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**Consumer behaviour in Mobile Social Media:
*A study of Chinese cosmetic buyers in WeChat***

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Master in Business Administration,

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ISCTE-IUL

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BUSINESS
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Department of Marketing, Strategy and Operations

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Abstract

The growth of Chinese Cosmetic Market and use of WeChat to make various purchases especially cosmetics by the users have garnered significant attention. However, there is a lack of empirical studies examining consumer behaviour when it comes to purchasing cosmetics on WeChat by the WeChat users. This study attempts to fill that gap in the literature. First, by surveying the existing literature, this study constructs a modified version of Decomposed Theory of Planned Behaviour. Second, using survey, data are collected from 150 Chinese WeChat users. And finally, Regression Analyses are used for validating the proposed model. The findings of this study indicate that Attitude and Perceived Behaviour Control have significant influence on WeChat users' Behaviour Intention, but such influence was not observed for Subjective Norms and Bandwagon Effect. The findings of this study will help cosmetic companies to formulate effective promotion strategies to enhance consumers' Behaviour Intention to purchase their products on WeChat. Furthermore, companies must ensure the ease of use and compatibility of their systems to influence higher purchase intention for their users.

Keywords: *Decomposed theory of planned behaviour; Consumer Behaviour of WeChat users; Regression Analysis; Factors affecting Cosmetic purchase intention.*

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1. Introduction

1.1 Research Background

WeChat has been enjoying exponential growth in China in the recent years. The app has over a billion monthly active users in China, and 90% of these users are between the age of 18 and 36 (Cao, 2020). The growth of active users is accompanied by growth in user spending on the platform to purchase products and services ranging from lifestyle products, holiday packages to fast food. According WeChat Impact Report 2018, consumers spent over RMB 333.9 billion (€42.46 billion approximately) for various purchases through WeChat (Graziani, 2018). This spending will likely to continue its upward trajectory in the near future. One of the growth categories of products attracting consumer spending on WeChat is lifestyle products such as Cosmetics (Iqbal, 2020).

Cosmetics sector in China has been growing around 20% between 2009 and 2016, and the growth trend is also likely to continue (Daxue Consulting, 2020). It is to note that Chinese cosmetic market is currently the second-largest cosmetic market in the world behind only the US market valued at RMB 261.9 billion (approximately €33.30 billion) in 2018 (Cosmetics China, 2020). The growth of Cosmetic market is driven by the growth of online retail sales. Report published by Cosmetics China (2020) indicates that in 2019, online retail sales of cosmetics reached RMB 194.4 billion (approximately € 24.72 billion), which amounts to more than two-third of all cosmetic sales in the country.

From the market data, it appears that the growth of cosmetic market is accompanied by the growth of consumer spending on WeChat, especially consumer spending on lifestyle products on the platform. It is clear that more and more customers are purchasing their cosmetic products on WeChat. This study aims to explore consumer behaviour of the WeChat users while purchasing cosmetic products on the platform.

There is a gap in the established literature when it comes to exploring the effective marketing and sales strategies for cosmetic products of WeChat. While there are a number of studies (Chen, 2017; Lien & Cao, 2014; Song, Qiao & Hu, 2018) examined various aspects of consumer behaviour that affect their purchase decision in WeChat, these studies focused on consumers independent of any industry. Therefore, this study aims to fulfil that gap in the literature. This research study has the following objectives:

1. To develop a modified *Decomposed Theory of Planned Behaviour* suitable to investigate consumers' purchase decisions in WeChat cosmetic market.
2. To assess the behavioural constructs (identified in modified *Decomposed Theory of Planned Behaviour*) on consumers' purchase decisions in WeChat cosmetic market.
3. To evaluate 'Bandwagon effect' on consumer purchase intentions in WeChat cosmetic market.

1.2 Research Questions

This study aims to address the following research questions.

1. Do 'Behavioural Constructs' identified in Decomposed Theory of Planned Behaviour influence consumers' purchase decisions in WeChat cosmetic market?
2. To what extent 'Bandwagon effect' influence consumer purchase intentions in WeChat cosmetic market?

1.3 Research Relevance

As mentioned, the rise of Chinese cosmetic market and the WeChat marketplace will continue to grow in the coming future. But despite this, there is a lack of research when it comes to understanding consumer behaviour of WeChat users who purchase their cosmetics on the platform, in spite to well-established online and offline marketplaces. It is to note that the rise of Chinese cosmetic market is attracting various multinational companies to Chinese market. From L'Oreal, Estee Lauder to Unilever are looking to aggressively expand their market positions in China (Motohashi, 2015; Tan & Ming, 2017). Liao (2018) points out WeChat has changed the social and communication dynamics in China, leaving businesses no choice but to reshape their marketing strategies to accommodate WeChat. For a Multinational company or even small local companies to be successful on the platform, understanding consumer behaviour is imperative. The knowledge generated from this study will help cosmetic companies to develop their WeChat marketing strategies better.

2. Literature Review

The purview of this chapter is to explore the established literature to understand consumer behaviour, consumer behaviour on online platforms, consumer behaviour in cosmetic industry, and how consumer purchase intention is formed when it comes to purchasing goods on WeChat and other platforms.

2.1 WeChat

WeChat is a mobile social media created by Tencent in China. According to Xu, Song and Clark (2015), although started as an instant messaging platform, WeChat subsequently integrated social networking, information sharing, user-generated content, as well as in-app payments enabling purchasing of products and services through the app. Currently, the app has over 1 billion active monthly users (Iqbal, 2020). This staggering number is compounded by the continuous growth sustained by WeChat in the recent years. And as Liang and Yang (2017) point out, the rise of users on WeChat forced the companies to establish themselves on the platform, allowing them to reach their target customers more effectively. The user demographics of WeChat is largely young adults (Tencent, 2016), which also is the primary target market for cosmetic companies (Kapferer & Bastien, 2012). Therefore, WeChat is highly attractive to cosmetic companies.

Xu (2015) explains that there are various ways companies can establish themselves on WeChat. The most common way is for them to open a WeChat Official Account (WOA). There are two different types of WOAs: subscription accounts and service accounts. While subscription accounts can push messages to the users daily, service accounts can do so on monthly basis. However, Liang and Yang (2017) find that beyond WOA, there is another large market on WeChat where users can sell products by advertising themselves on their 'WeChat Moments' or through WeChat user groups. This study will explore the consumer behaviours of those who not only purchase through WeChat WOAs, but also from other WeChat users.

2.2 Consumer Behaviour

According to Mooji (2010), '*Consumer Behaviour refers to the activities of individuals, groups or organisations that are associated with the purchase, use and disposal of goods and services, including consumer's emotional, mental and behavioural responses that precede or follow these activities.*' Cantalops and Salvi (2014) argue that understanding consumer behaviour is the key to successfully influence the consumers in their use of products, goods and services. Consumer behaviour online is significantly different than Highstreet shoppers. The reasons are lack of physical interaction (Damangeot & Broderick, 2010), concerns about privacy and security of financial information (Huseynov & Yildirim, 2014), trust (Zuroni & Goh, 2012) etc. Chen (2017) highlights that the factors

and their degree of influence also vary depending on the online platform they are using. Therefore, this study is aiming to find the consumer behaviour factors that are in play on WeChat.

2.3 Factors Influencing Consumer Behaviour

The established literature is rich when it comes to studying consumer behaviour online. Most of the studies predominately rely on three theoretical models to explain and examine consumer behaviour online. These are: Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB) and Decomposed Theory of Planned Behaviour (DTPB). However, the first two theories are significant limitations when it comes to analysing consumer behaviour online, as they fail to take aspects of technology into consideration (Song, Qiao & Hu, 2018). Therefore, this study will focus on the behavioural constructs identified in DTPB.

2.3.1 *Decomposed Theory of Planned Behaviour*

This theory was presented by Taylor and Todd (1995). According to them, beliefs of consumers can be broken down into multidimensional behaviour constructs. They further added that attitude, subjective norms and perceived behaviour control are three most important factors that explain consumer behaviour for technology adaptation. The attitude is influenced by three constructs – Perceived usefulness, Perceived ease of use and Compatibility. The ‘subjective norms’ is influenced by two constructs – Peer and Superior influence. The technology adaptation is influenced by three constructs – Self-efficacy, Resource Facilitating condition and Technology Facilitating Condition. The framework is shown in figure 1.

Decomposed Theory of Planned Behaviour (DTPB) is one of the most influential and comprehensive theories to study technology adaption by consumers (Moons & Pelsmacker, 2015; Tao & Fan, 2017). Based on Innovation of Diffusion Theory (IDT) and the Technology Acceptance Model (TAM), DTPB decomposes the three main antecedents (Attitude, Subjective Norms and Perceived Behavioural Control) of TPB into a set of decomposed beliefs. In their research Taylor and Todd (1995) find behaviour intention among customers is influenced by multidimensional constructs rather than previous thought uni-dimensional belief construct.

This model stipulates that Behaviour Intention is the pretext of purchase decision or behaviour, and Behaviour Intention is favourably or unfavourably swayed by Attitude, Subjective Norms and Perceived Behavioural Control.

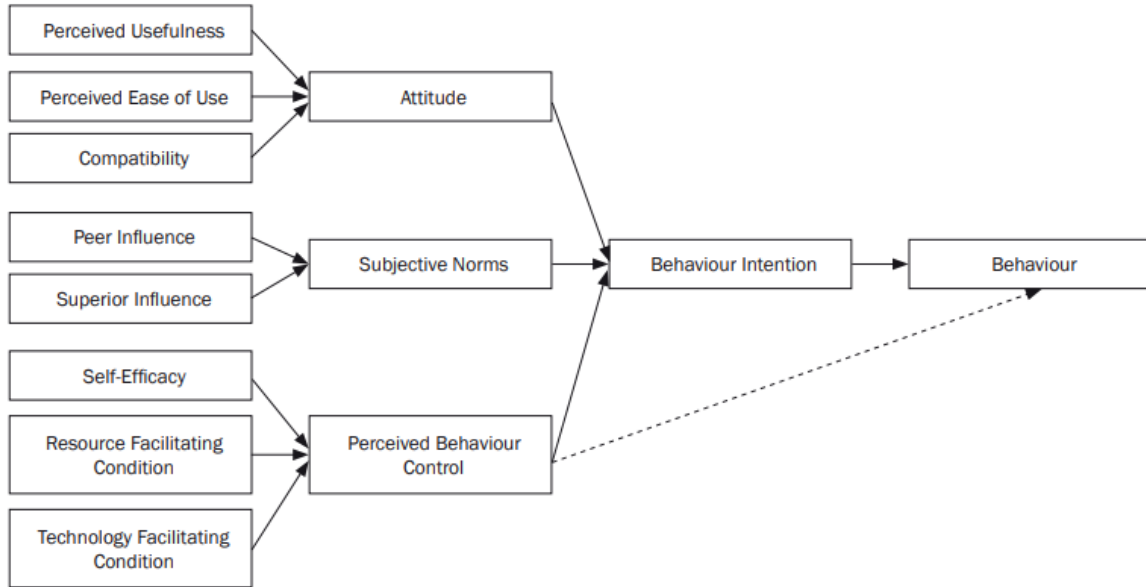


Figure 1 DTPB model (Taylor and Todd, 1995)

Drawing from innovation diffusion theory on personal perception of technology innovation, Attitude in DTPB is decomposed into three separate constructs: *Perceived Usefulness*, *Perceived Ease of Use*, and *Compatibility*. The perceived usefulness refers to the extent of which an individual consumer believes using a particular technology will bring convenience or practicality in his or her life, perceived ease of use refers to the extent of which an individual consumer perceives the convenience and ease of using a particular technology, and compatibility refers to the extent of which using a particular technology fits within the lifestyle and current value of the consumer (Tao & Fan, 2017). Originally, Rogers (1995) theorised two more constructs that affect attitude of individual consumers when adapting new technology: Observability and trialability. However, as Dearing (2009) points out, ‘*observability and trialability are not as consistently important across innovation types for adoption, though it is reasonable to assume that for high-risk, expensive, and obtrusive innovations, trialability should be especially important, while for complex innovations with many process steps and those innovations that embed high degrees of ambiguity or tacit knowledge in their operation, visibility of the innovation in process and observability of outcomes should be especially important.*’ As purchasing cosmetics on WeChat cannot be deemed as high-risk, expensive and obtrusive, Observability and trialability are therefore ignored. In the case of consumers using WeChat to purchase cosmetic products, the perceived usefulness would be how useful is the use of WeChat to purchase cosmetics perceived by the consumers, the perceived ease of use would be the perception of those consumers towards the convenience and practicality of using WeChat to purchase cosmetics, and compatibility would be the compatibility of using WeChat to purchase cosmetics with their lifestyle.

The subjective norms are simply social influence, which according to Pavlou and Fygenon (2006), is *'the person's perception of the expectations of important others about a specific behaviour'*. Individuals often look at the reference groups they deem important and shape their behaviour intention accordingly. Pavlou and Fygenon (2006) also called subjective norms 'Compliance effect'. Subjective norms in DTPB is decomposed into two constructs: *Peer Influence* and *Superior Influence*. Superior influence refers to influence exerted on individual consumers by his or her superiors and predecessors, and peer influence refers to influence exerted by his or her colleagues and friends (Moons & Pelsmacker, 2015). In the case of consumers using WeChat to purchase cosmetic products, peer influence would be the influence exerted by the peers of those consumers, and superior influence would be influence exerted by the superiors of those consumers in their purchase decision making.

Pavlou and Fygenon (2006) defined Perceived behavioural control as *"a person's perception of how easy or difficult it would be to carry out the behaviour"* (p. 119). According to Moons and Pelsmacker (2015), Perceived Behavioural Control involves skills of the users as well as constraints or facilitators in the context of using a particular technology. The three constructs that influence perceived behavioural control according to this model are: *Self-efficacy*, *Resource facilitating condition* and *Technology facilitating condition*.

Ajzen (1991) defined self-efficacy in the context of consumer behaviour as *'being confident of the ability of oneself to behave successfully in the situation'*. Gallagher (2012) further added, self-efficacy refers to individual's ability to perform specific behaviour themselves. In the context of this research, self-efficacy is individual customer's ability to use WeChat and purchase products on WeChat. Besides self-efficacy, resource and technology facilitating conditions also have strong influence on perceived behavioural control. These external conditions are drawn from Triandis' (1979) facilitating conditions. Resource facilitating condition refers to resources required to perform a particular behaviour, and Technology facilitating condition refers to technology needed to perform a particular behaviour by the consumers (Moons & De Pelsmacker, 2015). Shih and Feng (2004) in their study concerning internet banking behaviour among consumers state that, difference between 'Resource facilitating condition' and 'Technology facilitating condition' are rather ambiguous, as resources required to use such technological products are simply various technologies such as Internet connections, Web applications etc. This is also true for the current research, where resources required to purchase cosmetics on WeChat such as 'WeChat Account', 'Access to Mobile Devices' 'Internet connections' are technological resources.

2.3.2 'Bandwagon Effect'

Bandwagon effect refers to *'psychological phenomenon in which people do something primarily because other people are doing it, regardless of their own beliefs, which they may ignore or override'*

(Conner, 2013). In the age of social media and hyper connectivity, bandwagon effect is becoming more and more prevalent in the analysis of consumer behaviour. The studies conducted by Ko and Megehee (2012), Shaikh, Malik, Akram and Chakrabarti (2017) found significantly positive correlation between bandwagon effect and purchase decisions in luxury, fashion and other similar industries. Wu and Lin (2017) studied how Bandwagon Effect and other factors influence consumer purchase intention of the customers purchasing electronics online upon reading reviews and ratings. They found that Bandwagon Effect has statistically significant influence on purchase intention as customers tend to purchase products that are more popular. This study will therefore explore if same effect is present on purchase intention of the WeChat users when purchase of cosmetic is concerned.

2.3.3 Conceptual model and hypotheses

A few modifications are made to the DTPB presented in the previous section. This is to make the model compatible to this particular study. Bandwagon effect is integrated and a several decomposed constructed are changed depending on their applicability with the subject matter of this study.

The Attitude construct and its antecedents remained the same as the original model, as there is no notable study repudates these associations. Therefore, based on these associations, the following hypotheses are constructed:

H1a: Perceived usefulness of WeChat has positive influence on users' attitude towards using WeChat for purchasing cosmetics.

H1b: Perceived ease of use for WeChat has positive influence on users' attitude towards using WeChat for purchasing cosmetics.

H1c: Compatibility of using WeChat has positive influence on users' attitude towards using WeChat for purchasing cosmetics.

The study conducted by Wang, Yu and Wei (2012) finds significant importance of peer influence through Social Media on purchase intention. However, the studies conducted by Kapoor and Munjal (2019) fail to find any notable impact of 'superior influence' on individual consumers purchase decisions. On the other hand, a large number of studies (Lim, Radzol, Cheah & Wong, 2017; Erkan & Evans, 2016; Martin & Herrero, 2012) found significant importance of influencing power of external entities such as 'Social Media Influencers' on consumer purchase intention on Social Media. Therefore, the original DTPB is modified to remove 'superior influence' and to add 'external influence' as a decomposed construct of social norms.

Therefore, the following hypotheses are constructed:

H2a: Peer influence has positive impact on the users' Subjective norms towards using WeChat for purchasing cosmetics.

H2b: External influence has positive impact on the users' Subjective norms towards using WeChat for purchasing cosmetics.

For perceived behavioural control, the two constructs – ‘Resource facilitating condition’ and ‘Technology facilitating condition’ are merged into ‘Facilitating Condition’. As mentioned in the previous section, this is because difference between two constructs are ambiguous. For instance, access to mobile phone, WeChat account, Internet connections etc. are simultaneously fall into ‘Resource facilitating condition’ and ‘Technology facilitating condition’. On the other hand, there are a number of studies (for instance, Yahong, Xu & Fuming, 2018; Thangaraja and Lakshmi, 2016) that suggest the relation between self-efficacy and purchase intention among individuals on social media. In particular Thangaraja and Lakshmi (2016) found that consumers’ intention to use internet-based shopping platform is dependent on their ability to effectively and confidently use that medium to purchase their intended products and services. In other words, confidence in one’s ability to use a particular internet-platform or self-efficacy influences his or her intention to purchase goods on that platform.

Therefore, the following two hypotheses are constructed:

H3a: Self Efficacy positively affects WeChat users' Perceptive Behaviour Control.

H3b: Facilitating Condition positively affects WeChat users' Perceptive Behaviour Control.

According to TPB, positive attitude towards a specific behaviour increases behaviour intention among the users, similarly social norms positively influence behaviour intention of users (Taylor and Todd, 1995). Moreover, less constraints and personal challenges increase behaviour intention of the users (Taylor and Todd, 1995). The following three hypotheses are constructed to portray these relationships:

H4: A positive attitude towards WeChat has a positive influence on users' intention to use WeChat to purchase cosmetic products.

H5: There is a direct and positive relations between 'Subject Norms' perceived by a user and his or her intention to purchase cosmetics on WeChat.

H6: There is a positive correlation between 'Perceived Behavioural Control' of consumers and their intention to purchase Cosmetics on WeChat.

As mentioned, Bandwagon effect has significant influence on purchase decision making by consumers (Tsai, Yang & Liu, 2013). Although, the effect of bandwagon effect is thus far investigated mostly in luxury market, this study aims to explore the effect of this particular construct on consumer behaviour intention for this study.

Therefore, the following hypothesis is constructed:

H7: Bandwagon effect positive affects behaviour intention of WeChat users

The conceptual model illustrating the hypotheses above are shown in the figure below.

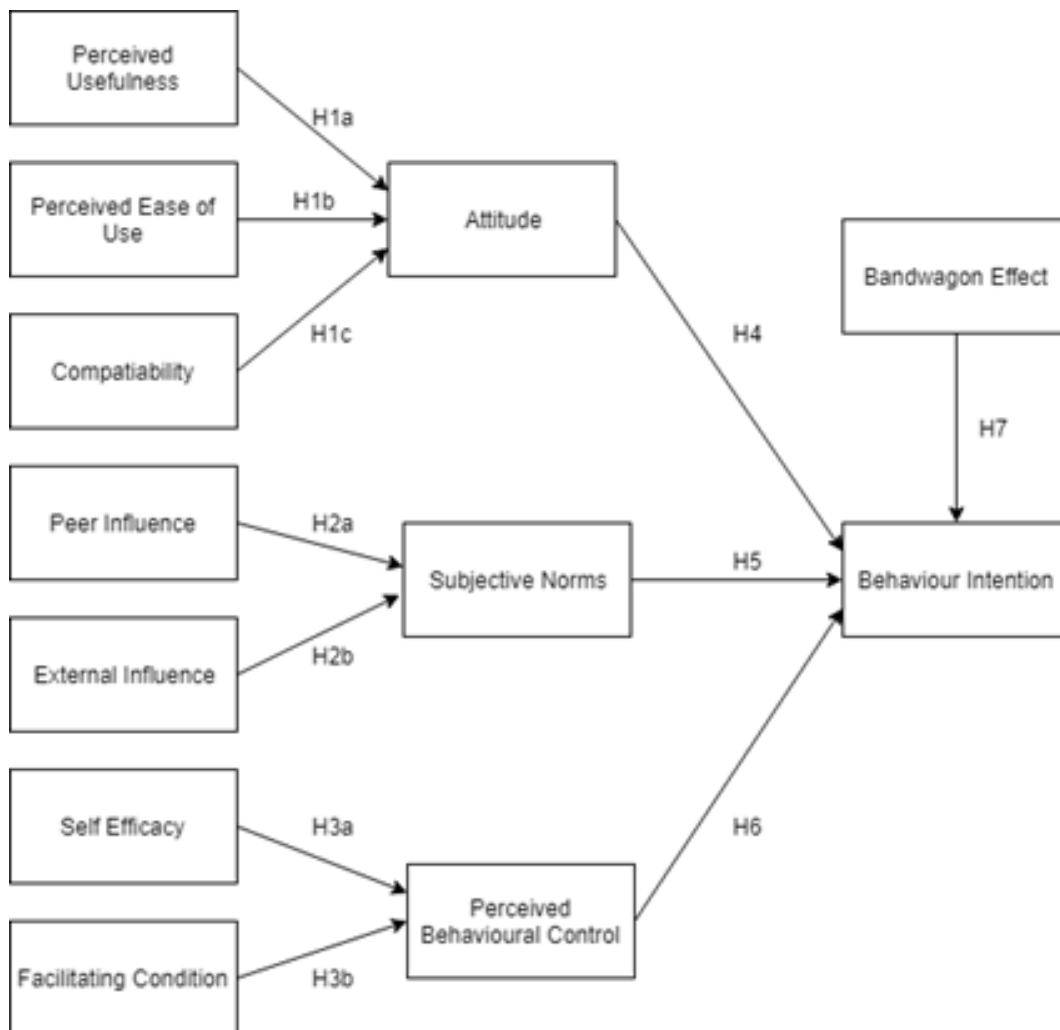


Figure 2 Conceptual Model

3. Research Methodology

According to Saunders, Lewis and Thornhill (2012), research method refers to the set of techniques and methods involved in collecting the required data to answer research questions. This proposed research relies on primary data, making it a primary research. The ‘Research Onion’ framework proposed by Saunders et al. (2012) helps to progressively select the tools and techniques required to conduct a research. The figure below illustrates the framework, and also highlights the tools and techniques selected for this research. In the sections below, various aspects of research methodology are briefly discussed along with rationale for choosing the research methodology for this research.

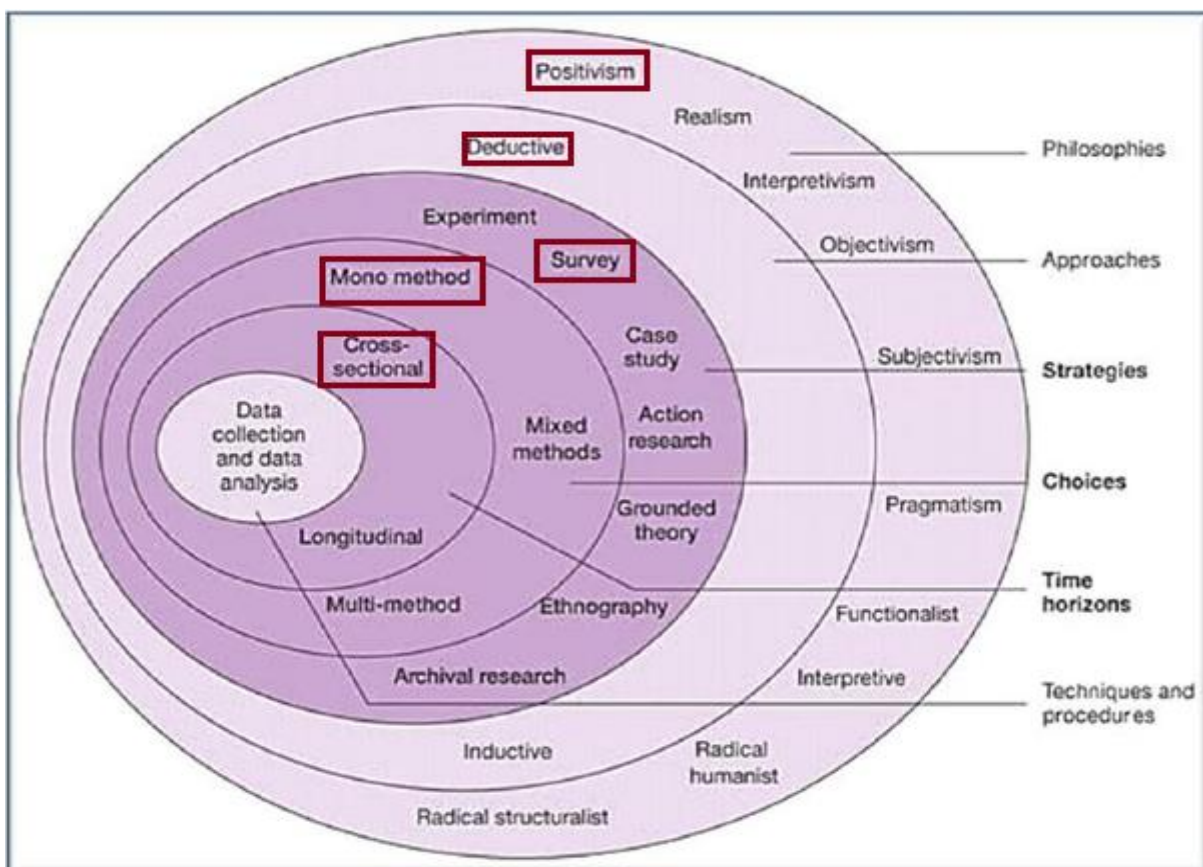


Figure 3 Saunders’s Research Onion

3.1 Research Philosophy

The nature, source and development of knowledge is dealt by Research Philosophy (Bryman & Bell 2011). According to Saunders et al. (2012), research philosophy dictates how the data for studying a specific phenomenon should be gathered, analysed and interpreted. As shown in figure 3 above, there are a number of research philosophies that a research can choose from. However, as highlighted by

Bryman and Bell (2011), majority of the business and management studies follow either *interpretivism* or *positivism* research philosophies. In their study of humanistic inquiry of marketing research, Hirschman (1986) argues that positivism is the most suitable research philosophy to understand human behaviour in the market.

Positivist research takes objective view of the surrounding world, while the interpretivist research takes subjective views (Bryman & Bell, 2011). Saunders et al. (2012) further added, for studies that are rooted in the existing knowledge, positivism is more suitable. In line with the rationale of Saunders et al. (2012), this study selected positivism as the research philosophy. Although the study takes place in China, the findings can still be generalised for other markets.

3.2 Research Approach

According to Saunders et al. (2012), Research approach outlines how a researcher draws his or her inferences from the data. Based on how researchers draw their inferences, a research can either be *deductive* or *inductive*. In a study that adopts deductive research approach, variables, hypotheses and conceptual frameworks are defined based on the established literature. Gathered research data are then tested against these variables, hypotheses and frameworks to make conclusions. On the other hand, study that follows inductive research approach, researchers draw their conclusions from the gathered data, free of established knowledge without predefining variables, hypotheses and frameworks. Bryman and Bell (2011) stated that in indicative research, researchers can survey the established literature, however, their conclusions do not merely test the existing knowledge, but rather extend that knowledge. Saunders et al. (2012) point out that inductive research approach is suitable for subjects with limited or no established knowledge.

Consumer behaviour on the online platforms are well studied. This study makes use of the established knowledge to define the hypotheses and conceptual frameworks, which are then tested against the gathered data. Therefore, deductive research approach is chosen.

3.3 Research Strategies

For research studies, there are a number of research strategies available for researchers. These research strategies include *Case Study*, *Survey*, *Experiments*, *Action Research*, *Archival Research*, *Ethnography*, *Narrative Inquiry* etc. (Saunders et al. 2012). However, for primary research that utilizes quantitative data, the suitable research strategies are Surveys and Experiments (Saunders et al. 2012). While experiments are more suited for observational scientific research, Survey is more suited for primary business and social studies (Bryman & Bell, 2011). Therefore, for this research, survey is chosen.

3.4 Research Choices

Research choices are concerned with the type of collected study data. All research data fall into two categories: *qualitative* and *quantitative*. Quantitative data refers to quantifiable numeric data that can be used for statistical analysis, while qualitative data refers to numeric or non-numeric data that cannot be used for statistical analysis (Bryman & Bell, 2011). According to Saunders et al. (2012), research that needs to build theories, predominantly used qualitative data, while research that tests those theories through hypotheses and statistical analysis to make predictions or explain the cause of an event relies on quantitative data. However, as highlighted by Saunders et al. (2012) researchers are not confined to choose just one type of data, therefore, a research can choose either mono research where they work with only one type of data, mixed or multi research choices where they can work with both types of data.

This research requires quantitative data to perform statistical analysis in order to verify theories and measure the degree of influences. Therefore, mono (quantitative) research is chosen.

3.5 Time Horizon

The timeline used to data collection can vary from study to study. According to Saunders et al. (2012), researcher can choose longitudinal or cross-sectional time horizon for their research. The prior research horizon allows researchers to collect data over a long period of time on their subjects, while the latter dictates that data are collected at a specific point in time. Bryman and Bell (2011) compared cross-sectional time horizon as a snapshot of the subjects. The longitudinal time horizon requires significant time and other resources, and are not feasible for many studies. Also, as highlighted by Saunders et al. (2012) most of the studies focusing on market and consumer behaviour can use cross-sectional data.

Therefore, for this study, cross-sectional time horizon is chosen, as assessing the view of the consumers towards cosmetic purchase on WeChat deemed to be fulfilled by cross-sectional time horizon.

3.6 Data Collection

This primary study uses survey to collect the data from the subjects. As mentioned, the choice of survey is in line with the research philosophy and research approach and the type of data needed for this research study.

To conduct the survey, a questionnaire was developed. The questions were arranged into two main sections – Consumer Behaviour questions and Demographic questions. The questionnaire included a conditional question that asked the respondents whether they purchase or intend to purchase their

cosmetics on WeChat. Only respondents answering yes to this question were presented with the remaining questions.

The section concerning demographics of the respondents include 4 questions regarding their age, gender, occupation and portion of their cosmetic purchase from the WeChat, and the section regarding consumer behaviour of the respondents include four sub-sections: *Using WeChat*, *Recommendations from friends and others*, *My Capacity to use WeChat*, and *My preferences*. The questions in these sub-sections reflect the constructs and measuring items for those constructs shown in table 1.

To conduct the survey, online questionnaire was used. Questionnaire was uploaded to Wenjuan (问卷网), as this is easily accessible in China and enables easy participation of WeChat users. The questionnaire is shown in Appendix A.

3.6.1 Sampling

Samples are subset of the population that is being studied (Saunders et al., 2012). The reason why samples are chosen is that conducting study involving the entire population is neither feasible nor practical. There are different types of sampling methods. According to Bryman and Bell (2011), all the sampling techniques can be categorised as probability sampling (where all the subjects in the population has equal chance to be selected as sample) and non-probability sampling (where it is known which subjects will be selected as samples). Although probability sampling improves reliability and validity of a study, non-probability sampling has a number of advantages such as feasibility, ease of access and practicality (Bryman & Bell, 2011). For this study, *purposive sampling* is chosen, which is a non-probability sampling. Purposive sampling selects samples based on the characteristics of the subjects; characteristics researcher deems important for the study. As this study looks to study consumers that purchase cosmetic products on WeChat or consider/ intent to purchase cosmetic products on WeChat. Therefore, the choice of purposive sampling is justified.

The goal was to include 200 samples. This estimation is based on 121 million estimated sampling frame and 95% confidence level. However, in the end, the final sample size for this study stands at 150 samples.

3.6.2 Data Analysis

To analyse the collected data, Linear Regression is used. Linear Regression allows researchers to model relationships between a dependent variable (scaler response) and one or more independent variables (explanatory variables) latent variables using variables that can be measured (Harrell, 2017). The

constructs and measuring items for each of independent variable and the dependent variable are shown in table 1. Measuring items for dependent and independent variables are selected from the established literature.

3.7 Ethical Issues and Considerations

To address ethical issues, a number of steps have been taken for this study. These steps include

1. The participants were made aware of the goals and objectives of the study.
2. The participants were also made aware of their rights, such as their freedom to decide whether they wish to participate in the study or not. Also, they were made aware that they can terminate their participation without any explanation.
3. To ensure the privacy and confidentiality of the participants, the data were anonymised, and throughout the study and publication of the study, no identifiable participant data will be disclosed.
4. The study used structured questionnaire for all the participations to eliminate any context bias.
5. The study is conducted in line with the ethical guidelines of ISCTE-IUL (https://www.iscte-iul.pt/assets/files/2018/10/24/1540377587396_Code_of_Ethical_Conduct_in_Research_ISCTE_IUL.PDF)

Constructs	Type	Source	Indicators
Perceived Usefulness	Independent variable	Davis (1989)	PU1: Using WeChat to purchase cosmetics saves me time. PU2: Using WeChat helps me to purchase cosmetics quickly PU3: Using WeChat to purchase cosmetics helps me to reduce spending time on unproductive activities.
Perceived ease of Use	Independent variable	Issac, Abdullah, Ramayah & Mutahar (2016)	PEU1: Using WeChat to purchase cosmetics is easy to do. PEU2: The process of purchasing cosmetics on WeChat is easy to understand. PEU3: Using WeChat to purchase cosmetics is more flexible
Compatibility	Independent variable	Taylor and Todd (1995) Vellido, Lisboa and Meehan (2000)	C1: Purchasing cosmetics on WeChat is compatible with my lifestyle C2: Shopping experience on WeChat is compatible with my shopping habits C3: I find the other customers on WeChat to be like-minded
Peer Influence	Independent variable	Nadeem et al. (2015) Tauber (1972) Makgosa and Mohube (2007)	PI1: Recommendations from peers have significant influence on my intention to purchase cosmetics on WeChat PI2: I am more likely to purchase cosmetics products from WeChat if my friends do so PI3: I am more likely to purchase cosmetics from WeChat if my peers encourage me to do so
External Influence	Independent variable	Song et al. (2018) Taylor (2019)	EI1: Recommendations by others influence my intention to purchase cosmetics on WeChat EI2: Recommendations from 'Social Media celebrities'/ 'famous vloggers'/ 'influencers' have influence on my cosmetics purchase intention on WeChat
Self-efficacy	Independent variable	Moons and De Pelsmacker (2015) Al-dalahmeh, Al-Shamaileh, Aloudat and Obeidat, (2018)	SE1: I have the required technical knowledge to purchase cosmetics on WeChat SE2: I am fully capable of purchasing cosmetics on WeChat. SE3: I do not have any anxiety about purchasing cosmetics on WeChat

Facilitating conditions	Independent variable	Shih and Fang (2004)	FC1: I have access to the Mobile device to purchase cosmetics on WeChat FC2: I have access to Mobile Internet to purchase cosmetics on WeChat FC3: I have adequate money on WeChat Wallet to purchase cosmetics on the platform
Bandwagon Effect	Independent Variable	Kastanakis and Balabanis (2012)	BE1: Purchasing cosmetics on WeChat helps my social status BE2: Purchasing cosmetics on WeChat is the current trend BE3: Purchasing cosmetics on WeChat differentiates me in a positive way
Attitude	Control variable	Spears and Singh (2004)	A1: I have favourable view of purchasing cosmetics on WeChat A2: Purchasing cosmetics on WeChat is more appealing to me A3: Purchasing cosmetics on WeChat is better for me.
Subjective Norms	Control variable	Glanz, Rimer and Viswanath (2008)	SN1: Most people who are important to me think I should purchase cosmetics on WeChat SN2: Most people who are important to me want me to purchase cosmetics on WeChat. SN3: I feel under social pressure to purchase cosmetics on WeChat
Perceived Behavioural control	Control variable	Ajzen (1991)	PBC1: I have financial resources to purchase cosmetics on WeChat PBC2: I can spend the required time to purchase cosmetics on WeChat PBC3: I have the required knowledge to purchase cosmetics on WeChat
Behaviour Intention	Dependent variable	Spears and Singh (2004)	BI1: I definitely purchase cosmetics on WeChat. BI2: I definitely intend to purchase cosmetics on WeChat BI3: I have high interest in purchasing cosmetics on WeChat

Table 1 constructs and measuring items for those constructs

4. Results and Discussion

The purview of this chapter is to present the findings gathered from the survey.

4.1 Demographics

4.1.1 Age-group of Participants

A total 150 individuals participated in this study. Among them, majority (67.3%) are aged between 25 and 34. The remaining 22% are aged between 18 and 24, and only 10.7% are aged above 35. The age distribution of the participations is shown in the table and figure below.

		Age-group			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	between 18 and 24	33	22.0	22.0	22.0
	between 25 and 34	101	67.3	67.3	89.3
	Above 35	16	10.7	10.7	100.0
	Total	150	100.0	100.0	

Table 2 Age distribution of the participants

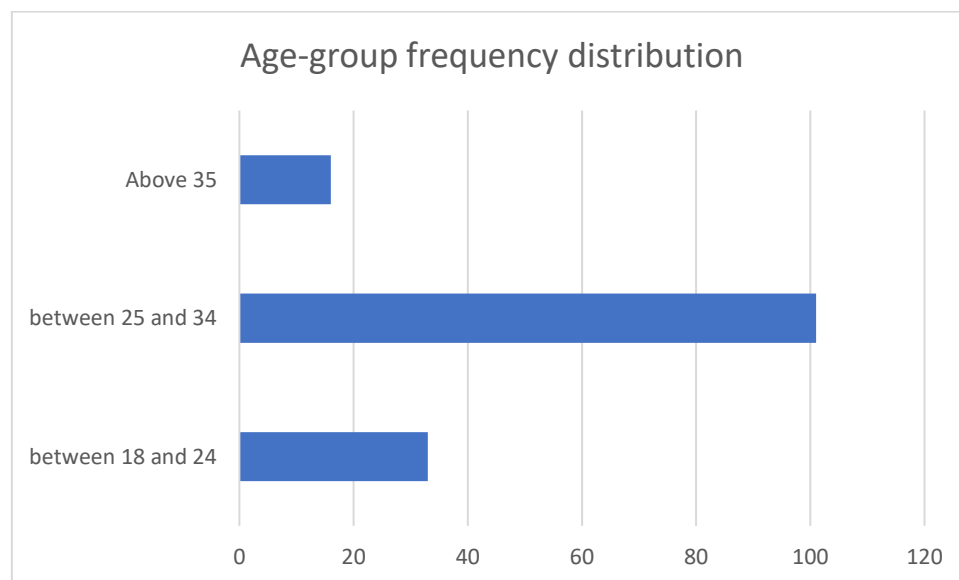


Figure 4 Age distribution of the participants

4.1.2 Gender distribution of the Participants.

The majority of the participants of this study are female. This reflects the composition of the industry as illustrated by Ramshida and Manikandan (2014). As shown in the table and bar chart below, 143 (95.3%) participants are female, while only 6 (4%) participants are male.

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	6	4.0	4.0	4.0
	Female	143	95.3	95.3	99.3
	Others	1	.7	.7	100.0
	Total	150	100.0	100.0	

Table 3 Gender distribution of the participants

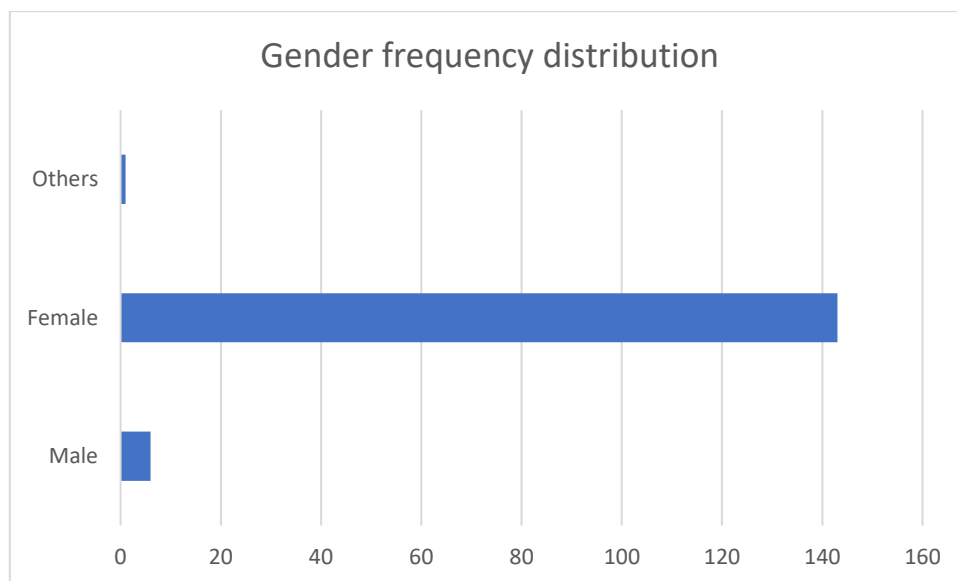


Figure 5 Gender distribution of the participants

4.1.3 Occupation of the Participants.

The participants are predominantly full-time employees. 65.3% stated that they work full-time, while 12.7% stated that they are still full-time students, 7.3% indicated that they are self-employed (or business owners). The distribution is shown in the figure and table below.

		Occupation			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	19	12.7	12.7	12.7
	Full-time Employment	98	65.3	65.3	78.0
	Self-employed	11	7.3	7.3	85.3
	Others	22	14.7	14.7	100.0
	Total	150	100.0	100.0	

Table 4 Occupation of the participants

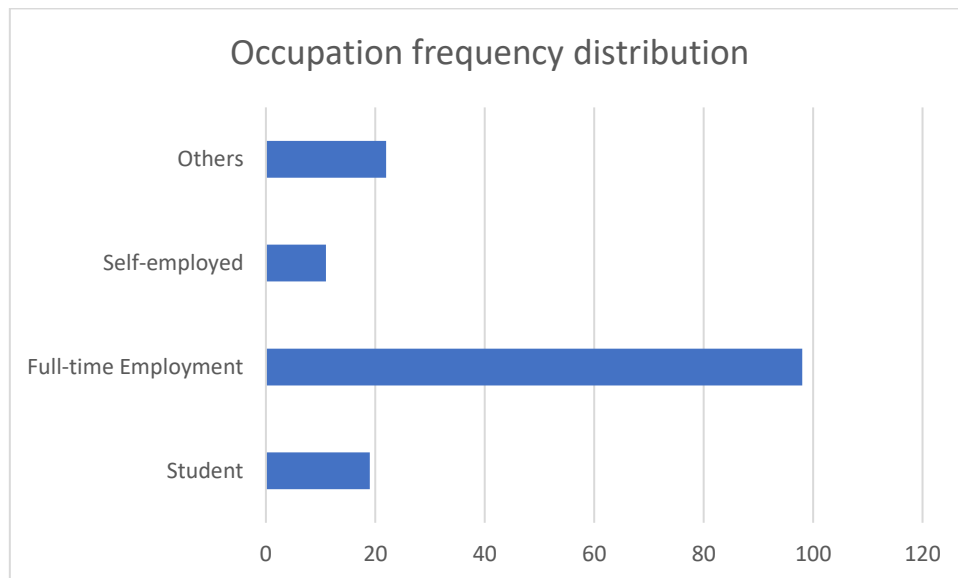


Figure 6 Occupation of the participants

4.1.4 Percentage of cosmetics purchased on WeChat

The participants are asked what percentage of the cosmetics they purchase on WeChat. It appears that 16.7% of the participants purchase more than half of their cosmetics on WeChat, while, 30.7% only purchase less than 10% of their cosmetics on WeChat. The distribution is shown in the figure and table below.

		portion of cosmetics purchased via WeChat			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 10%	46	30.7	30.7	30.7
	Between 10% and 25%	42	28.0	28.0	58.7
	Between 25% and 50%	37	24.7	24.7	83.3
	Over 50%	25	16.7	16.7	100.0
	Total	150	100.0	100.0	

Table 5 Portion of cosmetics purchased on WeChat

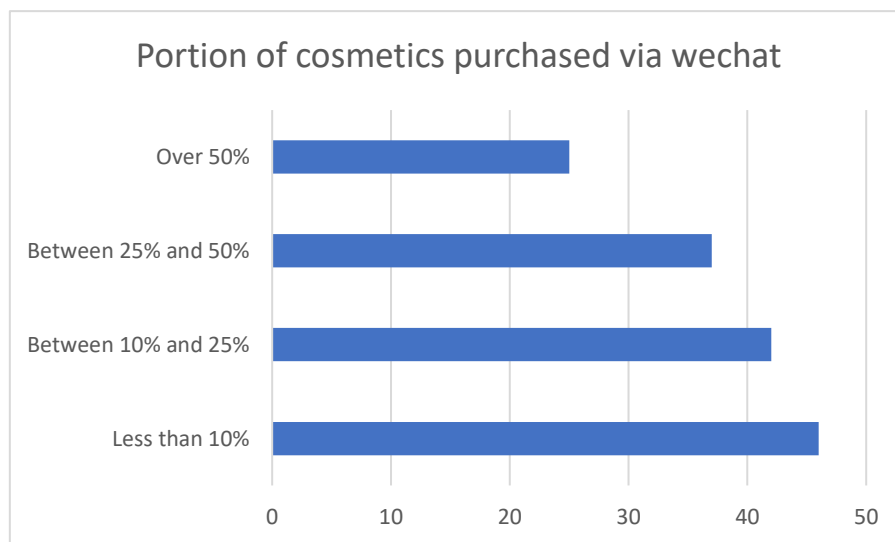


Figure 7 Portion of cosmetics purchased on WeChat

4.2 Reliability Analysis

4.2.1 Cronbach's Alpha

To evaluate the reliability of the measuring items for this study, Cronbach Alpha was calculated for each construct identified in table 1. For a construct to be reliable, the value for Cronbach Alpha is recommended to be ≥ 0.70 (Taber, 2016). However, value above 0.80 is deemed to be excellent (Taber, 2017). As shown in table below, all the constructs used for this study has Cronbach's Alpha of 0.73, and majority of the constructs have Cronbach's Alpha above 0.80.

Constructs	Measuring Items	Cronbach's α
Perceived Usefulness	PU1	0.888
	PU2	
	PU3	
Perceived ease of use	PEU1	0.913
	PEU2	
	PEU3	
Compatibility	C1	0.976
	C2	
	C3	
Peer Influence	PI1	0.926
	PI2	
	PI3	
External Influence	EI1	0.745
	EI2	
	EI3	
Self-efficacy	SE1	0.895
	SE2	
Facilitating Conditions	FC1	0.733
	FC2	
	FC3	
Bandwagon Effect	BE1	0.859
	BE2	
	BE3	
Attitude	A1	0.887
	A2	
	A3	
Subjective Norms	SN1	0.89
	SN2	
	SN3	
Perceived Behavioural Control	PBC1	0.783
	PBC2	
	PBC3	

Behaviour Intention	BI1	0.879
	BI1	
	BI3	

Table 6 Reliability Analysis using Cronbach's Alpha

4.3 Validation of the Constructs

4.3.1 Principle Component Analysis

To validate the constructs for uni-dimensionality, Principle Component Analysis (PCA) with Varimax rotation is used.

PCA was conducted in four stages. First, PCA was performed on all of 20 measuring items that measure Perceived Usefulness, Perceived Ease of Use, Compatibility, Peer Influence, External Influence, Self-efficacy and Facilitating Conditions. The maximum number of components were restricted to 7 based on the scree-plot (shown in figure 9).

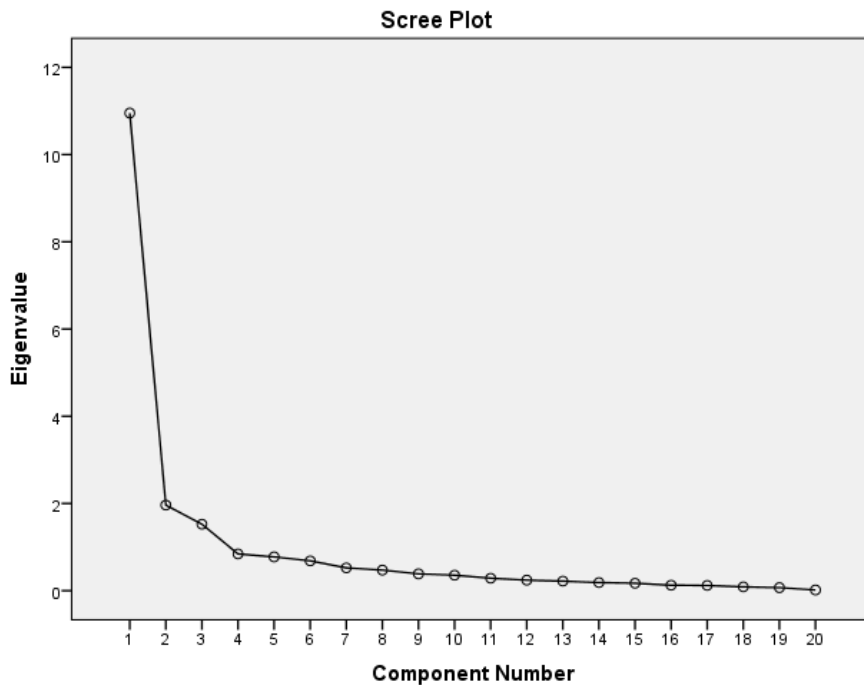


Figure 8 Scree-plot of PCA for all exogenous variables

The 7 components are able to explain 86.32% variance of all 20 exogenous variables (show in Appendix B: table 29). Rotated Component Matrix is shown in table 7.

Based on Rotated Component matrix shown in table 7, five Principle Components (PCs): Component 1 to 5 are selected as these components contain more than one element with loading greater than 0.5. On that basis, PEU2 and FC3 are discarded as their loadings for selected PCAs are less than 0.5.

Rotated Component Matrix^a

	Component						
	1	2	3	4	5	6	7
PU1	.142	.754	.380	.262	.139	-.067	.091
PU2	.224	.790	.186	.322	.056	.143	.029
PU3	.194	.739	.434	.116	.163	.167	.086
PEU1	.240	.579	.354	.130	.317	.450	.207
PEU2	.149	.360	.408	.285	.225	.585	.230
PEU3	.294	.534	.470	.128	.272	.379	.037
C1	.216	.431	.767	.261	.184	.102	-.022
C2	.267	.339	.823	.258	.146	.110	.033
C3	.269	.325	.812	.288	.133	.113	.020
PI1	.787	.169	.230	.163	.265	.047	.087
PI2	.805	.240	.282	.115	.242	-.057	.116
PI3	.826	.245	.140	.174	.225	-.010	.160
EI1	.800	.041	.112	-.050	.042	.223	.045
EI2	.577	.133	.033	.447	.026	.481	-.285
SE1	.179	.195	.296	.765	.232	.016	.094
SE2	.116	.327	.217	.727	.305	.108	.235
SE3	.039	.231	.280	.751	.204	.201	.277
FC1	.253	.151	.178	.265	.837	.092	.106
FC2	.303	.163	.153	.252	.819	.089	.068
FC3	.212	.123	.000	.336	.131	.062	.840

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 12 iterations.

Table 7 Rotated Component Matrix for First Principle Component Analysis

Moreover, the first component consists of 5 elements: PI1, PI2, PI3, EI1 and EI2. Second component consists of 5 elements: PU1, PU2, PU3, PEU1 and PEU3. Third component consists of 3 elements: C1, C2 and C3. Fourth component consists of 3 elements: SE1, SE2 and SE3, and Fifth component consists of 2 elements: FC1 and FC2.

In the second stage, first, PCA was performed on all of 9 measuring items that measure Attitude, Subjective Norms and Perceived Behavioural Control. The maximum number of components were restricted to 3 based on the scree-plot (shown in figure 10).

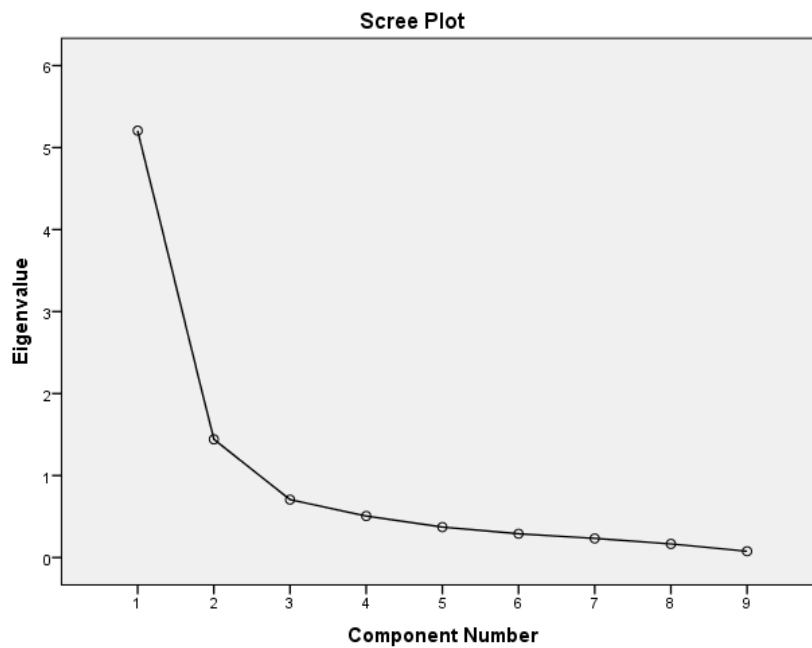


Figure 9 Scree-plot of PCA for all endogenous variables

The 3 components are able to explain 81.727% variance (shown in Appendix B: table 30). Rotated Component Matrix is shown in the table below.

Rotated Component Matrix^a

	Component		
	1	2	3
A1	.265	.833	.269
A2	.648	.576	.195
A3	.577	.700	.164
SN1	.816	.442	.120
SN2	.852	.368	.155
SN3	.893	-.056	.117
PBC1	.131	.181	.846
PBC2	.158	.274	.805
PBC3	.048	.749	.478

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Table 8 Rotated Component Matrix for second principle component analysis

From table 8, it appears that the loading of PBC3 on component 3 that includes other two elements: PBC1 and PBC2 is less than 0.50. Therefore, PBC3 is discarded, which indicates that PBC will be estimated from PBC1 and PBC2.

In the third stage of PCA, the indicator variables used for Bandwagon Effect (BE) were analysed. Maximum number of components were not restricted. Based on Scree-plot (figure 11) and total variance explained (Appendix B: Table 31), it appears that a single component is adequate.

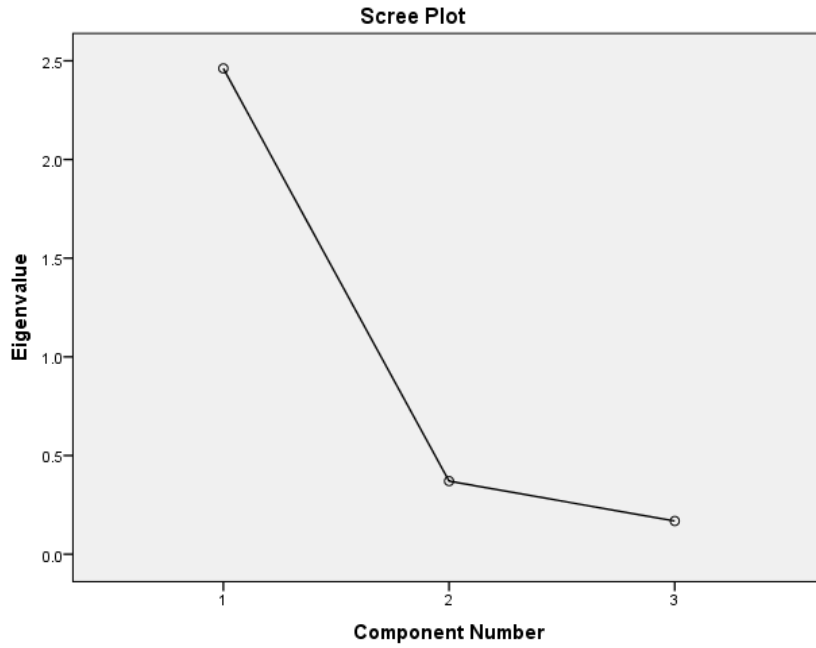


Figure 10 Scree-plot for dependent variable indicators

	Component
	1
BE1	.934
BE2	.784
BE3	.951

Extraction Method: Principal
Component Analysis.

a. 1 components extracted.

Table 9 Component Matrix for third Principle Component Analysis

As indicated in table 9, all the elements have loadings greater than 0.5 for the component and therefore all three elements: BE1, BE2 and BE3 are considered to estimate BE.

In the final stage of PCA, the indicator variables used for Dependent variable (BI) were analysed. Maximum number of components were not restricted similar to third stage PCA. Based on Scree-plot (figure 11) and total variance explained (Appendix B: Table 32), it appears that a single component is adequate.

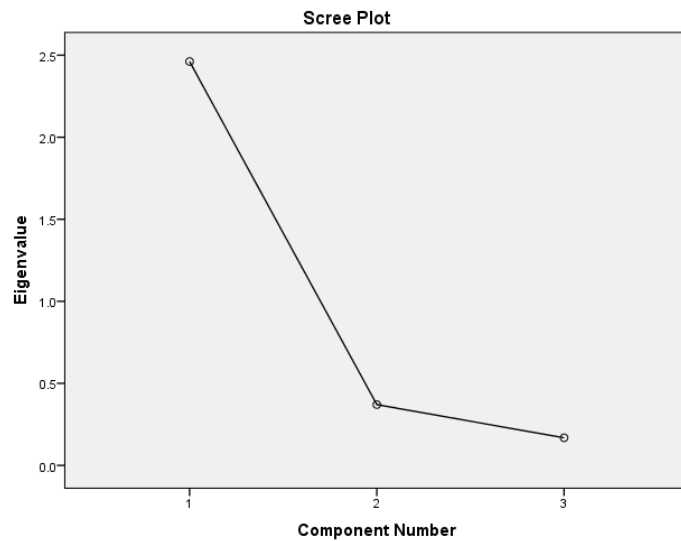


Figure 11 Scree-plot for fourth stage Principle Component Analysis

Table 10 illustrates the loadings for each of the elements for the component. It appears that all elements have loadings greater than 0.5 for the components, hence all three elements are considered to estimate the dependent variable, BI.

	Component
	1
BI1	.875
BI2	.897
BI3	.944

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table 10 Component Matrix for fourth stage PCA

4.3.1.1 KMO test

Kaiser-Meyer-Olkin (KMO) test is conducted to determine whether the dataset is suitable for PCA. Optimum KMO value for measuring sample adequacy is 1 (Kaiser, 1974). However, any value greater than 0.5 is acceptable, and values close to 1 are highly desirable. KMO value for four Principle Component Analysis is shown in table below.

Principle Component Analyses	KMO Measure of Sample Adequacy	Bartlett's Test of Sphericity (Significance)
First Stage PCA	0.913	0.000
Second Stage PCA	0.862	0.000
Third Stage PCA	0.642	0.000
Fourth Stage PCA	0.699	0.000

Table 11 KMO scores for all PCAs

From table 11, it appears that KMO score for all PCAs conducted are greater than 0.64, therefore, all the elements selected for each stage of PCA are suitable to perform Principle Component Analysis on them.

4.3.2 Recalculation of Cronbach's Alpha

In order to ensure that grouped elements selected based on the Principle Component Analyses are internally consistent, Cronbach's alpha is calculated for each group of variables, which is shown in the table below.

Variables	Cronbach's Alpha
PU1 PU2 PU3 PEU1 PEU2	0.926
C1 C2 C3	0.979
PI1 PI2 PI3 EI1 EI2	0.890

SE1 SE2 SE3	0.907
FC1 FC2	0.901
A1 A2 A3	0.892
SN1 SN2 SN3	0.898
PBC1 PBC2	0.690
BE1 BE2 BE3	0.872
BI1 BI2 BI3	0.888

Table 12 Recalculation of Cronbach's Alpha

Cronbach's Alpha for each grouped element satisfy the requirements laid out by Taber (2016). Therefore, set of items in each group are closely related and satisfy internal consistency.

4.3.3 Revised Hypotheses

The original hypotheses (shown in section 2.3.3) were modified in line of the outcomes of Principle Component Analysis. The revised hypotheses along with the original hypotheses are shown in the table below.

Original Hypotheses	Revised Hypotheses
H1a: <i>Perceived Usefulness</i> of WeChat has positive influence on users' <i>Attitude</i> towards using WeChat for purchasing cosmetics.	H1a_revised: <i>Perceived Usefulness-Perceived Ease of Use</i> of WeChat has positive influence on users' attitude towards using WeChat for purchasing cosmetics.
H1b: <i>Perceived Ease of Use</i> for WeChat has positive influence on users' <i>Attitude</i> towards using WeChat for purchasing cosmetics.	H1b_revised: <i>Compatibility</i> of using WeChat has positive influence on users' <i>Attitude</i> towards using WeChat for purchasing cosmetics.

<p>H1c: <i>Compatibility</i> of using WeChat has positive influence on users' <i>Attitude</i> towards using WeChat for purchasing cosmetics.</p>	
<p>H2a: <i>Peer influence</i> has positive impact on t users' <i>Subjective norms</i> towards using WeChat for purchasing cosmetics.</p> <p>H2b: <i>External influence</i> has positive impact on the users' <i>Subjective norms</i> towards using WeChat for purchasing cosmetics.</p>	<p>H2_revised: <i>Peer Influence-External Influence</i> has positive impact on t users' <i>Subjective norms</i> towards using WeChat for purchasing cosmetics.</p>
<p>H3a: <i>Self Efficacy</i> positively affects WeChat users' <i>Perceptive Behaviour Control</i>.</p> <p>H3b: <i>Facilitating Condition</i> positively affects WeChat users' <i>Perceptive Behaviour Control</i>.</p>	<p>H3a_revised: <i>Self Efficacy</i> positively affects WeChat users' <i>Perceptive Behaviour Control</i>.</p> <p>H3b_revised: <i>Facilitating Condition</i> positively affects WeChat users' <i>Perceptive Behaviour Control</i>.</p>
<p>H4: A positive <i>Attitude</i> towards WeChat has a positive influence on users' <i>intention</i> to use WeChat to purchase cosmetic products.</p>	<p>H4_revised: A positive <i>Attitude</i> towards WeChat has a positive influence on users' <i>intention</i> to use WeChat to purchase cosmetic products.</p>
<p>H5: There is a direct and positive relations between '<i>Subject Norms</i>' perceived by a user and his or her <i>intention</i> to purchase cosmetics on WeChat.</p>	<p>H5_revised: There is a direct and positive relations between '<i>Subject Norms</i>' perceived by a user and his or her <i>intention</i> to purchase cosmetics on WeChat.</p>
<p>H6: There is a positive correlation between '<i>Perceived Behavioural Control</i>' of consumers and their <i>intention</i> to purchase Cosmetics on WeChat.</p>	<p>H6_revised: There is a positive correlation between '<i>Perceived Behavioural Control</i>' of consumers and their <i>intention</i> to purchase Cosmetics on WeChat.</p>
<p>H7: <i>Bandwagon Effect</i> positive affects <i>Behaviour Intention</i> of WeChat users</p>	<p>H7_revised: <i>Bandwagon Effect</i> positive affects <i>Behaviour Intention</i> of WeChat users</p>

Table 13 Revised Hypotheses

4.3.4 Calculating New Constructs

In order to perform regression analysis, composite constructs were calculated from the indicator variables. These are shown in the table below.

Constructs	Composite Constructs
PU1 PU2 PU3 PEU1 PEU3	$PU_PEU = \text{mean}(PU1, PU2, PU3, PEU1, PEU3)$
C1 C2 C3	$CT = \text{mean}(C1, C2, C3)$
PI1 PI2 PI3 EI1 EI2	$PI_EI = \text{mean}(PI1, PI2, PI3, EI1, EI2)$
SE1 SE2 SE3	$SE = \text{mean}(SE1, SE2, SE3)$
FC1 FC2	$FC = \text{mean}(FC1, FC2)$
A1 A2 A3	$AT = \text{mean}(A1, A2, A3)$
SN1 SN2 SN3	$SN = \text{mean}(SN1, SN2, SN3)$
PBC1 PBC2	$PBC = \text{mean}(PBC1, PBC2)$
BE1 BE2 BE3	$BE = \text{mean}(BE1, BE2, BE3)$
BI1 BI2 BI3	$BI = \text{mean}(BI1, BI2, BI3)$

Table 14 Calculation of Composite constructs

4.3.5 Regression Equations

As mentioned, regression analysis is used to test the hypotheses. Based on the theoretical framework and revised hypotheses of table 17, the following regression equations are constructed.

Regression Equation 1 (to test H1a_revised and H1b_revised):

$$AT = \beta_0 + \beta_1 \text{PU_PEU} + \beta_2 \text{CT} + \varepsilon$$

Where, β_0 = intercept

β_1, β_2 = Coefficients

And ε = error term

Regression Equation 2 (to test H2_revised):

$$SN = \beta_0 + \beta_1 \text{PI_EI} + \varepsilon$$

Regression Equation 3 (to test H3a_revised and H3b_revised):

$$PBC = \beta_0 + \beta_1 \text{SE} + \beta_2 \text{FC} + \varepsilon$$

Regression Equation 4 (to test H4_revised, H5_revised, H6_revised and H7_revised):

$$BI = \beta_0 + \beta_1 \text{AT} + \beta_2 \text{SN} + \beta_3 \text{PBC} + \beta_4 \text{BE} + \varepsilon$$

4.4 Hypotheses Testing

4.4.1 Hypothesis 1

Hypothesis 1 predicted positive influence of *Perceived Usefulness – Perceived Ease of Use* (H1a_revised) and *Compatibility* (H1b_revised) of using WeChat on users' Attitude towards using WeChat for purchasing cosmetics.

The following Regression Equation is tested to validate this hypothesis.

$$AT = \beta_0 + \beta_1 PU_PEU + \beta_2 CT + \varepsilon$$

The Model Summary of the regression analysis is shown in the table below.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.770 ^a	.593	.589	.86435	2.052

a. Predictors: (Constant), CT, PU_PEU
b. Dependent Variable: AT

Table 15 Model Summary for first Regression Analysis

From table 15, it appears that Adjusted R-square is 0.589, which means that 58.9% of the variance in the dependent variable: AT can be explained by the independent variables: CT and PU_PEU. Table 18 also indicates that Durbin-Watson test statistic is 2.052, indicating slightly negative autocorrelation. However, as Field (2009) points out test statistic values ranging between 1 and 3 for Durbin-Watson test are acceptable. Therefore, this model has no cause for concern in terms of autocorrelation.

The Analysis of Variance (ANOVA) table (table 16) indicates that F-test is significant ($p < 0.001$), which means that this model (with 2 predictor variables: CT, PU_PEU) fits the data better than just the intercept-only model.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	214.142	2	107.071	143.317	.000 ^b
	Residual	147.177	197	.747		
	Total	361.319	199			

a. Dependent Variable: AT
b. Predictors: (Constant), CT, PU_PEU

Table 16 F-test for first Regression Analysis

The beta coefficients for each of the independent variable is shown in the table below.

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.955	.273		3.494	.001		
PU_PEU	.312	.084	.289	3.731	.000	.345	2.899
CT	.423	.063	.517	6.679	.000	.345	2.899

a. Dependent Variable: AT

Table 17 Beta Coefficients of the exploratory variables for first Regression Equation

From table 17, it appears that both of the exploratory or independent variables are statistically significant ($p < 0.001$). Also, increase in the rating of 1 for PU_PEU will increase the rating for AT by 0.312 (holding CT constant), similarly, increase in the rating of 1 for CT will increase the rating for AT by 0.423 (holding PU_PEU) constant.

Based on the coefficients from table 20, the first regression equation can be rewritten as:

$$AT = 0.955 + 0.312 * PU_PEU + 0.423 * CT + \varepsilon$$

From the above equation, CT has higher impact on AT than PU_PEU. Table 17 also shows the Collinearity Statistics for the regression model. Generally, Tolerance > 0.1 or VIF < 10 indicates absence of multicollinearity problem. Since, both of the independent variables have tolerance > 0.1 and VIF < 10 , this model (Regression Equation 1) has no multicollinearity problem.

Lastly, normality of the residuals is shown in a normal P-P plot (figure 12). The figure indicates no significant deviations from the normal diagonal line, which means that residuals are normally distributed.

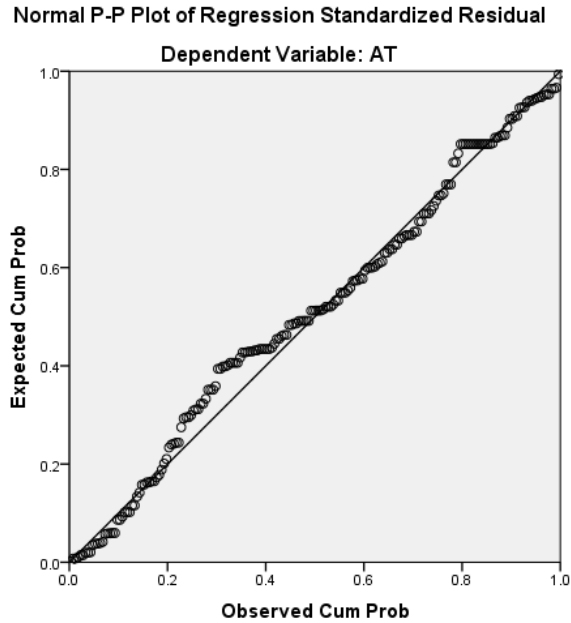


Figure 12 Normal P-P plot of Regression Standardized Residuals for first Regression

Perceived Usefulness – Perceived Ease of Use and *Compatibility* of using WeChat therefore have statistically significant positive influence on users’ Attitude towards using WeChat for purchasing cosmetics.

H1a_revised and H1b_revised are therefore **accepted**.

4.4.2 Hypothesis 2

Hypothesis 2 (H2_revised) indicated that *Peer Influence – External Influence* has positive impact on the users’ Subjective norms towards using WeChat for purchasing cosmetics.

The following regression equation is tested to validate this hypothesis.

$$SN = \beta_0 + \beta_1 PI_EI + \varepsilon$$

The model summary of the regression analysis is shown in the table below.

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.407 ^a	.166	.161	1.37153	2.285

a. Predictors: (Constant), PI_EI
 b. Dependent Variable: SN

Table 18 Model Summary for second Regression Analysis

The Adjusted R Square is 0.161 (table 18), which indicates that 16% of the variance in the dependent variable, SN can be explained by independent variable PI_EI. While, this R Square appears to be lower, according to Cohen (1992), R Square value between 0.13 and 0.25 indicates medium effect size. In respect to test for autocorrelation, Durbin-Watson test statistic falls between the acceptable range (1 to 3).

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	73.926	1	73.926	39.300	.000 ^b
	Residual	372.454	198	1.881		
	Total	446.380	199			

a. Dependent Variable: SN
b. Predictors: (Constant), PI_EI

Table 19 F-test for second Regression Analysis

F-test from table 19 indicates that the model is significant ($p < 0.001$), which means that model using predictor variable, PI_EI fits the data better than just the intercept-only model.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.943	.485		1.944	.053		
	PI_EI	.560	.089	.407	6.269	.000	1.000	1.000

a. Dependent Variable: SN

Table 20 Beta Coefficients of the exploratory variables for second Regression Equation

Table 20 indicates that the predictor variable, PI_EI is statistically significant ($p < 0.001$). Moreover, change in 1 rating of PI_EI results in 0.56 rating change in SN. Also, to note that Tolerance > 0.1 and VIF < 10 , indicating no collinearity issue.

However, normal P-P plot for the regression standardizes residual indicates deviations from the normal diagonal line.

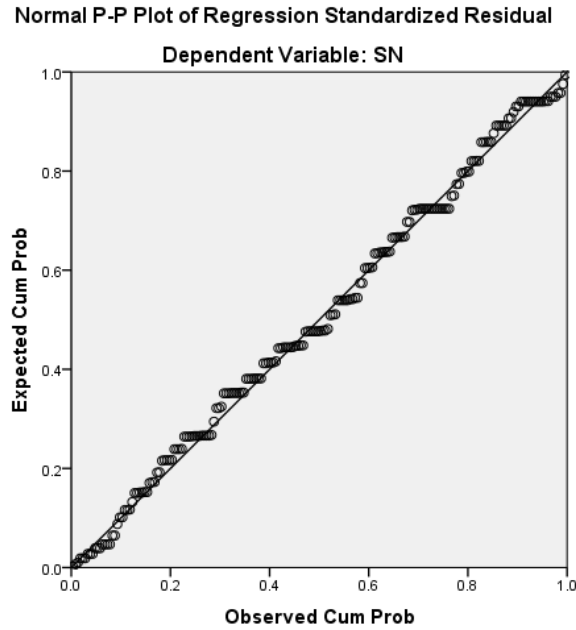


Figure 13 Normal P-P plot of Regression Standardized Residuals for second Regression

This indicates that normality of the residuals is violated, which is confirmed from the scatterplot, which is drawn from *Regression Standardized Residual* and *Regression Standardized Predicted Value* (figure 15).

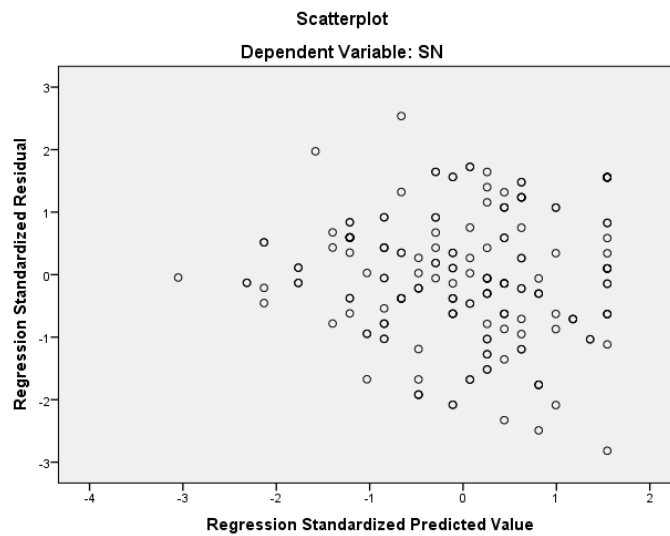


Figure 14 Scatter plot of the residuals of second regression model

Figure 14 indicates a clear pattern (Funnel shaped) emerging. This indicates a potential heteroskedasticity problem with the regression model. To rectify this, Robust Standard Errors proposed by Hayes and Cai (2007) is used. RLM Macro developed by Andrew Hayes was utilized. The detailed output is shown in Appendix C.

As it appears, Adjusted R Square remains the same 0.161, F-test indicating statistically significant model. Using Robust Standard Errors, the unstandardised coefficient is estimated to be 0.5602 for PI_EI (which is statistically significant $p < 0.001$). This indicates that change in 1 rating of PI_EI influences rating change of 0.5602 in SN. Therefore, H2_revised is **accepted**.

The second regression equation can therefore be written as:

$$SN = 0.9433 + 0.5602 * PI_EI + \varepsilon$$

4.4.3 Hypothesis 3

According to Hypothesis 3, *Self-Efficacy* (H3a_revised) and *Facilitating Conditions* (H3b_revised) have positive impact on WeChat users' *Perceived Behaviour Control*.

The following regression equation illustrates the hypothesized relationship.

$$PBC = \beta_0 + \beta_1 SE + \beta_2 FC + \varepsilon$$

Model summary for the regression analysis is shown below.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.604 ^a	.365	.359	1.01680	2.132

a. Predictors: (Constant), FC, SE
 b. Dependent Variable: PBC

Table 21 Model Summary for third Regression Analysis

Table 21 indicates that 36% (Adjusted R Square = 0.356) of the variance in PBC can be explained by FC and SE. Also, Durbin-Watson test statistic of 2.132 falls within the acceptable range of 1 to 3, indicating no serious concern of autocorrelation.

The model is also statistically significant as demonstrated by significance of f-test ($p < 0.001$) shown in table 22.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	117.200	2	58.600	56.680	.000 ^b
	Residual	203.675	197	1.034		
	Total	320.875	199			

a. Dependent Variable: PBC

b. Predictors: (Constant), FC, SE

Table 22 F-test for third Regression Analysis

Table 23 indicates that both of the predictor variables: SE and FC are statistically significant for dependent variable: PBC ($p < 0.001$). Moreover, table 26 indicates that change of 1 rating scale in SE results in change of 0.299 rating change in PBC (holding FC constant) and change of 1 rating scale in FC results in change of 0.4 rating change in PBC (holding SE constant).

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.424	.380		3.749	.000		
	SE	.299	.069	.308	4.327	.000	.635	1.575
	FC	.400	.078	.366	5.137	.000	.635	1.575

a. Dependent Variable: PBC

Table 23 Beta Coefficients of the exploratory variables for third Regression Equation

Table 23 also indicates that Tolerance is greater than 0.1 and VIF is less than 10, indicating no multicollinearity issue. The third regression equation can therefore be written as:

$$PBC = 1.1424 + 0.299 * SE + 0.400 * FC + \varepsilon$$

Although Normal P-P Plot of regression standardized residual (figure 16) indicates slight deviation of some residuals from the diagonal line, Scatterplot (figure 17) indicates that no clear pattern emerging when Regression Standardized Residuals were plotted against Regression Standardized Predicted Values. Therefore, constant variability or Homoscedasticity is assumed.

Hence, H3a_revised and H3b_revised are **accepted**.

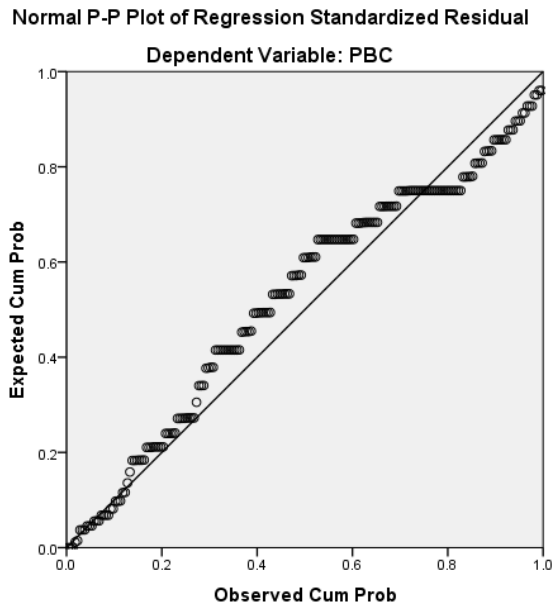


Figure 15 Normal P-P plot of Regression Standardized Residuals for third Regression

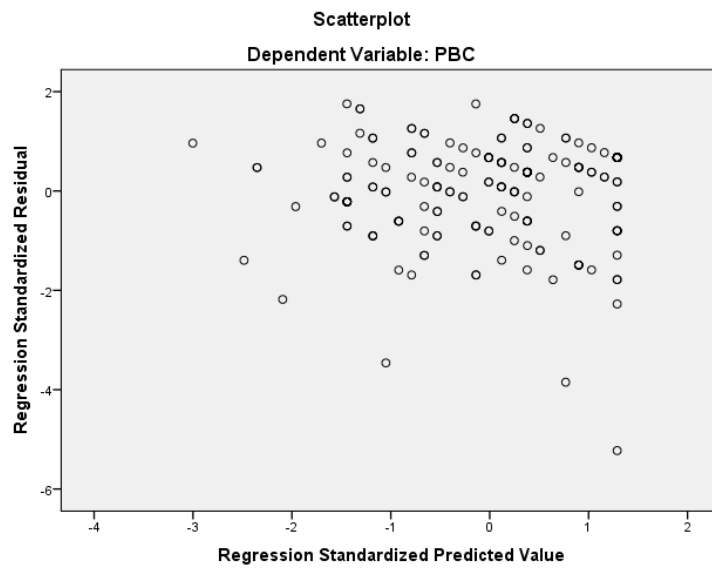


Figure 16 Scatter plot of the residuals of second regression model

4.4.4 Hypothesis 4 to Hypothesis 7

These hypotheses predicted positive influence between *Attitude* (H4_revised), *Subjective Norms* (H5_revised), *Perceived Behavioural Control* (H6_revised) and *Bandwagon Effect* (H7_revised), and *Behaviour Intention* of WeChat users.

To validate the above hypotheses, the following regression equation is tested.

$$BI = \beta_0 + \beta_1AT + \beta_2SN + \beta_3PBC + \beta_4BE + \varepsilon$$

However, before conducting regression analysis, Person Correlations are calculated between all the predictor variables (AT, SN, PBC and BE) and dependent variable (BI).

		BI	BE	PBC	SN	AT
Pearson Correlation	BI	1.000	.680	.540	.624	.857
	BE	.680	1.000	.478	.821	.786
	PBC	.540	.478	1.000	.353	.521
	SN	.624	.821	.353	1.000	.739
	AT	.857	.786	.521	.739	1.000
Sig. (1-tailed)	BI	.	.000	.000	.000	.000
	BE	.000	.	.000	.000	.000
	PBC	.000	.000	.	.000	.000
	SN	.000	.000	.000	.	.000
	AT	.000	.000	.000	.000	.
N	BI	200	200	200	200	200
	BE	200	200	200	200	200
	PBC	200	200	200	200	200
	SN	200	200	200	200	200
	AT	200	200	200	200	200

Table 24 Correlation Matrix for variables in Regression Equation 4

The correlation matrix (table 24) shows that all the exploratory variables are positively correlated with the dependent variable: BI. Among them, AT has strong positive (>0.70) with BI, while the remaining predictor variables: BE, PBC and SN have moderate positive correlations (>0.50) with the dependent variable, BI. It is to note that all the correlations are statistically significant ($p < 0.001$).

Regression Model summary is presented in table 25. As it appears, 74% (Adjusted R Square = 0.741) of the variance in BI can be explained by AT, PBC, SN and BE. This indicates good model fit. Also, the model does not have autocorrelation problem as indicated by Durbin-Watson test statistic of 1.803, which falls within the acceptable range of 1 to 3.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.864 ^a	.746	.741	.69084	1.803

a. Predictors: (Constant), AT, PBC, SN, BE
b. Dependent Variable: BI

Table 25 Model Summary for Fourth Regression Analysis

Statistically significant ($p < 0.001$) f-test for this model indicates that model using predictor variables: AT, PBC, SN, BE fits the data better than just the intercept-only model (table 25).

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	273.192	4	68.298	143.103	.000 ^b
	Residual	93.066	195	.477		
	Total	366.258	199			

a. Dependent Variable: BI
b. Predictors: (Constant), AT, PBC, SN, BE

Table 26 F-test for fourth Regression Analysis

Although all the predictor variables have positive associations with the dependent variable, as table 26 indicates, only two variables: AT and PBC are statistically significant in predicting BI.

Table 27 indicates that change of 1 in rating scale for AT results in change of 0.801 in rating scale for BI (holding all other independent variables constant), and change of 1 in rating scale for PBC results in change of 0.138 in rating scale for BI (holding all other independent variables constant). The equation can be written as:

$$BI = 0.318 + 0.801 * AT + 0.138 * PBC + \varepsilon$$

		Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.318	.224		1.423	.156		
	BE	.001	.068	.001	.020	.984	.244	4.092
	PBC	.138	.046	.129	2.982	.003	.698	1.433
	SN	-.009	.060	-.010	-.158	.875	.295	3.394
	AT	.801	.064	.796	12.542	.000	.323	3.091

a. Dependent Variable: BI

Table 27 Beta Coefficients of the exploratory variables for third Regression Equation

Therefore, H4_revised and H6_revised are **accepted**, while H5_revised and H7_revised are **rejected**.

Moreover, from the above equation, it is also apparent that AT has bigger impact on BI than PBC (0.801>0.138).

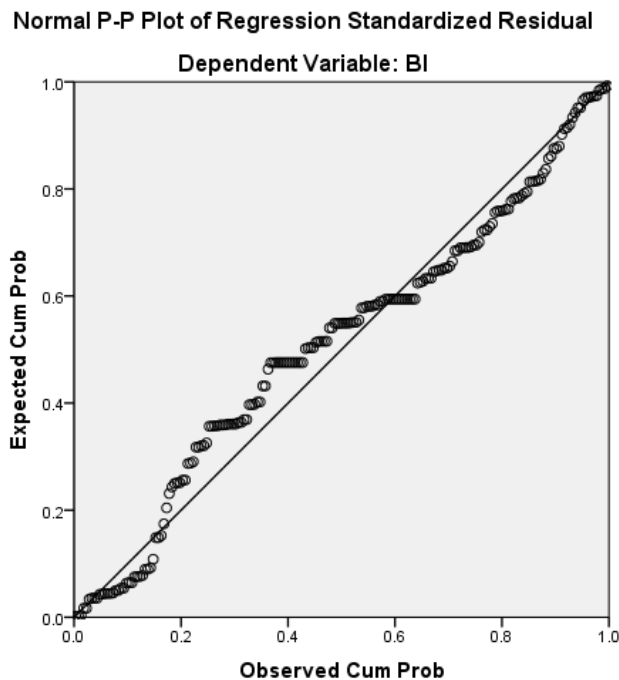


Figure 17 Normal P-P plot of Regression Standardized Residuals for third Regression

Figure 17 indicates that little deviations for a few points. Scatterplot drawn from Regression Standardized Residuals and Regression Standardized Predicted Value is consulted to ensure that normality for residuals is not violated. Scatterplot (figure 18) indicates no clear pattern emerging. Therefore, clear evidence of heteroscedasticity is absent.

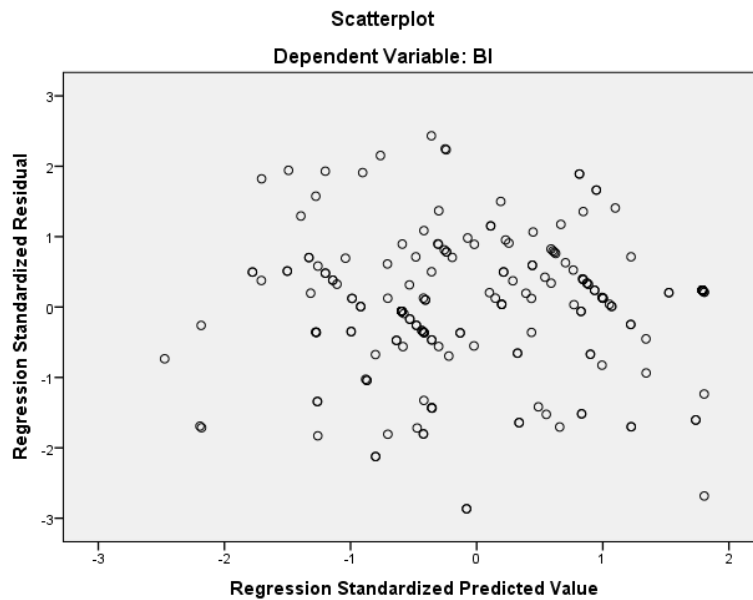


Figure 18 Scatter plot of the residuals of second regression model

Based on the regression analyses presented above summary of hypotheses testing is shown in the table below.

Hypotheses	Accept/Reject
H1a_revised: <i>Perceived Usefulness-Perceived Ease of Use</i> of WeChat has positive influence on users' attitude towards using WeChat for purchasing cosmetics.	Accepted
H1b_revised: <i>Compatibility</i> of using WeChat has positive influence on users' <i>Attitude</i> towards using WeChat for purchasing cosmetics.	Accepted
H2_revised: <i>Peer Influence-External Influence</i> has positive impact on the users' <i>Subjective norms</i> towards using WeChat for purchasing cosmetics.	Accepted

H3a_revised: <i>Self Efficacy</i> positively affects WeChat users' <i>Perceptive Behaviour Control</i> .	Accepted
H3b_revised: <i>Facilitating Condition</i> positively affects WeChat users' <i>Perceived Behaviour Control</i> .	Accepted
H4_revised: A positive <i>Attitude</i> towards WeChat has a positive influence on users' <i>intention</i> to use WeChat to purchase cosmetic products.	Accepted
H5_revised: There is a direct and positive relations between ' <i>Subject Norms</i> ' perceived by a user and his or her <i>intention</i> to purchase cosmetics on WeChat.	Rejected
H6_revised: There is a positive correlation between ' <i>Perceived Behavioural Control</i> ' of consumers and their <i>intention</i> to purchase Cosmetics on WeChat.	Accepted
H7_revised: <i>Bandwagon Effect</i> positive affects <i>Behaviour Intention</i> of WeChat users	Rejected

Table 28 Hypothesis testing

4.5 Discussion

Table 28 indicates that H1a_revised, H1b_revised, H2_revised, H3a_revised, H3b_revised, H4_revised, and H6_revised are accepted. This indicates that Perceived Usefulness-Perceived Ease of Use of WeChat and Compatibility of using WeChat have positive influence on users' Attitude. Also, Peer Influence-External Influence has positive influence on users' Subjective norms, while Self Efficacy and Facilitating Condition have positive influence on Perceived Behaviour Control. Finally, Attitude and Perceived Behaviour Control have positive influence on the Behaviour Intention for the users using WeChat to purchase cosmetics on WeChat.

These effects are in line with the established literature. As highlighted in the Decomposed Theory of Planned Behaviour (Figure 2 illustrates the modified version of the theory adopted for this study). According to the theory, the main three antecedents of TPB: Attitude, Subjective Norms and Perceived Behaviour Control can be decomposed into a set of decomposed beliefs. The findings of this study mostly support this. The regression analyses indicated that decomposed set of beliefs: *Perceived Usefulness-Perceived Ease of Use* and *Compatibility* shape consumer attitude. However, it is to note

that constructs used to measure Perceived Usefulness and Perceived Ease of Use share a lot of variance as indicated by the PCA in this study. Similarly, this study also finds that constructs used to measure *Peer Influence* and *External Influence* are highly correlated and share a lot of variance.

However, when it comes to antecedents of Behaviour Intention, the findings of this study depart from the original TPB. As shown in table 31, while H4_revised and H6_revised are accepted, H5_revised was rejected in line with the findings from regression analyses. In other words, Attitude and Perceived Behaviour Control have significant impact on Behaviour Intention of users but Subjective Norms have no influence (statistically significant) on Behaviour Intention of users when purchasing cosmetics on WeChat. The absence of influence of Subjective Norms on Behaviour Intention is not in line with the established literature. As highlighted by the works of Pavlou and Fygenson (2006) and Moons and Pelsmacker (2015) Subjective Norms have significant influence on Behaviour Intention when it comes to purchasing products online. However, regression analysis (section 4.4.4) in this study does not support this assertion, although both of the variables are positively correlated (table 24), indicating increase in Subjective Norms associated with Increased BI. This could be explained by a number of factors. Firstly, as discussed in 4.4.2, regression equation 2 only establishes medium effects of independent variable (PI_EI) on dependent variable (SN), which can weaken statistical significance of the relationship between SN and BI. Furthermore, this lack of relationship can also be explained by the study of Dakduk, Horst, Santalla, Molina and Malave (2017). Using modified Technology Acceptance Model, Dakduk et al. (2017) explained that Subjective norms do not have direct influence on BI when it comes to Customer Behaviour in E-Commerce, but rather Subjective Norms influence Attitude, which in return influence BI. This can also be true in cosmetic purchase BI on WeChat, where users do not purchase because it is expected but because others (peers and external influencers) affect their own perception on purchasing cosmetics on WeChat. In other words, Subjective Norms likely to have indirect effect on BI through Attitude.

Besides Subjective Norms, the regression analysis also failed to establish direct impact of *Bandwagon Effect* on BI. As mentioned, the studies of Ko and Megehee (2012), Shaikh et al. (2017), and Wu and Lin (2017) highlighted the influence of Bandwagon Effect on Purchase Intention of Internet consumers. This study attempted to examine whether such effect is present when it comes to purchasing cosmetics on WeChat, but failed to do so. This can be explained by the studies of Ko and Megehee (2012), and Shaikh et al. (2017), who found the presence of Bandwagon Effect for luxury products and explained that Bandwagon Effects exists because customers' think owning these products will change how others perceive them for owning those products. Therefore, it can be extrapolated that Bandwagon Effect might have statistically significant effect on BI for luxury cosmetics, not for all cosmetics that are purchased on WeChat.

5. Conclusion

5.1 Summary of the findings

The main objective on this study was to provide a modified DTPB model capable of explaining various factors associated with Behaviour Intention of users towards purchasing Cosmetics via WeChat. The modification to the DTPB model was conducted in line with the relevant studies from the existing literature. This study replaced 'Superior Influence' as an antecedent to Subjective Norms with 'External Influence'. This is because studies (Erkhan & Evans, 2016; Lim et al., 2017) indicated External Influence is more suitable in determining Subjective Norms than Superior Influence. Also, studies (Thangaraja & Lakshmi, 2016; Yahong et al., 2018) have indicated significant overlap between 'Technology Facilitating Condition' and 'Resource Facilitating Condition' when it comes to customer behaviour in purchasing products or services online. This study therefore merged both of these antecedents of Perceived Behaviour Control into one: 'Facilitating Conditions'. Moreover, in line with the work of Ko and Megehee (2012), and Wu and Lin (2017), 'Bandwagon Effect' as also added as this was found to have direct effects on Behaviour Intention. Bandwagon Effect is treated as fourth antecedent on Behaviour Intention besides Attitude, Subjective Norms, and Perceived Behavioural Control.

To verify this modified DTPB model, this deductive study collected quantitative data using survey methodology from 150 Chinese cosmetic consumers who have purchased or have intention to purchase cosmetics via WeChat. Among the 150 participants, 134 or 89.3% of the participants are between 18 and 34 years old, the key demography for any business. 99.3% of the participants are female while 65.3% of the participants are employed full-time. 69.4% participants stated that they purchase more than 10% of their cosmetics via WeChat, while, 16.7% stated that they purchase more than 50% of their cosmetics via WeChat. These purchase proportion support the industry reports (Cosmetics China, 2020; Graziani, 2018; Iqbal, 2019) of increasing number of consumers using WeChat to purchase their Lifestyle products.

Analysis of Survey data also indicates that *Perceived Usefulness – Perceived Ease of Use* and *Compatibility* have statistically significant influence on *Attitude*, the one of four antecedents of Behaviour Intention. The second antecedent of Behaviour Intention – *Subjective Norms* is influenced by *Peer Influence – External Influence*. However, the effect was found to be medium but statistically significant. Moreover, *Self-Efficacy* and *Facilitating Condition* have statistically significant influence on *Perceived Behavioural Control*, the third antecedent of Behaviour Intention.

Regression analysis found that two of the antecedents: *Attitude* and *Perceived Behavioural Control* have statistically significant direct effects on Behaviour Intention as indicated by the established literature. However, the other two antecedents: *Subjective Norms* and *Bandwagon Effect* do not have direct effects (statistically significant) on Behaviour Intention. This is contrary to some of the studies.

However, as studies such as Dakduk et al. (2017) explained that Subjective Norms do not have direct effect on Behaviour Intention of the consumers as described by many studies, but rather Subjective Norms have indirect effects on Behaviour Intention via Attitude. Similar conclusion was made by George (2004) who studied Internet Purchasing behaviour of US consumers. In regards to Bandwagon Effects, Ko and Megehee (2012) explain that Bandwagon Effect is more significant when consumers are driven by their need to be associated with products that will help them to be perceived as being stylish or fashionable or elevate their social status. Shaikh et al. (2017) also explained that Bandwagon Effect is more effective for luxury brands. Cosmetic products many of which are used for everyday use are not likely to be seen as products that can elevate the users' social status. Therefore, while Wu and Lin (2017) found that Bandwagon Effect is statistically significant in determining Behaviour Intention without controlling for luxury, the study does not support this conclusion reached by Wu and Lin (2017). It is likely that Behaviour Intention of Luxury cosmetics are directly affected by Bandwagon Effect, a conclusion that needs to be reached via quantitative study.

The findings of this study can help cosmetic companies to formulate effective marketing strategies to enhance consumers' Behaviour Intention to purchase their products on WeChat. This study shows Attitude of customers is the most important antecedent of Behaviour Intention. This means that companies need to ensure that customers perceive their products and purchase process over WeChat to be easy to use, useful and compatible with their lifestyles. Moreover, companies should also focus on facilitating peer and external influences, as these are likely to influence Attitude of the customers.

5.2 Limitations

The study focused on the purchase intention for cosmetics. Therefore, generalisation of the findings should not be made for all products and services that are sold on WeChat. Furthermore, the findings are for purchasing cosmetics on WeChat, different online platforms are likely to have different set of factors and degree of influence. Finally, the study focused on Chinese consumers, therefore purchase intention for different socio-culture group on the same platform can vary. These limitations should be considered before making any attempt to generalise the findings of this study.

5.3 Future Recommendations

Future studies should consider conducting random sampling to ensure effective generalisation of the findings on the population (cosmetic consumers in China). Moreover, studies should also consider other Consumer Behaviour models apart from DTPB including modified TRA and TAM, as findings of this study indicate that Subjective Norms, a key antecedent of Behaviour Intention does not have direct effects on Behaviour Intention, as predicted by the work of Dakduk et al. (2017) who used modified

TAM. Comparative analysis of all models will allow one to determine the best suited model to explain consumer purchase intention when it comes to purchasing cosmetics on WeChat.

Also, studies should also use Structural Equation Modelling to better identify direct and indirect effects of the variables on Behaviour Intention. Inductive research should also be done to determine if there are new variables that have influence on WeChat users' purchase intention for cosmetics that are not identified by the established models. Finally, similar studies are also need to be done for other category of products that are available to purchase on WeChat.

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Appendix A| Questionnaire in English and Mandarin

Questionnaire in English

Dear Participants,

The purpose of this questionnaire is to understand consumer behaviour in Mobile Social Media, in particular, purchasing cosmetics on WeChat.

The participation of this study is voluntary, and you are free to decide whether to take part in this study. Even if you decide to participate, you are free to withdraw at any time without giving a reason for withdrawal.

The responses are anonymised, so your name, email, and other identifiable attributes will not be shared or published.

Section 1| Conditional Question

1.1 Do you *purchase* or *intend to purchase* cosmetics from WeChat?

- Yes
- No

If 'No' survey is terminated.

Section 2| Questions regarding consumer behaviour

Please rate the following statements

2.1 Using WeChat

Statements	1 (Strongly Disagree)	2	3	4 (Neither Agree nor Disagree)	5	6	7 (Strongly Agree)
Using WeChat to purchase cosmetics is quick and saves time.							
Using WeChat helps me to purchase cosmetics quickly							
Using WeChat to purchase cosmetics helps me to reduce spending time on unproductive activities							
Using WeChat to purchase cosmetics is easy to do							
The process of purchasing cosmetics on WeChat is easy to understand							
Using WeChat to purchase cosmetics is more flexible							
Purchasing cosmetics on WeChat is compatible with my lifestyle							
Shopping experience on WeChat is compatible with my shopping habits							
I find the other customers on WeChat to be like-minded							

2.2 Recommendations from friends and others

Statements	1 (Strongly Disagree)	2	3	4 (Neither Agree nor Disagree)	5	6	7 (Strongly Agree)
Recommendations from peers have significant influence on my intention to purchase cosmetics on WeChat							
I am more likely to purchase cosmetics products from WeChat if my friends do so							
I am more likely to purchase cosmetics from WeChat if my peers encourage me to do so							
Recommendations by others influence my intention to purchase cosmetics on WeChat							
Recommendations from 'Social Media celebrities'/ 'famous vloggers'/ 'influencers' have influence on my cosmetics purchase intention on WeChat							

2.3 My capacity to use WeChat

Statements	1 (Strongly Disagree)	2	3	4 (Neither Agree nor Disagree)	5	6	7 (Strongly Agree)
I have the required technical knowledge to purchase cosmetics on WeChat							
I am fully capable of purchasing cosmetics on WeChat.							
I do not have any anxiety about purchasing cosmetics on WeChat							
I have access to the Mobile device to purchase cosmetics on WeChat							
I have access to Mobile Internet to purchase cosmetics on WeChat							
I have adequate money on WeChat Wallet to purchase cosmetics on the platform							
I have financial resources to purchase cosmetics on WeChat							
I can spend the required time to purchase cosmetics on WeChat							
I have the required knowledge to purchase cosmetics on WeChat							

2.4 My Preferences

Statements	1 (Strongly Disagree)	2	3	4 (Neither Agree nor Disagree)	5	6	7 (Strongly Agree)
Purchasing cosmetics on WeChat helps my social status							
Purchasing cosmetics on WeChat is the current trend							
Purchasing cosmetics on WeChat differentiates me in a positive way							
I have favourable view of purchasing cosmetics on WeChat							
Purchasing cosmetics on WeChat is more appealing to me							
Purchasing cosmetics on WeChat is better for me							
Most people who are important to me think I should purchase cosmetics on WeChat							
Most people who are important to me want me to purchase cosmetics on WeChat							
I feel under social pressure to purchase cosmetics on WeChat							
I definitely purchase cosmetics on WeChat							
I definitely intend to purchase cosmetics on WeChat							
I have high interest in purchasing cosmetics on WeChat							

Section 3| General Questions

3.1 Which age-group do you belong?

- between 18 and 24
- between 25 and 34
- Above 35

3.2 Which gender you identify with?

- Male
- Female
- Others
- Prefer not to say

3.3 What is your occupation?

- Student
- Full-time employment
- Part-time employment
- Self-employed/ own business
- Others

3.4 What portion of cosmetics you currently purchase or intend to purchase on WeChat?

- Less than 10%
- Between 10% and 25%
- Between 25% and 50%
- Over 50%

Questionnaire in Mandarin

(Screenshot of the questionnaire that was used on wjx.cn)

微信平台消费调查



致各位参与者，

这份问卷的目的是了解移动社交媒体中的消费者行为，特别是在微信上购买美妆产品的消费者。（在微信平台上购买美妆产品包括向私营企业，例如代购、微商、微店，或者在各种公众号上的消费）

本研究的参与是自愿的，您可以自行决定是否参与本研究。即使您决定参加，您也可以随时退出，并且无需给出退出的理由。

此问卷研究是匿名的，因此您的姓名，电子邮件和其他个人信息将不会被共享或发布。

感谢您的参与

*1. 您是否在微信平台上购买过或打算购买美妆产品？（如回答否，请无需继续作答）

- 是
 否

*2. 使用微信购买美妆产品很快捷并且节省时间

- 非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*3. 使用微信可以帮助我更快做决定

- 非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*4. 使用微信购买美妆产品非常有效率

- 非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*5. 使用微信购买美妆产品的操作很简单

- 非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*6. 第一次在微信平台购买美妆产品时，我很容易就了解了购买的操作过程

- 非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*7. 使用微信平台购买美妆产品这个渠道更灵活

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*8. 在微信平台购买美妆产品符合我的生活方式

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*9. 在微信平台购买美妆产品符合我的购物习惯

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*10. 如果朋友推荐我使用微信平台购买美妆产品，对我使用这个平台的意向有重要的影响

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*11. 如果我朋友在微信平台购买美妆产品，我也会愿意在这个平台上购买

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*12. 如果我朋友推荐我在微信平台购买美妆产品，我会愿意在这个平台购买

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*13. 其他人是否推荐微信这个平台，影响我在微信上购买美妆产品的意向

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*14. 如果“社交媒体名人”、“知名博主”“公众号”推荐我在微信这个平台购买美妆产品，我也会有意向使用这个平台

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*15. 我具备在微信上购买美妆产品所需的技术知识

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*16. 我在微信上购买美妆产品时，没有感到任何困难

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*17. 我对在微信上购买美妆产品没有任何压力

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*18. 我有可使用的移动设备在微信上购买化妆品

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*19. 我有可使用的移动网络在微信上购买化妆品

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*20. 我的微信钱包上有足够的钱在平台上购买美妆产品

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*21. 我有资金来源可供我在微信上购买美妆产品

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*22. 我可以花时间在微信上购买美妆产品

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*23. 我具备在微信上购买美妆产品所需的知识

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*24. 在微信上购买美妆产品有助于我的社会地位

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*25. 在微信上购买美妆产品是当前趋势

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*26. 在微信上购买美妆产品可以使我与众不同

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*27. 我赞成在微信上购买美妆产品

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*28. 在微信上购买美妆产品对我更有吸引力

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*29. 在微信上购买美妆产品对我来说是更好的选择

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*30. 大部分对我重要的人认为我应该在微信上购买美妆产品

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*31. 大部分对我重要的人希望我在微信上购买美妆产品

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*32. 我觉得在微信上购买美妆产品有社会压力

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*33. 我倾向于在微信上购买美妆产品

非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*34. 我会考虑在微信上购买美妆产品

- 非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*35. 我对在微信上购买美妆产品很感兴趣

- 非常不赞同 不赞同 有点不赞同 既不赞同也不反对 有点赞同 赞同 非常赞同

*36. 您的年龄段

- 18-24岁
 25-34岁
 35岁以上

*37. 您的性别

- 男
 女
 不想说

*38. 您的职业

- 学生
 全职工作
 兼职工作
 自营
 其他

*39. 您目前在微信上购买或打算购买的美妆产品与您从其他平台购买的美妆产品比例是多少?

- 少于10%
 10%-25%
 25%-50%
 50%以上

Appendix B | PCA – Total Variance Explained

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.952	54.760	54.760	10.952	54.760	54.760	3.635	18.177	18.177
2	1.963	9.814	64.574	1.963	9.814	64.574	3.325	16.623	34.800
3	1.525	7.623	72.196	1.525	7.623	72.196	3.241	16.203	51.003
4	.842	4.209	76.406	.842	4.209	76.406	2.716	13.580	64.582
5	.775	3.875	80.280	.775	3.875	80.280	2.105	10.524	75.106
6	.684	3.421	83.701	.684	3.421	83.701	1.135	5.677	80.784
7	.524	2.619	86.320	.524	2.619	86.320	1.107	5.536	86.320
8	.472	2.360	88.681						
9	.386	1.929	90.610						
10	.356	1.778	92.388						
11	.286	1.432	93.820						
12	.241	1.207	95.027						
13	.219	1.096	96.123						
14	.185	.927	97.050						
15	.171	.853	97.903						
16	.126	.629	98.532						
17	.120	.598	99.131						
18	.088	.441	99.571						
19	.069	.347	99.918						
20	.016	.082	100.000						

Extraction Method: Principal Component Analysis.

Table 29 PCA1 -Total Variance Explained

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.207	57.854	57.854	5.207	57.854	57.854	3.057	33.965	33.965
2	1.442	16.021	73.875	1.442	16.021	73.875	2.518	27.972	61.937
3	.707	7.852	81.727	.707	7.852	81.727	1.781	19.790	81.727
4	.507	5.628	87.355						
5	.371	4.126	91.481						
6	.290	3.224	94.705						
7	.233	2.593	97.299						
8	.166	1.849	99.148						
9	.077	.852	100.000						

Extraction Method: Principal Component Analysis.

Table 30 PCA2 -Total Variance Explained

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.391	79.705	79.705	2.391	79.705	79.705
2	.522	17.386	97.091			
3	.087	2.909	100.000			

Extraction Method: Principal Component Analysis.

Table 31 PCA3 -Total Variance Explained

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.461	82.045	82.045	2.461	82.045	82.045
2	.370	12.343	94.388			
3	.168	5.612	100.000			

Extraction Method: Principal Component Analysis.

Table 32 PCA4 -Total Variance Explained

Appendix C | SPSS output for second Regression model

Run MATRIX procedure:

***** RLM Procedure for SPSS Release 1.01

Written by Andrew F. Hayes, Ph.D. www.afhayes.com

**

Dependent Variable
SN

Sample size
200

Complete Model Regression Summary

R	R-sq	F	p	SEofEst
.4070	.1656	45.7285	.0000	1.3715

Population R-squared estimates

Adj. Rsq	PrattRsq
.1614	.1628

ANOVA summary table

	SS	df	MS
Regress	73.9260	1.0000	73.9260
Residual	372.4540	198.0000	1.8811
Total	446.3800	199.0000	2.2431

Regression Model

	Coeff	se(HC3)	t	p	LLCI
ULCI					
constant	.9433	.4192	2.2504	.0255	.1167
1.7699					
PI_EI	.5602	.0828	6.7623	.0000	.3968
.7235					

Simple (r), semipartial (sr), partial (pr) correlations with outcome and standardized regression coefficients (stand)

	r	sr	pr	stand
PI_EI	.4070	.4070	.4070	.4070

***** DIAGNOSTICS

Variable minimums and maximums

	Minimum	Maximum
PI_EI	2.0000	7.0000
SN	1.0000	7.0000
y-hat	2.0636	4.8644
resid	-3.8644	3.4800
t-resid	-2.8943	2.5827

Bonferroni-corrected p for largest t-residual

```
t-resid  p-value  Casenum
-2.8943   .8457   96.0000
```

```
***** ANALYSIS NOTES AND WARNINGS *****
```

```
NOTE: Level of confidence for confidence intervals:
      95.00
```

```
NOTE: A heteroscedasticity consistent standard error estimator was used.
```

```
----- END MATRIX -----
```

