha is calculated as the mean of intercorrelations between items measuring the concept. The closer the Cronbach alpha is to 1, the higher the internal consistency reliability.

The following is the Cronbach alpha formula:

$$r_{11} = \left[\frac{k}{(k-1)}\right]\left[1 - \frac{\sum \sigma b^2}{\sigma t^2}\right]$$

Source : (Sekaran & Bougie, 2016)

Note:
r_{11} = instrument reliability
k = number of question items
σt^2 = total variance
$\sum \sigma b^2$ = the amount of item variance per question

The decision to test the reliability of the instrument items is as follows:

1. The question item understudy is said to be reliable if the internal coefficient of all items (n)> r table with a significance level of 5%.

2. The question item understudy is said to be not reliable if the internal coefficient of all items (n) <rtabel with a significance level of 5%.

The following are the results of the reliability test of each research variable.

TABLE 3.5
RELIABILITY TEST RESULTS

Variable	Reliability Index	Critical Value	Result
Digital Sensory Marketing (X)	0.862	0.7	Reliable
Brand Experience (M)	0.959	0.7	Reliable
Brand Love (Y)	0.916	0.7	Reliable

Source: Data Processing (2021)

Based on table 3.5 regarding the reliability test of the three research variables. The reliability testing of the three variables shows that those variables have good reliability because they have a greater reliability coefficient than the critical value (0.7), as shown in the table above. Thus, each statement in the questionnaire can be analyzed further.

3.2.7 Data Analysis Technique

The data analysis technique is a way to measure, process, and analyze data to test hypotheses. The purpose of data processing is to provide useful information for research and test the hypotheses that have been formulated. Thus, the data analysis design is directed at testing hypotheses and answering the problems posed. The things that will be studied are digital sensory marketing and its influence on brand experience and impact on brand love. This study uses a questionnaire as a tool to measure research. The questionnaire was arranged based on the variables in the study. The data analysis activities in this study were carried out in several stages, including:

1. Compiling data, this activity aims to check the completeness of the respondent's identity, the completeness of the data, and filling in the data that is tailored to the research objectives.
2. Selecting data, this activity is carried out to check the completeness and correctness of the data that has been collected.

3. Data tabulation, this study tabulated data with the following steps:
   a) Entering/inputting data into the Microsoft Office Excel program
   b) Scoring each item
   c) Adding up the scores for each item
   d) Arranging a score ranking on each research variable.
4. Analyzing and interpreting calculation results based on the numbers obtained from statistical calculations. The data analysis method used in this research is descriptive analysis and verification.

TABLE 3. 6
POSITIVE AND NEGATIVE ANSWERS ALTERNATIVE SCORES

Alternative Answers	Very low, rare, indistinct, elusive, bad	Scoring Range	Very high, often, clear, easy to understand, agree, happy, good
Negative		1 2 3 4 5 6 7	Positive

Source : (Rasyid, 2005)

3.2.7.1 Descriptive Data Analysis Technique

Descriptive analysis is used to find a relationship between variables through correlation analysis and compare the average sample or population data without the need to test its significance. The research tool used in this research is a questionnaire based on the variables in the research data, which provide information and data about the effect of digital sensory marketing on brand experience and its impact on brand love. The stages in processing the data collected from the questionnaire results can be grouped into three steps. Those are preparation, tabulation, and the application of data in the research approach.

The steps used to carry out descriptive analysis on the three research variables are as follows:

1. Cross Tabulation Analysis

The cross-tabulation method is an analysis carried out to see whether there is a

descriptive relationship between two or more variables in the data obtained (Malhotra, 2015). In principle, this analysis presents data in a tabulated form which includes rows and columns. The data used for cross-tabulation presentation is nominal or category scale data (Ghozali, 2014). Cross tabulation is a method that uses statistical tests to identify and determine the correlation between two or more variables. If there is a relationship between these variables, then there is a level of interdependence, which is changes in one variable that influence the other. The tabulation table format used in this study is shown in Table 3.7 Table of the Cross Tabulation below.

TABLE 3. 7
***CROSS TABULATION* TABLE**

Control Variable	Title (Identification / Characteristics / Experience)	Title (Identification / Characteristics / Experience)				Total	
		Classification (Identification / Characteristics / Experience)					
		F	%	F	%	F	%
	Total Score						
Total							

2. Ideal Score

   The ideal score is expected to answer the questionnaire questions, which will be compared with the total score to determine the performance results of the variables. Research or surveys require instruments or tools used to collect data, such as questionnaires. The questionnaire contains questions asked to respondents or samples in a research or survey process. The number of questions included in the research is quite large, so it requires scoring to facilitate the assessment process and assist in analyzing the data that has been found. The formula used in the ideal score is as follows:

   Ideal Score = Highest Score x Number of Respondents

3. Descriptive Analysis Table

   This study uses descriptive analysis to describe the research variables, including 1) Descriptive Analysis of Variable Y (Brand Love), where the Y variable focuses on research on brand love through a passion for a brand, brand

attachment, positive evaluation of the brand, positive emotions in response to the brand, declarations of love toward the brand 2) Descriptive Analysis of Variable X1 (digital sensory marketing), where variable X1 focuses on research on digital sensory marketing through visual and auditory sensory; 3) Descriptive Analysis of Variable X2 (Brand Experience), where X2 variable focuses on research on brand experience through sensory experience, affective experience, behavioral experience, and intellectual experience. The method used to categorize the calculation results is the percentage interpretation criteria taken from 0% to 100%. The descriptive analysis table format used in this study can be seen in Table 3.8 Descriptive Analysis.

TABLE 3. 8
DESCRIPTIVE ANALYSIS

No	Statement	Alternative Answers	Total	Ideal Score	Total Score Per-Item	% Score
	Score					
		Total Score				

Source : Modified from Sekaran dan Bougie (2016)

The next step to take after categorizing the calculation results based on the interpretation criteria is drawing a continuum line which is divided into seven levels, including very high, high, moderately high, moderate, moderately low, low, and very low. The purpose of making this continuum line is to compare each total score of each variable to obtain an overview of the Brand Love variable (Y) and the digital sensory marketing (X). The steps for making a continuum line are described as follows:

1. Defining the highest and lowest continuum

   Highest Continuum = Highest Score × Number of Statements × Number of Respondents

   Lowest Continuum = Lowest Score × Number of Statements × Number of Respondents

2. Determining the difference in the continuum score from each level

$$\text{Score from each level} = \frac{Highest\ continuum - Lowest\ continuum}{Numbers\ of\ level}$$

3. Making a continuum line and determine the area where the results of the study score. Determining the percentage where the research score is located (rating scale) on the continuum line (Score / Maximum Score × 100%). The description of the criteria can be seen in Figure 3.1 regarding the Research Continuum Line for digital sensory marketing, brand experience, and brand love as follows:

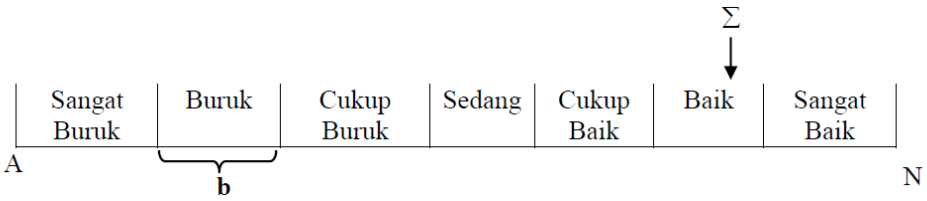

FIGURE 3. 1
RESEARCH CONTINUM LINE OF DIGITAL SENSORY MARKETING, BRAND EXPERIENCE, AND BRAND LOVE

Note :
a = Minimum Score ∑ = Total score obtained
b = Interval Range
N = The ideal score of the Verification Data Analysis Technique

3.2.7.2 Verification Data Analysis Techniques

After the overall data obtained from respondents has been collected and descriptive analysis is carried out, the following analysis is done: verification data analysis. Verification research is research conducted to test the truth of existing sciences in the form of concepts, principles, procedures, arguments, and practices from the science itself so that the purpose of verification research in this study is to obtain the truth of a hypothesis carried out through data collection in the field (Arifin, 2011).

The verification data analysis technique in this study was used to see the effect of digital sensory marketing (X1) on brand experience (X2) and its impact on brand love (Y). The verification data analysis technique used to determine the correlative relationship in this study is the SEM (Structural Equation Model) analysis technique.

SEM is a statistical technique that combines factor analysis and regression analysis (correlation), which aims to examine the relationships between the variables in a model, both between indicators and their constructs or the relationship between constructs (Santoso, 2011). SEM has characteristics that are more confirming analytical techniques(Sarwono & Narimawati, 2015). SEM is used not to design a theory but rather to examine and justify a model. Therefore, SEM's main requirement is to build a hypothetical model consisting of a structural model and a measurement model based on theoretical justification.

SEM is a combination of two separate statistical models. Those are factor analysis developed in psychology and psychometrics and simultaneous equation modeling developed in economics (Ghozali, 2014). The statement that SEM is a simultaneous equation model supported by Cleff (2014), who states that using SEM allows the analysis of a series of relationships simultaneously, therefore, providing statistical efficiency.

SEM has significant characteristics that differentiate it from other multivariate analysis techniques. SEM data analysis techniques have multiple dependence relationship estimates and represent previously unobserved concepts in existing relationships and take measurement errors into account (Sarjono & Julianita, 2015).

Model in SEM

There are two types in an SEM calculation model, consisting of a measurement model and a structural model as follows:

1. Measurement Model

The measurement model is part of an SEM model that deals with latent variables and their indicators. The measurement model itself is used to test the construct validity and instrument reliability. A pure measurement model is called a confirmatory factor analysis (CFA) model, where there are unmeasured covariants between each pair of possible variables. The measurement model is evaluated as any other SEM model using the conformity test measurement. The analysis process can only be continued if the measurement model is valid (Sarwono & Narimawati, 2015).

In this study, exogenous latent variables consist of digital sensory marketing which affect endogenous latent variables, that are brand experience and brand love, either directly or indirectly. The specification of the variable model measurement model is as follows:

a. Exogenous Latent Variable Measurement Model

1) Variable X (Digital Sensory Marketing)

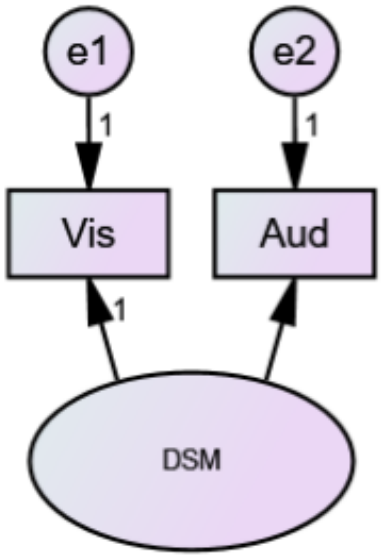

FIGURE 3. 2 MEASUREMENT MODEL OF DIGITAL SENSORY MARKETING

Note:

DSM	= Digital Sensory Marketing
Vis	= Visual Sensory
Aud	= Auditory Sensory

b. Endogenous Latent Variable Measurement Model

1. Variable M (Brand Experience)

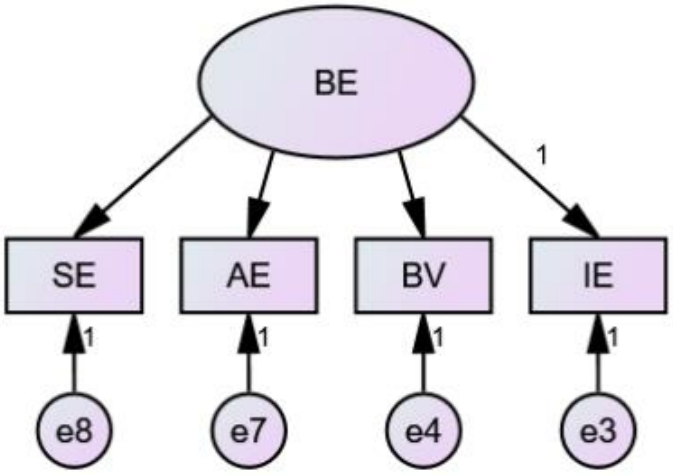

FIGURE 3. 3 BRAND EXPERIENCE MEASUREMENT MODEL

Note:

BE	= Brand Experience	BV	= Behavioral Experience
SE	= Sensory Experience	IE	= Intellectual Experience
AE	= Affective Experience		

2. Variable Y (Brand Love)

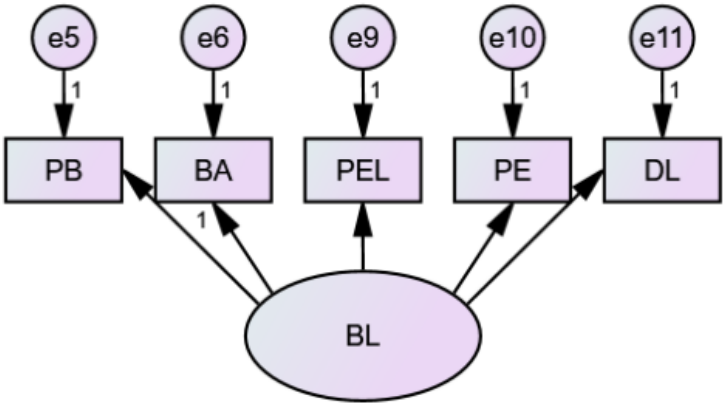

FIGURE 3. 4 BRAND LOVE MEASUREMENT MODEL

Note:

PB	= *Passion of the Brand*	*PE*	= *Positive Emotion*
BA	= *Brand Attachment*	*DL*	= *Declaration of Love*
PEL	= *Positive Evaluation of brand*		

2. Structural Model

The structural model is part of the SEM model, consisting of the independent and dependent variables. This is different from the measurement model, which makes all variables (constructs) independent variables based on SEM's nature and particular theories. Structural models include the relationships between latent constructs, and these relationships are considered linear, although further developments have allowed the inclusion of nonlinear equations.

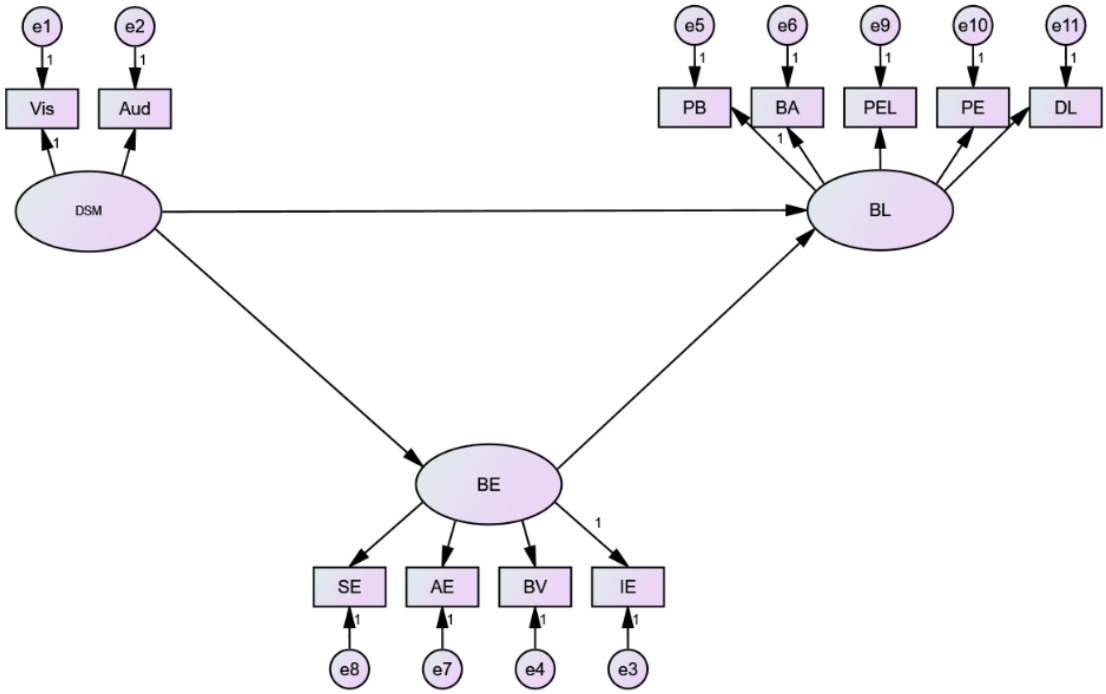

FIGURE 3. 5 THE STRUCTURAL MODEL ON THE INFLUENCE OF DIGITAL SENSORY MARKETING ON BRAND EXPERIENCE AND ITS IMPACT ON BRAND LOVE

Graphically, a line with one arrowhead depicts the regression relationship, and a line with two arrowheads illustrates the correlation or covariance relationship. This study creates a structural model presented in Figure 3.8 Structural Model of the Influence of digital sensory marketing on Brand experience and its impact on Brand love.

Assumptions, Stages, and Procedures of SEM

Parameter estimation in SEM is generally based on the Maximum Likelihood (ML) method, which requires several assumptions that must ensure that the SEM assumptions are met to determine whether the model is good and can be used not. These assumptions are as follows (Ghozali, 2014):

1. Sample Size

   The sample size that must be met in an SEM that will provide a basis for estimating the sampling error is at least 100. In the estimation model using the maximum likelihood (ML), the sample size that must be used, among others, is 100-200 to get the correct parameter estimation (Ghozali, 2014).

2. Data Normality

   The requirement for conducting SEM-based testing is to test the data's assumptions and variables studied with the normality test. The data can be said to be normally distributed if the c.r skewness and c.r kurtosis values are in the position of ± 2.58 (Santoso, 2011). The data distribution must be analyzed to see whether the assumption of normality is fulfilled so that the data can be further processed for modeling (Cleff, 2014).

3. Outliers Data

   Data outliers are data observations which values are far above or below the average value (extreme value), both univariate and multivariate, because of the unique combination of characteristics it has. Therefore it is far different from other observations (Ferdinand, 2006). The outliers examination can be done by comparing the Mahalanobis d-squared value with the chi-square dt. Mahalanobis value d-squared <chisquare dt. Another way to check the presence or absence of outliers data is to look at the p1 and p2 values, p1 is expected to have a small value, while p2 is, on the contrary, the outliers data is indicated if p2 is 0.000 (Ghozali, 2014).

After all the assumptions are fulfilled, the following SEM analysis stages can be carried out. Several procedures must be passed in data analysis techniques using SEM, which generally consists of the following stages (Bollen & Long, 1993).

1. Model Specification

The specification stage of model formation is the formation of relationships between one latent variable and other latent variables and is also related to the relationship between latent variables and the manifest variable based on the prevailing theory (Sarjono & Julianita, 2015). This step is carried out before estimating the model. The following are the steps to get the desired model in the model specification stage (Wijanto, 2008), those are:

a) Measurement model specifications
    1) Defining the latent variables in the study
    2) Defining the observed variables
    3) Defining the relationship between latent variables and the observed variables
b) Structural model specification, which defines the causal relationship between these latent variables.
c) Drawing a path diagram with a hybrid model, which is a combination of the measurement model and the structural model, if needed (optional).

2. Model Identification

This stage is concerned with assessing the possibility of obtaining a unique value for each parameter in the model and the possibility of simultaneous equations for which there is no solution. There are three categories in the equation simultaneously, those are (Wijanto, 2008):

a) Under-identified model, a model with a more significant number of parameters estimated than the number of known data. The situation occurs when the degree of freedom/df value shows a negative number. In this situation, the estimation and model assessment cannot be done.
b) Just-identified model, a model with the same number of parameters estimated as the number of known data. This situation occurs when the degree of freedom/df value is at 0, this condition is also called saturated. If just identified model occurred, then estimation and model assessment does not need to be done.

c) Over-identified model, a model with a smaller number of parameters estimated than the number of known data. This situation occurs when the degree of freedom/df value shows a positive number. Thus, in this situation, the estimation and assessment of the model can be carried out.

The amount of degree of freedom (df) in SEM is the amount of known data minus the estimated number of parameters which value is less than zero (df = the number of known data-the estimated number of parameters <0).

3. Estimation

The model estimation method is based on the distribution assumption of the data. Suppose the data has a multivariate normal distribution. In that case, the model estimation is carried out using the maximum likelihood (ML) method. However, if the data deviates from the multivariate normal distribution, the estimation method that can be used is the Robust Maximum Likelihood (RML) or Weighted Least Square (WLS). This step is intended to determine the estimated value of each model parameter that forms the $\Sigma(\Theta)$ matrix, so that the parameter value is as close as possible to the value in the S matrix (the covariance matrix of the observed/sample variables) (Sarjono & Julianita, 2015).

This study will determine whether the model produces an estimated population covariance matrix that is consistent with the sample covariance matrix. This stage is carried out by checking the suitability of several tested models (models that have the same shape but differ in the number or types of causal relationships representing the model), which subjectively indicate whether the data fit or suitable with the theoretical model or not.

4. Model Fit Testing

This stage is concerned with testing the fit between the model and the data. A model fit test is conducted to test whether the hypothesized model is an excellent model to represent the research results. There are several statistics to evaluate the model used. In general, there are various types of fit indexes used to measure the degree of conformity between the hypothesized model and the data presented. The suitability of the models in this study is seen in the following three conditions: 1)

Absolute Fit Measures (absolute fit), 2) Incremental Fit Measures (better relative to other models) and, 3) Parsimonious Fit Measures (more straightforward relative to the model - alternative model).

The suitability test is done by calculating the goodness of fit (GOF). The basis for taking the cut-off value to determine the criteria for the goodness of fit can be done by taking the opinions of various experts. Nevertheless, the indicators for testing the goodness of fit and the cut-off value used in this study refer to the opinion (Yvonne & Kristaung, 2013) as follows:

1) Chi-Square (X^2)

   The measure that underlies the overall measurement is the likelihood ratio change. This measure is the primary measure in measurement model testing, which indicates whether the model is an overall fit model. This test aims to determine whether the sample's covariance matrix is different from the covariance matrix of the estimation results. Therefore, the chi-square is very sensitive to the size of the sample used. The criteria used is if the sample covariance matrix is not different from the estimation result matrix, then the data is said to be fit with the data entered. The model is considered good if the chi-square value is low.

   Although chi-square is the primary testing tool, it is not considered the only basis for determining the fit model. To correct the chi-square test's shortcomings, $\chi 2$/df (CMIN / DF) is used, where the model can be said to be fit if the CMIN / DF value <2.00.

2) GFI (Goodness of Fit Index)

   GFI aims to calculate the weighted proportion of variance in a sample matrix described by the estimated population's covariance matrix. The value of the Good of Fit Index measures between 0 (poor fit) to 1 (perfect fit). Therefore, the higher the GIF value, the more fit the model is with the data. The GFI cut-off value is ≥0.90, which is considered a good value (perfect fit).

3) Root Mean Square Error of Approximation (RMSEA)

The RMSEA is an index used to compensate for chi-square weakness (X2) in a large sample. The lower RMSEA value indicates that the model is a better fit with the data. The RMSEA value between 0.05 and 0.08 is an acceptable measure (Ghozali, 2014). The RMSEA empirical test results are suitable for testing a confirmatory or competing strategy model with a large sample size.

4) Tucker Lewis Index

TLI is an alternative to the incremental fit index that compares a tested model against the baseline model. The recommended value as a reference for acceptance by a model is ≥ 0.90.

5) AGFI (Adjusted Goodness of Fit Index)

AGFI is a GFI adjusted for the degree of freedom, analogous to R2 and multiple regression. Both GFI and AGFI are criteria that consider the weighted proportion of the variance in a sample covariance matrix. The cut-off-value from AGFI is ≥ 0.90 as a good grade. This criterion can be interpreted if the value ≥ 0.95 is ic considered as an excellent overall model fit. If the value ranges from 0.90 to 0.95, it is considered as a sufficient level, and if the value is 0.80-0.90, it indicates a marginal fit.

6) Comparative Fit Index

The advantage of this model is that the model's feasibility test is insensitive to the size of the sample and the complexity of the model, so it is very good for measuring the acceptance level of a model. The recommended value to declare the model fit is ≥ 0.90.

7) Parsimonious Normal Fit Index

PNFI is a modification of NFI. PNFI includes the number of degrees of freedom used to reach the fit level. The higher the PNFI score, the better. The main usage of PNFI is to compare models with different degrees of freedom. If the PNFI difference is 0.60 to 0.90, it indicates a significant difference in the model (Ghozali, 2014).

8) Parsimonious Goodness Fit Index

PGFI is a modification of GFI based on the estimated model parsimony. PGFI values range from 0 to 1.0, with higher values indicating a more parsimony model (Ghozali, 2014).

TABLE 3. 9
MODEL CONFORMITY TESTING INDICATORS

Goodness-of-Fit Measures	Tingkat Penerimaan
Absolute Fit Measures	
Statistic Chi-Square (X^2)	Following statistical tests related to the requirements of significance. The smaller, the better.
The goodness of Fit Index (GFI	Values range from 0-1, with higher scores the better. GFI ≥ 0.90 is a good fit, while 0.80 ≤ GFI <0.90 is a marginal fit.
Root Mean Square Error of Approximation (RMASEA)	The lower RMSEA indicates the model is getting fit with the data. The cut-off-value measure RMSEA <0.05 is considered a close fit, and 0.05 ≤ RMSEA ≤ 0.08 is considered a good fit as the accepted model.
Incremental Fit Measures	
Tucker Lewis Index (TLI)	Values range from 0-1. A higher score is better. TLI ≥ 0.90 is a good fit, while 0.80 ≤ TLI <0.90 is a marginal fit.
Adjusted Goodness of Fit (AGFI)	The cut-off-value from AGFI is ≥ 0.90
Comparative Fit Indez (CFI)	Values range from 0-1, with higher scores the better. CFI ≥ 0.90 is good fit, while 0.80 ≤ CFI <0.90 is marginal fit
Parsimonious Fit Measures	
Parsimonious Normal Fit Index (PNFI)	PGFI <GFI, the lower, the better
Parsimonious Goodness of Fit Index (PGFI)	A high value indicates a better fit is only used for comparisons between alternative models. The higher the PNFI value, the better the fit of a model.

Source : (Ghozali, 2014; Yvonne & Kristaung, 2013)

5. Re-specification

This stage is related to model re-specification based on the results of the previous stage's suitability test. The implementation of re-specification is very dependent on the modeling strategy to be used. A structural model that can be proven statistically fit and has a significant relationship between variables is not then said to be the only best model. This model is one of the many possible forms of models that can be statistically accepted. Therefore, in practice, one does not stop after analyzing one model. Researchers tend to make model re-specifications or model modifications, which is an attempt to present a series of alternatives to test whether there is a model form that is better than the current model.

The purpose of the modification is to test whether the modification can reduce the chi-square value or not, where the smaller the chi-square number, the more fit the model is with the existing data. The steps for this modification are the same as the tests that have been done before. Before the calculations are carried out, some modifications are made to the model based on the rules under AMOS usage. The modifications that can be made on AMOS are found in the output modification indices (M.I), consisting of three categories: covariances, variances, and weight regressions. Common modifications are made by referring to the covariances table by making the covariances relationship on the variables/indicators suggested in the table or the relationship with the greatest M.I value. Meanwhile, modifications using regressions weight must be carried out based on a particular theory that shows a relationship between the variables suggested in the output of modification indices (Santoso, 2011).

3.2.8 Hypothesis test

A hypothesis is broadly defined as a provisional guess or answer to a problem that will be proven statistically (Sukmadinata, 2012). Hypothesis in quantitative research can be in the form of a one-variable hypothesis and a hypothesis of two or more variables known as a causal hypothesis (Priyono, 2016). Hypothesis testing is a way of testing if the applicable theoretical framework's statements undergo rigorous examination (Sekaran & Bougie, 2016). The research object is the independent variable. Those are digital sensory marketing (X1) and brand experience (X2), while the dependent variable is brand love (Y) by paying attention to the characteristics of the variables to be tested. The statistical test used is through the calculation of SEM analysis for all three variables.

In this study, the hypothesis testing was carried out using the IBM SPSS AMOS version 22.0 for Windows program to analyze the relationships in the proposed structural model. The structural model is proposed to examine the causality relationship between digital sensory marketing (X1) on brand experience (X2) and its impact on brand loyalty (Y). Hypothesis testing is performed using a t-value with a significance level of 0.05 (5%) and degrees of freedom of n (sample). The t-value in

the IBM SPSS AMOS version 22.0 for Windows program is the Critical Ratio (C.R.) value. If the value of Critical Ratio (C.R.) ≥ 1.967 or the probability value (P) ≤ 0.05, then H0 is rejected (the research hypothesis is accepted).

The criteria for the acceptance or rejection of the main hypothesis in this study can be written as follows:

1. Hypothesis Test 1

   H0 $Z_{count} \leq Z_{table}$, meaning that brand experience does not mediate the effect of digital sensory marketing on brand love

   H1 $Z_{count} \geq Z_{table}$, meaning that brand experience mediates the effect of digital sensory marketing on brand love

2. Hypothesis Test 2

   H0 c.r ≤ 1.96, it means that there is no effect of digital sensory marketing on brand experience

   H1 c.r ≥ 1.96, meaning that there is an effect of digital sensory marketing on brand experience

3. Hypothesis Test 3

   H0 c.r ≤ 1.96, meaning that there is no effect of brand experience on brand love

   H1 c.r ≥ 1.96, meaning that there is an effect of brand experience on brand love

4. Hypothesis Test 4

   H0 c.r ≤ 1.96, meaning that there is no effect of digital sensory marketing on brand love

   H1 c.r ≥ 1.96, meaning that there is an effect of digital sensory marketing on brand love

The value used to determine the magnitude of the factors that build digital sensory marketing in forming brand experience and later on brand love can be seen in the implied (for all variables) correlations matrix or table listed in the IBM SPSS AMOS version's output 22.0 for Windows. Meanwhile, the amount of influence can be seen from the output estimates in the total effect column by standardized. The value of the coefficient of determination is indicated by the value of the squared multiple

correlations (R2), which shows the magnitude of variable Y's explanation by variable X (Ghozali, 2014).