



Are makeup wearing women more attractive to guys?

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Presents

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Abstract

This research paper aims to investigate whether makeup can actually increase men's tendency to respond to women's requests or not. We attempt to investigate about women's makeup and non-makeup on men's response rate through the experiment. Moreover, we also use the survey to know the perception of men toward makeup on paper to compare with the result from our experiment. Our data conducted by ourselves as interviewers with the total of 90 sessions of experiment. The result of this study confirms that makeup can increase men's response to the women request. Furthermore, the outcomes from the experiment and survey have conflicted. According to the survey, men prefer women who wear light makeup with only eyebrows. While the experiment of wearing full facial makeup gives higher response rate than non-wearing makeup.

1. Introduction

Nowadays, we live a world where appearances are very important. People put a lot of efforts to make themselves become more attractive. Some even undergo plastic surgery. There are many ways to make yourself more appealing, one of that is wearing makeup. Makeup is a social tool used to make women appear more attractive and more professional in a variety of social environments. We can see that cosmetics have played an important role in the society. Moreover, there has been an increasing rate of beauty blogger, who reviews cosmetics through Youtube, Facebook, or their own blog. Therefore, we can see that women pay attention to their look in order to increase attractiveness and to obtain accompanying social benefits. In this paper, we will analyze and answer the three research questions which are; how men value cosmetics? How does the results affect cosmetic industry? Do men react differently between wearing makeup and non-wearing makeup women?

In perceptions of men, they probably think that makeup is not that important and natural look would bring women a beauty. Adrien (2016) mentioned that “less is more”, he did not believe in makeup because if a girl does not exude beauty from within, there is no amount of makeup will be able to cover that up or another author (Rondrick, 2015) said that a woman’s make up should only accentuate her natural features. Too much makeup tends to take away women’s charm. However, not many researchers focus on the factors of wearing and non-wearing makeup women that would affect the response rate of men. Hence, in this paper, we will test whether makeup can increase men’s respond to women’s request.

A few research papers that are related will be discussed as well as some primary data that will be used for some arguments. We have some hypothesis for this research questions. The first one is that elders who are in the range of 45-60 years old would consider makeup as not necessary for women. While teenagers (below 18) and adults would see the importance of makeup to women. Lastly, we think that the results of response rate to non-wearing makeup

would be the opposite to men's opinions towards makeup. This paper composed of 5 sections, starting with background of cosmetics, literature review, economic framework, analysis and discussion, conclusion and limitation.

2. Background of cosmetics

2.1 History of makeup

The first cosmetics were invented by Egyptians which they used copper and lead as primary materials. Cosmetics is an essential product in the present time for female in order to do everything. For instance, hide pores, smooth complexions, and also turn the pale green of your eyes a vivid shade of emerald. Over the centuries, women used burnt matches to darken their eyes, berries to stain their lips and young boys' urine to fade their freckles. Some women even swallowed ox blood in some misguided attempt to improve their complexions. The practice of beautifying one's self dates back to ancient times, as early as 1500 B.C. Painting around the eyes with various colors and using kohl to darken brows and eyelashes was common in ancient Egypt and Arabia (Diamond & Diamond, 2008). In addition, wearing makeup can be involved with psychology as well.

2.2 Psychology

Wearing makeup can significantly alter others' perceptions of a woman's personality. However, what people infer from a made-up appearance varies depending on the observer's gender. "For the most part, what a woman observes in the mirror is what she uses as a measure of her worth as a human being" (Lerner, Karabenick, & Stuart, 1973). The majority of research on women and their self-esteem has been related to how they feel about their body shape and size (Trampe, Siero, & Stapel, 2007). A woman can use cosmetics to both hide things she does not like and accentuate things she does. Makeup holds the possibility for a woman to personally transform herself which leads to self-confidence.

Wearing makeup is more than a physical experience for many women. Beyond positive or negative emotions, there are more of a psychological response to makeup. Studies have shown that women's faces are more attractive to both sexes during the fertile phase of their menstrual cycles (Roberts, S., Havlicek, J., Flegr, J., Hruskova, M., Little, A., Jones, B., Perrett, D., & Petrie, M. 2004). Makeup exaggerates these signs of fertility and sexual availability, thus making a woman seem more appealing. The darker the eyes are in relation to the rest of the face, the more attractive a woman appears. In fact, the darkness of the eyes compared to the rest of the face is important, the exact same face can be perceived as either male or female depending on the level of contrast (Russell, R. 2009). It is found that women with darker lips make it appear more feminine and attractive. But it turns out that the color of the lipstick matters, too. Moreover, the colors applying can reflect menstrual cycle of likewise.

When women are ovulating, the relative concentration of the hormone estrogen rises. This hormonal shift enhances vascular blood flow under the skin's surface, which has a number of side effects. Women near ovulation (when they're most fertile) reported that they are more easily turned on and have more interest in sex. They may try to put redder lipstick to express a natural signal of fertility (Stephen ID, & McKeegan AM, 2010). Makeup works because our bodies are programmed to perceive sexual signals from the coloration of our faces. It is globally known that makeup is used especially to increase attractiveness.

2.3 Universal attractiveness

Nowadays, there are many advertisements that promote the elusive beautiful image to women by using photo-shopped and computer-enhanced models in advertisements. Impossible standards of beauty were built up from society causing the feelings of inadequacy among women. In 2008, the YWCA USA developed a report, *Beauty at Any Cost*, which

discussed the consequences of the beauty obsession on women and girls in America. The report showed that the beauty obsession not only resulted in decreased levels of self-esteem, but also brought large amount of money from the pocket of many Americans. The YMCA reported that \$7 billion is spent each year on cosmetics (Beauty at Any Cost, 2008, p. 7). It stated that the association between self-objectification and anxiety about appearances and feelings of shame has been found in adolescent girls (only 12–13 years old) as well as in adult women (Beauty at Any Cost, 2008, p. 6). Girls who spent the most time and effort on their appearance suffered loss in confidence. Moreover, the physical beauty impacts women economically through their workplaces. Lookism or prejudice which based on physical appearance and attractiveness, is an increasing equal-opportunity problem. One research found that workers with “below average” looks tended to earn about 9% less money than workers who were “above average” in appearance, and that those who were “above average” in appearance tended to make about 5% more money than those who were “average looking” (Beauty at Any Cost, 2008, p. 3). Despite the fact that work productivity has not been scientifically linked with physical attractiveness, one study found that employers believe that good looks contribute to the success of their companies. Even the workplaces also view wearing makeup more attractive than those without makeup.

There is also a study found that women viewed the women as more attractive with makeup than without. The women themselves felt that they were more physically attractive with makeup, and often overestimated their attractiveness with the makeup, while underestimating their attractiveness without makeup (Ann Marie Britton, 2012). Since the overestimation of attractiveness while wearing makeup could very possibly lead to confidence and increased self-image. Nonetheless, women have different objective of wearing makeup depending on many factors.

2.4 Purpose of makeup

Appearance is tied directly to attractiveness. A physical attractiveness is proudness of the possessions, it is a quality of human that intrinsic to many positive qualities. For example, success and happiness, are associated with attractiveness. However, there are many purposes of wearing makeup depending on the activities.

According to Beausoleil (1992), many women report having different makeup routines depending on what they expect to do during the day. Women often engage in specific appearance practices to distinguish between day and night looks, basic looks and looks for special occasions, etc.” (Beausoleil, 1992). For example, little amount applied could reflect the everyday routines makeup. While heavy makeup can also reflect the special occasions. Perceptions of females’ external characteristics tend to change when they apply different amounts of makeup. Some girls even change ways of make up in order to fit in the order to fit in the ideal of beauty.

In America, women are constantly seeking ways to change their appearance to fit the American ideal of beauty which they are bombarded by the media – big blue eyes, clear skin, rosy cheeks, and pouty red lips (Poran, 2002). As cosmetics companies present the made-up face as ideal, many women use makeup as an attempt to conform to these images of ideality. According to Kelson, Kearney-Cooke, and Lansky (1990), there are certain pressures on women to meet cultural standards of beauty, as well as rewards involved for those women who use cosmetics to reach these standards, such as increased attention from the opposite sex and idol recognition from other females.

Existing evidence suggests that women apply their makeup according to the situation they are preparing for. “It seems that women’s appearance practices are almost solely, or at least largely, determined by concerns with situations, occasions and audiences,” (Beausoleil, 1992). For example, when going to job interview, the makeup should look simple and clean.

As we can see, cosmetics do not only have crucial roles in girls' lives but also influences our society.

2.5 Influence of cosmetics

In our society, women are influenced with the images of what our society deems as beautiful. They tend to feel inadequate which their feelings of confidence and expectations of self are affected. "When one's body is disliked because of deviation from norms of function or appearance, replicated evidence shows that anxiety, insecurity, and low self-esteem are regular correlates" (Jourard, 1964). Therefore, cosmetics has played a role in order to make them feel more self-confidence.

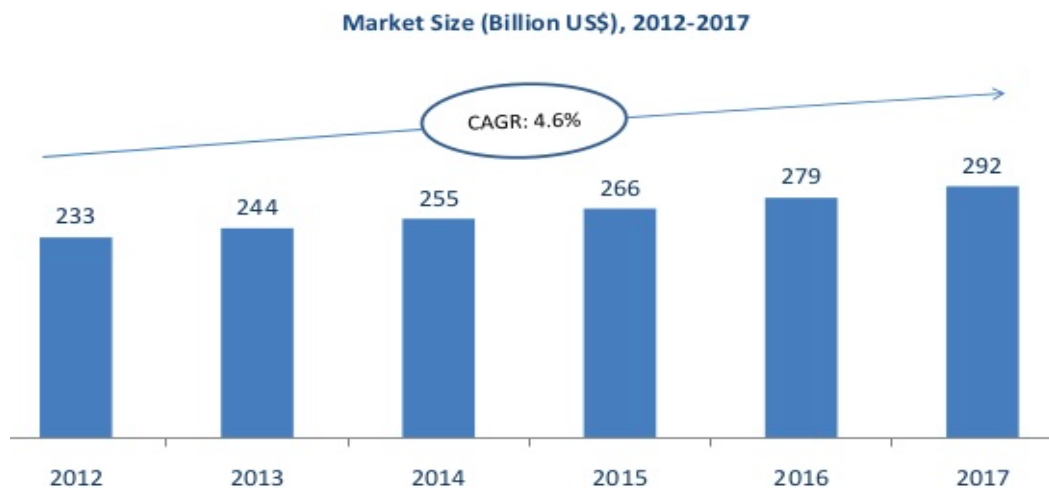
An abundance of research exists on how women feel when comparing to the ideal of beauty that exists in current society. However, not many research that talked about the action to improve women's confidence - applying cosmetics. Cosmetic products such as foundation, mascara, and blush are a quick and impermanent means to improving one's appearance and thus improving confidence (Miller & Cox, 1982). They are a quick means of improvement versus more long-term changes such as diet and exercise. For many, makeup is a way to invoke one's self (LaBelle, 1988). Using different products and colors, women can use makeup to explore and portray their own individuality. Cosmetics serve as a sign of femininity in their symbolization of stereotypical feminine values. Moreover, they are one of the ways to enhance feminine beauty ideals and serve to help women conform to our society's beauty expectations. Since they believed that cosmetics will positively affect their level of physical attractiveness.

Cosmetics has influenced women with the effects on the appearance ideals which mostly represented by the medias and her friends. Consistently, the majority of women apply cosmetics to gain self-esteem and confidence as makeup could conceal their negative feeling

on appearance. Makeup also emphasizes beauty which including clearer complexion, younger look or matured look, disguise blemishes and enhance facial features in order to make people notice them, to appear appealing and to receive compliments from others.

2.6 Growth of Cosmetic

Figure1: Market Size of Global Cosmetics Industry, 2012-2017



Source: RNCOS (2015)

Global cosmetics market is expected to grow to \$292 billion by 2017, with the CAGR of 4.6%. There is a significant rise in disposable incomes over the past decades. The growth in global economies, changing lifestyles, rising demands of skin and sun care products due to varying climatic conditions encourage the growth of the cosmetics market. A shift of preference towards natural and organic beauty products, particularly in U.S. and European countries, fosters the growth of the cosmetics market. In 2016, Thailand's cosmetic industry was valued at approximately \$5.8 billion. It is ranked 16th in the world and 3rd in Asia after Japan and South Korea. The annual growth rate in Thailand is ranging between 8 to 10 percent on average if it is not affected by factors such as Thai politics or global economic conditions (Petchanet Pratrungkrai, 2015). The reasons why cosmetic industry has expanded very fast are the increasing in consumer spending and rapid product development. Moreover, the social factors which that changed attitude towards looks among the younger generation

and a greater demand for aesthetics services are one of the most important factors that drive cosmetic industry in Thailand. Chris Barker (2013) claimed that Thai people pay more attention to their beauty since there are more environmental factors damaging the skin in daily life, such as pollution and hot weather.

3. Literature Review

3.1 Men perceptions towards makeup

Due to our assumptions that men perceptions towards women's makeup is not as necessary as women think. Since there are researches that studied men perceptions towards makeup, from interviewing, men think that makeup is not that important to women and some even reveal that too much make up make women look less attractive. Christie Wilcox (2010) said that "I hear my female readers, MY(boyfriend/husband/whoever) says that I look prettier without makeup!". However, their actions speak louder than their words, there are many studies show that when shown pictures of women with and without their makeup, men consistently rate images with makeup as more attractive, confident, and healthier. Men also think women wearing makeup come off as more intelligent and having higher earning potentials and more prestigious jobs. Cox and Glick (1986) examined how average-looking woman were perceived after a professional make-over versus cosmetic-free and found that cosmetics significantly enhanced the impression of attractiveness and femininity and sexiness. Workman and Johnson (1991) instructed female participants to view one of three colored photographs of a professional model wearing either heavy, moderate, or no cosmetics. They found Cosmetics use did significantly affect impressions of attractiveness, femininity, and morality.

Cash, Dawson, Davis, Bowe and Galumbeck (1989) conducted the experiment which found that male judgments were more favorable when the women were photographed with cosmetics than when they were cosmetics free, whereas female judgments were not affected by the presence or absence of makeup. McKeachie (1952) found that young male students evaluated young women with makeup as more frivolous and more interested in the opposite sex. Mulhern, Fieldman, Hussey, Leveque and Pineau (2003) asked male and female participants to view a set of five photographs of women volunteers and to rank each set from most to least attractive. Volunteers were made up by a beautician under five cosmetics conditions: no makeup, foundation only, eyes makeup only, lips makeup only and full facial makeup (foundation, eyes and lips). It was found that faces with full makeup were judged more attractive than the same faces that were makeup free. They found faces with full makeup were judged more attractive than the same faces that were makeup free. Moreover, eye makeup alone yielded higher levels of mean attractiveness ratings than foundation makeup only, and the latter yielded higher levels of mean attractiveness rating than lip makeup only. In addition, the experiment of comparing supermodel photographs also resulted intriguingly.

According to Alex L. Jones's Literature, he examined how professionally applied cosmetics alter attractiveness can compare this effect with the variation in attractiveness observed between individuals. He has collected 45 images of supermodel without their makeup from the internet. These images were casting photographs for Louis Vuitton's runway show. All pictures were taken with the models looking directly into the camera, with a neutral expression. He then collected the same models with cosmetics on and selected images where they had a neutral expression and looking directly into the camera in order to match the casting photographs as closely as possible. The procedure is to let men choose between with and without cosmetics. As before, models were rated as more attractive with

cosmetics than without. Robin (2016) said that professionally-applied cosmetics produce a larger effect than self-applied cosmetics. He concluded that using cosmetics increases perceptions of attractiveness compared to no cosmetics, with several novel findings and caveats. To elaborate clearer outcomes, there is another experiment conducting at the bar.

Nicolas Gueguen developed the research which explored the effect of makeup on the courtship behavior of men toward women in a real situation, as contrasted with previous research where impression formation of facial attractiveness was evaluated in a laboratory with the help of photographs. Nicolas did the research by doing the experiment at the bar. The hypothesis was the women with facial cosmetics would be solicited more often by men for a date than the same women without cosmetics, and that the latency between entering the bar and the first solicitation would be shorter for the cosmetic condition. Moreover, the effect of makeup might not only enhance physical attractiveness but also serve a cue to males that this female might be available. Cosmetics also have been found to enhance some factors associated with greater attractiveness for men in dating relationships. This paper suggested that women can successfully use cosmetics to increase their attractiveness and to encourage men to establish contact with them. However, there have been some limitations in this study since this experiment will test with only men that go to the bar.

Our experiment will eliminate this limitation by doing the experiment at Siam Square in order to capture almost every group of men which are teenager, working age and the elderly. Another limitation is some factors are difficult to control, such as changes in facial expression and body language, could have influenced their attraction. But our experiment will be asked directly to men so this problem might not occur.

4. Economics Framework

Incentive economics motivate people to behave in a certain way, while preferences are the people needs, wants and desires. Economic incentives provide you the motivation to pursue your preferences. They usually involve money, but they can also involve goods and services. Economic Incentives are offered to influence people's behavior. Economic incentives can be both positive and negative to people.

- Positive economic incentives reward people financially for making certain choices and behaving in a certain way. They reward people with money or some sort of financial gain such as a better price, a free item, or an upgraded item. Coupons, sales, freebies, discounts, and rewards can be positive economic incentives.
- Negative economic incentives punish people financially for making certain choices and behaving in a certain way. These incentives cost you money. Fines, fees, and tickets can be negative economic incentives.

In this experiment, cosmetic is the incentive economics since it can influence men to do the survey. There are many companies that use cosmetic as the incentive economics for example Uniqlo. They use make-up trending program with their employees because Uniqlo believes that well appearance employee will appeal more consumers. Moreover, the airlines companies also use cosmetic as the incentive economics as we can see from the air hostess and receptionist. It is clear that not only the strategies of marketing will convey more consumers but also the appearances of employees will attract more people. Therefore, behavioral economics is playing roles with the consumer biases.

Behavioral economics studies the effects of psychological, social, cognitive, and emotional factors on the economic decisions of individuals and the consequence for market prices, returns, and resource allocation. The behavior bias is the important issue that

ingrained aspects of human decision-making processes. There are three categories of biases which are based on preferences, beliefs, and decision-making processes. For preferences, they are affected by emotions and psychological experiences. Beliefs are often formed by implicit and unreliable rules of thumb. Decision-making processes for making choices which often occur by adopting unreliable decision-making shortcuts. So, behavioral bias can affect each participant who joined our survey. Each individual has different aspects towards each interviewer, survey, and types of experiment that we have conducted. The way of asking for cooperation might not be consistent. Thus, the response rate of each interviewer may vary and the answer of survey might give different outcomes because not every participant is rational.

5. Methodology

Since our research paper investigates whether makeup affect men's perception, our group decided to do the survey and regression analysis of the factors that might affect men perceptions towards makeup. Apart from the survey, we chose to do the experiment as well. We believe that only collecting opinions through a survey may be inadequate to know men's perceptions. Therefore, the experiment will assist us conducting more accurate results because it is a superior methodology than survey and men may not be fully aware how much makeup has impact on their tendency to respond.

5.1 Participants

Participants are men who do not come with any women. So we can easily get the answers without any bias because we think that there could be bias when answering questions with women standing nearby. Moreover, we choose men who are not busy. We will observe around 15-20 persons per session for around 15 minutes depending on density of people surrounding the area.

5.2 Procedure

To begin the procedure, we do the survey by constructing around 10 questions about men perceptions towards women who wear makeup. Moreover, we also question about their opinions and how they value cosmetics. To closely examine the questionnaire, we separate the different levels of the importance and women cosmetics into three levels which are heavy, light and none. In order to make our survey accurate as much as possible. The questionnaire has shown in Appendix 1.

5.3 Experiment

we also do the other method to ensure that there is no or least bias towards our result. Since there could occur the bias by people who participate in the survey. Therefore, we come up with the experiment. The experiment will be conducted by ourselves as interviewers (Gain, Nan, and Praew). There are sessions consisted of interviewers with and without makeup. In order to see how people respond or participate in our experiment to do the survey. To compare that wearing makeup will give us higher response rate or not.

Our experiments were conducted on Monday, Wednesday, Friday, Saturday, and Sunday. These days will be taken place twice by interviewers with and without makeup. There will be three sessions per day, 15 minutes per session. The sessions composed of three periods which are morning, afternoon, and evening. The location is taken place at Siam which contains variety of ages such as teenager, working age, and the elderly. The interviewer will be Nan, Praew, and Gain wearing the same outfit so there will not be some bias toward clothes. For each interviewer, 30 observational periods were obtained (five days, three sessions, and two rounds (with/without makeup). So, our experiment will be around 90 observations with approximately 1,300 participants in our experiment. The experiment and survey were conducted one week in March and one week in April, 2017.

5.4 Regression Analysis

As the research paper investigates whether wearing and non-wearing makeup could affect response rate of men to do the survey and also prove our hypothesis. We would be used to run the multiple linear model by Ordinary Least Square (OLS) method. Our regression model is:

$$\begin{aligned} \text{Response rate of men} = & \beta_0 + \beta_1 \text{Makeup} + \beta_2 \text{Nan} + \beta_3 \text{Praew} + \beta_4 \text{Morning} \\ & + \beta_5 \text{Afternoon} + \beta_6 \text{Weekday} + \varepsilon_i \end{aligned}$$

On the left-hand side, it is a dependent variable (Response rate of men) which determined by all independent dummy variable. In this paper, we focus on one dependent variable which is the response rate of men towards makeup. For the dummy variables, we have six dummy variables which concern four topics (Makeup, Interviewers, Times, and Days); 1. Makeup: Makeup(=1 if wearing makeup, = 0 if non-makeup) 2. Interviewers: Praew(= 1 if Praew, = 0 if otherwise), Nan(= 1 if Nan, = 0 if otherwise) which will be 2 dummies and we set Gain as a base case. 3. Time: Morning(= 1 if @time1, = 0 if otherwise), Afternoon(= 1 if @time2, = 0 if otherwise) which will be 2 dummies and we set evening as a base case. 4. Day: Weekday(= 1 if weekday, = 0 if weekend)

To examine the relationship between the response rate of men as dependent and independent variables, makeup, interviewers, time and days data were collected from our experiment. Table 2 is the statistics of Variables that Can Increase Men's Response during our 90 experiment sessions of three interviewers, Nan, Praew, and Gain.

Table 2: Summary Statistics table

VARIABLES	Observation	Mean	Std. Dev.	Min	Max
Response rate	90	0.59	0.21	0.20	1.00
Makeup	90	0.50	0.50	0.00	1.00
Nan	90	0.33	0.47	0.00	1.00
Praew	90	0.33	0.47	0.00	1.00
Morning	90	0.33	0.47	0.00	1.00
Afternoon	90	0.33	0.47	0.00	1.00
Weekday	90	0.60	0.49	0.00	1.00

Source: Author's own compilation

According to Table 2, makeup, Nan, Praew, morning, afternoon and weekday are dummy variables. Meaning that the minimum value is zero and the maximum is one for these six dummy variables. Since each interviewer conducted 30 sessions of experiment, the mean is equal to 0.33. The periods of time also have mean of 0.33 because the observation conducted 3 sessions per day, morning, afternoon, and evening. For weekday variable, our group did the experiment in weekday (Monday, Wednesday and Friday) more than weekend (Saturday and Sunday) causing the mean equals to 0.6. For makeup variable, interviewers did the experiment by wearing and not wearing makeup with the equal amount of days, therefore mean equals 0.50.

5. Result and Discussion

5.1 Experiment analysis

After we have done our experiment, we use the multiple linear regression model to run an Ordinary Least Square (OLS) regression analysis through STATA 13. We chose this type of regression because we want to predict the value of a variable based on the value of more than one variables. From the regression analysis, mainly consisted of dummy variables since our independent variables are qualitative. We have come up with the factors that might

have effects on men's response rate which are wearing cosmetics, interviewers, days, and time periods. Moreover, R-squared shows that the independent variables are able to explain the dependent variable by 66% and the F-ratio tests whether the overall regression model is a good fit for the data. The output shows that the independent variables statistically significantly predict the dependent variable, $F(6, 83) = 27.04$, $p < .0005$

Table 1: Regression Result

VARIABLES	(1) Situation 1	(2) Situation 2 Makeup only	(3) Situation 3 Makeup and Interviewers	(4) Situation 4 Makeup, Interviewers, and Days
Makeup	0.164*** (0.0266)	0.164*** (0.0409)	0.164*** (0.0407)	0.164*** (0.0338)
Nan	0.0540 (0.0326)		0.0540 (0.0498)	0.0540 (0.0414)
Praew	-0.0303 (0.0326)		-0.0303 (0.0498)	-0.0303 (0.0414)
Morning	-0.263*** (0.0326)			-0.263*** (0.0414)
Afternoon	-0.147*** (0.0326)			-0.147*** (0.0414)
Weekday	-0.196*** (0.0272)			
Constant	0.753*** (0.0365)	0.506*** (0.0289)	0.499*** (0.0407)	0.635*** (0.0414)
Observations	90	90	90	90
R-squared	0.662	0.154	0.182	0.448

Standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

The main purpose of this regression is to test whether these factors have any effects on men's response rate on participating in the survey and we want to know whether wearing makeup can really affect the response rate or not. Firstly, we test only makeup and then add interviewers, times, and days, respectively. Thus, we can see that adding more variable still affect wearing makeup significantly and R-square also increase as well. This result confirmed

that wearing makeup can affect the response rate of men and there are other factors that affect response rate as well. The outcome turns out to be that wearing makeup have positive and statistically significant relationship with the response rate of men to do the survey which can increase the response rate by 16.40%. So, it shows that men will be more likely to respond to wearing makeup woman than those without. There are other effects that can affect the response rate of men which are times and days of doing the experiment. On the other hand, times which are morning, afternoon and weekday have negative relationship with the response rate of men. If we do the survey in the morning and afternoon, the response rate will decrease by 26.3% and 14.7% respectively. Comparing to doing experiment in evening, it implies that participants may have some errands to be done. For weekday experiment, it makes the response rate fall by 19.6% compare to weekend. Since the session were conducted in rush hour. However, there are some dummy variables are not statistically significant as shown in Table 1. We can see that the interviewer variables which are Nan and Praew have $P \text{ value} > 0.0005$. Implying that interviewers did not affect the response rate of men to do the survey. Consequently, not only makeup that tend to affect men's response rate but also external factors.

5.2 Survey analysis

Table3: Questions and Answer of the Survey

Survey Question and answer	percentage
Ages	
under 18	48%
19-25	20%
26-35	8%
36-45	19%
Above 45	5%
Income	
Under 15,000	45%
15,000-30,000	26%
30,000-50,000	13%
50,000-100,000 / Above 100,000	8%
What purpose that you think women have for makeup?	
Confidence	81%
Camouflage	12%
Working	21%
Sex appeal	24%
Addiction	9%
How much makeup do you like on women's face?	
Heavy	19%
Light	76%
None	5%
How would you value cosmetics?	
High	27%
Medium	62%
Low	11%
Do you separate woman with/without makeup?	
Yes	59%
Slightly	39%
No	2%
Is makeup necessary to women?	
Very important	29%
Important	47%
Moderate	20%
Least	4%
Would you buy cosmetics for your girlfriend?	
Yes	74%
No	26%
Would you wear makeup in your daily life?	
Yes	29%
No	71%

Source: Author's own compilation

From the survey above, it can imply that almost half of the respondent are teenagers who mostly get income lower than 15,000 baht. About 80% of the men think that the purpose of makeup is for confidence. Approximately 20% of men think that the purposes are for working and sex appeal. Only 10% of men think that women wear makeup for camouflage and addiction.

For the question that makeup necessary to women or not, almost half of the respondents' response that it is important and about 30% think that it is very important. When classified the respondents into five levels of income which are income lower than 15,000 Baht, between 15,000-30,000, between 30,000-50,000, between 50,000-100,000 and higher than 100,000, men see the importance of cosmetics to women in every level of income (Appendix 2). Moreover, we categorized the respondents into five levels of age and can imply that different level of age will see the different level of the cosmetics importance. Men at age above 45 will see the importance of cosmetics less than other ages (Appendix 3). Since our group think that the men at this age may have family or already married, so they might not interest about the beauty of the women.

When ask men to value the cosmetics, 60% of the men think that the value is medium and 30% think that the value is high. Only 10% of men think that the value is low. Therefore, it might conclude that men think that the cosmetics is important to women and quite give the value to it. For the question that men can separate women with/without makeup or not, about 60% of men think that they can separate. However, our group consider that men just think they can separate but they cannot actually. For the question of how much makeup do you like on women's face, approximately 80% of men prefer the light level and 20% prefer the heavy level. Only five percent of the men favor no-makeup women. When look at each level of age, most of the men in every level of age prefer the light level of makeup (Appendix 4).

When ask the men will you buy the cosmetics for your girlfriend or not, about 70% of men will buy. When divided the respondents into each level of income, it can see that men will buy the cosmetics for her girlfriend regardless of how much the income is (Appendix 5). The data we collected mainly consists of teenagers who has income lower than 15,000 Baht per month so there are more men in the lower level than high level of income who will buy the cosmetics for his girlfriend. Moreover, in the last question of the survey which ask the men that they will use the men cosmetics or not, about 30% will use (Appendix 6). The behavior of buying cosmetics of men can interpret to the increasing trend of the cosmetics industry though only 30% of men will buy the cosmetics. In the past, men did not use the cosmetics but currently there are cosmetics for men. Therefore, these two factors may imply to the higher growth of cosmetics industry.

6. Conclusion

Forms of body decoration exists in all human cultures. However, women are more likely to engage in appearance modification, especially through the use of facial cosmetics. From our experiment of doing survey by asking them to respond to our activity with and without cosmetics on, the response rate is higher when interviewers wear makeup. Therefore, makeup is applied to help manipulating men's perceptions toward a woman.

From our hypothesis, elders would consider cosmetics as unnecessary while teenagers and adults see the importance of makeup, it turns out that most of men, even elders, answered that cosmetics is necessary for women.

For the part of experiment and survey, the outcomes are negatively related. According to the experiment, wearing makeup results in higher response rate. Meaning that men tend to prefer women with cosmetics. However, survey provided the opposite results. Men tend to prefer women with light makeup who draw only eyebrows. This implies that men may not always be truthful in their response. This finding suggests that only conducting a survey may not give accurate results.

In economics aspects, cosmetics play an important role in many sectors. It was used for economics incentive. For example, some cosmetics commercial claim that wearing makeup will help attract men. In addition, many careers need cosmetics in order to attract people participate in economic activity.

Last but not least, there now exists convincing evidence that using cosmetics seem to explain a larger proportion of variation in attractiveness judgements than not wearing it. We conclude that men appeared to respond to wearing makeup women than who are not.

7. Limitations and Further Improvement

There are several limitations of this research paper which are limited locations, participants, and interviewers. Initially, the research is only conducted at Siam Square, Bangkok. Even though Siam seems to consist of many ranges of ages, the participants we collected are mostly teenagers. Moreover, interviewers were located in different area of Siam Square. Some areas were more crowded than others which might result in different numbers of participants. Next, the participants that we collected are merely men. Thereby, we can analyze only men's opinions. However, participants might have different attitudes towards interviewers. We could not control this factor because everyone seems to have different perspective and there were different interviewers as well. The last limitations would be interviewers. There were only three interviewers in the experiment which were Nan, Praew,

and Gain. Due to the uniqueness of each interviewer, it may result in different views of men too.

For further study, we can add other independent variables such as location since we think different locations can capture more range of ages, various incomes of participants, or more interviewers to participate in the experiment.

References

- Barker, C. (2013). Growing market for Thai skin care predicted. Retrieved March 19, 2017, from <http://www.cosmeticsdesign-asia.com/Market-Trends/Growing-market-for-Thai-skin-care-predicted>
- Beausoleil, N. (1992). Makeup in everyday life: An inquiry into the practices of urban American women of diverse backgrounds. In N. Sault (Ed.), *Many mirrors: Body image and social relations* (p.33-57). New Jersey: Rutgers University Press.
- Beauty at any cost: A YWCA report on the consequences of America's beauty obsession on women and girls. (2008). Retrieved from <http://www.ywca.org/atf/cf/{3B450FA5-108B-4D2E-B3D0-C31487243E6A}/Beauty%20at%20Any%20Cost.pdf>
- Behavioral economics. (n.d.). Retrieved May 13, 2017, from https://en.wikipedia.org/wiki/Behavioral_economics
- Bender, R. G. (2016, June 15). Wearing Makeup Influences How Men and Women Perceive Your Social Status, in Different Ways. Retrieved March 17, 2017, from <https://www.yahoo.com/beauty/wearing-makeup-influences-men-women-000000163.html>
- Buegeler, C. (2015). Makeup, Your Mind: Social Expectations and Perceptions of Makeup Use. 42-62. Retrieved March 17, 2017, from <https://bir.brandeis.edu/bitstream/handle/10192/30533/BuegelerThesis2015.pdf?sequence=1>
- Britton, A. M. (2012). The Beauty Industry's Influence on Women in Society. 13-21.
- Cash, T. F., Dawson, K., Davis, P., Bowen, M., & Galumbeck, C. (1989). Effects of Cosmetics Use on the Physical Attractiveness and Body Image of American College Women. *Journal of Social Psychology*, 129(3), 349-355. Retrieved from EBSCO databases (5387677)
- Cosmetics History and Facts. (n.d.). Retrieved May 2, 2017, from <http://www.historyofcosmetics.net/>
- Cox, C.L., Glick, W.H., (1986). Resume evaluation and cosmetics use: when more is not better. *Sex Roles* 14, 51–58.
- Diamond & Diamond (2008). *The world of fashion* (4th ed.). New York: Fairchild Books Inc.
- Economic Incentives in Our Community. (n.d.). Retrieved March 29, 2017, from <http://www.econedlink.org/lesson/390/Economic-Incentives-Our-Community>

- Gardner, S. S. (2017, January 29). History of Makeup. Retrieved March 20, 2017, from <http://www.webmd.com/beauty/history-makeup>
- Gleeson, H. (2016, March 21). Studies show that men like women who wear less makeup. Retrieved March 18, 2017, from <http://www.abc.net.au/news/2016-03-21/studies-show-that-men-like-women-who-wear-less-makeup/7262952>
- GRENIER, A., & WILLIAMSON, R. (2014, February 25). What Men Really Think About Your Makeup (J. Luciani, Ed.). Retrieved April 2, 2017, from <http://www.shape.com/lifestyle/beauty-style/what-men-really-think-about-your-makeup>
- Gueguen, N. (n.d.). Brief report the effects of women cosmetics on men approach an evaluation in a bar. Retrieved March 15, 2017, from http://www.communicationcache.com/uploads/1/0/8/8/10887248/brief_report_the_effects_of_womens_cosmetics_on_mens_approach_an_evaluation_in_a_bar.pdf
- J. (1964). Makeup as Self Expression (K. Castano, Ed.). Retrieved March 20, 2017, from <http://fosterstyle.com/makeup-as-self-expression/>
- Jones, A. L., & Kramer, R. S. (n.d.). Facial Cosmetics and Attractiveness: Comparing the Effect Sizes of Professionally-Applied Cosmetics and Identity. Retrieved April 2, 2017, from <http://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0164218#sec002>
- K. (2015). Opportunity: Analysis on the multi-billion dollar cosmeceutical market. Retrieved March 17, 2017, from http://2015icatcher.blogspot.com/2015/04/its-small-and-beautiful-world-franchina_10.html
- K. (2016, June 25). The Surprising Psychology Behind Makeup. Retrieved March 23, 2017, from <https://www.psychologytoday.com/blog/the-truth-about-exercise-addiction/201606/the-surprising-psychology-behind-makeup>
- Kelson, T. R., Kearney-Cooke, A., & Lansky, L. M. (1990). Body-image and body beautification among female college students. *Perceptual and Motor Skills*, 71, 281-289.
- Korichi, Rodolphe. Why women use makeup: Implication of psychological traits in makeup functions. *Journal of Cosmetic Science*. 5 9: 127-137.
- La Belle, J. (1988). *Herself beheld: The literature of the looking glass*. Ithaca, NY: Cornell University Press.

- Lerner, A., Karabenick, B., & Stuart, S. (1973). Physical attractiveness, body attitudes, and self-concept in late adolescents. 307-316. Retrieved March 17, 2017, from <http://link.springer.com/article/10.1007/BF02214744>
- Luciani, J. (n.d.). What men really think about your makeup? Retrieved March 17, 2017, from <http://www.shape.com/lifestyle/beauty-style/what-men-really-think-about-your-makeup>
- Malley, R. O. (2016, June 16). Wearing Makeup Influences How Men and Women Perceive Your Social Status, in Different Ways. Retrieved March 20, 2017, from <http://www.swansea.ac.uk/humanandhealthsciences/news-and-events/latest-research/wearingmakeupinfluenceshowmenandwomenperceiveyoursocialstatusindifferentways.php>
- McKeachie, W. J. (1952). Lipstick as a determiner of first impressions of personality: an experiment for the general psychology course. *The Journal of Social Psychology*, 36, 241-244.
- Miller, L. C., & Cox, C. L. (1982). For appearances' sake: Public self-consciousness and makeup use. *Personality and Social Psychology Bulletin*, 8, 748-751.
- Mulhern, R., Fieldman, G., Hussey, T., Levequ, J., & Pineau, P. (2003). Do cosmetics enhance female Caucasian facial attractiveness? Retrieved March 17, 2017, from <http://onlinelibrary.wiley.com/doi/10.1046/j.1467-2494.2003.00188.x/abstract>
- Poran, M. A. (2002). Denying diversity: Perceptions of beauty and social comparison processes among Latina, Black, and White women. *Sex Roles: A Journal of Research*, 47(1-2), 65- 81.
- Pratruangkrai, P. (2015). Thai beauty sector looks set for rosy future. Retrieved March 18, 2017, from <http://www.nationmultimedia.com/news/business/EconomyAndTourism/30257934>
- Roberts, S., Havlicek, J., Flegr, J., Hruskova, M., Little, A., Jones, B., Perrett, D., & Petrie, M. (2004). Female facial attractiveness increases during the fertile phase of the menstrual cycle *Proceedings of the Royal Society B: Biological Sciences*, 271 (Suppl_5) DOI: 10.1098/rsbl.2004.0174
- Russell, R. (2009). A sex difference in facial contrast and its exaggeration by cosmetics *Perception*, 38 (8), 1211-1219 DOI: 10.1068/p6331
- Scott, S. (n.d.). Influence of cosmetics on the confidence of college women: an exploratory study. (Unpublished doctoral dissertation). Hanover College, IN.

Silverio, Lauren, "Makeup's Effects on Self-Perception" (2010). OTS Master's Level Projects & Papers.

Stephen ID, & McKeegan AM (2010). Lip colour affects perceived sex typicality and attractiveness of human faces. *Perception*, 39 (8), 1104-10 PMID: 20942361

Strugatz, R. (2016, August 10). Bloggers and digital influencers are reshaping the fashion and beauty landscape. Retrieved March 20, 2017, from <http://www.latimes.com/fashion/la-ig-bloggers-20160809-snap-story.html>

The Surprising Psychology Behind Makeup. (2016, June 25). Retrieved March 20, 2017, from <https://www.psychologytoday.com/blog/the-truth-about-exercise-addiction/201606/the-surprising-psychology-behind-makeup>

Trampe, D., Stapel, D.A., & Siero, F.W. (2007). On models and vases: Body dissatisfaction and proneness to social comparison effects. *Journal of Personality and Social psychology*, 92, 106-118.

Wilcox, C. (2010, November 4). The Science of Makeup. Retrieved March 25, 2017, from <http://scienceblogs.com/observations/2010/11/04/the-science-of-makeup/>

Workman, J.E., Johnson, K.K., 1991. The role of cosmetics in impression formation. *Clothing and Textiles Research Journal* 10, 63–67.

Wright, E. T., Martin, R., Flynn, C., & Gunter, R. (1970). Some psychological effects of cosmetics. *Perceptual and Motor Skills*, 30, 12-14

Zung, D. (2015, April 15). What do guys really think of girls without makeup? Retrieved April 1, 2017, from <https://www.quora.com/What-do-guys-really-think-of-girls-without-makeup>

Appendix

Appendix 1:

การสำรวจความคิดเห็นของผู้ชายที่มีต่อการแต่งหน้าของผู้หญิง

1. อายุ :

☐ ต่ำกว่า 18 ☐ 19-25 ☐ 26-35 ☐ 36-45 ☐ มากกว่า 45

2. อาชีพ :

3. รายได้

☐ ต่ำกว่า 15,000 ☐ 15,000-30,000 ☐ 30,000-50,000 ☐ 50,000-100,000 ☐ มากกว่า 100,000

4. คุณคิดว่าผู้หญิงแต่งหน้าเพื่ออะไร

☐ ความมั่นใจ ☐ การปกปิด ☐ การทำงาน ☐ ดึงดูดเพศตรงข้าม
☐ เสพติด

5. ระดับการแต่งหน้าของผู้หญิงที่คุณชอบ?

☐ แต่งเต็ม (ทารองพื้น, คิ้ว, ตา, ปาก, แก้ม)

☐ แต่งน้อย (เขียนคิ้วอย่างเดียว) ☐ ไม่แต่งเลย

6. คุณให้มูลค่ากับเครื่องสำอางค์มากแค่ไหน?

☐ มาก ☐ ปานกลาง ☐ น้อย

7. คุณคิดว่าเครื่องสำอางค์สำคัญกับผู้หญิงมากแค่ไหน?

☐ มากที่สุด (5) ☐ มาก (4) ☐ ปานกลาง (3) ☐ น้อย (4) ☐
ไม่สำคัญ (1)

8. คุณแยกผู้หญิงแต่งหน้าออกไหม
เล็กน้อย ☐ ไม่ออก

☐ ออก ☐

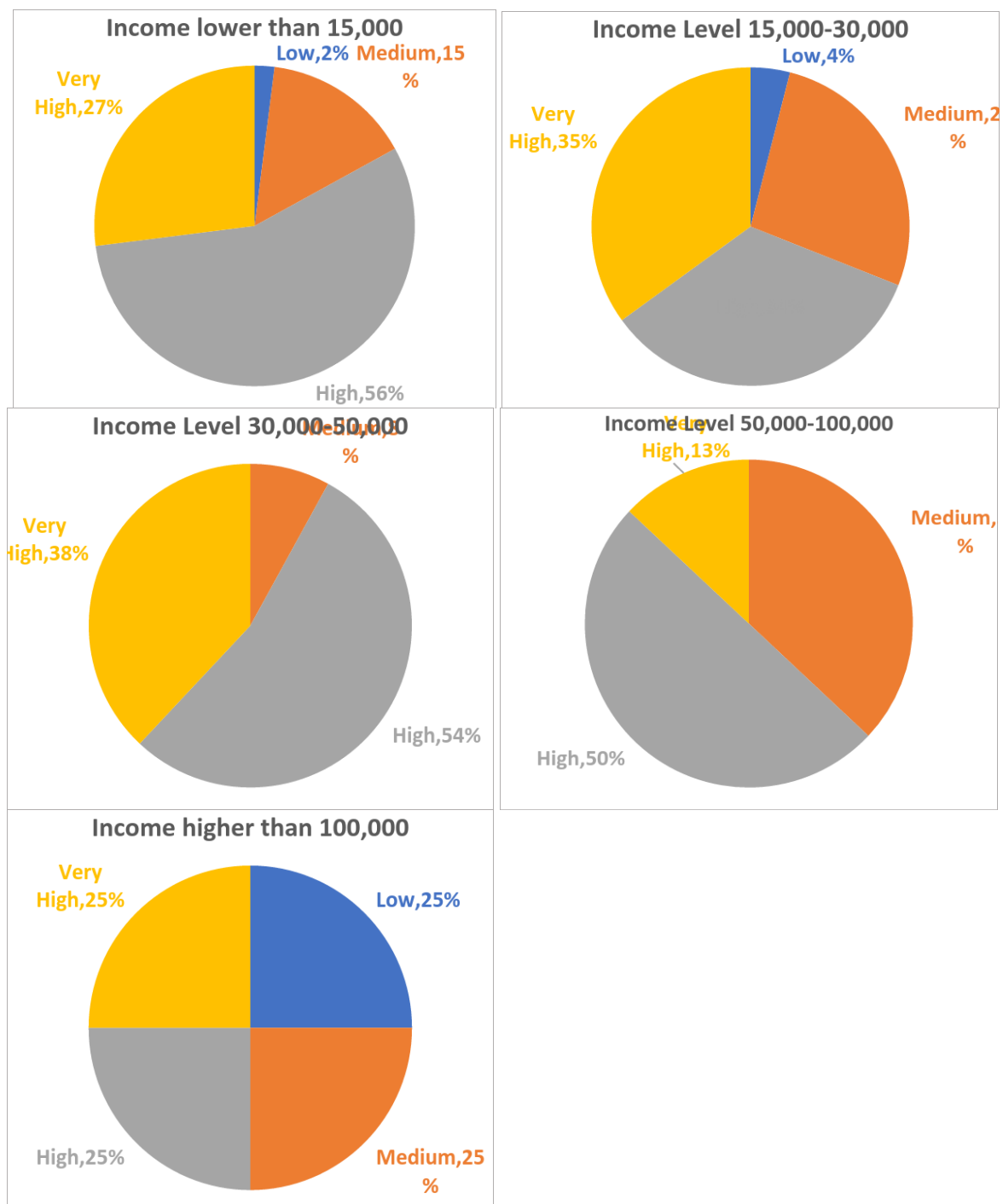
9. คุณจะซื้อเครื่องสำอางค์ให้แฟนไหม

☐ ซื้อ ☐ ไม่ซื้อ

10. คุณมีความคิดที่จะใช้เครื่องสำอางค์ไหม?

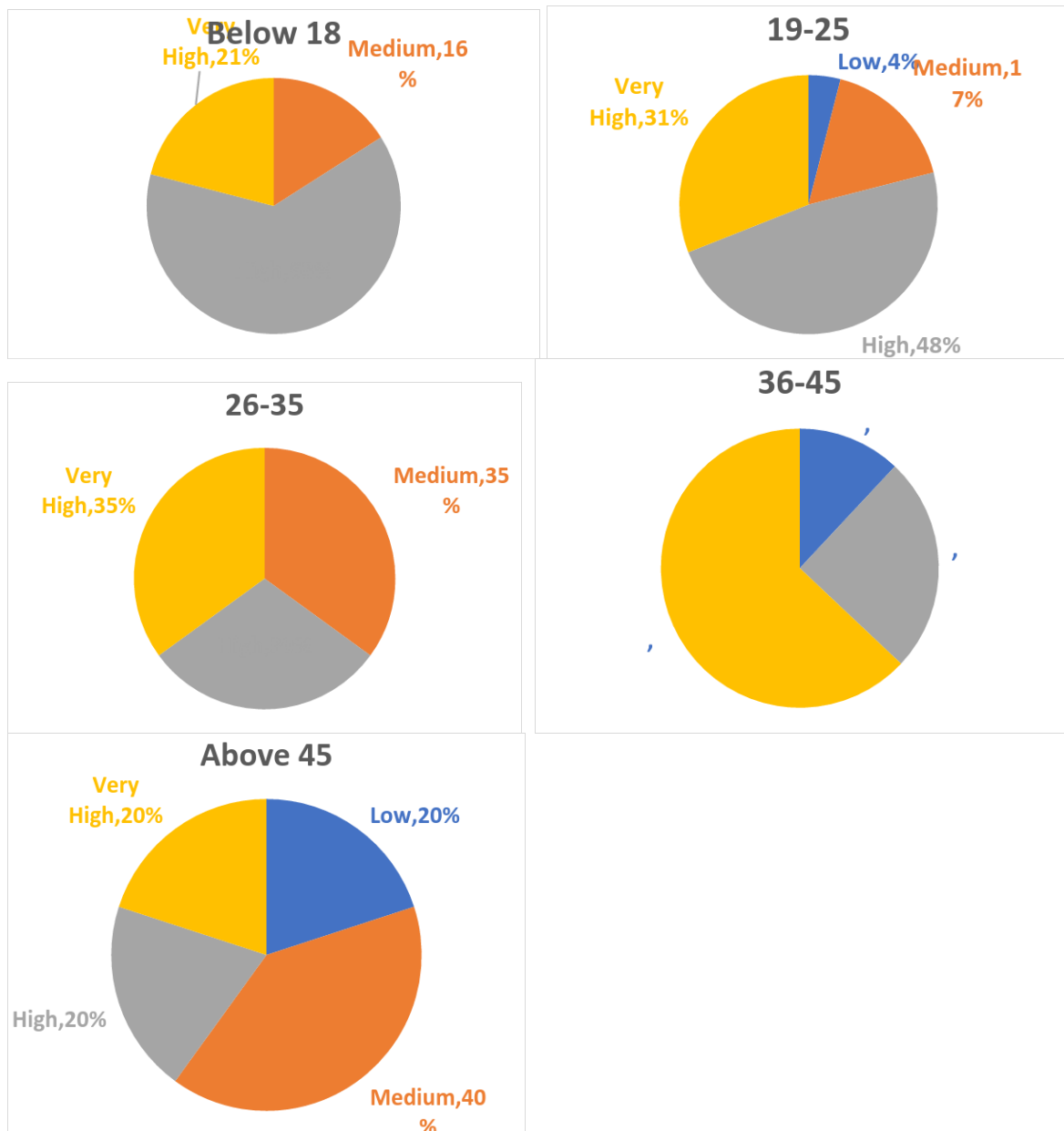
☐ มี ☐ ไม่มี

Appendix 2: How important of the cosmetics categorized by income



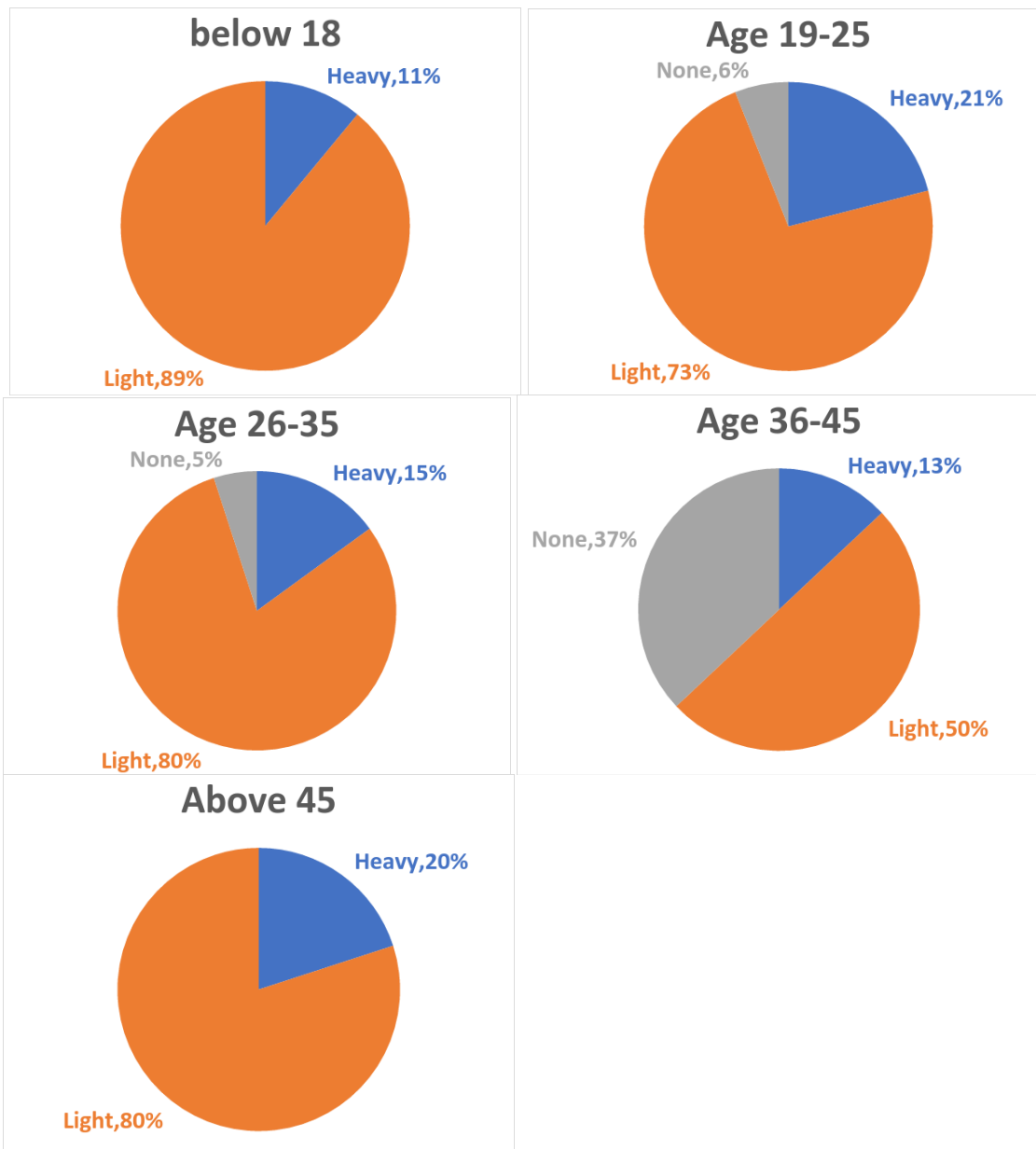
Source: Author's own compilation

Appendix 3: How important of the cosmetics categorized by age



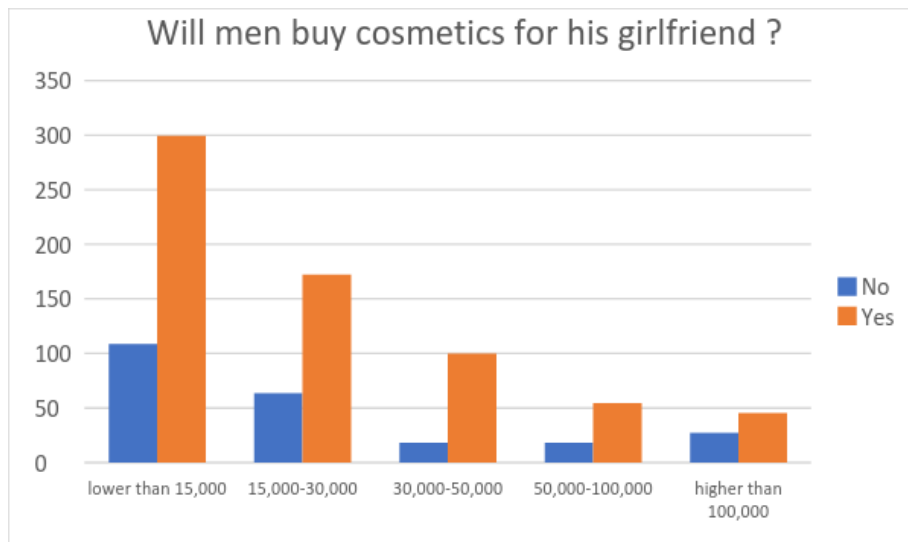
Source: Author's own compilation

Appendix 4: Level of makeup



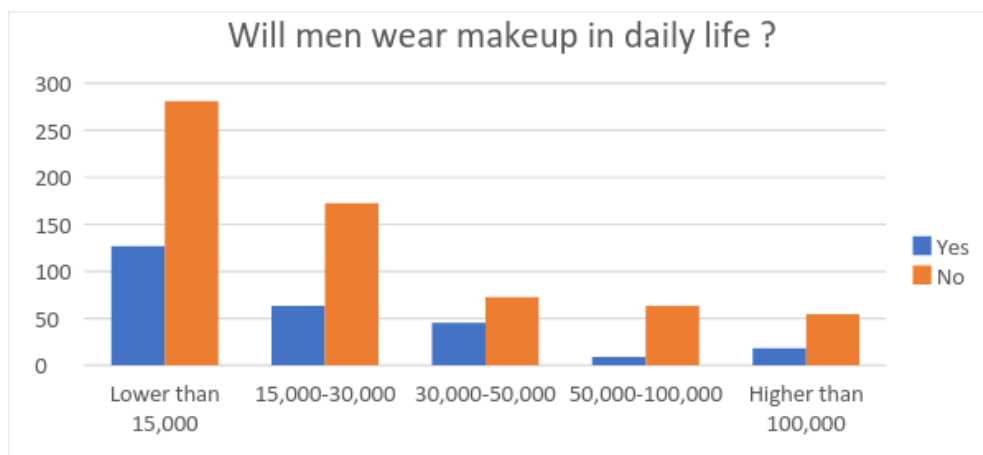
Source: Author's own compilation

Appendix 5:



Source: Author's own compilation

Appendix 6:



Source: Author's own compilation

Raw Data

Makeup		Non-makeup	
0.40	0.50	0.44	0.20
0.46	0.88	0.56	0.36
0.63	1.00	0.63	0.54
0.36	1.00	0.80	0.35
0.50	1.00	0.76	0.40
0.75	0.88	0.54	0.63
0.45	0.90	0.67	0.25
0.59	0.81	0.75	0.50
0.80	0.40	0.37	0.58
1.00	0.81	0.45	0.45
1.00	1.00	0.50	0.50
0.96	0.47	0.34	0.65
0.80	0.32	0.56	0.38
0.75	0.71	0.61	0.47
0.95	0.21	0.48	0.75
0.36	0.49	0.46	0.30
0.67	0.67	0.63	0.50
0.50	0.54	0.38	0.50
0.45	0.69	0.45	0.42
0.55	0.84	0.65	0.52
0.65	0.46	0.21	0.71
0.44	0.55	0.47	0.34
	1.00		0.78

Nan		Praew		Gain	
0.40	0.25	0.36	0.34	0.40	0.48
0.46	0.50	0.67	0.44	0.81	0.46
0.63	0.58	0.50	0.56	1.00	0.63
0.36	0.45	0.45	0.63	0.47	0.54
0.50	0.50	0.55	0.80	0.32	0.69
0.75	0.65	0.65	0.76	0.71	0.84
0.45	0.38	0.44	0.54	0.21	0.46
0.59	0.47	0.50	0.67	0.49	0.55
0.80	0.75	0.88	0.75	0.67	1.00
0.20	1.00	0.30	1.00	0.37	0.38
0.36	1.00	0.50	1.00	0.45	0.45
0.54	0.96	0.50	1.00	0.50	0.65
0.35	0.80	0.42	0.88	0.34	0.21
0.40	0.75	0.52	0.90	0.56	0.47
0.63	0.95	0.71	0.81	0.61	0.78

Morning		Afternoon		Evening	
0.40	0.34	0.44	0.46	0.56	0.63
0.36	0.63	0.80	0.50	0.76	0.75
0.45	0.54	0.67	0.59	0.75	0.80
0.20	0.55	0.88	0.36	1.00	0.54
0.35	0.64	0.90	0.40	0.81	0.63
0.25	0.40	0.81	0.50	1.00	0.58
0.45	0.47	0.32	0.50	0.71	0.65
0.38	0.21	0.49	0.47	0.67	0.75
0.55	0.37	0.45	0.80	0.50	0.96
0.80	0.34	0.56	0.75	0.61	0.95
0.36	0.48	0.46	0.67	0.63	0.50
0.45	0.54	0.69	0.55	0.84	0.65
0.44	0.46	0.55	0.50	1.00	0.88
0.30	0.38	0.45	0.50	0.65	0.50
0.42	0.21	0.47	0.52	0.78	0.71

Weekday			Weekend	
0.88	0.40	0.36	0.45	0.81
0.30	0.46	0.67	0.50	0.54
0.50	0.63	0.50	0.65	0.69
0.50	0.36	0.45	0.38	0.84
0.42	0.50	0.55	0.47	0.46
0.52	0.75	0.65	0.75	0.55
0.71	0.45	0.44	1.00	1.00
0.34	0.59	0.50	1.00	0.38
0.44	0.80	0.63	0.96	0.45
0.56	0.20	0.67	0.80	0.65
0.40	0.36	0.37	0.75	0.21
0.81	0.54	0.45	0.95	0.47
1.00	0.35	0.50	0.63	0.78
0.47	0.40	0.34	0.80	1.00
0.32	0.63	0.56	0.76	1.00
0.71	0.25	0.61	0.54	1.00
0.21	0.50	0.48	0.67	0.88
0.49	0.58	0.46	0.75	0.90