

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Object

According to Sugiyono, (2013), a research object can be described as a summary of an individual's characteristics, qualities, and beliefs. For this research study, the object is the impact of green packaging, perceived value, and perceived risk towards a customer's green purchase intention. For this research study, the research object includes both independent and dependent variables; where there are three independent variables: perceived value, green packaging, and perceived risk. While there will be only one dependent variable, which is green purchase intention.

3.2 Research Paradigm

Based on study from Robert Friedrich. (1970), it is stated that the definition of paradigm is that of a moral viewpoint or compass that influences how humanity understands, experience, and interpret reality. From there, it means that a research's paradigm influences a researcher's way of conducting and executing their research.

In accordance with research from Sekaran & Bougie. (2016), it has been identified that there are four categories of paradigms; which include positivism, critical realism, pragmatism, and last but not least constructivism. The chosen type of paradigm that will then be applied in this research study is positivism. The reason for choosing positivism is due to positivism utilising objective designs and metrics

and simultaneously using deductive reasoning to further verify a theory, which makes it the proper paradigm type for this research study.

According to Leedy and Ormrod (2001), the methodology of quantitative research employs a statistical or numeric approach to research design. This type of research is focused on surveying and experimentation, and it is built on pre-existing theories. According to Creswell (2003), quantitative research follows an empiricist paradigm and is conducted independently of the researcher. The data collected is used to objectively measure reality, and the meaning is derived from the objectivity found in the collected data (Williams, 2007). The term "Quantitative" can also be referred to as positivism or objective research, which utilizes methods such as experiments, surveys, and testing to gather data. The findings of such research are presented in numerical form. Quantitative data is typically gathered through structured questions yielding numerical results. On the other side, "Qualitative" was known as constructionism or subjective research, which included a lot of observation and took a long time to produce the results, which were in the form of words (Sekaran & Bougie, 2016).

3.3 Type of research

The primary form of research that will be used for this research will be quantitative research. Based on research from Dharma S. (2008) defined quantitative research as a method of researching in which the data collected and used are numbers centric; where the results, data collection, and data interpretation are all in the form of numbers or figures. The reason for choosing quantitative research is because this research will be collecting and gathering its data mainly

conducted through both interviews and survey questionnaires via Google Forms by providing open ended questions to allow for detailed responses in a form of numbers.

But with the condition of the pandemic still lurking around the corner, all of this data collection will be done via online in order to not only ensure the safety of the researcher but also the respondents. Another reason is it will be the most efficient way of data collection to be done online through survey questionnaires via Google Forms.

3.4 Data Collection Strategy

The chosen data collection strategy that will be implemented and conducted in order to gather the data required for this research study to achieve the research objectives of this study and give answers in response to the research questions is an online survey. Online survey is best fit for this research study because it is the most efficient and practical way of collecting and receiving data in the midst of the pandemic situation still lurking around, thus ensuring the safety and wellness of all parties involved. According to Sekaran & Bougie. (2016), survey is a strategy of collecting data from/or about people with the objective of portraying, justifying, or comparing the people's knowledge, virtues, and characteristics. The survey questionnaire will then be distributed to the respondents involved in the data collection of this research study.

3.5 Extent of Researcher Interference

Based on an accordance of study from Sekaran & Bougie. (2016), during the process of a research study, usually there are three levels of interferences or interventions that a researcher might use or do. Those three levels are low/minimal, moderate, and excessive. For this research study, it can be identified that the level of intervention will be minimal or low. The reason for that is because first the purpose of this study is to analyze and examine the relationship and effect of product packaging, towards purchase intention. Secondly, it will be low or minimal interference from the researcher because for the data collection, it will be done in a form of survey questionnaire that will then distributed via online in a Google Forms link, in which it means this study can be identified as a quantitative research, where the data that has been processed and analyzed will correspond with the data that was gathered from the result of the survey questionnaire, which means making the data can't be altered. More explanation on the extent of researcher interferences will be provided in **Table 3.1** below.

Table 3.1 Extent of Researcher Interference

Category	Minimal/Low Interference	Moderate Interference	Excessive/Maximal Interference
Definition	Low intervention by researcher	Moderate or mild intervention by researcher	Strong intervention by researcher
Example	Survey questionnaire	Field study, field experiments	Lab experiments

Source: Sekaran & Bougie (2016)

3.6 Study Setting

Research found from Sekaran & Bougie. (2016) implied that there are two different forms of research or study setting, which are contrived and uncontrived or non-contrived settings. Non-contrived setting looks at a research that concentrates in dealing with comprehending how the cause and effect relationship truly operates. For this specific research study, it will use a non-contrived study setting because this study looks at the relationship of green packaging, perceived risk, and perceived value towards green purchase intention.

Also, study from Sekaran & Bougie. (2016) also suggested that non-contrived setting is when the research is done with a neutral setting with minimal to low interference towards the participants and respondents' daily life during and

after assisting the research. This is an additional reason of why this research study matches the category of uncontrived or non-contrived study setting, since the survey questionnaire that will then be distributed to the respondents, the respondents can execute in their own premises without any force or disturbance from the researcher. Further explanation on study setting will be provided in **Table 3.2** below.

Table 3.2 Differences of Study Setting

Category	Contrived	Non-Contrived
Definition	Set environment by researcher to collect data needed	Natural environment without any intervention from the researcher
Example	Lab experiments	Questionnaire

Source: Sekaran & Bougie (2016)

3.7 Unit of Analysis

Research composed by Sekaran & Bougie. (2016) described that unit of analysis can be defined as a single distinctive unit that is regarded as a subject during the study. There are five kinds of units of analysis, which are cultures, groups, organizations, dyads, and individuals. But for this research study, there will be only one unit of analysis that will be chosen, which is individual. Individual is self-explanatory, which usually means to a single person, where in this research study throughout the data collection process, the researcher will be collecting and receiving the data needed one by one, thus making it more efficient and easier in

collecting the data and also when analyzing it. Also, since this research study is concentrating on individuals rather than groups. Further description on the unit of analysis is provided below on **Table 3.3**.

Table 3.3 Differences of Unit of Analysis

Category	Individual	Dyads	Groups	Organization	Culture
Definition	Data Collection from each person	Data Collection from a group or two	Obtain data from a few people	Collect data from few people who is in the same institution	Obtain data from people who shares identical beliefs
Example	Student	Student & teacher	Management students	University	Balinese people

Source: Sekaran & Bougie (2016)

3.8 Time Horizon

Research done by Sekaran & Bougie. (2016) distinguished that there are two varieties of temporal period: cross-sectional studies and longitudinal studies. In regards to this research study, it will use cross-sectional studies. The reason is because this research study will not be continuous and will only allow a certain time frame for data collection, usually a day, week, or a month. This statement is supported by research from Sekaran & Bougie. (2016), it is declared that cross-

sectional studies are not continuous and will only grant a specific amount of time frame for collecting the data required. Second reason for this study will be implementing cross-sectional study because it will be efficient and won't take much of the respondents' time when conducting the survey questionnaire, thus making it much more convenient for all parties involved. More explanation on time horizon will be provided in **Table 3.4**.

Table 3.4 Time Horizon

Category	Longitudinal Studies	Cross-Sectional Studies
Definition	Research done in multiple time period	Data collection finished in one period of time
Example	Researchers conduct a research on understanding people behavior every summer season	Researchers conduct a research on understanding people behavior during summer of 2021.

Source: Sekaran & Bougie (2016)

3.9 Variable Measures

A research written by Sekaran & Bougie. (2016) described variables as something that has the ability to distinguish, identify, and differentiate different types of values. Based on the same research, it is implied that there are four types of variable: independent variable, moderating variable, mediating variable, and last but not least dependent variables. Regarding this research study, it will be only using two variables; which are independent and dependent variables.

3.9.1 Independent Variables

In accordance with study from Sekaran & Bougie. (2016), it defined independent variables as variables that are capable of affecting the dependent variable both in a positive and negative manner. Inside this research study, there are three independent variables that will be utilized: green packaging, perceived value, and perceived risks.

3.9.2 Dependent Variables

According to a study from Sekaran & Bougie (2016), it is stated that dependent variables are the main point and main interest of the researcher. Well, for this research, there will be one independent variable use, which is green purchase intention.

3.10 Data Collection Ethics

Based on the information collected from Sekaran & Bougie. (2016), there are nine ethics or rules that a researcher must obey and follow when conducting the data collection process. As follows:

- Protection of the confidential information provided by participants

- The researcher must be open about the purpose of the study and information
- Refraining from asking participants any information which might be perceived as sensitive
- Regardless of the result of the information given the participants must be treated with respect
- Participants must not feel pressured to provide information for the survey
- Participants mustn't be placed in hazardous or dangerous situations that could have a detrimental psychological and physical impact on them.
- Researchers must refrain from spreading faulty or fraudulent data

3.11 Data Collection Methods

Based on information collected from Sekaran & Bougie. (2016), it can be derived that data can be gathered or retrieved through many different sources, and some examples can be in the form of personally administered questionnaires, mail questionnaires, and electric questionnaires. Based on research done by Sugiyono. (2016), it is said that data collection can be viewed as a methodical strategy in order to gather the data needed. For this specific research study, the chosen method for data collection is through the distribution of survey questionnaires that will be distributed via online using a Google Forms link. The reason is because through distributing survey questionnaires in the form of Google Forms link, it is highly efficient and easy to be distributed to the respondents involved, which falls into the category of electric questionnaires. More explanation on different types of data collection methods will be given in **Table 3.5**.

Table 3.5 Data Collection Methods

Category	Cross-Sectional
Personal Administered Questionnaires	<ul style="list-style-type: none"> ● High level of respondents' anonymity ● Researchers have the ability to contact a larger and broader range of respondents ● Respondents are able to receive gifts from the researchers ● Respondents have more convenience since they can give response at anytime and anywhere
Mail Questionnaires	<ul style="list-style-type: none"> ● Researchers have the capability to establish relationships with respondents ● High response rate ● It is more affordable especially when it comes to group respondents ● Researchers can give clarifications to doubts that

	<p>might appear from the respondents</p> <ul style="list-style-type: none"> ● High level of respondents' anonymity
Electronic Questionnaires	<ul style="list-style-type: none"> ● More convenient to administer ● Researchers and respondents have the ability to distribute survey internationally ● Inexpensive ● Short time period needed for distribution ● More convenient to the respondents, due to the fact that respondents can fill out the survey anytime and anywhere

Source: Sekaran & Bougie (2016)

3.12 Design Sample & Sample Size

3.12.1 Design Sample

Based on the research collected from Sekaran & Bougie. (2016), it is said that there are five components of a research design. These include the objective of the study, examination, measurement, time period or duration, and research setting. For this study, judgement sampling will be used as the chosen research design of this specific research study. For reasons like there are specific rules to complete the questionnaire, which means it will give further assistance by preventing unneeded and unwanted data to be collected by the researcher when collecting the data.

3.12.2 Sample Size

Based on a study done by Roscoe. (1975), it is described that in a research, the sufficient number of samples required for a data to be considered valid and reliable is between the range of 30 to 40 for each variable. The population sample relevant to this study will 230 people between the ages of 20-70 who shop for items in their households because in this study there will be 23 indicators and each indicator there will be 10 people to make it relevant. So, with that said $23 * 10 = 230$ people

The age group chosen will be used to provide insight into how different age demographics affect the outcome of the results. Similarly, half of the respondents will be Australian and half of the respondents will be Indonesian. This even spread will allow the comparison of cultures in relation to the variables namely, their views and buying habits in regard to the difference between soda packaging in Australia

and Indonesia. The interviews will be conducted with 10 respondents, 5 from Australia and 5 from Indonesia as a means of ascertaining more detailed answers and gain more information into the cultural aspects of consumer trends and views on sustainability as a whole.

3.13 Sampling Technique

After figuring out the design sample and sample size, the last step is to choose the proper sampling technique that will then be used in the study. There are two types of sampling technique: probability and non-probability sampling. Based on a research from Hair et al. (2017), probability sampling, which focuses on randomly selecting the sample targeted while still providing a representation in line with the characteristics of the population, can be defined as a sampling technique that chooses between each element from the targeted population that has a similar probability to be selected as a target. Non-probability sampling, on the other hand, can be described as a sampling procedure when the author selects a target based on judgments and the convenience of the subjects. For this specific study, it will use non-probability sampling. In addition to that, non-probability sampling has three distinct types: convenience, quota, and judgmental sampling. Convenience sampling is a kind of sampling where the participants are chosen, or in other words, it includes people or responders who are conveniently available to the researcher (Frey., 2018). Again, for this study, it will be utilising non-probability sampling, to be precise the convenience sampling. For reasons like it will bring advantages like for example fast, efficient, convenient to all parties involved, inexpensive, and

lastly most reachable to obtain both data and respondents (Sekaran & Bougie., 2016).

3.14 Conceptual Definition & Operational Definition

Table 3.6 Conceptual Definition & Operational Definition

Variable	Conceptual Definition	Operational Definition	Measurements	Sources
Packaging Color	<p>- A distinct trait that a product has to differentiate itself from other brands</p> <p>Lawrence L. Garber Jr. (2000)</p>	<p>1. I like the color of coca cola packaging</p> <p>2. Color of packaging of this beverage influences whether or not i buy this product</p> <p>3. I remember coca cola when the same colored</p>	<p>- Ordinal scale (5-point liker scale)</p>	<p>- Ahmad, Billoo & Lakhan (2012)</p> <p>- Lawrence L. Garber Jr. (2000)</p>

		<p>packaging is available</p> <p>4. I can associate the color of coca cola as brand image</p>		
<p>Packaging Design</p>	<p>- A concept that tackles the protection of the product and a means to attract consumers Rundh, B. (2009)</p>	<p>1. The way the beverage is designed effects my decision to buy it</p> <p>2. The design influences what i think about the brand</p>	<p>- Ordinal scale (5-point liker scale)</p>	<p>- Ahmad, Billoo & Lakhan (2012)</p> <p>- Diogo Alexandre Afonso Luís (2021)</p> <p>- Rundh, B. (2009)</p>
<p>Packaging Material</p>	<p>- the materials that are used to present the</p>	<p>1. I would buy this beverage because they</p>	<p>- Ordinal scale (5-point liker</p>	<p>- Ahmad, Billoo & Lakhan</p>

	<p>product a way to protect the products inside Sidrah Waheed, Marium Mateen Khan, & Nawaz Ahmad (2018)</p>	<p>use high quality material.</p> <p>2. The overall packaging of the beverage is appealing to me</p> <p>3. Because the quality of the packaging is high I think the beverage is good.</p> <p>4. Because the packaging is good i think its a renowned brand.</p>	<p>scale)</p>	<p>(2012)</p> <p>- Sidrah Waheed, Marium Mateen Khan, & Nawaz Ahmad (2018)</p>
<p>Printed Information</p>	<p>- knowledge and understandin</p>	<p>1. I read the Information that</p>	<p>- Ordinal scale (5-point liker</p>	<p>- Ahmad, Billoo & Lakhan</p>

	g towards the product	<p>is on the beverage</p> <p>2. I judge the beverage based on the information that available.</p> <p>3. I belief that information about the product on the packaging is important</p>	scale)	<p>(2012)</p> <p>- Sidrah Waheed, Marium Mateen Khan, & Nawaz Ahmad (2018)</p>
Font style	- The way letters are presented with different characteristic	1. The font that is used in this packaging is appealing	- Ordinal scale (5-point liker scale)	<p>- Ahmad, Billoo & Lakhan (2012)</p> <p>- Sidrah Waheed,</p>

	s	<p>2. I like the font that is used</p> <p>3. The size of the font makes me remember the brand</p>		<p>Marium Mateen Khan, & Nawaz Ahmad (2018)</p>
Consumer Purchase Intention	<p>- consumer's conscious plan or intention to make an effort to purchase a product</p> <p>Diogo Alexandre Afonso Luís (2021)</p> <p>-</p>	<p>1. The likelihood of me buying this beverage is high</p> <p>2. I would buy this beverage again</p> <p>3. I consider buying this beverage everytime I think of Soda</p>	<p>- Ordinal scale (5-point liker scale)</p>	<p>- Ahmad, Billoo & Lakhan (2012)</p> <p>- Khan et al. (2018)</p> <p>- Spears and Singh (2004)</p> <p>- Diogo Alexandre Afonso Luís (2021)</p>

		<p>4. I think about buying Coca Cola</p> <p>5. I would recommend Coca Cola</p>		
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3.15 Testing the Goodness of Measures

Throughout this stage, the researcher will start to perform the reliability and validity testing to identify whether the data that has been received and collected can be deemed reliable or valid enough. In order to identify whether the data received are valid enough or not, it will then use requirements from a study done by Sekaran & Bougie. (2016), where inside it is declared that for a data to be deemed reliable, simultaneously it has to reach a score of 0.60 or above on the Composite Reliability and above than 0.50 on Average Variance Extracted (AVE). While on the other hand, to conduct the validity testing, the data must be gone through a testing called discriminant and convergent validity.

3.16 Data Analysis

Next step after gathering all the data required for the study, the next step that has to be executed by the researcher is data analysis. Based on a research from Sugiyono. (2013), it declared that data analysis is a task with the objective of classifying data according to the varieties of variables, respondents, data assortment, displays information for every variable, and lastly performing calculations to distinguish and provide solutions to the research problems & test the current hypothesis. To execute the data analysis, there are two methods that can be chosen by the researcher: descriptive and inferential statistics. As far as this study is concerned, it will use descriptive statistics. Further description and explanation on descriptive statistics will be provided in **Point 3.16.1** below. Furthermore, all of the data analysis will be done using an application called SmartPLS 4.0.

3.16.1 Descriptive Statistics

Study by Sekaran & Bougie. (2016) defined descriptive statistics as a data file in which contains descriptive information like in the form of measurements of central tendency, frequency, and dispersion. For frequency, it works best when calculating and measuring percentages and cumulative percentages. While measurements of central tendency include factors like median, mean, mode, range, standard deviation, range, and interquartile range. But for this study, the measurements that will be used for the descriptive statistics will be mean, median, standard deviation, minimum, and maximum.

3.16.2 Validity Testing

Validity testing can be described as a test or method that is executed to assess how successful an instrument is developed at measuring a specific concept (Sekaran & Bougie., 2016). Next, there are two types of validity testing as mentioned before in previous points; which are convergent and discriminant validity. Research composed by Sekaran & Bougie. (2016) suggested that discriminant validity occurred when the two variables that are assumed to be uncorrelated theoretically and the numbers obtained from the measurements are in fact showing no correlation.

3.17 Reliability Test

Reliability refers to the degree of consistency and stability in the measurements taken by a research instrument (Sekaran and Bougie, 2016). In other words, it is the extent to which a measuring instrument produces the same results each time it is used. A reliability test is performed to assess the consistency and stability of the data collected by the instrument. A study is considered reliable when it yields consistent results across different time periods, indicating that the instrument can be trusted to produce accurate and dependable measurements. Therefore, reliability refers to the consistency and stability of a measure without bias or errors. It ensures that the instrument measures the concept consistently across time and various items, indicating the quality of the measure. (Sekaran and Bougie, 2016, p223)

Consistency and stability are both necessary to ensure the reliability of a measure. The reliability of each indicator of independent variables is demonstrated through the Cronbach Alpha reliability test, which is the test adequate for testing internal consistency, where a value of 0.70 or greater indicates a reliable construct, and a higher internal consistency reliability is indicated by a Cronbach's Alpha value closer to 1. (Sekaran and Bougie, 2016, p289).

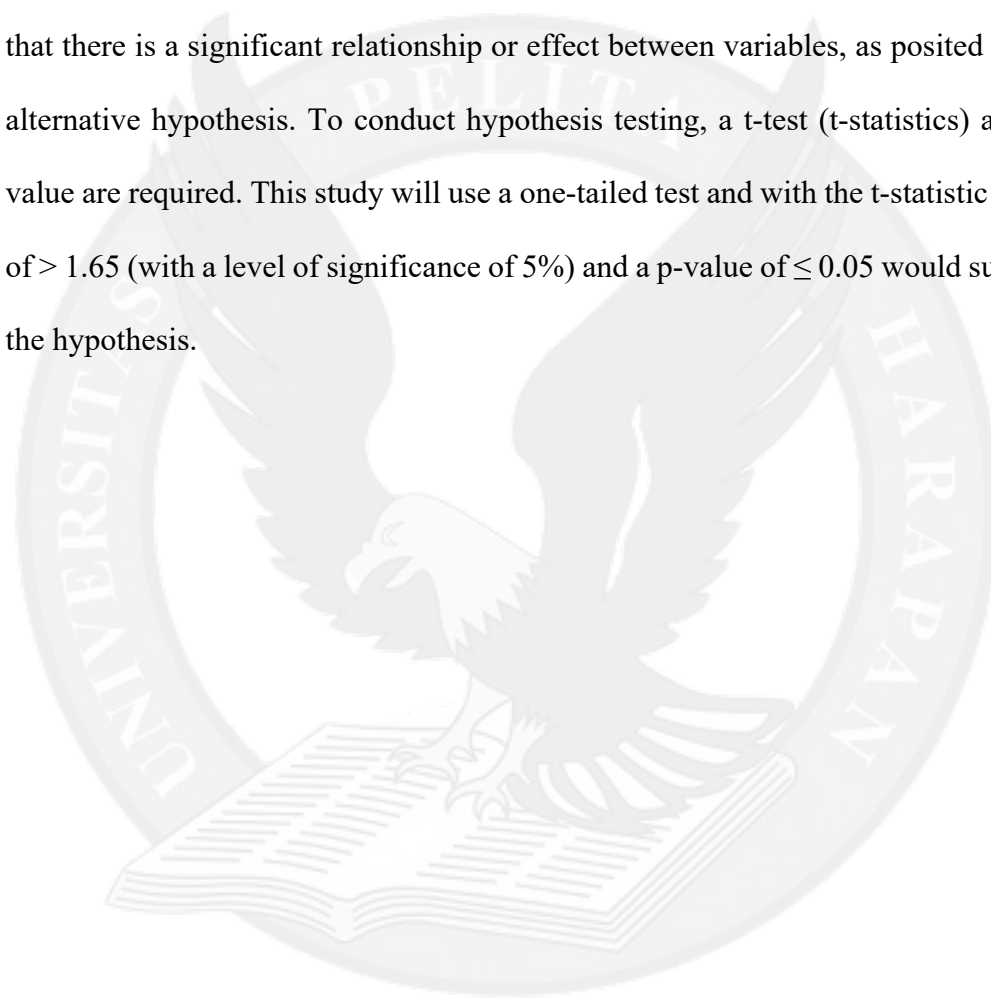
Table 3.7: Cronbach's Alpha Values Measures

Cronbach's Alpha Coefficient	Cronbach's Alpha Coefficient
$\alpha \leq 0.5$	The scale has no internal consistency
$0.5 \leq \alpha < 0.6$	The scale exhibits weak internal consistency.
$0.6 \leq \alpha < 0.7$	The scale exhibits acceptable internal consistency.
$0.7 \leq \alpha < 0.9$	The scale has internal consistency.
≥ 0.9	The scale exhibits high internal consistency.

Sources: Sekaran & Bougie, 2016

3.18 Hypothesis Testing

Hypothesis testing aims to establish whether the null hypothesis can be rejected in favour of the alternative hypothesis by analyzing sample data with a degree of confidence, despite the possibility of incorrect inferences about the population (Sekaran & Bougie, 2016, p301). Rejecting the null hypothesis implies that there is a significant relationship or effect between variables, as posited in the alternative hypothesis. To conduct hypothesis testing, a t-test (t-statistics) and p-value are required. This study will use a one-tailed test and with the t-statistic value of > 1.65 (with a level of significance of 5%) and a p-value of ≤ 0.05 would support the hypothesis.



Questionnaire

Table 3.8 Questionnaire

No.	Questions	Answer				
		SA	AG	NT	DA	SDA
Packaging Color						
1.	I like the color of coca cola packaging					
2.	Color of packaging of this beverage influences whether or not i buy this product					
3.	I remember coca cola when the same colored packaging is available					
4.	I can associate the color of coca cola as brand image					
Packaging Design						
1.	The way the beverage is designed effects my decision to buy it					

2.	The design influences what i think about the brand					
Packaging Material						
1.	I would buy this beverage because they use high quality material.					
2.	The overall packaging of the beverage is appealing to me					
3.	Because the quality of the packaging is high I think the beverage is good.					
4.	Because the packaging is good i think its a renowned brand.					
Printed Information						
1.	I read the Information that is on the beverage					

2.	I judge the beverage based on the information that available					
3.	I belief that information about the product on the packaging is important					
Font Style						
1.	The font that is used in this packaging is appealing					
2.	I like the font that is used					
3.	The size of the font makes me remember the brand					
Consumer Purchase						
1.	The likelihood of me buying this beverage is high					

2.	I would buy this beverage again					
3.	I consider buying this beverage every time I think of Soda					
4.	I think about buying Coca Cola					
5.	I would recommend Coca Cola					

