

**FEMALE COLLEGE STUDENTS' PERSPECTIVE AND
PURCHASE INTENTION ON PRODUCT SCARCITY: A
CASE STUDY ON COUNTER COSMETICS IN
DEPARTMENT STORES**

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Female College Students' Perspective and Purchase Intention on Product Scarcity: A Case Study on Counter Cosmetics in Department Stores

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ABSTRACT

Product scarcity has been widely applied for research on cosmetics, shoes, food, mobile phones, etc. In recent years, “limited product”, “out of stock”, and “pre-order” are common marketing strategy. Generally, when brands products supply in batches, they will create an image of shortage supply will be created; it might stimulate consumers' desire to purchase those products and create a feeling of worthy of purchases psychologically. Thus, consumers may be willing to wait for few days or even months to get those products.

This research aimed to explore reasons why consumers are willing to wait for a period of time to get what they buy. It covered two issues: (1) How long can consumers wait? (2) Will consumers change their attitude toward brand, if the product is temporarily out of order and needs to wait for a period of time?

This is a quantitative research. It took use of internet channel to collect 504 questionnaires for the purpose of understanding female college students' perspective on scarcity products. Basically, questionnaire respondents do not need to have experience on purchasing cosmetics in the department store or following the brand launching new products. This research had found out the length of waiting time and the reasons of waiting on the scarcity products from the perspective of female college students.

Keywords: hunger marketing, purchase intention, scarcity

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INTRODUCTION

Background

Recently, scarcity marketing has been widely used on products marketing, such as counter cosmetics, shoes, iPhone, etc. Brands supply products in batches have created the illusion of supply shortage which has, therefore, strengthened consumers' desire to purchase the brands products. It has also created psychological feelings of worthy of purchase the products to make profit.

There are many researchers conduct researches about scarcity effect from consumers' perspective to explore positive and negative effect on the marketing strategy. Also, many researches focused on comparison the result of scarcity marketing with regards to waiting time and product quantity.

The interesting part is that, one the one hand, consumers complain that they cannot buy products because they are out-of-stock for a long time; on the other, they are willing to wait.

Motivation

Given that scarcity marketing has been frequently applied to Brand products. According to commodity theory, it provides four definition of unavailability; one of the definitions is delays in providing a commodity.¹ This marketing strategy has stimulated customers' psychological feelings of contradiction in "complaining of unavailability" but still "waiting for products".

¹ Timothy C Brock, "Implication of Commodity Theory for Value Change," in *Psychological Foundations of Attitudes*, ed. Anthony G Greenwald, Timothy C Brock, and Thomas M Ostrom (Academic Press, 2013).

For the purpose of understanding aforementioned phenomena, this research has focused on consumers' perspective and purchase intention with regards to the product scarcity. This research used female college students as case study. It has focused on their perspective on purchasing counter cosmetics under the situation of delaying in providing commodities.

Research Purpose

There are lots of researches about scarcity product, but there are few researches focusing on how counter cosmetics applied scarcity marketing strategy. A News report mentioned that the counter brand YSL was originally regarded as an old-fashioned brand; it was almost withdrawing from Taiwan market. Nevertheless, it became a brand that attracted young people. The news showed that in addition to replacing designers, the main reason was the "hunger marketing" strategy by relying on offering "popular color" of products to drive hunger marketing. By so doing, consumers were willing to wait few months. Meanwhile, it had also arisen hot topic among customers.

This research aimed to explore female college students' perspective and purchase intention of "delay supply" in providing a commodity. Of course, whether customers would change their attitude to other brand in counter cosmetics would also be discussed.

Research Questions

Aiming to collect sufficient data to complete the research, by following research aim, the author has set up following three research questions to collect first-hand data.

1. What is the relationship between consumers' perspective of product scarcity and their shopping behavior?
2. What is the relationship between consumers' brand preference and their purchase intention?
3. What is the relationship between internet marketing and consumers' purchase intention?

Limits

Because of the time limit, this study would only focus on the consumer's intention of purchase and consumers' perspective on delays of providing a commodity. In other words, this research would not discuss how companies operate scarcity strategy. Meanwhile, given that there are various customers who are involving in pursuing various type of brand products, this research would not be possible to cover all customers and all products.

Delimits

For the purpose of solve the problem of not being able to cover all type of customers and brand products, this study had only focused on female college students. There are two reasons for the author to choose female college students as research focus. First, the author is a student; it would be easily for the author to collect data from same generation young girls. Secondly, young persons' purchasing intention is always an important research topic for marketer. Thus, the author had focused on the

reason why consumers were willing to wait for the product and explored the suitable time for consumers to wait. Of course, whether they would change their attitude to other brand in counter cosmetics would also be discussed. Besides, counter cosmetics often use scarcity strategy but not in the open-shelf cosmetics; with this regard so the author would only discuss counter cosmetics.

LITERATURE REVIEW

The Definition of Scarcity

Michael Lynn said that scarcity will lead the high price, especially the limited quantity and the assumed expensiveness mediate the scarcity's enhancement of value.² There are two types of scarcity, in quantity and in time. Quantitative scarcity can be divided into supply quantity and demand quantity. Heribert Gierl, Michael Plantsch and Janine Schweidler divided the scarcity in quantity into supply quantity and demand quantity. "Limited edition", "restriction volume per outlet" are the example of supply quantity. "Publication of sales volume", "ostentatious few units of an article in the shelf" and "only... units in the stock" are the example of demand quantity. "Seasonal restriction of supply", "only temporary available" and "only available unit..." are the common way of scarcity in time.³ Given above information, the author had focused on whether consumers preferred supply quantity or scarcity in time.

² Michael Lynn, "Scarcity Effects on Desirability: Mediated by Assumed Expensiveness?," *Journal of Economic Psychology* 10, no. 2 (1989).

³ Heribert Gierl, Michael Plantsch, and Janine Schweidler, "Scarcity Effects on Sales Volume in Retail," *The International Review of Retail, Distribution and Consumer Research* 18, no. 1 (2008).

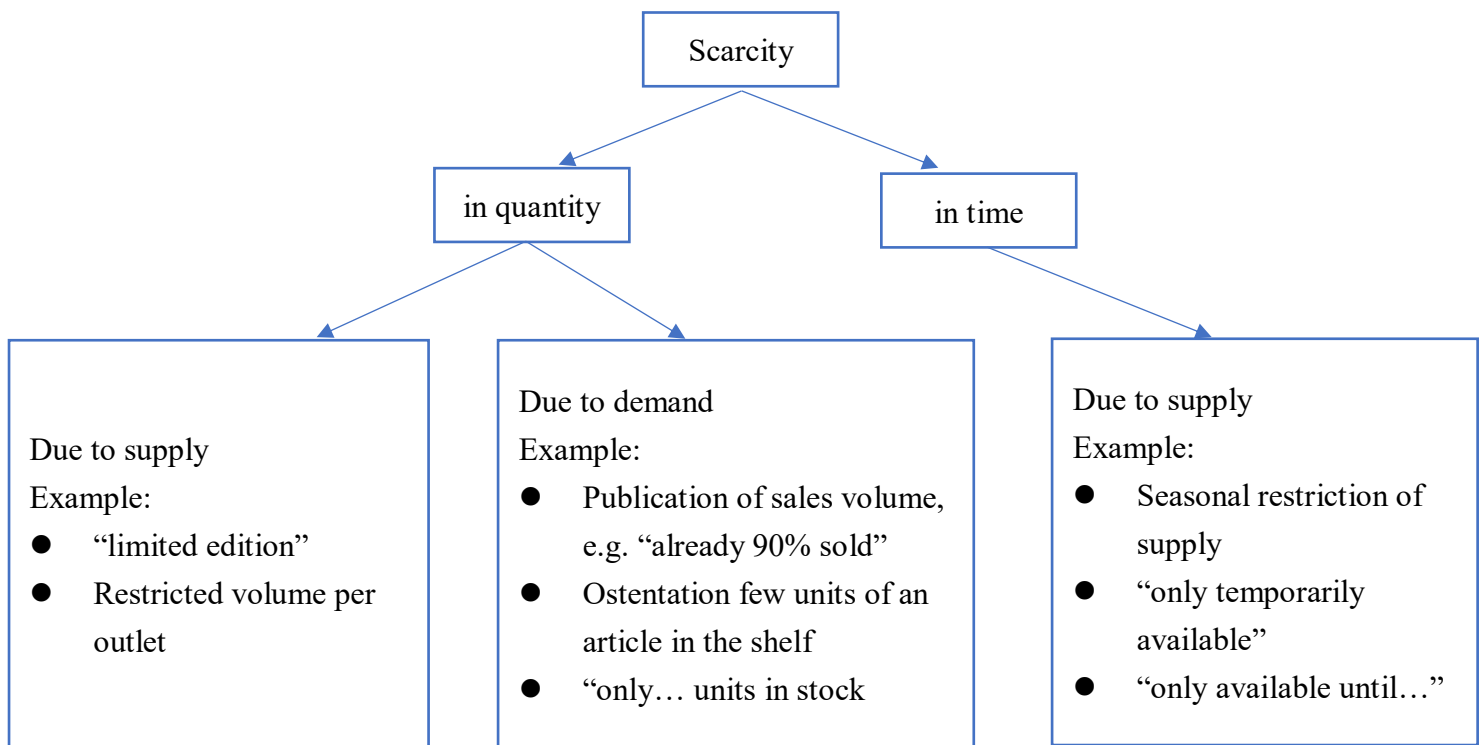


Figure 1 Types of Scarcity

Source: Heribert Gierl, Michael Plantsch, and Janine Schweilder⁴

Scarcity Effects

There are many articles conducting research about scarcity effects; most of them have proofed that scarcity had positive effect on consumer and increased the value of products. Praveen Aggarwal, Sund Youl Jun and Jong Ho Huh found that scarcity increased purchasing intention and limited-quality scarcity was greater than limited-time scarcity. They divided the brand concept into functional and symbolic.

Functional products emphasize the function and consumers’ needs, while symbolic products use uniqueness to stimulate consumers’ purchase intention.⁵ However,

Seung Yun Lee and Ashesh Mukherjee argued that scarcity might have negative effect

⁴ Ibid.

⁵ Praveen Aggarwal, Sung Youl Jun, and Jong Ho Huh, "Scarcity Message: A Competition Perspective," *Journal of Advertising* 40, no. 3 (2011).

on product evaluation. They thought that consumers had other inferences when they faced scarcity: value inference and manipulative intent, they specified four moderators: persuasion knowledge, frequency of exposure to scarcity claims, decision reversibility, and cognitive load. In the study 1, they found that purchase intention increased when persuasion knowledge was low. In the study 2, when frequency of exposure of scarcity claims was frequently used, consumers might think this was the strategy to increase the sales volume, and decreased purchase intention. In the study 3, when decision reversibility was low, consumer perceive scarcity as manipulate intent. In the study 4, when the cognition load was high, purchase intention increase.⁶ Seung Yun Lee, Sangdo Oh and Sunho Jung found two factors that moderated the product evaluation of scarcity – consumers' cognition resources and company reputation. When brand is with poor reputation, consumer may think whether brand uses scarcity as sales tactic and tries to sale detective product.⁷

Commodity Theory

Commodity is defined that the possessor interested in the useful product, and it has three concepts-commodity, value, unavailability to deal with the consumer phycology of scarcity effect.⁸

Unavailability refers to the limited and scarcity. There are four definition: (1) limits on supply, or the number of suppliers, of commodity; (2) costs of acquiring, of keeping, or of providing a commodity; (3) restriction limiting possession of a commodity; (4) delays in providing commodity. Producing limited products and

⁶ Seung Yun Lee and Ashesh Mukherjee, "The Effect of Scarcity on Product Evaluation," *ACR North American Advances* (2011).

⁷ Seung Yun Lee, Sangdo Oh, and Sunho Jung, "The Effects of Scarcity Appeal on Product Evaluation: Consumers' Cognitive Resources and Company Reputation," *Social Behavior and Personality: An internatioall journal* 42, no. 5 (2014).

⁸ Brock.

limited supply of the quantity are the common way that brands use. In commodity theory, it said that the reason why consumer was attracted by the limited products was because of uniqueness. When an individual feel highly similar to others around him or her, he or she will feel that the self-image has been threatened; it would cause emotional and behavioral reaction and individual wants to be different from others.

The Definition of Hunger Marketing

In order to achieve profits, commodity providers reduce production to make an illusion of demand exceeds supply and delay providing products. Hunger marketing needs to have four market essentials, a psychological resonance, operate according to your capability, promotion campaign and consider the situation.⁹

To understand hunger marketing, it is necessary to start from the core theory of Theory of Consumer Behavior, utility theory which measure amount of satisfaction of consumers when they get the products. It is believed that consumers' motivation for commodity consumption comes from consumers' own desires.¹⁰

APPLE is one of the most successful company that used hunger marketing. Steve Jobs, the former CEO of Apple Inc., said that Apple products have “once again, change everything” on the product launch. When a new product launch, is a long period of time. During the time, consumers keep their desire of the new product, and APPLE lets consumers always feel the products is shortage.¹¹

⁹ Yi-Ting Chen, "Hunger Marketing? Culture Criticism of Queuing in Internet" (National Taiwan University of Arts, 2014).

¹⁰ Chih Hsiang Ho, "Hunger Marketing Strategies Based on Consumers' Psychology," *Young Society* 541, no. 11 (2013).

¹¹ Sheng-bing TIAN and CHEN Da, "'Hunger Marketing' Strategy and Its Application Research—Based on Apple Products," *DEStech Transactions on Economics, Business and Management*, icem (2016).

Implementation Conditions of hunger marketing

The reason why brands use hunger marketing is they want to stimulate consumers' purchase intention. There are two conditions need to consider before using hunger marketing. One of the reasons is market positioning, brand accurate position the product and make it popular. Second is the irreplaceable product, it may be the feature of the product. If the product is irreplaceable, it will attract consumer to purchase.¹²

Internet Marketing

Many brands use social media to promote their products, such as YouTube, Facebook, Instagram. Brand will cooperate with the youtuber and make a video or write an article to introduce the product.¹³ More than half of the consumers will use internet to search the comment of the product, 49 percent of the consumer purchase the product that were influenced by social media. 60 percent said they will send the information to others, and 45 percent who searched the information rely on word-of-mouth. In this article, we can know how much consumers rely on the social media and brand need to consider the influence of social media on consumers.¹⁴ Therefore, many brands use social media to connect with consumers or hold the activity which let consumers take photos and upload to their social media.¹⁵

¹² Ho.

¹³ Ping-Yu Su, "The Influence of Youtuber on Consumers' Decision Journey in Cosmetic Products" (National Chengchi University, 2016).

¹⁴ Angella J. Kim and Eunju Ko, "Do Social Media Marketing Activities Enhance Customer Equity? An Empirical Study of Luxury Fashion Brand," *Journal of Business Research* 65(10), no. 1480-1486 (2012).

¹⁵ Su.

Consumer' Purchase Behavior

The factors affect consumers can be divided in two parts, internal influences and external influences. The article mentioned that consumption as a psychological and economic behavior. Psychology is a study of individual behavior and it has two major factors: (1) motivation, personality and cognition, and (2) understand what a person needs. This is a process and behavior of consumers' behavior of purchasing activities. Sociology is a study of how group influence consumer, family, friends and social class, these will influence consumption. Socio psychology is a study of an individual in the group, individuals are influenced by their friends and friends, and individuals reference peers' options when they consumption.

External influences include socio-cultural environment, informal sources, family, reference groups, social class and subculture. Socio-cultural environment is the value, structure, custom, religion, culture and living habit. Individuals' consumption habit influenced by those factors, for the individuals, if the group is more important to the individuals, the more influence on the individuals. Informal sources are the opinion from opinion leader instead of friends and neighbor, the opinion leader is familiar to the social media and interact with people frequently. There are two aspects of family: decision-making role and lifestyle. From single to have a kid, consumption habit and needs change. Social class can measure by income, reputation, occupation and education. Subculture, this research has identified the different consumption between urban area and suburb area.

Internal factors include psychology, motivation, perception, learning, personality and attitudes. Maslow's "hierarchy of human needs" illustrate that human need to satisfy the basic level then the more demand will appear, human will not desire more if they do not satisfy about the lower level. Consumer motivation base on the

unfulfilled needs or consumers want to satisfy the Maslow's theory.¹⁶

Maslow's "hierarchy of human needs" includes physiological needs, safety and security needs, love and belonging, self-esteem and self-actualization. The article shows that consumers' motivation belongs to love and belonging and self-esteem.¹⁷

Brand Preference

Fishbein M. believes that description beliefs are the important factors to attitude and proves that attitude can predict social behavior.¹⁸ Ebrahim said that brand preference bases on consumers' bias of certain brand and comparison with other products. Cognitive information process and experience are essential to analyze consumers' preference. Brand preference directly motivates consumers' purchase intention and behavior.¹⁹

Focusing Research

Most of the brands use Internet to promote, they usually choose the famous youtuber or celebrity to endorse their product. In the past research, some people do the research about the effectiveness of the hunger marketing and the conformity²⁰ or the word of mouth. Lots of people focus on iPhone and xiaomi, and I want to focus on the counter cosmetics. Hunger marketing usually use on the popular product and the specific color and I want to do a research that female college students' opinion and

¹⁶ Susan L Henry, "Consumers, Commodities, and Choices: A General Model of Consumer Behavior," *Historical Archaeology* 25, no. 2 (1991).

¹⁷ Ho.

¹⁸ Martin Fishbein, "An Investigation of the Relationships between Beliefs About an Object and the Attitude toward That Object," *Human relations* 16, no. 3 (1963).

¹⁹ Reham Shawky Ebrahim, "A Study of of Brand Preference: An Expriential View," (2013).

²⁰ Meng-Ju Chiang, "Exploring the Impact of Hunger Marketing through Wom and Conformity Behavior on Consumer Purchase Behavior–Taking I–Mei Thick Milk Tea for an Example" (National Cheng Kung University, 2018).

whether this strategy affects purchase intention on counter cosmetics.

RESEARCH METHODOLOGY

Research Method

As mentioned in previous chapter, many researches have illustrated that scarcity marketing would create both positive and negative effects as well as external and internal influences. When consumers perceived scarcity and assumed that the price of products would be expensive, they would increase purchase intention effectively. This research has focused on variables of consumers purchase intention, including products scarcity, brand preference, internet marketing influence. With this understanding, the author would use questionnaire as data collecting method to collect first-hand data.

This research had carefully designed questionnaire and conducted piloting questionnaire to make the questionnaire be suitable for collecting necessary data. Given that the questionnaire is to verify whether these four independent variables would influence the dependent variable and consumers prefer limited quantity or limited time, the questionnaire has been designed accordingly.

Research Process

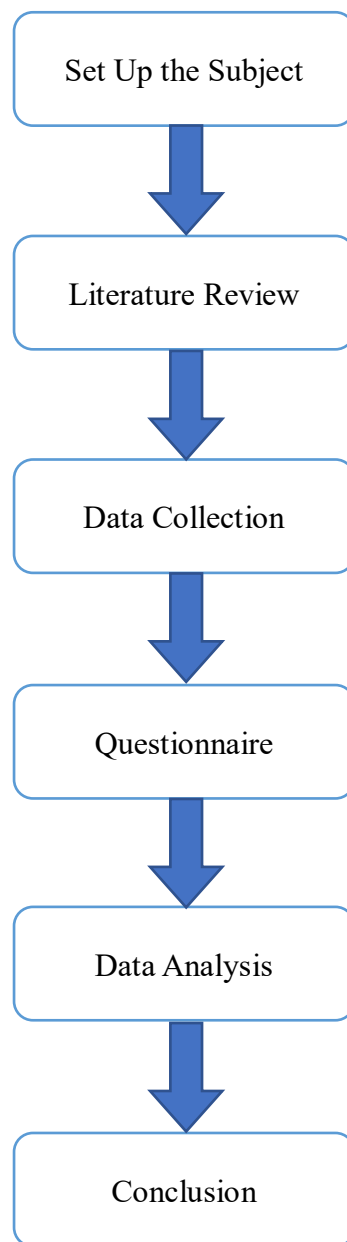


Figure 2 Research Process

The overall research flow has set as Figure 2. With this research process, the research can be completed step by step and systematically.

Questionnaire Design

This quantitative research has taken use of questionnaires to collect data. By random sampling, this research collected 504 questionnaires from the female college students via internet. The data collecting period was from August 12, 2019 to August 11, 2019.

The questionnaire had been carefully designed and checked by piloting review. The Likert scale with seven levels had been applied to the questionnaire questions. Meanwhile, to make sure the respondents are female college students, the questionnaire gives an introduction in the beginning part of questionnaire. It also does not specifically indicate any cosmetic brand in the questionnaire.

This questionnaire is designed to collect data to fulfill the research questions; thus, it had been designed by dividing into two parts. First part is the personal information; it aims to help the author to do the cross analysis. Second part is to collect college female students' opinion; it aims to help the author to find out product design, the quality of product, web promotion, sale intent, and brand. With this information, this research can find out the reason why consumers are willing to purchase or to wait for the availability of product. These are the questions and the detail of the questionnaire will be illustrated in Appendix.

Product scarcity:

1. I think there will be many people buying limited edition product.
2. I think limited edition product will soon be sold out.
3. Limited edition product are more attractive to me than general product.
4. "Limited quantity" is more attractive to me than "limited time"
5. "Limited time" is more attractive to me than "limited quantity"
6. I can wait for limited edition product for one month.
7. I will buy because it is limited edition product.
8. I will buy because it is limited time product.
9. I will not buy because I think limited edition product will soon be sold out.
10. Is "limited edition" the first factor that you buy it?

Brand preference:

1. I will not go to this counter because limited edition product is not available.
2. I will buy limited edition product because I like this brand.
3. I will have a negative comment of the brand because I get the product after one month.
4. I think the brand launch limited edition product has a positive impact on the brand.

5. I will consider the brand's reputation before buying.
6. I will be very concerned about the brand when buying limited edition product.
7. I will give priority to limited edition product of the "brand"
8. I only buy limited edition product from the "Brand"

Internet marketing:

1. I will ask people around me before buying.
2. I will search the comments of the product on the internet before buying.
3. I will read the comments of the product from bloggers or Youtubers before buying.
4. I often look at different websites whether brand launch of new products.
5. I will give priority to buy the products that recommended by bloggers or Youtubers.
6. I follow different beauty Youtubers.
7. I follow different beauty websites.

Purchase intention:

1. I will buy because the product design attracts me.
2. I will buy because the brand image is good.
3. I will not buy because the products are not in stock.
4. I would like to buy limited edition products because others buy.
5. I have a high probability of buying limited edition product.
6. I will consider whether the brand used “limited edition” as the marketing strategy before buying.
7. I would like to understand whether the brand used “limited edition” as marketing strategy before buying.

DATA ANALYSIS

This research had collected 504 questionnaires from the female college students and applied the SPSS software to analyze the collected data after carefully coding all materials. From the data analysis, this research had found out the relationship between product scarcity and customer's purchase intention. The author had used one-way analysis of variance, t-test, and linear regression analysis to analyze the data.

Reliability Analysis

Reliability analysis aims to maintain the consistency of the measurement results; the higher the reliability, the high validity of the results will be. While the alpha is ranged between 0.7 and 0.98, it means the collected data is high valid; but in the condition of many variables, the alpha is located between 0.35 and 0.7; the data is still acceptable.²¹ Nevertheless, once the alpha is lower than 0.35, it means that the data is not valid.

This research used questionnaire to collect first-hand data. The questionnaire was divided into four sections to measure including scarcity, brand preference, internet marketing, and purchase intention. As shown in Table 1, among four variables, only the result of "Brand preference" was "acceptable". The rest three variables were all "High valid". The result implied that the collected data of this research was valid.

²¹ Mary Lou Roberts and Lawrence H Wortzel, "New Life-Style Determinants of Women's Food Shopping Behavior," *Journal of Marketing* 43, no. 3 (1979).

Table 1 Reliability Test

Variables	Cronbach's Alpha	Results
Product scarcity	0.702	High valid
Brand preference	0.597	Acceptable
Internet marketing	0.732	High valid
Purchase intention	0.705	High valid

Source: edited by the author

The Result of One-way ANOVA

Table 2 Descriptive Statistics of Four Grades of Four Variables

Variables	Mean	S.D.	Minimum	Maximum	F	P
Product scarcity	4.1500	.76639	1.40	6.30	1.333	.263
Brand preference	4.2929	.67001	2.00	7.00	.884	.449
Internet marketing	5.3954	.85025	2.29	7.00	1.616	.185
Purchase intention	4.4935	.83850	1.57	6.57	2.134	.095

N=504

Source: edited by the author

A one-way ANOVA between subjects had been conducted to compare the effect of grade on product scarcity among different grades students: freshman, sophomore, junior and senior. It had found that there was no significant effect of grade on scarcity product at $p > .05$ level for the four conditions. According to the statistical analysis in Table 2, $F=1.333$, $p=0.263$. The result showed that grade did not significantly influence product scarcity.

A one-way ANOVA between subjects had been conducted to compare the effect of grade on brand preference among freshman, sophomore, junior, and senior. It had found that there was not a significant effect of grade on brand preference at $p > .05$ level for the four conditions. As shown in Table 2, $F=0.884$, $p=0.449$. The result showed that grade did not significantly influence brand preference.

A one-way ANOVA between subjects was conducted to compare the effect of grade on internet marketing among freshman, sophomore, junior, and senior. It had found that there was not a significant effect of grade on internet marketing at $p > .05$ level for the four conditions. As shown in Table 2, $F=1.1616$, $p=0.185$. The result showed that grade did not significantly influence internet marketing.

A one-way ANOVA between subjects was conducted to compare the effect of grade on purchase intention among freshman, sophomore, junior, and senior. It had found that there was not a significant effect of grade on purchase intention at $p > .05$ level for the four conditions. As shown in Table 2, $F=2.134$, $p=0.095$. The result showed that grade did not significantly influence purchase intention.

In summary, the one-way ANOVA between subjects had found that none of the four variables had been influence by the college grade.

The Result of Independent T-test

Table 3 Difference of Having Part Time or Not Having Part Time on Four Variables

Variables	Part time job	N	Mean	S.D.	Difference	t	p																																
Product scarcity	Yes	242	4.1872	.77922	.07154	1.047	.296																																
	No	262	4.1156	.75421				Brand preference	Yes	242	4.3187	.65215	.04961	.830	.407	No	262	4.2691	.68648	Internet marketing	Yes	242	5.3996	.84426	.00815	.107	.914	No	262	5.3915	.85734	Purchase intention	Yes	242	4.5360	.83923	.08181	1.095	.274
Brand preference	Yes	242	4.3187	.65215	.04961	.830	.407																																
	No	262	4.2691	.68648				Internet marketing	Yes	242	5.3996	.84426	.00815	.107	.914	No	262	5.3915	.85734	Purchase intention	Yes	242	4.5360	.83923	.08181	1.095	.274	No	262	4.4542	.83751								
Internet marketing	Yes	242	5.3996	.84426	.00815	.107	.914																																
	No	262	5.3915	.85734				Purchase intention	Yes	242	4.5360	.83923	.08181	1.095	.274	No	262	4.4542	.83751																				
Purchase intention	Yes	242	4.5360	.83923	.08181	1.095	.274																																
	No	262	4.4542	.83751																																			

Source: edited by the author

The author used t-test to understand whether part time job would or would not influences college female students' purchase intention of the limited products. From Table 3, we can see that the t of the product scarcity is 1.047, $p > .05$, the t of the brand

preference is 0.830, $p > .05$, the t of the internet marketing is 0.107, $p > .05$ and the t of the purchase intention is 1.095, $p > .05$, so there is no significant between have part time job and not having a part time job. This table shows that in product scarcity, the mean of having a part time job is 4.1872, and not having a part time job is 4.1156, there is no significant between two groups. In brand preference, the mean of having a part time job is 4.3187, and not having a part time job is 4.2691, there is no significant between two groups. In internet marketing, the mean of having a part time job is 5.3996, and not having a part time job is 5.3915, there is no significant between two groups. In purchase intention, the mean of having a part time job is 4.5360, and not having a part time job is 4.4542, there is no significant between two groups.

In summary, the t-test between subjects had found that none of the four variables had been influence by part time job of female college students.

Table 4 F test and Significance of Four Variables

Variables	F test	Significance	Significance (Two-tailed)
Product scarcity	.464	.496	.296
Brand preference	.625	.430	.407
Internet marketing	.157	.692	.914
Purchase intention	.011	.917	.274

Source: edited by the author

Table 4 had shown that the F test to present how part time job would affect the four variables: product scarcity, brand preference, internet marketing, and purchase intention. In product scarcity, the $F = .464$, $p = .496 > .05$, no significant. In brand preference, the $F = .625$, $p = .430 > .05$, no significant. In internet marketing, the $F = .157 > .05$, no significant. In purchase intention, $F = .011$, $p = .917 > .05$, no significant.

In summary, the F-test between subjects had found that none of the four variables had been influence by part time job. In other words, no matter female

college students have part time job or not; none of the four variables has been significantly affected.

The Result of Linear Regression Analysis

A simple linear regression was calculated to predict product scarcity based on income. A significant regression equation was found $F=.440$, $p=.507>.05$, with an R^2 of .001.

A simple linear regression was calculated to predict brand preference based on income. A significant regression equation was found $F=2.827$, $p=.093>.05$, with an R^2 of .006.

A simple linear regression was calculated to predict internet marketing based on income. A significant regression equation was found $F=0.079$, $p=.779>.05$, with an R^2 of .000.

A simple linear regression was calculated to predict purchase intention based on income. A significant regression equation was found $F=4.388$, $p=.037<.05$, with an R^2 of .009.

In summary, the linear regression between subjects had found that none of the four variables had been influence by income.

Correlation Matrix

Table 5 Pearson Correlation Matrix

Means, Standard Deviation, and Correlations (N=504)					
Variable	Mean	S.D.	1	2	3
Product scarcity	4.1500	.76639			
Brand preference	4.2929	.67001	.439***		
Internet marketing	5.3954	.85025	.522***	.381***	
Purchase intention	4.4935	.83850	.132**	.123**	.088

p<.05*, p<0.01**, p<0.001***

Source: edited by the author

Table 6 Linear Regression Table

Standardized Regression Coefficients from Analysis Purchase Intention (N=504)			
Independent Variables	Model 1	Model 2	Model3
Product scarcity	.439***	.281***	.275***
Brand preference		.415***	.412***
Internet marketing			.062
Model F	120.063***	129.305***	87.507***
ΔF	120.063	112.048	2.881
R ²	.193	.341	.344
ΔR^2	.193	.147	.004
Adjusted R ²	.191	.338	.340

p<.05*, p<0.01**, p<0.001***

Source: edited by the author

In this regression table, it showed that the $\beta=0.439$, $p<0.001$, product scarcity is highly influence purchase intention and highly significant. In model 2, the β of the product scarcity is 0.281, $p<0.001$ and the β of brand preference is 0.415, $p<0.001$, it is highly influence purchase intention. In model 3, the β of the product scarcity is 0.275, $p<0.001$ and the β of brand preference is 0.412, $p<0.001$, and the β of internet marketing is 0.062, it is not significant.

In summary, the linear regression between subjects had found that purchase intention had been influence by product scarcity and brand preference.

In the previous chapter, the author mentioned that many brands use internet for brand exposure. However, the linear regression of this research had found that purchase intention was not influenced by internet marketing. This result was different from that of previous researches. The possible reason of the result might be because the research targets were different; one was focus on regular product, while this research was focused on limited products. This can be another further study in the future.

CONCLUSION

In this study, the author collected female college students' opinions of product scarcity. According to one-way Anova, between subjects had found that none of the four variables had been influence by the student's grade. According to t-test between subjects, it had found that none of the four variables had been influence by part time job of female college students. According to the linear regression, the author found that product scarcity would influence purchase intention. Respondents will search comments of the products on internet. "Limited edition" is not the first factor that would affect consumers purchase the products, but consumers would choose the product if they preferred the brand. Brand is one of the reasons when consumers purchase product.

For the open-ended question, most consumers were willing to wait for the products if it would need them to wait. The shortest time was one week, and the longest time could be a year. As stated by the commodity theory, delaying provide commodity is one of the strategies of limited and scarcity supply. Consumers are willing to wait for the products because they like the brand and it is limited.

Given that this research was only focused on female college students' opinions on product scarcity. In the future, the author will expect to do more researches on consumers' psychology in a larger scale to cover not only female college students but also other age groups' perspective on product scarcity with more research variables and external factors.

APPENDIX

大學女學生對於產品稀少性的看法與購買意願之調查-以專櫃化妝品為例

親愛的填答者，您好：

首先感謝您撥空協助填答，本問卷是為了完成畢業論文所進行的資料收集；研究的目的是要了解女大學生對於限量化妝品的看法以及購買意願。本問卷資料僅為學術研究之目的，採不記名方式進行，填答資料絕不對外公開，請您放心填答。您的寶貴意見，將為本研究提供極大的貢獻，感謝您的填答！

★ 本研究對象為女大學生，若您不具此資格，則不需填答此問卷，感謝您

敬祝 身體健康 平安順利

文藻外語大學 國際事務系

研究生 劉芸君

指導教授 陳玉珍

一、基本資料

★本資料僅提供學術研究，絕不外洩，請安心填答，感謝您！

1. 年級

一年級 二年級 三年級 四年級

2. 請問您目前是否有打工？

是 否

3. 個人每月平均所得(零用錢+打工的薪水)？

5,000 元以下 5,001-7,000 元 7,001-9,000 元

9,001-11,000 元 11,001-13,000 元 13,001-15,000 元

15,001-17,000 元 17,001-19,000 元 19,001-21,000 元 21,000 元以上

二、請回答以下問題

稀少性衡量	非常不同意	不同意	有點不同意	尚可	有點同意	同意	非常同意
1. 我認為 <u>限量商品</u> 會有很多人買							
2. 我認為限量商品會很快賣光							
3. 限量商品比一般商品更吸引我							
4. “限量”比“限時”更吸引我							
5. “限時”比“限量”更吸引我							
6. 我可以接受限量商品等一個月才拿到							
7. 我會因為 <u>限量</u> 商品而購買							
8. 我會因為 <u>限時</u> 商品而購買							
9. 我認為 <u>限量商品</u> 很快賣光而不購買							
10. “限量”是您購買的首要原因嗎?							

品牌偏好衡量	非常不同意	不同意	有點不同意	尚可	有點同意	同意	非常同意
1. 我會因為買不到限量商品而不到這個專櫃消費							
2. 我會因為喜歡這個品牌而購買限量商品							
3. 對於一個月後才能拿到的商品，我會對品牌有負面評價							

4. 我認為品牌推出限量商品對品牌有正面影響							
5. 購買前，我會考慮品牌的聲譽							
6. 選購限量產品時，我會很在意品牌							
7. 我會優先購買該“品牌”推出的限量商品							
8. 我只會購買該“品牌”推出的限量商品							

網路傳播衡量	非常不同意	不同意	有點不同意	尚可	有點同意	同意	非常同意
1. 購買前我會向身邊的人徵詢意見							
2. 購買前我會在網路上搜尋產品評論							
3. 購買前我會看部落客或 Youtuber 的評論							
4. 我常常會看不同的網站來追蹤有沒有新產品推出							
5. 部落客或 Youtuber 推薦的商品我會優先考量購買							
6. 我有關注不同的美妝 Youtuber							
7. 我有關注不同的美妝網站							

購買意願衡量	非常不同意	不同意	有點不同意	尚可	有點同意	同意	非常同意
1. 我會因為產品包裝吸引我而購買							
2. 我會因為品牌形象良好而購買							
3. 我會因為商品沒有現貨而不購買							
4. 我會因為別人買到限量商品而更想得到限量商品							
5. 我購買限量商品的可能性很高							
6. 購買前我會考量品牌是否以“限量”為行銷策略							
7. 購買前我會想了解品牌是否以“限量”為行銷策略							

1. 若商品無現貨，請問多長時間您願意等? _____

問卷到此結束，非常感謝您的填答!

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