

Exploring the Impact of Social Media Marketing, Customer Attitude, and Engagement within the Quality of Review and Review Valence on Customer Purchase Intention in Green Cosmetic Product in Chengdu, China

Yunman Li¹, Chompu Nuangjammong²

¹ Master of Business Administration, Graduate School of Business and Advanced Technology Management, Assumption University of Thailand.

² Graduate School of Business and Advanced Technology Management, Assumption University of Thailand.

Abstract

Purpose – The purpose of this research is to exploring the impact of social media marketing, customer attitude and engagement within the quality of review and review valence on customer purchase intention in green cosmetic product in Chengdu, China.

Design/Methodology/Approach – This research is using secondary data analysis and an archival study approach to investigate the factors that impact on customer purchase intention on green cosmetic product in Chengdu, China. The data was gathered from 401 customers with an ordinary demand for cosmetic product and live in Chengdu, China. Moreover, to construct a new conceptual framework, this research adopted two frameworks from previous research.

Findings – This research examined at the factors that influence customer attitude and purchase intention in green cosmetics product. The research's findings revealed that quality of review and review valence have impact on customer attitude. Moreover, customer purchase intention got affect by social media marketing, customer attitude and customer engagement.

Research Limitations/Implications – There are a number of limitations to researching the factors that influence customer attitude and purchase intention. This research is based on Chinese who live in Chnegdu, so this study may not be completely applicable to people from different cultural backgrounds in other nations.

Originality/value - This research is about the important influencing variables that customer attitude and purchase intention.

Keywords – Quality of review, review valence, customer attitude, social media marketing, customer engagement, customer purchase intention.

JEL code classification – M10, M12, M15

1. Introduction

1.1 Background of the study

China's cosmetics sector has been growing rapidly in recent years. Back in 2020, the country became the world's second largest cosmetics market after the US. The natural and organic cosmetics industry has also witnessed an increasing demand for "natural", "organic", "sustainable" or "green" tags. These tags are the new drivers of consumer purchasing preferences in China's cosmetics sector. Chengdu as a culture diversity and inclusiveness city in China, experiences fast development of economic. In 2019, Chengdu is defined as a

"new science and technology city" based on the report releases by CBRE. Business can take the market advantage in research and development, technology manufacturing and new media fields which also provide opportunity for green cosmetics industry to enter in this market. Recently, there were 1.02 billion internet users in China in January 2022 and internet penetration rate stood at 70.9 percent of the total population at the start of 2022. Kepios analysis indicates that internet users in China increased by 35.9 million (+3.6 percent) between 2021 and 2022. Moreover, online shopping is a part of everyday life in China, with the rise of virtual communities, online customer reviews (OCRs) have become a primary source of information and a significant influencer of customer evaluation of products. As OCRs help them to make more informed decisions (Moe & Trusov, 2011), customer transformed their way for shopping. Furthermore, many companies begin to notice that OCRs could be a useful source of feedback and a valuable tool for observing customers' attitudes toward their products and help them adopting the appropriate marketing strategies (Dellarocas et al., 2007).

More and more company intend to catch customer eyes via social media channels, they believe that social media marketing strategy is an effective way to engage with customers, especially in China. Moreover, social media marketing offers possibility for customer participation, develop trust, goodwill, and commitment to brand (Farook & Abeysekara, 2016). However, there are other factors influence level of customer engagement, social media marketing affects customer engagement only as much as 34%. (Muchardie et al., 2016). Investigation of customer engagement is more psychological for many researchers, but marketers take attention now. 23% of market gains from customer engagement, customer with highly engage to brand are more likely to influence relatives to become a customer (Nawaz & Kaldeen, 2020). Therefore, the purpose of this study is to investigate the factors that affect Chinese customer purchase intention of green cosmetics product towards customer attitude within quality of review and review valence. Moreover, social media marketing strategy and customer engagement are also factors that have effects on purchase intention. So, this study is to explore the related factors that are affecting customer purchase intention of green cosmetics product in Chengdu, China.

1.2 Problem statements

As the green trend continues to grow in an expanding market in China, many companies will find opportunities in this fast-moving area. This has result in transformation of customer buying behavior, more and more Chinese customers noticed that healthy, safe, and organic also important factors to be considered when they purchase a cosmetics product. Moreover, with the development of social media marketing, customer can get information of products from various channels as well as purchasing. Searching review and comments before buying is a common phenomenon in Chinese society. However, Customer purchase intention will not whole-fully drive by products itself anymore, outstanding customer relationship and positive attitude set up towards product are keys for sales. So, in this research which will investigate whether quality of review and review valence would affect customer attitude and thus further influence customer purchase intention on green cosmetics product in Chengdu, China. Besides, the impact of social media marketing and customer engagement on customer purchase intention of green cosmetics product in Chengdu, China also the investigate objective for this study.

1.3 Objectives of the study

As previous mentioned, customer purchase intention in green cosmetics industry impact by many factors when company enter Chinese market in Chengdu. For independent variables, multi-channel marketing strategy, customer engagement, customer awareness, customer attitude affecting on dependent variable purchase intention. This study aims to evaluate and validate those influencing variables of customer purchase intention in cosmetics industry:

1) To explicit the impact of quality of review on customer attitude toward customer purchase intention in Green Cosmetic Product in Chengdu, China.

2) To explicit the impact of review valence on customer attitude toward customer purchase intention in Green Cosmetic Product in Chengdu, China

3) To describe social media marketing impact on customer purchase intention in Green Cosmetic Product in Chengdu, China

4) To describe customer attitude impact on customer purchase intention in Green Cosmetic Product in Chengdu, China

5) To explain customer engagement impact on customer purchase intention in Green Cosmetic Product in Chengdu, China

1.4 Research questions

In this study, the research questions have been set up to align with the objectives, as detailed present below:

1) Has the quality of review significantly impacted customer attitude toward purchase intention in green cosmetic products in Chengdu, China?

2) Has the review valence significantly impacted customer attitude toward purchase intention in green cosmetics product in Chengdu, China?

3) Has social media marketing significant impacted on customer purchase intention in Green Cosmetic Product in Chengdu, China?

4) Has customer attitude significant impacted on customer purchase intention in Green Cosmetic Product in Chengdu, China?

5) Has customer engagement significant impact on customer purchase intention in Green Cosmetic Product in Chengdu, China?

1.5 Significant of the study

The natural and organic cosmetics industry has witnessed an increasing demand for “natural”, “organic”, “sustainable” or “green” tags. These tags are the new drivers of consumer purchasing preferences in China’s cosmetics sector. Beyond this, online shopping and social media is a part of everyday life in China, with the rise of virtual communities, online customer reviews (OCRs) have become a primary source of information and a significant influence of customer evaluation of products. Quality of review and review valence may deliver positive customer attitude towards the products or brands, which can directly transform to purchase stage. Moreover, customer who have good sense of engagement with products or brands would pay for it more than others. Thus, this research being conducted to identify what factors influence customer purchase intention of green cosmetics product in Chengdu, China. To begin with, the finding of this study will help both domestic and foreign green cosmetics companies to understand the factors affecting customer purchase intention. Moreover, this study could be helpful for the green cosmetics industry to set up strategies enter customers and increase sales of green cosmetics product in Chengdu, China. In addition, this study could be beneficial for the researcher to use a reference for future research in customer purchase intention of green cosmetics product in Chengdu, China, including factors that affect customer purchase intention such as quality of review, review valence, social media marketing, customer attitude and customer engagement.

2. Literature Review And Hypotheses Development

2.1 Theories related to each variable

2.1.1 Quality of review

Online review provides users who rely on detailed comments about experiences and opinions with products or services published by other users (Lu et al., 2010). This is a common e-WOM for online product review (Xu

et al., 2015). Quality of review evaluated through the comments from words and images contained in the reviews (Liu & Ji, 2018). According to De Maeyer (2012), quality of review positively influences the sales of products. Moreover, credibility of sources and information have been recently added to investigated in quality of review, including characteristics of reviewer, level of expertise and number of follower (Cheng & Ho, 2015). However, researchers' study towards quality of review in different contexts obtained vary results.

2.1.2 Review Valence

In this context, the average rating, and the distribution of ratings by other consumers serve as influence for customer attitude. Review valence has examined the influence of customer's product evaluation (Topaloglu & Dass, 2021). The effect of positive and negative reviews is also known to vary depending upon the type of product under consideration. Qiu et al. (2016) find that positive reviews have a greater effect on consumer evaluations for search (compared to experience) goods. However, high valence not always efficient when dissuade customer who possess a high pre-commitment to the product or possess a strong need for uniqueness (Qiu et al., 2012).

2.1.3 Social Media Marketing

In recent times, organizations have been increasingly using social media to engage customers with their brands (Okazaki et al., 2015). SMM is a type of online marketing that uses the cultural context of society to meet communication and branding objectives (Tuten, 2009). Many of marketers has noticed that social media provides them a two-way communication with customer and customer engagement also associated with social marketing strategy (Laksamana, 2018). However, social media strategy is a double-edged sword for market (Lee et al., 2016). Predicting customer's attitude meanwhile accept negative points from customer either.

2.1.4 Customer Attitude

A consumer attitude may be defined as bias to respond in favorable or unfavorable manner toward product based on overall evaluation of product (Dean, 2010). In the field of marketing, an attitude is the filter to examine every product and service. The previous study proves that consumer attitudes will affect intention to purchase and whether a transaction will be made (Fishbein & Ajzen, 1975). Moreover, Online reviews can produce attitude change through either of the routes of the ELM, such as volume of reviews, identity of reviews, attractive and trustworthiness of sources may lead to attitude change, but attitude change is also determined by both motivated and capable of exerting cognitive to evaluate the facts of persuasive information (Cacioppo & Petty, 1984; Petty & Cacioppo, 1986; M. Xu & Nuangjamnong, 2022; P. Xu & Nuangjamnong, 2022). In addition, attitude is an important determinant of purchase intention in green cosmetics products (Liu et al., 2020; Shah et al., 2021). According to Ethead and Ghaith (2022), attitude is one of the most prominent predictors of intention.

2.1.5 Customer Engagement

Customer engagement behavior has been found to be a key driver of success in online shopping environments and online brand communities. The willingness of customers to participate in the brand community can be translated into their willingness to purchase merchandise or services from the brand (Van Doorn et al., 2010). Moreover, Customer management by social media networks where customers can interact easily with other customers and firms also drives high customer engagement with brand (Brodie et al., 2011). According to Sun et al. (2019), customer engagement positively impact on customer purchase intention. More market practice of customer engagement can be found Clement et al. (2021), who researched customer engagement involves emotional attachment and rational loyalty. Furthermore, customer engagement has been defined as

psychological state and it is a simple indicator for transnational motive (Rather et al., 2019; Thakur, 2018).

2.1.6 Customer Purchase Intention

Purchase intention is a component of consumer cognitive behavior on how a person intends to buy a specific product or service (Ling et al., 2010; M. Xu & Nuangjamnong, 2022). Many studies has identified customer's behavior is best to explained by intentions as correspond to action and context (Ajzen & Madden, 1986; Munamba & Nuangjamnong, 2021). It further states that since consumers may make purchases due to constraints instead of an actual preference, the measure of intention is more effective than behavioral measures (Younus et al., 2015). Moreover, The formation of consumer's purchase intentions depends on their general attitudes towards a particular product (Cheruiyot & Maru, 2013). The better these attitudes are, the better the purchasing intentions (Gremmler et al., 2001).

2.2 Related literature review

2.2.1 Quality of Review, Review Valence, Customer Attitude and Purchase Intention

Currently, Chinese customer used to review before buying, therefore quality of review has been seen as the valuable sources which provide more actual and specific comments on products or services (Meng et al., 2018). Therefore, many marketers use online customer review as a tools to get a more particular knowledge of customer attitude. (Dellarocas et al., 2007; M. Xu & Nuangjamnong, 2022; P. Xu & Nuangjamnong, 2022). Moreover, online review quality has impacts on information adoption, information usefulness and information credibility that facilitates customer purchase intention (Erkan & Elwalda, 2018).

Compared to review volume, review valence is more persuadable for customer. Negative reviews drive less favorable attitude and purchase intention than positive reviews (Yang et al., 2016). The valence intensity of online review effects purchase intention if and only if positive medium and strong reviews are provided. Based on these findings, market managers should encourage customer to share their positive feeling of the brand and satisfied experiences from services and products online that will convince other customers (Floh et al., 2013). Nowadays, more and more people realized the necessity of environmental protection, using natural, renewable, and sustainable products are the trends of customer behavior. According to the Theory of Planned Behavior by Ajzen (1991), the combination of attitudes towards the behavior, subjective norms, and perceived behavioral control guides the formation of an intention, thus intention is assumed to be the predecessor of the actual behavior. Moreover, Purchase intention refers to the consumers' possibility of planning or requesting to buy a product/service in the future (Wu et al., 2011; Erdil, 2015; M. Xu & Nuangjamnong, 2022; P. Xu & Nuangjamnong, 2022). Attitude is an important mediation which has a positive effect on customer green purchase intention (Indriani et al., 2019). The discussion reveals the expectation that a positive attitude towards green product purchase would influences purchase intention. Thus, the following is hypothesized:

***Hypotheses 1 (H1):** Quality of review has no significant impact on customer attitude toward customer purchase intention in Green Cosmetic Product in Chengdu, China.*

***Hypotheses 2 (H2):** Review valence has no significant impact on customer attitude toward customer purchase intention in Green Cosmetic Product in Chengdu, China.*

***Hypotheses 4 (H4):** Customer attitude has no significant impact on customer purchase intention in Green Cosmetic Product in Chengdu, China.*

2.2.2 Social Media Marketing and Customer Purchase Intention

Social media marketing (SMM) refers to the promotion of products, brands, or organizations by interacting on social media with current or prospective consumers, and it is intended to persuade them to change their behavior (Saravanakumar & Sugantha, 2012). According to Alalwan (2018), social media marketing enables marketer to reach their target customer faster and efficiently. Moreover, word of mouth, brand awareness and customer purchase intention as well as influenced by social media marketing (Hutter et al., 2013). Social media such as WeChat, Weibo, QQ, TikTok and Little Red Book where people can share their feelings, likes, dislikes publicly on the platforms. Therefore, opportunities and challenges are concurrent when social media as a marketing tool (Yadav, 2017). The hypothesis is as follows, based on the above discussion:

***Hypotheses 3 (H3):** Social media marketing has a significant impact on customer purchase intention in Green Cosmetic Product in Chengdu, China.*

2.2.3 Customer Engagement and Customer Purchase Intention

As per Martos-Partal et al. (2015), in order to accomplish marketing targets, the interaction between consumers and the brand contributes a crucial part of the company's growth capacity. The probability of a customer purchasing intention for services and goods would be better if their purchasing experience is positive. Boyer and Hult (2006) conducted research on consumer behavioral intentions for online purchases using the data gathered from the survey, and their results revealed that, depending on the extent of customer service, they could adjust the buying intention. Customers who purchase the associated goods and services of the company would be persuaded by this method. More precisely, Magneto's report in 2015 showed that a 23 percent rise in revenue is a boost to Customer Loyalty because they pay more and more on each order. So, Yang and He (2011) concluded that customer spending choices would be affected by user interaction. This will result in a high purchase value for buyers, and a potential buyer's expense will decline. Theoretically, increasingly active shoppers are establishing a fairly popular pattern by persuading their loved ones like family members and mutual friends as consumers. Thus, the following is hypothesized:

***Hypotheses 5 (H5):** Customer engagement has a significant impact on customer purchase intention in Green Cosmetic Product in Chnegdu, China.*

2.3 Conceptual framework

The conceptual framework is developed on previous research, theoretical concepts and testing literatures revealing independent variables such as quality of review and review valence has effect on customer attitude, customer purchase intention; social media marketing and customer engagement which have an impact on dependent variables such as purchase intention. The conceptual framework for Exploring the Impact of Social Media Marketing, Customer Attitude, and Engagement within the Quality of Review and Review Valence on Customer Purchase Intention in Green Cosmetic Product in Chengdu, China are shown in Figure 2.3.

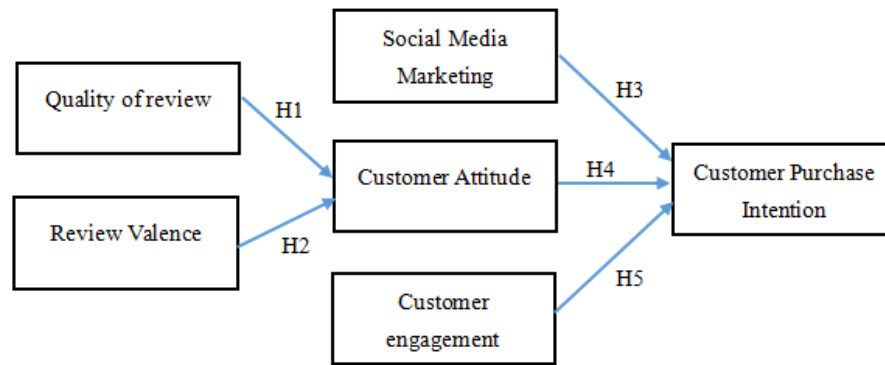


Figure 1: Exploring the Impact of Social Media Marketing, Customer Attitude, and Engagement within the Quality of Review and Review Valence on Customer Purchase Intention in Green Cosmetic Product in Chengdu, China

Source. Constructed by author.

3. Research Methodology

3.1 Research Design

The objective of this research is to examine the determinant influencing customer purchase intention in green cosmetics product in Chengdu, China including social media marketing, customer engagement, and customer attitude. Moreover, this study will also evaluate the level of effect for customer attitude within quality of review and review valence of green cosmetics product in Chengdu, China. Cronbach's Alpha, Multiple Linear Regression, Simple Linear Regression, and Descriptive Statistics are among the types of analysis used in this study as it is quantitative research.

The questionnaire is organized into three parts, with a total of 30 questions relating to six research model variables, two items connected to screening questions, 28 questions related to measuring variables, and six items linked to demographic information.

To begin with, Cronbach's Alpha was used to determine the questionnaire's reliability and whether any measuring items in the questionnaires were unclear or confusing. A small group of 90 samples were conducted a pilot to ensure the questionnaire's reliability and to see whether there was any uncertainty about the measuring items in the questionnaires. Secondly, multiple linear regression (MLR) was used to analyze the factors affecting customer attitude, composing of quality of review and review valence. Lastly, the multiple linear regression (MLR) was used to analyze the factors influencing customer purchase intention, composing of social media marketing, customer attitude and customer engagement.

3.2 Sampling Plan

3.2.1 Target Population

In this research, the target population is people who are living in Chengdu, China and have used cosmetics product at ordinary time. According to Worldpopulationreview.com (2022), the population of Chengdu, China is 9,479,000 people, which is also serves as the capital of the Sichuan province. Moreover, Chengdu as major city located in Western China, it has become known as one of the most innovative in the world, and it is a leader in its country in finance, culture, communications, and transportation (Worldpopulationreview.com, 2022).

3.2.2 Sample Size

For estimating sample size for a limited population, the research employs the table of Krejcie and Morgan

(1970). The sample size for this study is 385 Chinese nationality respondents who live in Chengdu and have used cosmetics product at ordinary time, based on the estimated population of 9.5 million people in Chengdu. The appropriate sample size for a million individuals is 384 persons, according to the sample size table of Krejcie and Morgan (1970).

3.2.3 Sampling Procedures

In this research, the researcher used non-probability sampling method by using convenience sampling and snowball sampling to collect information as the respondents will be screened beforehand based on the research purpose. Researchers chose to adopt a non-probability sampling strategy in this research due to the limited time available and present situation that required social distancing. As a result, this method is the most suitable method since the researcher may easily gather the data based on the convenience.

3.3 Research Instrument

3.3.1 Questionnaire Design

In this research, questionnaires were utilized as a research tool to examine the significant factors as well as the relationships between the variables. The researcher has distributed the questionnaire online to the qualified samples. The questionnaire is divided into three parts. The first section consists of screening questions that will only be answered by persons who live in Chengdu and have used cosmetics product at ordinary time. The second section is the questions on demographic information of respondents. The last section is the questions for dependent and independent variables are containing a total of 21 scale items.

3.4 Validity

3.4.1 Content validity with the index of item-objective congruence

The researchers utilize the Item Objective Congruence (IOC) Index to assess the item quality of each question in the questionnaire. To obtain the content validity score, the researchers requested 3 experts for their opinion. The result for IOC value was 0.67. All questions are suitable to distribute to the respondents since the result is higher than 0.5.

3.4.2 Cronbach's Alpha in Reliability Analysis with pilot test

The researcher decided to run a pilot test with 50 people to see whether there were any discrepancies or flaws in the questionnaire's variables. Cronbach's alpha is one approach to quantify consistency, and it's used to evaluate the reliability of any measurement variable. Refer to Cronbach (1951), the reliability is typically tested using the pilot test research approach, using Cronbach's Alpha (CA) as a common premise. Since it uses 5-point Likert scales to identify overall items, Bardhoshi and Erford (2017) advised that Cronbach's alpha is the most acceptable test of reliability for this research before distributing the questionnaire to target audiences. The range of alpha coefficient and strength of correlation is shown in Cronbach's Alpha and internal Consistency's Rules by Cronbach (1951).

Alpha Coefficient Range	Strength of Association
$\alpha > 0.9$	Excellent
$0.8 < \alpha < 0.9$	Good
$0.7 < \alpha < 0.8$	Acceptable
$0.6 < \alpha < 0.7$	Questionable
$0.5 < \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Cronbach's Alpha values for the independent variables are quality of review, review valence, social media

marketing, customer attitude and customer engagement were acquired from a pilot test with 90 participants. The result showed the overall variables of the factors that influencing customer purchase intention in green cosmetics product in Chengdu, China consist of 6 items. The outcome shown that the Cronbach's alpha for quality of review of 3 items is 0.860, the 3 items of review valence is 0.856, the 3 items of social media marketing is 0.882, the 4 items of customer attitude is 0.907, the 5 items of customer engagement is 0.901, the 3 items of customer purchase intention is 0.905 (per shown in Table 3.1). The results supported the constructs' internal consistency, including the questionnaire is reliable enough to be utilized again under the rule of thumb that the value must be 0.60 or above to be considered as acceptable.

Table 3.1: The Value of Reliability Analysis of Each Item and Variable in this Study (n=90)

Item No.	Measurement Items	Cronbach's Alpha	Strength of Association
Quality of Review		.860	Good
QOR1	Before buying a green cosmetics product, I usually look at the review first.	.861	Good
QOR2	Quality of review have impact on my buying decision.	.769	Acceptable
QOR3	I believe that green cosmetics product with positive quality of review are trustworthy.	.772	Acceptable
Review Valence		.865	Acceptable
RV1	Before buying a green cosmetics product, I usually look at the review valence first.	.736	Good
RV2	Review valence will influence my belief of a cosmetics product.	.774	Acceptable
RV3	Comparing with lower review valence, I prefer to buy green cosmetics product with high review valence.	.871	Acceptable
Social Media Marketing		.882	Acceptable
SMM1	I usually received green cosmetics product information from social media channel (such as WeChat, Weibo, Little Red Book).	.820	Good
SMM2	I am impressed by green cosmetics brands that frequently appear on social media.	.811	Good
SMM3	I always choose brand recommended by social media channel (such as WeChat, Weibo, Little Red Book).	.866	Excellent
Customer Attitude		.907	Good
CA1	I support green cosmetics product emotionally because they are kind of the environment and safe to use.	.882	Good
CA2	I believe green cosmetics product have better quality (natural ingredients implement).	.868	Good
CA3	I have a sufficient knowledge of standard of green cosmetics product, so I encourage more people to use.	.881	Good
CA4	I think using green cosmetics product can protect skin health.	.887	Good
Customer Engagement		.901	Excellent
CE1	I often browse the news post by green cosmetics	.876	Excellent

	product on social media channel or brand official website.		
CE2	I often join the activities (such as Double eleven, Double twelve, pop-up store) organize by green cosmetics brand from both online and offline.	.867	Excellent
CE3	I would like to share the experience of using cosmetic products and brands with other consumers on different social media channel (such as WeChat, Weibo, Little Red Book).	.881	Excellent
CE4	I often comment on green cosmetics product post in official website.	.891	Excellent
CE5	I say positive things about green cosmetics product or brand to others.	.882	Excellent
Customer Purchase Intention		.905	Excellent
CPI1	I have intention to purchase green cosmetics (both skin care and beauty) product.	.903	Excellent
CPI2	I expect to purchase green cosmetics product in the future.	.847	Good
CPI3	I willing to buy green cosmetics product have acknowledge by others.	.835	Good

4. Data Analysis And Discussion Of Results

4.1 Reliability Testing

The researcher wants to re-examine the questionnaire for any inconsistencies or errors in variable for all 401 respondents. Cronbach’s Alpha test of Reliability is used to assess and analysis 401 respondent reliability with a questionnaire as shown in Table 4.1.

Table 4.1 The value of Reliability Analysis of Each Item and Variable in this Study (n=401)

Measurement Items	Cronbach’s Alpha
Quality of Review	.825
Review Valence	.799
Social Media Marketing	.788
Customer Attitude	.850
Customer Engagement	.865
Customer Purchase Intention	.813

Table 4.1 shows how the researchers use Cronbach’s Alpha to determine how closely related a group of items using the SPSS program to measure the scale of reliability. The result showed the overall variables of the factors that influencing customer purchase intention of green cosmetics product in Chengdu, China consist of 6 items. The result shows that all factors are valid and reliable because the value is greater than 0.7. The highest reliability is customer engagement of 5 items is 0.865, following by customer attitude of 4 items is 0.850, quality of review of 3 items is 0.825 and customer purchase intention of 3 items is 0.813, the 3 items of review valence with overall score 0.799, and 3 items of the social media marketing is 0.788.

4.2 Descriptive Analysis of Demographic Data

The researcher evaluated demographic data of respondents who have intention to purchase green cosmetics

product in Chengdu, China using descriptive analysis in the SPSS program. The researcher collected demographic information from 401 respondents about gender, age, current income per month, purchasing frequency of green cosmetics product per year, spending on green cosmetics product and platforms used for buying green cosmetics product per time. The researcher utilizes the descriptive analysis to explain the respondent’s characteristics.

Table 4.2 shows the frequency distribution and percentage in sample size of 401 respondents are as follows. **Gender** - From the total of 401 respondents, male respondents accounted for 52.6 percent of total 402 respondents, compared to 47.4 percent for female respondents. The results of respondents for male and female are 211 and 190 respectively. **Age** - The majority of respondent in this study is aged between 31-40 years old with 232 respondents totally, following by respondents who are aged between 41-50 years old with 94 people, 64 respondents are aged between 20-30 years old and only 11 respondents aged over 50 years old. **Current income per month** - From the total 401 respondents, 212 respondents with 52.9 percent have income between 3001-6,000 RMB per month, 85 respondents with 21.2% have income between 6,001 – 9,000 RMB per month, 82 respondents with 20.4 percent have income less than 3,000 RMB per month, 15 respondents with 3.7 percent have income between 9,001-12,000 per month and 7 respondents with only 1.7 percent have income more than 12,000 per month. **Purchasing frequency of green cosmetics product per year** - Among 401 respondents of this study, 196 respondents with 48.9 percent purchase green cosmetics product 4-6 times per year, 144 respondents with 35.9 % purchase green cosmetics product 1-3 times per year, 48 respondents with 12 % purchase green cosmetics product 7-9 times per year and only 13 respondents with 3.2 % purchase green cosmetics product more than 9 times per year. **Spending on green cosmetics product per time** - From total 401 respondents, 170 respondents with 42.4% spending on green cosmetics product around 501-1500 RMB per time, 133 respondents with 33.2% spending on green cosmetics product less than 500 RMB per times, 81 respondents with 20.2% spending on green cosmetics product around 1,501-3,000 RMB per time, 13 respondents spending on green cosmetics product between 3,001- 5,000 RMB per time with 3.2% and 4 respondents spending on green cosmetics product more than 5,000 RMB per times, accounted for 1.0%. **Platforms used for buying green cosmetics product per time** - Among 401 respondents, 110 respondents only use JingDong platform for buying green cosmetics product with 27.4%, 97 respondents only use TaoBao platform for buying green cosmetics product with 24.2%, 38 respondents only use Little Red Book platform for buying green cosmetics product, accounted for 9.5%, 38 respondents normally use both JingDong and TaoBao platforms for buying green cosmetics product with 9.5%, 27 respondents with 6.7% only buying green cosmetics product from official website or store of the brand, 30 respondents use JingDong, TaoBao and Little Red Book for buying green cosmetics product with 7.5%, 12 respondents buying green cosmetics product from JingDong, TaoBao and official websiste has same number of respondents buying cosmetics product from those four platforms with 12 respondents accounted 3%, 11 respondents use both TaoBao and Little Red Book platforms for buying green cosmetics product with 2.7%, 8 respondents with 2% buying green cosmetics product from TaoBao and Official website, respondents who use JingDong and Little Red Book or JingDong and Official website are 7 respondents (1.7%), and lastly around 4 respondents were responded with TaoBao, Little Red Book and Official website or brand store and Little Red Book and Official website or brand store respectively.

Table 4.2: The analysis of demographic factors using the frequency distribution and percentage

Demographic Factors	Frequency	Percent
Gender	401	100
Male	211	52.6
Female	190	47.4

Age	401	100
20 – 30 years old	64	16.0
31 – 40 years old	232	57.9
41 – 50 years old	94	23.4
Over 50 years old	11	2.7
Current income per month	401	100
Less than 3,000 RMB	82	20.4
3,001-6,000 RMB	212	52.9
6,001-9,000 RMB	85	21.3
9,001-12,000 RMB	15	3.7
More than 12,000 RMB	7	1.7
Purchasing frequency of green cosmetics product per year	401	100
1-3 times per year	144	35.9
4-6 times per year	196	48.9
7-9 times per year	48	12.0
More than 9 times per year	13	3.2
Spending on green cosmetics product per time	401	100
Less than 500 RMB	133	33.2
501-1,500 RMB	170	42.4
1,501-3,000 RMB	81	20.2
3,001-5,000 RMB	13	3.2
More than 5,000 RMB	4	1.0
Platforms used for buying green cosmetics product	401	100
Only JingDong	110	27.4
Only Taobao	97	24.2
Only Little Red Book	38	9.5
Only Official Website or brand store	27	6.7
JingDong and Taobao	38	9.5
JingDong and Little Red Book	7	1.7
JingDong and Official website or brand store	7	1.7
JingDong, TaoBao and Little Red Book	30	7.5
JingDong, TaoBao and official website	12	3.0
JingDong, TaoBao, Little Red Book and official website or brand store	12	3.0
TaoBao and Little Red Book	11	2.7
TaoBao and Official website or brand store	8	2.0
TaoBao, Little Red Book and Official website or brand store	1	0.2
Little Red Book and Official website or brand store	3	0.7

4.3 Mean and Standard Deviation for Descriptive Analysis

In this section, the summary of Mean and Standard Deviation for each group variable, including quality of review, review valence, social media marketing, customer attitude, customer engagement and customer purchase intention. The following criteria for evaluating the mean scores were developed from Moidunny (2009) and are detailed below:

The criteria of the interpretation of mean scores:

Mean score	Interpretation
4.21 – 5.00	Very high
3.21 – 4.20	High

2.61 – 3.20	Medium
1.81 – 2.60	Low
1.00 – 1.80	Very low

4.3.1 Mean and standard deviation of Quality of Review

Table 4.3 indicated that the highest mean of Quality of review was “I believe that green cosmetics product with positive quality of review are trustworthy” which is equal 3.61. On the contrary, the lowest mean was “Before buying a green cosmetics product, I usually look at the review first” which equals to 3.51. Moreover, the highest standard deviation was “Quality of review have impact on my buying decision” which is equals to 1.142. Nonetheless, the lowest standard deviation was “Before buying a green cosmetics product, I usually look at the review first” was 1.080.

Table 4.3: The result of Mean and Standard Deviation of Quality of Review

	Mean	Std. Deviation	Interpretation
QOR1: Before buying a green cosmetics product, I usually look at the review first.	3.51	1.080	High
QOR2: Quality of review have impact on my buying decision.	3.59	1.142	High
QOR3: I believe that green cosmetics product with positive quality of review are trustworthy.	3.61	1.108	High

4.3.2 Mean and standard deviation of Review Valence

Table 4.4 indicated that the highest mean of Review valence were “Before buying a green cosmetics product, I usually look at the review valence first and Review valence will influence my belief of a cosmetics product” which are equal to 3.64. On the contrary, the lowest mean was “Comparing with lower review valence, I prefer to buy green cosmetics product with high review valence” which equals to 3.47. Furthermore, the highest standard deviation was “Review valence will influence my belief of a cosmetics product” which is 1.129. On the other hand, the lowest standard deviation was “Before buying a green cosmetics product, I usually look at the review valence first” which equals to 1.071.

Table 4.4 The result of Mean and Standard Deviation of Review Valence

	Mean	Std. Deviation	Interpretation
RV1: Before buying a green cosmetics product, I usually look at the review valence first.	3.64	1.071	High
RV2: Review valence will influence my belief of a cosmetics product.	3.64	1.129	High
RV3: Comparing with lower review valence, I prefer to buy green cosmetics product with high review valence.	3.47	1.177	High

4.3.3 Mean and standard deviation of Social Media Marketing

Table 4.5 shows indicated that the highest mean was “I always choose brand recommended by social media

channel (such as WeChat, Weibo, Little red book)” which is equals to 3.73. However, the lowest mean was “I usually received green cosmetics product information from social media channel (such as WeChat, Weibo, Little red book)” which equals 3.69. For standard deviation, the highest standard deviation was “I am impressed by green cosmetics brands that frequently appear on social media” which equals to 1.069. on the contrary, the lowest was “I always choose brand recommended by social media channel (such as Wechat, Weibo, Little red book) which equals to 1.007.

Table 4.5 The result of Mean and Standard Deviation of Social Media Marketing

	Mean	Std. Deviation	Interpretation
SMM1: I usually received green cosmetics product information from social media channel (such as WeChat, Weibo, Little red book).	3.69	1.023	High
SMM2: I am impressed by green cosmetics brands that frequently appear on social media.	3.70	1.069	High
SMM3: I always choose brand recommended by social media channel (such as WeChat, Weibo, Little red book).	3.73	1.007	High

4.3.4 Mean and standard deviation of Customer Attitude

Table 4.6 indicated that the highest mean of customer attitude was “I have a sufficient knowledge of standard of green cosmetics product, so I encourage more people to use and I think using green cosmetics product can protect skin health” which are equal to 3.76. Nonetheless, the lowest mean was “I support green cosmetics products emotionally because they are kind of the environment and safe to use” which is equals to 3.70. In addition, the highest standard deviation was “I think using green cosmetics product can protect skin health” which equals 1.100. On the other hand, the lowest standard deviation was “I support green cosmetics products emotionally because they are kind of the environment and safe to use” which equals to 1.039.

Table 4.6 The result of Mean and Standard Deviation of Customer Attitude

	Mean	Std. Deviation	Interpretation
CA1: I support green cosmetics products emotionally because they are kind of the environment and safe to use.	3.70	1.039	High
CA2: I believe green cosmetics product have better quality in natural ingredients implement.	3.72	1.058	High
CA3: I have a sufficient knowledge of standard of green cosmetics product, so I encourage more people to use.	3.76	1.067	High
CA4: I think using green cosmetics product can protect skin health.	3.76	1.100	High

4.3.5 Mean and standard deviation of Customer Engagement

Table 4.7 indicated that the highest mean of customer engagement was “I often comment on green cosmetics product post in official website” which is equals to 3.80. Nonetheless, the lowest mean was “I often browse

the news post by green cosmetics product on social media channel or brands official website” which equals to 3.67. For standard deviation, the highest standard deviation was “I often join the activities (such as Double eleven, Double twelve, pop-up store) organize by green cosmetics brands from both online and offline” which is equals to 1.101. On the contrary, the lowest standard deviation was “I often browse the news post by green cosmetics product on social media channel or brands official website” which equals to 1.014.

Table 4.7 The result of Mean and Standard Deviation of Customer Engagement

	Mean	Std. Deviation	Interpretation
CE1: I often browse the news post by green cosmetics product on social media channel or brands official website.	3.67	1.014	High
CE2: I often join the activities (such as Double eleven, Double twelve, pop-up store) organize by green cosmetics brands from both online and offline.	3.71	1.101	High
CE3: I would like to share the experience of using cosmetic products and brands with other consumers on different social media channel (such as WeChat, Weibo, Little red book).	3.71	1.075	High
CE4: I often comment on green cosmetics product post in official website.	3.80	1.026	High
CE5: I say positive things about green cosmetics product or brand to others.	3.74	1.037	High

4.3.6 Mean and standard deviation of Customer Purchase Intention

Table 4.8 indicated that the highest mean of customer purchase intention was “I expect to purchase green cosmetics product in the future” which equals to 3.76. However, the lowest mean was “I have intention to purchase green cosmetics (both skin care and beauty) product” which was 3.65. Moreover, the highest standard deviation was “I expect to purchase green cosmetics product in the future” which equals to 1.063. On the other hand, the lowest standard deviation was “I have intention to purchase green cosmetics (both skin care and beauty) product” which is equals to 0.963.

Table 4.8 The result of Mean and Standard Deviation of Customer Purchase Intention

	Mean	Std. Deviation	Interpretation
CPI1: I have intention to purchase green cosmetics (both skin care and beauty) product.	3.65	0.963	High
CPI2: I expect to purchase green cosmetics product in the future.	3.76	1.063	High
CPI3: I willing to buy green cosmetics product have acknowledge by others.	3.72	1.062	High

4.4 Hypothesis Testing Results

In this section, the researcher utilized basic linear regression as a statistic approach to examine whether quality of review, review valence significantly impact on customer attitude, social media marketing, customer engagement and customer attitude significantly impact on customer purchase intention. With the use of multiple linear regression, the multicollinearity can be used to indicate which variable should be removed and

also evaluate the level of multiple factors that can impact on customer purchase intention on green cosmetics product in Chengdu, China. According to Hair et al. (1995), When the relationship among the independent variables is moderate, the value of variance inflation factor (VIF) can be as high as "10," which is acceptable and classified as moderate multicollinearity. Furthermore, the R-square (R^2) value, which shows the proportion of variance in the dependent variable based on the independent variable, can be used to explain the variable.

4.4.1 Results of Multiple Linear Regression of H1, H2

Statistical Hypothesis

Ho: Quality of Review (H1) and review valence (H2) has no significant influence on customer attitude toward customer purchase intention in Green Cosmetics Product in Chengdu, China.

Ha: Quality of Review (H1) and review valence (H2) has significant influence on customer attitude toward customer purchase intention in Green Cosmetics Product in Chengdu, China.

Table 4.9 shows that a multiple linear regression was used to see if quality of review (H1) and review valence (H2) has a significantly impact on customer attitude towards customer purchase intention in Green Cosmetics product in Chengdu, China. The result indicated that the significant level of all hypotheses Quality of review (H1) and Review valence (H2) was less than 0.05. Thus the null hypotheses are rejected. In addition, the value of R-square was 0.710 at 95% of confidence level meaning that the independent variables (Quality of review and Review valence) can justified the dependent variable (Customer attitude) by 71.0% approximately, and $p < 0.05$ reflects there are 71.0% of variances in customer attitude. Furthermore, each individual predictor has result showed that Quality of review ($B=0.336$, $P < 0.05$) and Review valence ($B=0.457$, $p < 0.05$) were positively significant to customer attitude. By examine of variance inflation factors for the three predictors, the result shows that VIF value of Quality of review = .0336, the VIF value of Review valence = 0.457, thus there was no issue of multicollinearity among these independent variables due to the VIF value being less than 10.

Table 4.9: Multiple Linear Regression Analysis Summary for Hypotheses 1 and 2

Variables	B	SE B	β	t	Sig.	VIF
Quality of review	0.366	0.042	0.395	8.634	0.000*	2.884
Review valence	0.457	0.043	0.490	10.709	0.000*	2.884

Note. $R^2 = 0.710$, Adjusted $R^2 = 0.709$, * $p < 0.05$ Dependent Variable = Customer Attitude

4.4.2 Results of Multiple Linear Regression of H3, H4, H5

Statistical Hypothesis

Ho: Customer attitude (H3), Social media marketing (H4) and customer engagement (H5) has no significant impact on customer purchase intention in Green Cosmetics Product in Chengdu, China.

Ha: Customer attitude (H3), Social media marketing (H4) and customer engagement (H5) has significant impact on customer purchase intention in Green Cosmetics Product in Chengdu, China.

Table 4.10 shows that a multiple linear regression was used to see if customer attitude, social media marketing and customer engagement has a significant impact on customer purchase intention in Green Cosmetics product in Chengdu, China. The result indicated that the significant level of all hypotheses Customer attitude (H3), Social media marketing (H4) and Customer purchase intention (H5) was less than 0.05. So, the null hypotheses are rejected. Furthermore, the value of R-square was 0.771 at 95% of confidence level indicating that the independent variables (Customer attitude, Social media marketing and Customer engagement) can justified the dependent variable(customer purchase intention) by 77.1% approximately, and

$p < 0.05$ can reflect there are 77.1% of the variances in customer purchase intention. In addition, under the examining of each independent variables, the result shows that Customer attitude ($B=0.379$, $p < 0.05$), Social media marketing ($B=0.178$, $p < 0.05$) and Customer engagement ($B=0.381$, $p < 0.05$) are positively significant to customer purchase intention. Moreover, the examiner result shows that the VIF value of Customer attitude equals to 3.985, the VIF value of Social media marketing equals to 0.178 and VIF value of Customer engagement is 0.381, which were moderately correlated and no issue of multicollinearity due to the VIF value being less than 10. Therefore, the hypotheses 3, 4, 5 that used to justify influence of customer purchase intention are not overlapped and the result is valid for this study.

Table 4.10: Multiple Linear Regression Analysis Summary for Hypotheses 3, 4, and 5

Variables	B	SE B	β	t	Sig.	VIF
Customer attitude	0.379	0.048	0.175	7.963	0.000*	3.985
Social media marketing	0.178	0.053	0.382	3.334	0.000*	4.770
Customer engagement	0.381	0.056	0.367	6.846	0.000*	4.986

Note. $R^2 = 0.771$, Adjusted $R^2 = 0.769$, * $p < 0.05$ Dependent Variable = Customer Purchase Intention

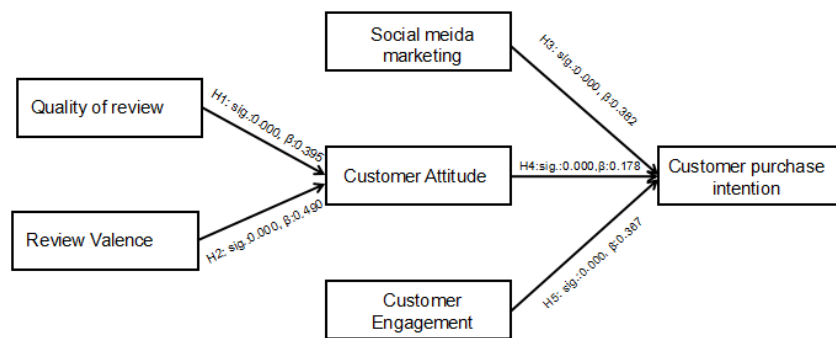


Figure 2: the result of structure model

5. Conclusion And Recommendations

5.1 Summary of the study

The study's summary is focused on research objectives and research questions, which are to precisely analyze those relationships affecting factors customer purchase intention toward Green Cosmetics Product in Chengdu, China. The study was guided by the following five research questions:

Does quality of review have a significant influence on customer attitude toward Green Cosmetics product?

Does review valence have a significant influence on customer Attitude toward Green Cosmetics Product?

Does customer attitude have a significant influence on customer purchase intention toward Green Cosmetics Product?

Does social media marketing have a significant influence on customer purchase intention toward Green Cosmetics Product?

Does customer engagement have a significant influence on customer purchase intention toward Green Cosmetics Product?

The results of description analysis shows that for overall 401 respondents most of the people took part into

this research was male (211, 52.6%), age group between 31-40 years old (232, 57.7%), current income at 3001-6000 RMB per month (212, 52.9%), purchasing frequency of green cosmetics product at 4-6 times per year (196, 48.9%) and spending on green cosmetics product at 501-1500 RMB per time (170, 42.4%).

According to the survey, the mean and standard deviation of variables influencing customer purchase intention toward Green Cosmetics product in Chengdu, China can be received. The highest mean and standard deviation among variables of customer purchase intention towards Green Cosmetics product was Quality of review ($\bar{x} = 3.61$ SD = 1.142), Review valence ($\bar{x} = 3.64$ SD = 1.177), Social media marketing ($\bar{x} = 3.73$ SD = 1.069), Customer attitude ($\bar{x} = 3.76$ SD = 1.100), Customer engagement ($\bar{x} = 3.80$ SD = 1.101) and customer purchase intention ($\bar{x} = 3.76$ SD = 1.063).

Based on the conceptual framework has constructed by this study, the researcher only utilized multiple linear regression to test hypotheses in this research to identify the relationship between dependent variables and independent variables. Multiple linear regression (MLR) is used to evaluate the influence of quality of review and review valence on customer attitude towards green cosmetics product. Another Multiple linear regression is applied to analysis the influence of social media marketing, customer attitude and customer engagement on customer purchase intention towards green cosmetics product. Hypotheses testing result indicated that all independent variables were positively significant ($p < 0.05$).

Table 5.1 Summary of the hypotheses results

Statement of Hypothesis	p-value	Decision results
H1: Quality of review has no significant influence on customer attitude toward Green Cosmetics product in Chengdu, China.	0.000*	Rejected
H2: Review valence has no significant influence on customer attitude toward Green Cosmetics product in Chengdu, China.	0.000*	Rejected
H3: Social media marketing has no significant influence on customer purchase intention toward Green Cosmetics product in Chengdu, China.	0.000*	Rejected
H4: Customer attitude has no significant influence on customer purchase intention toward Green Cosmetics product in Chengdu, China.	0.000*	Rejected
H5: Customer engagement has no significant influence on customer purchase intention toward Green Cosmetics product in Chengdu, China.	0.000*	Rejected

The result of hypotheses testing using MLR demonstrate strengths of variables that influence customer attitude towards green cosmetics product and customer purchase intention on green cosmetics product in Chengdu, China. For the Customer attitude, review valence ($\beta = .490$) is first rank significant factor comparing with quality of review ($\beta = .395$). The researcher ranked the significant factors that influence customer purchase intention, the first rank significant factors is customer attitude ($\beta = .382$), the second rank is customer engagement ($\beta = .367$), and the third rank is social media marketing ($\beta = .175$). The ranking is summarized in Table 5.2 below.

Table 5.2: Summary strengths of influence factors of each dependent variable

Dependent variable	Rank	Independent variable	Standardized Coefficient
--------------------	------	----------------------	--------------------------

Customer attitude (CA)	1st	Review valence (RV)	0.490
	2nd	Quality of review (QOR)	0.395
Customer purchase intention (CPI)	1st	Customer engagement (CE)	0.382
	2nd	Social media marketing (SMM)	0.367
	3rd	Customer Attitude (CA)	0.175

5.2 Discussion and Conclusion

In this research, the hypotheses testing indicated that quality of review and review valence have impact on customer attitude. Moreover, there are three variables influence customer purchase intention which are social media marketing, customer attitude and customer engagement.

5.2.1 Quality of review, review valence and customer attitude

The result from this study demonstrate that quality of review had highly significant and positive relationship with customer attitude. The significant value of quality of review and customer attitude was 0.000, which is less than 0.05 meaning that quality of review has a significant influence of customer attitude towards green cosmetics product. Moreover, the findings of this research are coherence with De Maeyer (2012), that quality of review have impact on customer attitude. Furthermore, customer attitude was significantly influenced by quality of review from post buyers.

In terms of relationship between review valence and customer attitude, review valence had highly significant impact on customer attitude. The significant value of review valence and customer attitude was 0.000, which is less than 0.05. The result has indicated that review valence has a significantly influence to customer attitude towards green cosmetics product in Chengdu, China. According to previous research, it has confirmed that positive reviews has a greater effect on consumer evaluations on a product or services (Browning et al., 2013). Furthermore, valence intensity of online review drives customer attitude and further influence customer purchase intention, is confirmed by past study (Floh et al., 2013; Munamba & Nuangjamnong, 2021).

The statistical data shows that the mean of quality of review is 3.57, based on a descriptive analysis of quality of review derived from three questions in the questionnaire that researcher has conducted. The lowest mean among the questions was “Before buying a green cosmetics product, I usually look at the review first” which is equals to 3.51 that is lower than average means of quality of review. On the other hand, the highest standard deviation is from question “Quality of review have impact on my buying decision” which equals to 1.142. Thus, green cosmetic products by the company should notice that consumers will look at the reviews online before buying, but those reviews not always drive customer buying decision in the way as seller wants.

5.2.2 Social media marketing, customer attitude, customer engagement and customer purchase intention

The result form this research indicated that social media marketing, customer attitude and customer engagement had highly significant and positive relationship with customer purchase intention. The significant value of social media marketing, customer attitude, customer engagement and customer purchase intention were 0.029 which is less than 0.05. This demonstrate that social media marketing, customer attitude and customer engagement has a significant impact on customer purchase intention on green cosmetics product in Chengdu, China.

For the relationship between social media marketing and customer purchase intention, social media marketing has significant and positive relationship with customer purchase intention. The significant value of social media marketing and customer purchase intention was <0.001 which is less than 0.05. Thus, social media

marketing has a significant effect on customer purchase intention. Furthermore, based on the previous study by (Baird & Parasnis, 2011), social media marketing can generate an increased purchase intention. Moreover, customer purchase intention was significantly influenced by social media marketing (Agarwal, 2020).

In terms of relationship between customer attitude and customer purchase intention, customer attitude has positive and significant relationship with customer purchase intention. The significant value of customer attitude was < 0.001 which is less than 0.05. The result indicated that customer attitude has significant influence to customer purchase intention on green cosmetics product in Chengdu, China. According to (Fishbein & Ajzen, 1975), customer attitude will affect intention to purchase and whether a transaction will be made. Moreover, (Liu et al., 2020; Shah et al., 2021) prove that attitude is an important determinant of purchase intention.

For the relationship between customer engagement and customer purchase intention, customer engagement had highly significant and positive relationship with customer purchase intention. The significant value of customer engagement and customer purchase intention was < 0.001 which is less than 0.05. This indicated that customer engagement has a significant influence of customer purchase intention. Regarding to previous study, it has confirmed that customer engagement positively impacts on customer purchase intention (Sun et al., 2019; M. Xu & Nuangjamnong, 2022; P. Xu & Nuangjamnong, 2022).

Moreover, customer engagement is a simple indicator for purchase intention (Rather et al., 2019; Thakur, 2018). The statistical data shows that the mean of social media marketing is 3.71, mean of customer attitude is 3.735, and mean of customer engagement is 3.726. Based on the descriptive analysis of these three predictors from questionnaire that researcher collected. The lowest mean among social media marketing questions was "I usually received green cosmetics product information from social media channel" which equals to 3.69. However, the highest standard deviation from question "I am impressed by green cosmetics brands that frequently appear on social media" which is equals to 1.069. Therefore, green cosmetics product company should use social media marketing as marketing strategy to communicate with customer, but customer may feel negative with brands has overlapped on social media. In addition, the lowest mean among customer attitude questions was "I support green cosmetics products emotionally because they are kind of the environment and safe to use" which equals to 3.70. However, the highest standard deviation from question "I think using green cosmetics product can protect skin health" which is equals to 1.100. Thus, green cosmetics product company should increase customer awareness of green cosmetics product safe and health equity, enhance the value of purchasing green cosmetics products for customer. Furthermore, the lowest mean among customer engagement questions was "I often browse the news post by green cosmetics product on social media channel or brands official website" which is 3.67. On the contrary, the highest standard deviation from question "I often join the activities (such as Double eleven, Double twelve, pop-up store) organize by green cosmetics brands from both online and offline" which equals to 1.101. So, green cosmetics company can improve customer engagement by variety activities that can increase product or brand awareness of customer.

5.3 Recommendations

Regarding to the conclusion, the result of this study shows that there are relationships between variables that greatly influence customer attitude. Quality of review and review valence have a significant effect on customer attitude. Moreover, social media marketing, customer attitude and customer engagement have a significant impact on customer purchase intention.

Therefore, green cosmetics Product Company should maintain a good quality and performance of products to receive positive reviews from consumer that may influence opportunity customers. Keeping innovation and development of products and services, providing customers with environment and safe cosmetics product that health to their body.

Moreover, green cosmetics product company should also notice that social media as a channel to promote products or services, overexposure and overpublicize may lead to negative impact on products or brands. It is a double-edged sword when firms involve in using social media marketing as strategy marketing plan. Selecting suitable image spokesperson or celebrities for the brands will increase brand awareness and likability. While word of mouth not always drives consequence in the way marketer aimed. In terms of customer engagement, green cosmetics company should understand the customer expectation and needs then organize activities which attract customer to join. When consumers leave comments on website or share the experience with other on social media channel this will increase opportunity customer purchase intention.

5.4 Further Studies

In this research, there are several limitations. Due to time constraints, the researcher focused only on five variables consist of quality of review, review valence, customer attitude, social media marketing, customer engagement that effect customer purchase intention on green cosmetics product in Chengdu, China. For the further research, a similar study is needed to determine whether other related factors that impact customer attitude and customer purchase intention should be included in order to obtain more comprehensive information and understanding of factors. Moreover, further study should be done with large sample size and population to improve the research's generalizability and credibility. In addition, this study are based on people live in Chengdu, China that have ordinary demand of cosmetics product and may not be entirely applicable to people from other culture backgrounds. So, another study could be conducted in other area of China or other countries for more accurate result. Finally, this research primarily presented data on direct relationships between variables in this study, and the research model did not account for any potential mediating relationships.

References

1. Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. *Psychological bulletin*, 82(2), 261.
2. Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of experimental social psychology*, 22(5), 453-474.
3. Agarwal, M. (2020). Importance of User Generated Content as a part of Social Media Marketing that drives Customer's Brand Awareness and Purchase Intentions. *The International Journal of Analytical and Experimental Modal Analysis*, 12(2), 3071.
4. Baird, C. H., & Parasnis, G. (2011). From social media to social customer relationship management. *Strategy & leadership*.
5. Barhemmati, N., & Ahmad, A. (2015). Effects of social network marketing (SNM) on consumer purchase behavior through customer engagement. *Journal of Advanced Management Science*, 3(4).
6. Brodie, R. J., Hollebeek, L. D., Jurić, B., & Ilić, A. (2011). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of service research*, 14(3), 252-271.
7. Bowen, T., Cicardi, M., Farkas, H., Bork, K., Longhurst, H. J., Zuraw, B., ... & Xiang, Z. Y. (2010). 2010 International consensus algorithm for the diagnosis, therapy and management of hereditary angioedema. *Allergy, Asthma & Clinical Immunology*, 6(1), 1-13.
8. Browning, V., So, K. K. F., & Sparks, B. (2013). The influence of online reviews on consumers' attributions of service quality and control for service standards in hotels. *Journal of Travel & Tourism Marketing*, 30(1-2), 23-40.
9. Chen, J., Teng, L., Yu, Y., & Yu, X. (2016). The effect of online information sources on purchase intentions between consumers with high and low susceptibility to informational influence. *Journal of*

Business Research, 69(2), 467-475.

10. Cheruiyot, T. K., & Maru, L. C. (2013). Service quality and relative performance of public universities in East Africa. *The TQM Journal*.
11. Cheung, C. M., & Thadani, D. R. (2010). The Effectiveness of Electronic Word-of-Mouth. Recuperado de <http://citeseerx.ist.psu.edu/viewdoc/download>.
12. Duarte, M. M. D. A. (2021). Green marketing as an antecedent of willingness to pay: the mediating role of brand coolness and pro-environmental behavior (Doctoral dissertation).
13. Dashdorj, N. J., Wirz, O. F., Röltgen, K., Haraguchi, E., Buzzanco III, A. S., Sibai, M., ... & Dashdorj, N. D. (2021). Direct comparison of antibody responses to four SARS-CoV-2 vaccines in Mongolia. *Cell host & microbe*, 29(12), 1738-1743.
14. De Maeyer, P. (2012). Impact of online consumer reviews on sales and price strategies: A review and directions for future research. *Journal of Product & Brand Management*, 21(2), 132-139.
15. Dellarocas, C., Zhang, X., & Awad, N. F. (2007). Exploring the value of online product reviews in forecasting sales: The case of motion pictures. *Journal of Interactive marketing*, 21(4), 23-45.
16. ECHCHAD, M., & GHAITH, A. (2022). Purchasing Intention of Green Cosmetics Using the Theory of Planned Behavior: The Role of Perceived Quality and Environmental Consciousness. *Expert Journal of Marketing*, 10(1).
17. Erdoğan, İ. E., & Cicek, M. (2012). The impact of social media marketing on brand loyalty. *Procedia-Social and behavioral sciences*, 58, 1353-1360.
18. Farook, F. S., & Abeysekara, N. (2016). Influence of social media marketing on customer engagement. *International Journal of Business and Management Invention*, 5(12), 115-125.
19. Gremler, D. D., Gwinner, K. P., & Brown, S. W. (2001). Generating positive word-of-mouth communication through customer-employee relationships. *International Journal of Service Industry Management*.
20. Huthasuhut, M. F. A., Lubis, P. H., & Utami, S. (2022). The Influence of Brand Image and Lifestyle on Purchase Intention Mediated by Consumer Attitude on Personal Care Products with Regional Comparison as Multigroup Moderator (Study on Consumers in Banda Aceh VS Lhokseumawe).
21. Holsing, C., & Olbrich, R. (2012, August). Effect of user-generated content on website stickiness: the case of social shopping communities. In *Proceedings of the 14th Annual International Conference on Electronic Commerce* (pp. 301-308).
22. Jalilvand, M. R., & Samiei, N. (2012). The effect of electronic word of mouth on brand image and purchase intention: An empirical study in the automobile industry in Iran. *Marketing Intelligence & Planning*.
23. Laksamana, P. (2018). Impact of social media marketing on purchase intention and brand loyalty: Evidence from Indonesia's banking industry. *International Review of Management and Marketing*, 8(1), 13-18.
24. Lin, M., Chen, Q., & Yan, S. (2013). Network in network. arXiv preprint arXiv:1312.4400.
25. Ling, K. C., Chai, L. T., & Piew, T. H. (2010). The effects of shopping orientations, online trust and prior online purchase experience toward customers' online purchase intention. *International business research*, 3(3), 63.
26. Lee, J., Kim, S., & Ham, C. D. (2016). A double-edged sword? Predicting consumers' attitudes toward and sharing intention of native advertising on social media. *American Behavioral Scientist*, 60(12), 1425-1441.
27. Laksamana, P. (2018). Impact of social media marketing on purchase intention and brand loyalty: Evidence from Indonesia's banking industry. *International Review of Management and*

Marketing, 8(1), 13-18.

28. Lee, E. J., & Shin, S. Y. (2014). When do consumers buy online product reviews? Effects of review quality, product type, and reviewer's photo. *Computers in human behavior*, 31, 356-366.
29. Lu, Y., Tsaparas, P., Ntoulas, A., & Polanyi, L. (2010, April). Exploiting social context for review quality prediction. In *Proceedings of the 19th international conference on World Wide Web* (pp. 691-700).
30. Moe, W. W., & Trusov, M. (2011). The value of social dynamics in online product ratings forums. *Journal of Marketing Research*, 48(3), 444-456.
31. Agustin, C., & Singh, J. (2005). Curvilinear effects of consumer loyalty determinants in relational exchanges. *Journal of marketing research*, 42(1), 96-108.
32. Muchardie, B. G., Yudianta, N. H., & Gunawan, A. (2016). Effect of social media marketing on customer engagement and its impact on brand loyalty in caring colours cosmetics, Martha Tilaar. *Binus Business Review*, 7(1), 83-87.
33. McCord, J. (2015). Progress in magnetic domain observation by advanced magneto-optical microscopy. *Journal of Physics D: Applied Physics*, 48(33), 333001.
34. Mo, Z., Li, Y. F., & Fan, P. (2015). Effect of online reviews on consumer purchase behavior. *Journal of Service Science and Management*, 8(03), 419.
35. Munamba, R., & Nuangjamnong, C. (2021). The Impact of Green Marketing Mix and Attitude towards the Green Purchase Intention among Generation y Consumers in Bangkok. *SSRN Electronic Journal*, 1–20. <https://doi.org/10.2139/ssrn.3968444>
36. Park, H. H., Lee, S., Son, H. Y., Park, S. B., Kim, M. S., Choi, E. J., ... & Kim, S. H. (2008). Flavonoids inhibit histamine release and expression of proinflammatory cytokines in mast cells. *Archives of pharmacal research*, 31(10), 1303-1311.
37. Phillips, P., Barnes, S., Zigan, K., & Schegg, R. (2017). Understanding the impact of online reviews on hotel performance: an empirical analysis. *Journal of Travel Research*, 56(2), 235-249.
38. Qiu, L., Pang, J., & Lim, K. H. (2012). Effects of conflicting aggregated rating on eWOM review credibility and diagnosticity: The moderating role of review valence. *Decision Support Systems*, 54(1), 631-643.
39. Sun, K., Xiao, B., Liu, D., & Wang, J. (2019). Deep high-resolution representation learning for human pose estimation. In *Proceedings of the IEEE/CVF conference on computer vision and pattern recognition* (pp. 5693-5703).
40. Singh, S. K., Del Giudice, M., Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technological Forecasting and Social Change*, 150, 119762.
41. Senecal, S., & Nantel, J. (2004). The influence of online product recommendations on consumers' online choices. *Journal of retailing*, 80(2), 159-169.
42. Tuten, T. (2009). Real world experience, virtual world environment: The design and execution of marketing plans in Second Life. *Marketing Education Review*, 19(1), 1-5.
43. Van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer engagement behavior: Theoretical foundations and research directions. *Journal of service research*, 13(3), 253-266.
44. Wong, K. K., Chang, Y. M., Tsang, Y. T., Perlaky, L., Su, J., Adesina, A., ... & Lau, C. C. (2005). Expression analysis of juvenile pilocytic astrocytomas by oligonucleotide microarray reveals two potential subgroups. *Cancer research*, 65(1), 76-84.
45. Whiting, A., & Deshpande, A. (2016). Towards greater understanding of social media marketing: A

review. *Journal of Applied Business and Economics*, 18(4), 82-91.

46. Xu, M., & Nuangjamnong, C. (2022). Determinant Factors Influence the Purchase Decision through Handbags in the Luxury Product in China. *International Research E-Journal on Business and Economics*, 7(1), 30–43.
<http://www.assumptionjournal.au.edu/index.php/aumitjournal/article/view/6281>
47. Xu, P., & Nuangjamnong, C. (2022). Understanding Chinese Buying Behavior in Purchase Intention towards Luxury Goods in China under the COVID-19 Pandemic. *International Research E-Journal on Business and Economics*, 7(1), 15–29.
<http://www.assumptionjournal.au.edu/index.php/aumitjournal/article/view/6282>
48. Xu, X., Hua, Y., Wang, S., & Xu, G. (2020). Determinants of consumer's intention to purchase authentic green furniture. *Resources, Conservation and Recycling*, 156, 104721.
49. Younus, S., Rasheed, F., & Zia, A. (2015). Identifying the factors affecting customer purchase intention. *Global Journal of Management and Business Research*.
50. Yu, Y., & Zhouyan, L. (2020). The influence of social media marketing on the behavior of consumers purchasing cosmetic product—A comparative study of China and Sweden.
51. Zhang, W. L., Lin, C. S., Geng, L., Li, Y. Y., Zhang, H., He, Z. Z., & Cheng, W. D. (2010). Synthesis and characterizations of two anhydrous metal borophosphates: $MIII_2BP_3O_{12}$ (M= Fe, In). *Journal of Solid State Chemistry*, 183(5), 1108-1113.
52. Zhu, D. H., Zhang, Z. J., Chang, Y. P., & Liang, S. (2019). Good discounts earn good reviews in return? Effects of price promotion on online restaurant reviews. *International Journal of Hospitality Management*, 77, 178-186.