

**Czech University of Life Sciences Prague**

**Faculty of Economics and Management**

**Department of Economics**



**Master's Thesis**

**Consumption and Consumers' Behaviour Analysis of  
Luxury Goods in China**

**Bc. Xiaorui Wang**

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## DIPLOMA THESIS ASSIGNMENT

Xiaorui Wang

Economics and Management  
Economics and Management

Thesis title

**Consumption and Consumers' Behaviour Analysis of Luxury Goods in China**

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### Objectives of thesis

The aim of the diploma thesis is to analyze the consumption and consumers' behavior on the Chinese luxury market.

The aim will be fulfilled on the partial aims. Then, several hypotheses will be defined and verified. Based on the results of an empirical analysis the final conclusions will be introduced.

### Methodology

The diploma thesis will cover both, theoretical and empirical part. Theoretical part will contain theoretical background of the selected topic as well as the methodological framework. Scientific literature will be used to prepare the literature overview. Based on the empirical analysis the results will be presented and some recommendations will be suggested.

To fulfill the aim of the thesis the selected methods and indicators will be employed as following:

- econometric model (complex relationships among selected variables)
- survey of consumers' behavior based on own questionnaire

## The proposed extent of the thesis

60-80 pages

## Keywords

Consumption, consumers' behaviour, China, luxury goods

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## Recommended information sources

FRANK, R H. – BERNANKE, B. – ANTONOVICS, K L. – HEFFETZ, O. *Principles of microeconomics*. New York: McGraw-Hill Education, 2016. ISBN 978-1-259-25410-9.

GUJARATI, D N. *Econometrics by example*. London: Palgrave Macmillan Education, 2015. ISBN 978-1-137-37501-8.

MONTGOMERY, D C. – PECK, E A. – VINING, G G. *Introduction to linear regression analysis*. Hoboken, N.J.: John Wiley and Sons, 2012. ISBN 978-0-470-54281-1.

MOOIJ, M K D. *Consumer behavior and culture : consequences for global marketing and advertising*. Thousand Oaks, Calif.: Sage Publications, 2004. ISBN 0761926682.

SCHIFFMAN, L G. – KANUK, L L. – WISENBLIT, J. *Consumer behavior*. Boston: Pearson Prentice Hall, 2010. ISBN 978-0-13-700670-0.

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## The Diploma Thesis Supervisor

Ing. Lenka Rumánková, Ph.D.

## Supervising department

Department of Economics

Electronic approval: 27. 3. 2022

**prof. Ing. Miroslav Svatoš, CSc.**

Head of department

Electronic approval: 28. 3. 2022

**doc. Ing. Tomáš Šubrt, Ph.D.**

Dean

Prague on 30. 03. 2022



### **Declaration**

I declare that I have worked on my master's thesis titled "Consumption and Consumers' Behaviour Analysis of Luxury Goods in China" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the master's thesis, I declare that the thesis does not break any copyrights.

In Prague on 31. 3. 2022

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# Consumption and Consumers' Behaviour Analysis of Luxury Goods in China

## Abstract

China is now on track to become the world's biggest luxury market surpass the Americas and Europe. Bain Group partner Bruno Lannes predicts that by 2025, China is estimated to represent between 40% to 45% of global luxury market share. The growth of China's luxury consumption is due to the rise of China's economy on the one hand, and the huge base of China's population on the other hand. In addition, the motivations and intentions behind Chinese consumers' purchase of luxury goods are also the key to influencing their consumption. Therefore, it is very important to understand the consumption and consumers' behaviour of Chinese consumer on luxury.

This thesis is based on the cognitive model of consumers' behaviour as the theoretical basis, combined with the econometric model in practical part to study the impact of various factors on luxury consumption. The cross-sectional data of 297 samples were surveyed by questionnaire. The influencing factors are divided into external factors and internal factors. The most relevant impact factors are selected to establish an econometric model to analyse the main determinants that affect Chinese consumers' purchase of luxury goods. The main results indicate that the Net income, Apartment size, Motivation of Gift-giving, Motivation of Celebrities influence, and Motivation of Show-offish have the positive impact on luxury consumption, however, the Motivation of Patriotism has the negative impact on luxury consumption.

**Keywords:** Consumption analysis, consumers' behaviour, China luxury market, luxury goods, purchase motivation, luxury consumption, econometric model, questionnaire.

# Spotřební analýza a analýza chování spotřebitelů luxusního zboží v Číně

## Abstrakt

Čína je na cestě stát se největším trhem s luxusním zbožím na světě, který překoná Ameriku a Evropu. Brunno Lannes, společník ze skupiny Bain Group, předpovídá, že do roku 2025, bude Čína podle odhadů představovat mezi 40 až 45 procenty podílu na celosvětovém trhu s luxusním zbožím. Růst čínské spotřeby luxusního zboží je na jedné straně způsoben vzestupem čínské ekonomiky a obrovskou základnou čínské populace na straně druhé. Klíčem k ovlivnění jejich spotřeby jsou motivace a záměry, stojící za nákupem luxusního zboží čínskými spotřebiteli. Proto je velmi důležité porozumět spotřebě a spotřebitelskému chování čínského spotřebitele ohledně luxusního zboží.

Tato studie vychází z kognitivního modelu spotřebitelského chování jako teoretického základu, kombinovaného s ekonometrickým modelem v praktické části pro studium vlivu různých faktorů na spotřebu luxusního zboží. Průřezová data 297 vzorků byla zjišťována dotazníkem. Ovlivňující faktory se dělí na vnější faktory a vnitřní faktory. Nejrelevantnější dopadové faktory jsou vybrány pro vytvoření ekonometrického modelu pro analýzu hlavních determinantů, které ovlivňují nákup luxusního zboží čínskými spotřebiteli. Hlavní výsledky naznačují, že čistý příjem, velikost bytu, motivace darování dárků, motivace vlivu celebrit a motivace předvádění se mají pozitivní vliv na spotřebu luxusu, ale motivace vlastenectví má negativní dopad na spotřebu luxusu.

**Klíčová slova:** spotřební analýza, spotřební chování, Čínský luxusní trh, luxusní zboží, motivace k nákupu, spotřeba luxusního zboží, ekonometrický model, dotazník

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# 1. Introduction

China's luxury consumption has become the third largest luxury consumption market in the world since year 2018. Bain Group partner, Bruno Lannes, predicts that by year 2025, China is estimated to represent between 40% to 45% of global luxury market share. China is now on track to surpass the Americas and Europe to become the world's biggest luxury market. Luxury brands are also increasingly focusing on the Chinese market and see China as the centre of their competition in the Asian market.

The growth of China's luxury consumption, on the one hand, it is due to the rise and vigorous and prosperous development of China's economy, and on the other hand, it is also due to the huge base of China's population as an important support. In addition, the motivations and intentions behind Chinese consumers' purchase of luxury goods are also the key to influencing their consumption. Therefore, it is very important to understand the consumption and consumers' behaviour of Chinese consumer on luxury.

Adam Smith categorizes consumption into four segments (Smith, 1776):

1. Necessary, refer to for life maintenance;
2. Basic, refer to for normal growth and prosperity;
3. Affluence, refer to are not necessary for growth and prosperity;
4. Luxury, refer to limited supplied, difficult to obtain and/or extremely expensive.

Because of Adam Smith's definition of consumption, the traditional definition of luxury is often related to its scarcity, preciousness, high price, good quality, and the sense of prestige and show-off it brings. However, in the society nowadays, luxury is no longer the high society and rich and elite patents, but more affordable quality and prestige representatives of the middle class people. Luxury goods are no longer so out of reach in people's lives, but in schools and gardens, subways and buses, and even wet markets, people can be seen wearing, or carrying, or using luxury goods everywhere. The middle class people may not be able to afford a one million luxury car, but he or she is likely to be able to afford and wear a luxury brand's scarf or carry a luxury brand's bag.

At the same time, what has changed is not only the consumption habits, consumption channels, and consumption frequency of consumers, but also the deeper consumption motives and intentions behind them. Consumers buy luxury goods no longer just for show off and exaggeration. It is based on many deeper and inner factors such as self-praise, self-satisfaction, as the hedonist and the perfectionist. The rise of idol culture and influencer culture has also had a big impact on the purchase of luxury goods by young people and generation-Z groups. Chinese people have loved socializing and gift-giving since ancient times, so gifting has also become one of the reasons why people buy luxury goods. Many people think that gifting luxury goods to lovers and family members reflects their love and care for them, while gifting luxury goods is used for occasions such as business and social networking are more win "Mianzi" and bring advantages. Finally, according to the author's observation, a rarely mentioned influencing factor is also proposed, Patriotism. When the global luxury brands are all looking at the "delicious fat meat", the Chinese market, but because of political insensitivity or political right incorrect, they are caught in such a crisis as "Chinese-racism" or "Asian-racism", which can be fatal to sales and also their brand reputation. The Chinese could boycott such luxury brands because of their rising patriotism.

Based on this phenomenon and observation, the author decided to write this master's diploma thesis to explore and study the main reasons that influence the consumption and purchase of luxury goods in the Chinese market. This paper uses primary data from questionnaires, collects 297 cross-sectional data from different samples, and conducts statistical analysis and econometric analysis on the data. Using an econometric model to analyse the influence and connection of different impact factors for Chinese consumers to buy luxury goods. The author divides the factors that affect Chinese consumers' purchase and consumption of luxury goods into external factors and internal factors. External factors include Frequency of consumption, Age, Gender, Income level, Family size, Marital status, Apartment owner, Apartment size, Business owner, Education level, Place of residence. Internal factors include Show-offish, Celebrities influence, Gift-giving, Symbol of status, Hedonist and Perfectionist, Patriotism, Impulsively buying, Value-preserved. In addition, the questionnaire also investigates Purchasing channels, Purpose of using, and Attitudes towards second-hand luxury goods, which makes the research results richer in reflecting consumers' behaviour and habit of consumption.



For reacting to the research question, as well as reaching the defined objectives, the structure of this thesis is as follows:

After this Introductory Chapter, Chapter 2 outlines the research objectives and methodology which used for this thesis. In Chapter 3, the related literatures on consumers' behaviour, consumption of luxury, and Chinese luxury market overview are reviewed. Chapter 4 consists of two sections, which in the first section provides a statistical analysis of the data from questionnaires. The economic analysis of the data from questionnaires which used econometric model is measured in the second section. In Chapter 5, more descriptive interpretations and presentation of discussions are following the analysis results. Chapter 6 as the last chapter displays the conclusions of the research.

## **2. Objectives and Methodology**

### **2.1 Objectives**

China is now on trend to become the world's biggest luxury market. The growth of China's luxury consumption is due to the rise of China's economy on the one hand, and the huge base of China's population on the other hand. In addition, the motivations and intentions behind Chinese consumers' purchase of luxury goods are also the key to influencing their consumption. Therefore, it is very important to understand the consumption and consumers' behaviour of Chinese consumer on luxury.

By the view of the above background, the main purpose of this thesis is to explain the consumption and consumers' behaviour on the Chinese luxury market, find out the main determinant factors that affect Chinese luxury consumers' purchasing behaviour. The thesis divided the influencing factors into external factors and internal factors. The author summarizes the factors into the questionnaires and uses the questionnaire results to transform into quantitative data for further statistical analysis, economic analysis, and econometric analysis. To determine the difference of the key influencing factors on Chinese consumers' consumption of luxury goods.

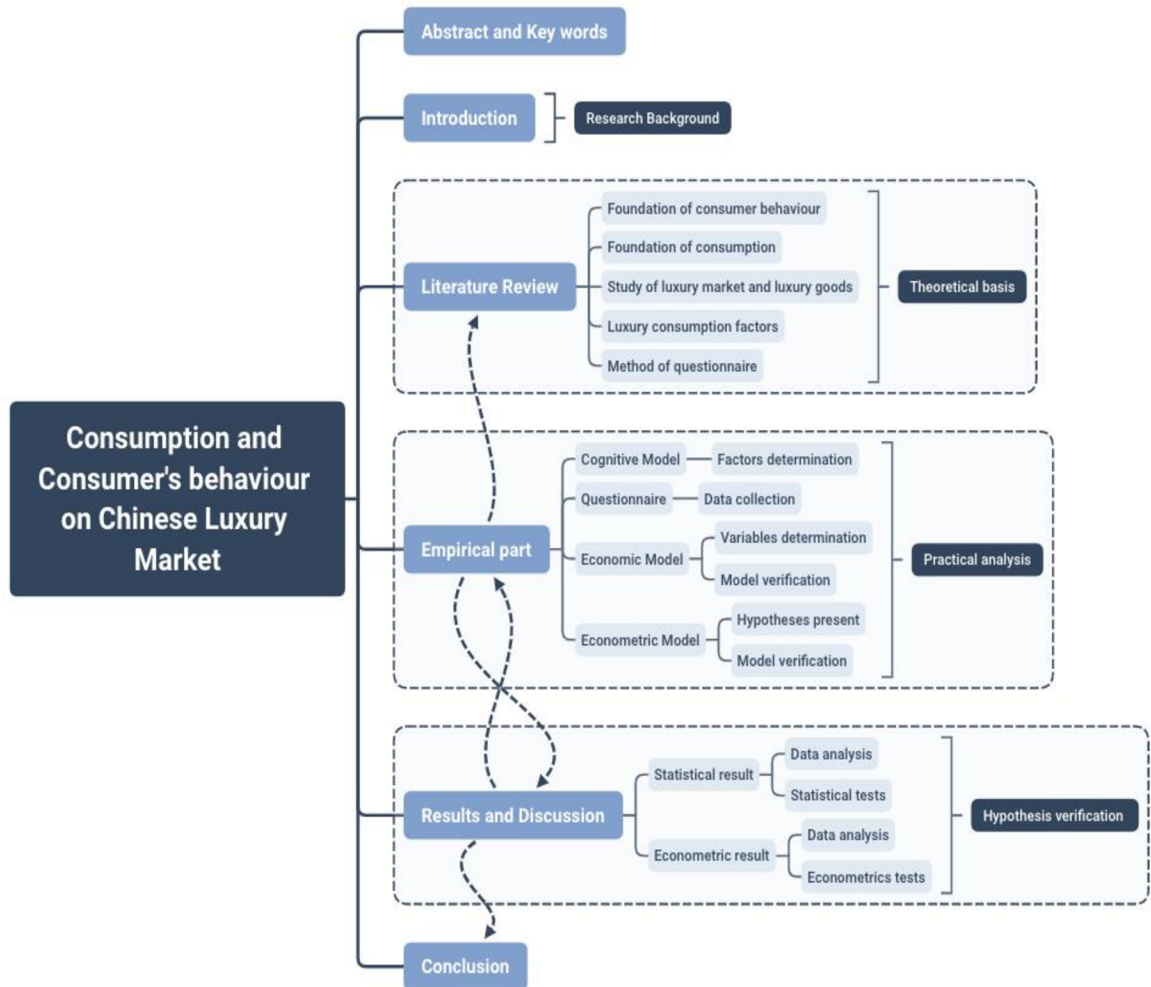
Taking all above reasons, the aims of the thesis are to:

1. Leverage the consumption model to determine the external factors (consumption level and habits) that affect Chinese consumers' purchase of luxury goods.
2. Leverage the theoretical model of consumer behaviour, cognitive model, to determine the internal factors (motivations and intentions) that affect Chinese consumers' purchase of luxury goods.
3. Use the found both external factors and internal factors to establish a questionnaire. Leverage the questionnaires results to do statistical analysis and economics analysis to determine the main influencing factors that affect Chinese consumers' purchase of luxury goods.
4. Leverage the questionnaire results to transpose the data into quantitative data for econometric analysis, and establish an econometric model to determine how much strength impact, and what relationship between the main influencing factors that affect Chinese consumers' purchase of luxury goods.

## 2.2 Methodology

This thesis covers both theoretical and practical (empirical) parts. The analysis framework of the thesis was displayed in Figure 2.1

Figure 2.1 Analysis Framework of the Diploma Thesis



Source: Own processing

### 2.2.1 Methodology of theoretical part

The theoretical part contains the theoretical background of the consumption, consumer's behaviour, Chinese luxury market, Chinese consumer's consumption of luxury goods. Scientific literatures are used for the literature overview. As well as the methodological framework. The concept model was performed using software XMind.

A literature review is a critical evaluation of the literature related to a particular topic or topic. It aims to be systematic, comprehensive, and repeatable. The goal is to identify, evaluate and synthesize existing evidence that has been presented by other researchers with as little bias as possible. By reading domestic and foreign scholars' relevant literature on the factors affecting the purchase and consumption luxury goods, summarize the existing theories in the current and famous research. For this thesis the Literature review part include five parts: foundations of consumer behaviour, foundations of consumption, research of luxury market and luxury goods, luxury consumption factors, and method of questionnaire.

## **2.2.2 Methodology of practical part**

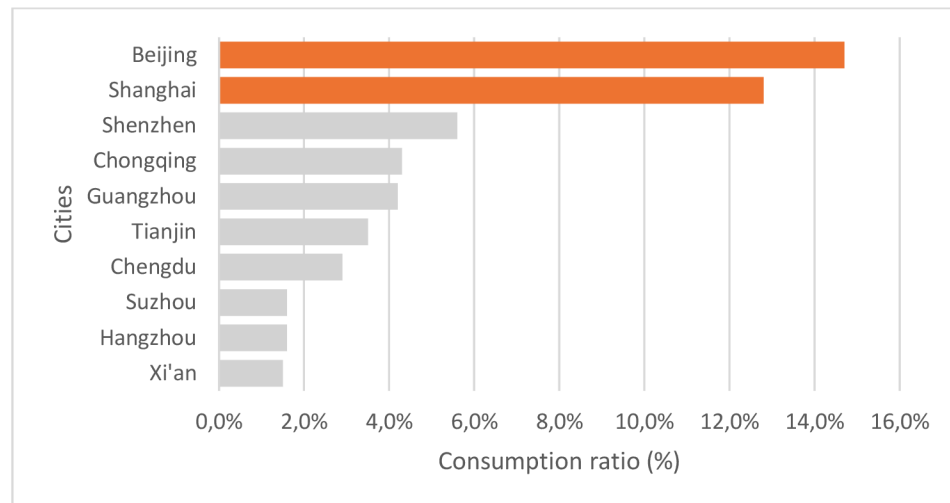
The practical and empirical analysis based on primary data which from the questionnaire. First, leverage the consumption model to determine the external factors (consumption level and habits) that affect Chinese consumers' purchase of luxury goods. Then, leverage the theoretical model of consumer behaviour, cognitive model, to determine the internal factors (motivations and intentions) that affect Chinese consumers' purchase of luxury goods. In the next part, use the found both external factors and internal factors to establish a questionnaire. Leverage the questionnaires results to do statistical analysis and economics analysis to determine the main influencing factors that affect Chinese consumers' purchase of luxury goods. In the last part, the author leverages the questionnaire results to transpose the data into quantitative data for econometric analysis, and establish an econometric model to determine how much strength impact, and what relationship between the main influencing factors that affect Chinese consumers' purchase of luxury goods.

### **2.2.2.1 Questionnaire**

The questionnaire was created and surveyed by WenJuanXing platform ([www.wjx.cn](http://www.wjx.cn)). WenJuanXing is the largest questionnaire survey platform in China. The questionnaire was developed first in English and then translated into Chinese language. Back-translation was helped by bilingual third parties to improve the translation accuracy. Research participants were tried to cover range age, all gender, and the residents living in large cities (Beijing, Shanghai, Guangzhou, Shenzhen). The reason for sampling participants from those cities is based on the economic development level of them are most advanced

and more likely to purchase luxury goods. And also because those cities have the most luxury offline stores. See Figure 2.2.

Figure 2.2 Ranking of major cities for luxury consumption in China, year 2020



Source: Own processing, Deloitte, 2021

The survey date of the questionnaire was from March 2021 to March 2022 for a period of one year, and finally 334 questionnaires were collected, of which 297 were the available usable response. The availability over 88%.

The questionnaire uses a combination of closed questions and open questions. The questionnaire was designed to examine the external and internal factors of purchasing luxury goods. External factors include Frequency of consumption, Age, Gender, Income level, Family size, Marital status, Apartment owner, Apartment size, Business owner, Education level, Place of residence. Internal factors include Show-offish, Celebrities influence, Gift-giving, Symbol of status, Hedonist and Perfectionist, Patriotism, Impulsively buying, Value-preserved. In addition, the questionnaire also investigates Purchasing channels, Purpose of using, and Attitudes towards second-hand luxury goods, which makes the research results richer in reflecting consumers' behaviour and habit of consumption.

The questionnaire includes total 24 question. Question No.2 and No. 10 are open questions. Others from question No.1 to No. 13, and No.24 are multiple choice with only answer. Question No. 22 to No. 23 are multiple choice allow the participants to choose with all possible answer. Questions No.14 to No.21 are scoring questions. Those questionnaire

items were rated on a 10-point Likert scale, which 1 represents Strongly Disagree, 10 represents Strongly Agree.

Transform of quantitative and qualitative variables are using following three methods: Binning method, Dummy Coding, and Likert scale of scaling method.

Binning method is used to smoothing data or to handle noisy data. In this method, the data is first sorted and then the sorted values are distributed into a number of buckets or bins. As binning methods consult the neighbourhood of values, they perform local smoothing. Data binning, also called discrete binning or bucketing, is a data pre-processing technique used to reduce the effects of minor observation errors. The original data values which fall into a given small interval, a bin, are replaced by a value representative of that interval, often the central value.

Nominal variables, or variables that describe a characteristic using two or more categories, are commonplace in quantitative research, but are not always useable in their categorical form. A common workaround for using these variables in a regression analysis is dummy coding. Dummy coding provides one way of using categorical predictor variables in various kinds of estimation models (see also effect coding), such as, linear regression. Dummy coding uses only ones and zeros to convey all the necessary information on group membership. In statistics and econometrics, particularly in regression analysis, a dummy variable is one that takes only the value 0 or 1 to indicate the absence or presence of some categorical effect that may be expected to shift the outcome.

The Likert scale is a psychometric scale that usually involves studies using questionnaires. It is the most widely used method of measuring response in survey research, so the term is often used interchangeably with rating scales, although there are other types of rating scales. It is sometimes called a satisfaction scale and ranges from one extreme attitude to another. In this survey, responses were measured using a 10-point Likert scale ranging from 1 (Strongly disagree, or Very rare) to 10 (Strongly agree, or Very often).

### 2.2.2.2 Model selection and setting of consumption

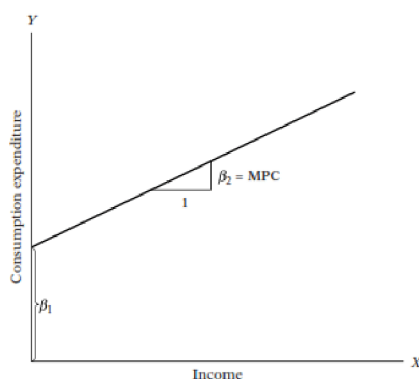
Although Keynes assumed a positive relationship between consumption and income, he did not specify the exact functional relationship between the two. For simplicity, mathematical economists might suggest a Keynesian consumption function of the following form:

$$Y = \beta_1 + \beta_2 X$$
$$(0 < \beta_2 < 1)$$

Source: Keynes, 1936

Where Y equals to consumption expenditure, X equals to income, and  $\beta_1$  and  $\beta_2$ , called model parameters, represent the intercept and slope coefficients, respectively. The slope coefficient  $\beta_2$  measures the marginal propensity to consume. To illustrate its geometric meaning, the equation is shown in Figure 2.3. This equation shows that consumption has a linear relationship with income. This relationship is just one example of a mathematical model of the consumption-income relationship, known in economics as the consumption function. Mathematical model is nothing more than a set of mathematical equations. If the model has only one equation, as in the example above, it is called a single-equation model, if the model has more than one equation, it is called a multiple-equation model. (Gujarati, 2012)

Figure 2.3 Keynesian consumption function



Source: Gujarati, 2012

The variable that appears on the left side of the equal sign in equation is called the dependent variable, and the variable or variables that appear on the right side is called the

independent or explanatory variable. Thus, in the equation of Keynesian consumption function, consumption expenditure is the dependent variable, and income is the explanatory variable.

The purely mathematical model of the consumption function, given by equation above, assumes an exact or deterministic relationship between consumption and income, and is therefore of limited use to econometricians. Generally speaking, the relationship between economic variables is inaccurate. For example, we obtained data on a sample of 500 US households on consumption expenditure and disposable income and plotted these data on a graph with consumption expenditure as the ordinate and disposable income as the abscissa. We cannot expect all observations to fall nicely on the straight line of equation, because other variables besides income affect consumer spending. For example, family size, age of family members, family religious beliefs, etc., will have a certain impact on consumption.

Considering the inaccurate relationship between economic variables, econometricians will use the deterministic consumption function modify as follows:

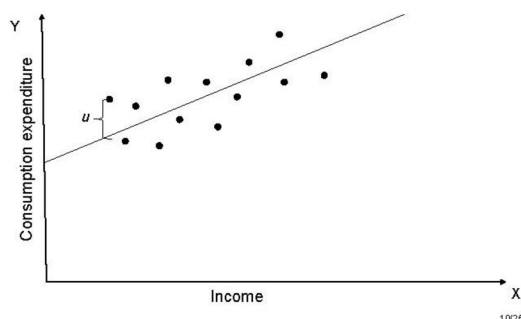
$$Y = \beta_1 + \beta_2 X + u$$

Source: Keynes 1936

Where  $u$ , called disturbance or error term, is a random variable, or called stochastic variable. It with well-defined probabilistic properties. The disturbance  $u$  can be used to represent all unspecified factors that affect consumption. Equation above is an example of an econometric model. More technically, it is an example of a linear regression model. This econometric consumption function assumes a linear relationship between the dependent variable  $Y$  (consumption) and the explanatory variable  $X$  (income). However, the relationship of them is not accurate, it varies with the family of the host. An econometric model of the consumption function can be depicted as shown in Figure 2.4. (Gujarati, 2012)



Figure 2.4 Econometric Model of the Keynesian consumption function



Source: Gujarati, 2012

The thesis was selected Ordinary Least Squares regression (OLS) for the econometrics model. The OLS is a common technique for estimating coefficients of linear regression equations which describe the relationship between one or more independent quantitative variables and a dependent variable for simple or multiple linear regression. The tool used to process data is software Gretl. And other tools are also used to process and analyse data are software Microsoft Excel, and software Statistical Package for the Social Sciences (SPSS). The procedures mentioned above can be found in book Basic Econometrics, as the methodological background of this thesis.

In the econometrics verification, the thesis uses few different tests to examine the model and equation.

The Variance Inflation Factors test (VIF) was used when testing collinearity of the model. Variance inflation factor (VIF) is used to detect the severity of multicollinearity in the ordinary least square (OLS) regression analysis. Multicollinearity inflates the variance and type II error. It makes the coefficient of a variable consistent but unreliable. The formula of VIF is followed:

$$VIF_j = \frac{1}{1 - R_j^2}$$

And

$$\overline{VIF} = \sum_{j=1}^p VIF_j / p$$

Source: Cuthbert Daniel, 1981

Where  $R_j$  is the multiple correlation coefficient between variable  $j$  and the other independent variables.

The ANOVA test and F-test were also used when testing goodness of fit of the model. Analysis of variance (ANOVA) is a collection of statistical models and their associated estimation procedures used to analyze the differences among means. An ANOVA test is a way to find out if survey or experiment results are significant. ANOVA uses the F-test to determine whether the variability between group means is larger than the variability of the observations within the groups. If that ratio is sufficiently large, you can conclude that not all the means are equal.

The null hypothesis  $H_0$  to be tested is that:

$H_0$ : the mean outcome is the same across all categories,  $\mu_1 = \mu_2 = \dots = \mu_k$

$H_1$ : at least one of means are different from each other.

The formula of F-test has following form:

$$F = \frac{MSB}{MSW}$$

Source: George W. Snedecor, Ronald A. Fisher, 1920

Where: MSB is the Mean Square Between, MSW is the Mean Square Within

Very small p-value of F-statistics leads to rejection of null hypothesis.

### **3. Literature Review**

#### **3.1 Foundations of consumer behaviour**

##### **3.1.1 Concept and theory of consumer behaviour**

Consumer behaviour was defined as the behaviour that consumers display in searching for, purchasing, using, evaluating, and disposing of the products and services that they expect will satisfy their needs. The consumer behaviour focuses on how individual consumers, families or households make decisions to spend their available resources, such as time, money, and efforts, on consumption related items. Consumer behaviour includes what they buy, when they buy it, why they buy it, where they buy it, how often they buy it, how often they use it, how they evaluate it after purchase and use, the impact of such evaluations on future purchases, and how they dispose of it. (Schiffman, 2007)

The definition of consumer behaviour has evolved over time, and it has been found that it depends mainly on two aspects. Consumer needs and acts. According to Edmund W.J. Faison (1977), the concept of consumer behaviour is the assumption that people have series of needs which lead to drive state. Kotler (1994) addressed Consumer behaviour is the study of how people buy, what they buy, when they buy and why they buy. Moreover, Solomon (1995) combined needs and buying process then presented that consumer behaviour is the study of the processes involved when individuals or groups select, purchase, use, or dispose of products, services, ideas, or experiences to satisfy needs and desires. Blackwell, Miniard, and Engel (2006) mentioned in their book those acts of individuals directly involved in obtaining, using, and disposing of economic goods and services, including the decision processes that precede and determine these acts. Consumer buying behaviour itself is a complex, dynamic issue which cannot be defined easily and commonly. Therefore, the concept of consumer buying behaviour has been defined in different ways by different researchers.

Researchers have long been interested in consumer decision-making. Beginning about to start 300 years ago early economists, led by Nicholas Bernoulli, John von Neumann, and Oskar Morgenstern, begins research the basis of consumer decision-making (Richarme 2007). This earlier work explored the topic from an economics perspective opinion, and only focused solely on the act of buying and purchase (Loudon and Della Bitta, 1993). From this

perspective, the most popular model is "utility theory", which consumers are advised to make choices based on their expected outcomes decide. Consumers are seen as rational decision makers who only care self-interest is the starting point (Schiffman and Kanuk, 2007; Zinkhan, 1992).

Zinkhan (1992) presents that where utility theory views the consumers as 'rational economic man'. Contemporary research on consumer behaviour considers a wide range of factors that influence the consumers and acknowledges a wide range of consumption, activities beyond purchasing. Those activities typically include need recognition, information research, evaluation of alternatives, establishment of purchase intention, and the acts of purchasing, consuming and ultimately disposing of them. This more complete view of the consumer behaviour, in the past, has evolved through several discernible stages over the centuries, and new research methods and paradigmatic approaches are being used and adopted.

The study of consumer behaviour includes how consumers think, which is their decision-making processed and decisions, their feelings, and emotions, and behave that their physical actions that result from those decisions and feelings. Therefore, as a research area, consumer behaviour is the study of how individuals spend their available resources (such as money, time, and effort) on products and services (Schiffman, Leon, Aron O'Cass, Angela Paladino, and Jamie Carlson, 2013).

### **3.1.2 Approaches and models of consumer behaviour**

Many different approaches are employed in decision research, drawing on different psychological traditions. Writers have proposed different types of classifications of these works, and five main approaches have emerged. Each of these five approaches assumes surrogate models for humans and emphasizes the need to examine entirely different variables (Foxall 1990).

#### **3.1.2.1 Economic man**

Early research has shown that people are completely rational and selfish, making decisions based on their ability to maximize utility with minimal effort. Although work in

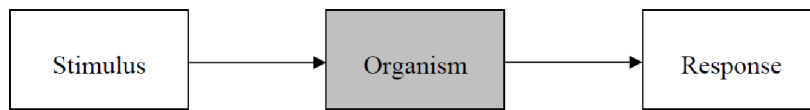
this field began about 300 years ago (Richarme 2007), the term "economic man" (or even man economics (Persky 1995)) was first used in the late 19th century (Persky 1995), when more persistent the research started in the area.

To act rationally in an economic sense, as this approach implies, consumers must be aware of all available consumption options, be able to properly evaluate each alternative and be able to choose the best course of action (Schiffman and Kanuk 2007). These steps are no longer seen as realistic descriptions of human decision-making, as consumers rarely have enough information, motivation, or time to make such a "perfect" decision and are often driven by less rational factors such as social relationships and values Impact. Simon 1997). Furthermore, as emphasized by Herbert Simons' satisfaction theory (Simon 1997) or Kahneman and Tversky's prospect theory (Kahneman and Tversky 1979), individuals are often described as seeking gratification rather than the best choice, which involves bounded rationality (Simon 1991).

### **3.1.2.2 Cognitive Approach**

Cognitive methods stem largely from cognitive psychology, which can be traced back to early philosophers such as Socrates (Plato 360 BC) who were interested in the origin of knowledge, and Aristotle who proposed the first memory Theory (Aristotle 350 BC) and Descartes in his Meditations explored how knowledge is manifested psychologically (Descartes 1640) (Sternberg 1996). In stark contrast to the foundations of classical behaviourism, cognitive approaches attribute observed behaviour (behaviour) to introspective cognition. Individuals are considered "information processors" (Ribeaux and Poppleton 1978). It was not until the mid-21st century, however, with the publication of landmark texts by Hebb in the 1950s (Figure 3.1) (Cziko 2000) and by Ulric Neisser in 1967 (Neisser 1967). From this point of view, many authors argue that cognitivism has replaced behaviourism as the dominant paradigmatic approach to decision research (Furedy and Riley 1987).

Figure 3.1 Stimulus-Organism-Response Model of Decision Making



Source: Cziko, 2000

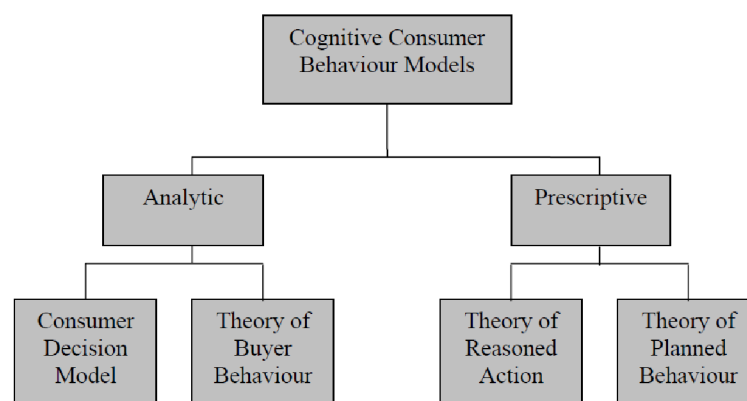
The early Stimulus-Organism-Response model (shown in Figure 3.1) suggests a linear relationship between the three stages, with environmental and social stimuli as external antecedents to the organism. This approach assumes that the stimulus acts on an inactive and unready organism (Eysenck and Keane 2000). However, most modern theorists now acknowledge that information processing is carried out by an active organism whose experience affects not only the processing of such information, but even the information sought and received. Information processing will be stimulus-driven and concept-driven (Moital 2007); (Groome, Dewart et al. 1999). This development has led to a recent characterization of consumer decisions in fashion (Peter and Olson 2008) or drawn through Venn diagrams, although (Jacoby 2002).

In addition, cognitivism has the ability to explain complex behaviour, a recognized deficiency of competing behavioural perspectives that fail to identify contingencies that control responses (Foxall 1993). However, cognitive approaches have also been criticized for several reasons. Foxall remarks that cognitive approaches "rely extensively on the use of abstract and unobservable explanatory variables that have rarely proven suitable for empirical investigation and evaluation" (1990 p. 96). Furthermore, cognitivism assumes that consumers are rational, insightful, logical, and actively involved in decision-making; an assumption that many authors have questioned (Bozinoff 1982) (Solomon, Bamossy et al. 2006) (Schiffman and Kanuk 2007).

Two main types of cognitive models can be seen, as shown in Figure 3.2 below. First, analytical models provide a framework aimed at explaining key elements of consumer behavior. These models identify a plethora of influencing factors and reveal broad relationships among factors in consumer decision-making. Typically, they tend to follow a traditional five-step taxonomy with problem identification, information search, alternative evaluation, choice, and outcome evaluation as key stages in the consumer decision-making

process (Erasmus, Boshoff et al. 2001, Schiffman and Kanuk 2007). Buyer behavior theory (Howard and Sheth 1969) and consumer decision models (Blackwell, Miniard et al. 2001) are two of the most widely cited analytical models. Second, normative models "provide guidance or a framework to organize the structure of consumer behavior" (Moital 2007). The most widely cited and used normative models are the theory of rational action (Fishbein and Ajzen 1975) and the theory of planned behavior (Ajzen 1985).

Figure 3.2 Cognitive Consumer Behaviour Models

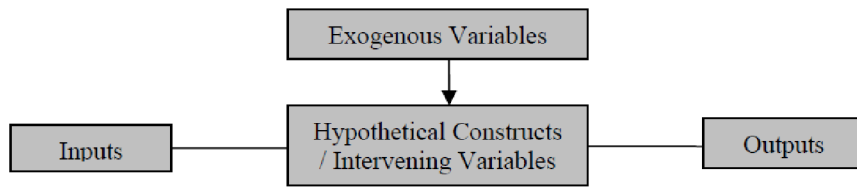


Source: Adapted from Fawcett and Downs 1992, Moital 2007

### Analytic Cognitive Models

Howard developed the first consumer decision model in 1963 (Du Plessis, Rousseau et al. 1991). This model was further developed by Howard and Sheth in 1969 as "Buyer Behavior Theory" (or Howard and Sheth Model) (Howard and Sheth 1969). It provides "the complex integration of the various social, psychological and marketing influences of consumer choice into a coherent sequence of information processing" (Foxall 1990 p.10). The basic architecture of the model is shown in Figure 3.3 below.

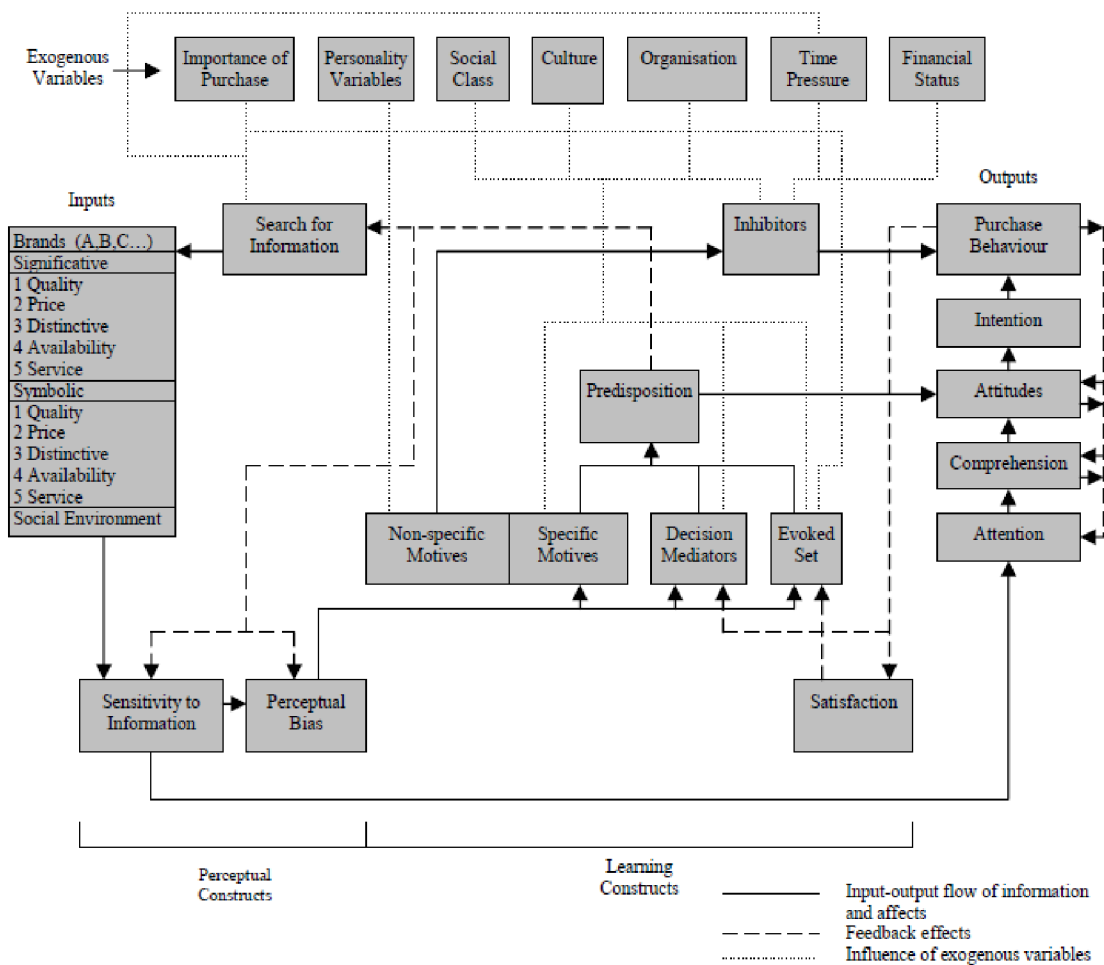
Figure 3.3 Major components of the Theory of Buyer Behaviour



Source: Adapted from Loudon and Della Bitta 1993

As shown in Figure 3.4 below, hypothesis constructs or intervening variables can be divided into two categories: those described as perceptual constructs, and those described as learned constructs. Perceptual structure includes sensitivity to information, perceptual bias, and search for information. These perceptual structures combine to control, filter, and process received stimuli.

Figure 3.4 The Theory of Buyer Behaviour

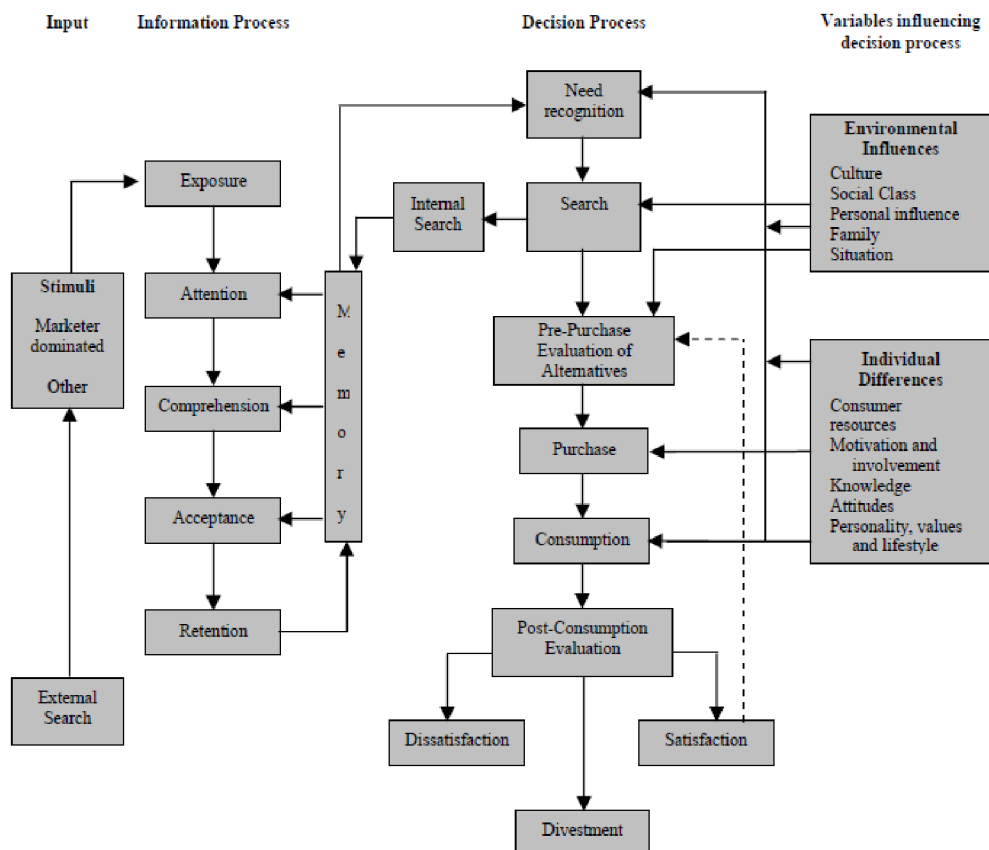


Source: Adapted from Howard and Sheth 1969, Loudon and Della Bitta 1993



The Consumer Decision Model (also known as the Engel-Blackwell-Miniard Model), the latest release of this model is shown in Figure 1.5 below. Many elements of the model are similar to those presented in buyer behaviour theory, but the structure and relationships between variables presented differ. The model is built around a seven-point decision-making process: need to identify, then search for internal and external information, evaluate alternatives, buy, reflect after purchase, and finally divest. These decisions are influenced by two main factors. Identified environmental impacts include culture, social class, personal impact, family, and situation. And individual influences include consumer resources, knowledge, attitudes, motivation and engagement, character, values, and lifestyles (Blackwell, Miniard et al. 2001).

Figure 3.5 Consumer Decision Model



Source: Blackwell, Miniard et al. 2001

## Prescriptive Cognitive Models

Normative cognitive models were first developed in the 1960s by marketing researchers' increasing focus on beliefs and attitudes as determinants of consumer buying behaviour (Ahtola 1975). The most influential work in this area was by Martin Fishbein, who proposed a model of attitude formation that came to be known as the "Fishbein model". The model is represented algebraically in Figure 3.6 below.

Figure 3.6 Fishbein Model

$$A_o = \sum_{i=1}^N B_i a_i$$

Where:

$A_o$  = the person's overall attitude towards object o

$B_i$  = the strength of belief that the product possesses attribute i

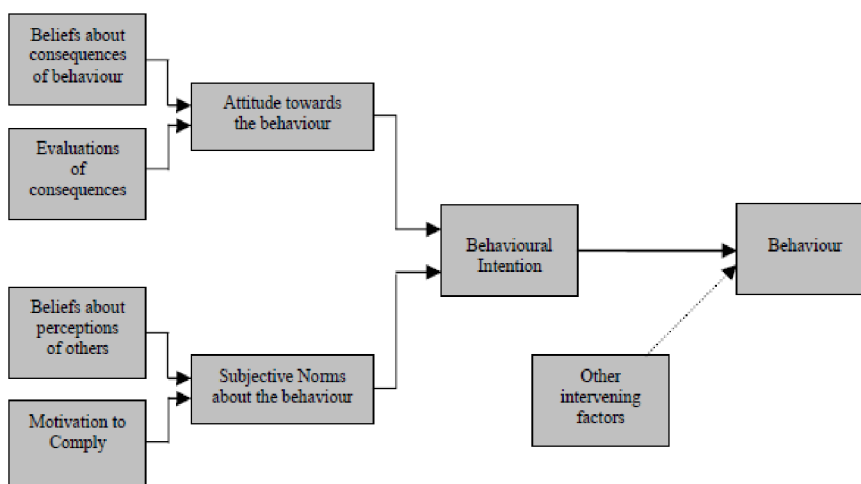
$A_i$  = the evaluation or intensity of feeling (liking or disliking) toward attribute i

$N$  = the number of relevant beliefs considered by that person

Source: Ahtola 1975, Loudon and Della Bitta 1993, Solomon 2006

This revised model became known as the Theory of Reasoned Action (TRA) and is depicted in Figure 3.7 below.

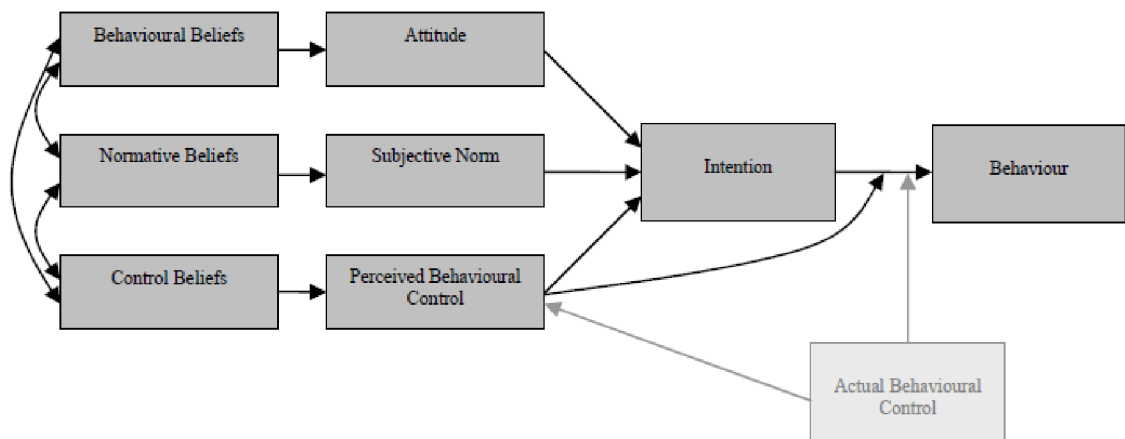
Figure 3.7 Theory of Reasoned Action (TRA Model)



Source: Fishbein and Ajzen, 1975

Behaviour is approximately equal to behavioural intention, which can be derived from subjective norms of consumer attitudes and behaviour toward product purchases. Some studies suggest that the high correlation between behavioural intent and actual behaviour is an oversimplification due to environmental constraints. Hence the need for additional variables that mediate between intent and behaviour (Warshaw 1980). Ajzen provided this additional variable when he published Theory of Planned Behaviour (TPB) in 1985. The theory of planned behaviour, depicted in Figure 3.8 below is just an extension of the TRA designed to address what appears to be an over-reliance on intentions to predict behaviour.

Figure 3.8 Theory of Planned Behaviour (TPB Model)



Source: Ajzen, 2006

### 3.1.3 Behavioural economics

Earl (1990) defines behavioural economics as a relatively new school of economic thought that can include multiple branches, such as "new institutions/transaction cost economics", economic psychology and psych-economics, consumer behaviour and Decision Theory.

Based on Behavioural Economics Guide (2014), Behavioural economics (also, behavioural economics) studies the effects of psychological, cognitive, emotional, cultural, and social factors on the decisions of individuals and institutions and how those decisions vary from those implied by classical economic theory.

Behavioural Economics (BE) uses psychological experiments to develop theories about human decision-making and identifies a range of biases as a result of the way people think and feel. BE is trying to change the way economists think about people's values and expressed preferences. According to BE, people are not always stable in their individual preferences for self-interest, benefit maximization and cost minimization - our thinking is influenced by insufficient knowledge, feedback, and processing power, which often involves uncertainty and is influenced by what we impact on the environment decide. Most of our choices are not the result of careful consideration. We are influenced by information readily available in our memory, automatically generated emotions, and salient information in our environment. We also live in the present because we tend to be resistant to change, have poor ability to predict future behaviour, are susceptible to distorted memories, and are influenced by physical and emotional states. Finally, we are social animals with social preferences, such as those expressed in trust, reciprocity, and fairness; we are susceptible to social norms and self-conformity.

## **3.2 Foundations of consumption**

### **3.2.1 Definition and concept of consumption**

Consumption is an important and final link in the process of social reproduction. It refers to the process of using social products to meet people's various needs. Consumption is divided into production consumption and personal consumption. The former refers to the use and consumption of production materials and living labour in the production process of material materials. The latter refers to the behaviour and process in which people use the produced material materials and spiritual products to meet the needs of personal life, and it is "performing life functions outside the production process". It is an indispensable condition for the restoration of human labour and the reproduction of labour.

In macroeconomics, it refers to the total expenditure of a person or a country on consumer goods in a certain period. Strictly speaking, "consumption" should only refer to those consumables that were completely used up (shared or eaten) during the period. However, consumer spending includes all goods purchased, many of which are in use well beyond the period under review, such as furniture, clothing, and cars.

Before the 1930s, research on consumption theory was relatively simple. The dominant orthodoxy at the time was Marshall's theory of needs. The main point of this demand theory is: If the consumer's income remains constant, the quantity of goods obtained by the consumer changes in the opposite direction as the price rises and falls. Engel's coefficient is an important factor to measure the level of consumption. After the 1930s, Keynes introduced the consumption problem into the macroeconomic field, and he regarded consumption as one of the basic forms of the circulation of national income. Expenditures for purchasing consumer goods are called consumption expenditures. From the perspective of the whole society, the expenditure of one person is the income of another person, and the total expenditure is equal to the total income. In a two-sector economy, social aggregate demand is equal to the sum of consumption and investment, and investment expenditure is subtracted from aggregate demand, which is consumption expenditure. On the basis of analysing the concept of consumption, Keynes proposed concepts such as average propensity to consume and marginal propensity to consume, which added new meanings to the theory of consumption. Consumption is a fundamental variable in macroeconomics.

Keynes's theory of absolute income consumption states that consumption depends on a person's current income. Modigliani's life cycle consumption theory believes that a person will comprehensively consider consumption and income throughout his life, and consumption depends on a comprehensive measurement of a person's lifetime income and expenditure. Duesenberg's relative income consumption theory proposes that a person's consumption depends on past consumption and the consumption of surrounding people. Friedman's persistent income consumption theory proposes that a person's consumption depends on his long-term persistent income.

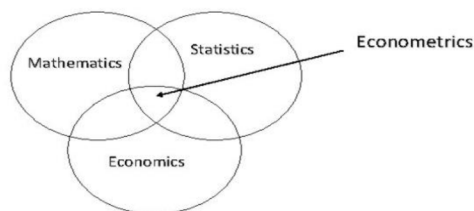
### **3.2.2 Econometrics in consumption**

#### **3.2.2.1 Definition and methodology of Econometrics**

Literally, econometrics means "economic measurement". While measurement is an important part of econometrics, the scope of econometrics is much broader, as can be seen from some of the following excerpts from the literature: Econometrics is the expected result of the role of economics. It applies mathematical statistics to economic data so that the models constructed by mathematical economics can be empirically supported and numerical

results can be obtained. (Gerhard, 1968) Samuelson and Koopmans defined Econometrics can be defined as the quantitative analysis of real economic phenomena. This analysis is based on the parallel development of theory and observations, which in turn are linked by appropriate inference methods. Econometrics can be defined as a social science that applies economic theory, mathematics, and statistical inference as tools to the analysis of economic phenomena. (Goldberger, 1964) The relationship of Econometrics, Mathematics, Statistics, and Economics are display in Figure 3,9.

Figure 3.9 Relationship of Econometrics, Mathematics, Statistics, and Economics



Source: Gujarati, 2021

Spanos (1999) said that in econometrics, the modeler is usually faced with observational data rather than experimental data. This has two important implications for empirical modelling in econometrics. First, modelers are required to master very different skills from analysing experimental data. Second, the separation of data collectors and analysts requires that the modeler be very knowledgeable about the nature and structure of the data used.

How do econometricians analyse an economic problem? Although there are several schools of thought about econometrics, what we describe here is primarily the traditional or classical methodologies that have so far dominated empirical research in economics and other social and behavioural sciences. The traditional econometric methodology is carried out along the following lines:

1. Statement of the theory or hypothesis,
2. The mathematical model setting of the theory,
3. The statistical or econometric model setting,
4. Data acquisition,

5. The parameters of the econometric model Estimating,
6. Hypothesis testing,
7. Forecasting or forecasting,
8. Using models to control or specify policy.

As Keynes envisioned, marginal propensity to consume, the rate of change in consumption per unit change in income, is greater than zero and less than one. That is, people tend to increase their consumption as their income increases, but not as much as their income increases. (Gujarati, 2012)

### **3.3 Research of luxury market and luxury goods**

#### **3.3.1 Definition and concept of luxury and luxury goods**

Luxury goods or luxury products have been defined as goods that bring prestige to the owner simply by using or displaying a particular brand of product, in addition to any functional utility (Grossman and Sharpiro, 1988). Deeter Schmelz (1995) defines prestige preference as an individual's preference for shopping in a clothing store where customer identity, store type and atmosphere, commodity price, quality, brand, and fashion combine to create a specific level of prestige. Phau and Prendergast (2001) postulate that luxury brands evoke exclusivity, possess a well-known brand identity, enjoy high brand awareness and perceived quality, and maintain sales levels and customer loyalty.

Moore and Birtwistle (2005) are critical of this model and assert that other details need to be combined to build a modern luxury brand. Currently, research on the luxury market is moving in a new direction. Due to the unprecedented demand from Asian countries, recent research has focused on cross-cultural comparisons of attitudes towards the concept of luxury (Dubois and Laurent, 1996; Dubois and Paternault, 1997).

I Yeoman (2011) in his research said, the concept of luxury is very flexible and changes dramatically over time and culture. In the past, it has been associated with champagne, caviar, designer clothes and sports cars. Today, with increasing wealth, luxury is an obscure genre, no longer reserved for the elite. As tradition and the old values of aristocracy became less important, more and more consumers began to trade.

Danziger (2005), Israel (2003), and Gambler (1997) define it as the feminization of luxury, which has moved from masculine trophies and status symbols to experiences and indulgences. This may be attributed to the increasing purchasing power of women in society, which drives the market for luxury goods such as welfare, clothing, and travel.

Luxury, a concept of “refined enjoyment, of elegance, of things desirable but not essential.” (Goody, 2006, p. 341), is attracting more and more people all over the world. Luxury fashion goods are defined as apparel, accessories, handbags, shoes, watches, jewelry, and perfume for which the mere use or display of a particular branded product brings prestige to owners, apart from any functional utility (Gao et al., 2009). Adam Smith categorizes consumption into four segments: necessary (for life maintenance), basic (for normal growth and prosperity), affluence (are not necessary for growth and prosperity), and luxury (limited supplied, difficult to obtain and/or extremely expensive) (Smith, 1776)

Luxury goods are part of a new social protocol where one’s identity and self-worth are determined by the visible brands worn on the body (Husic and Cicic, 2009). Consumers are likely to pay the huge price difference for luxury brands since these products have a unique set of characteristics such as premium quality, craftsmanship, recognizability, exclusivity and reputation (MONASH University Business and Economics, 2007)

### **3.3.2 Luxury market in China**

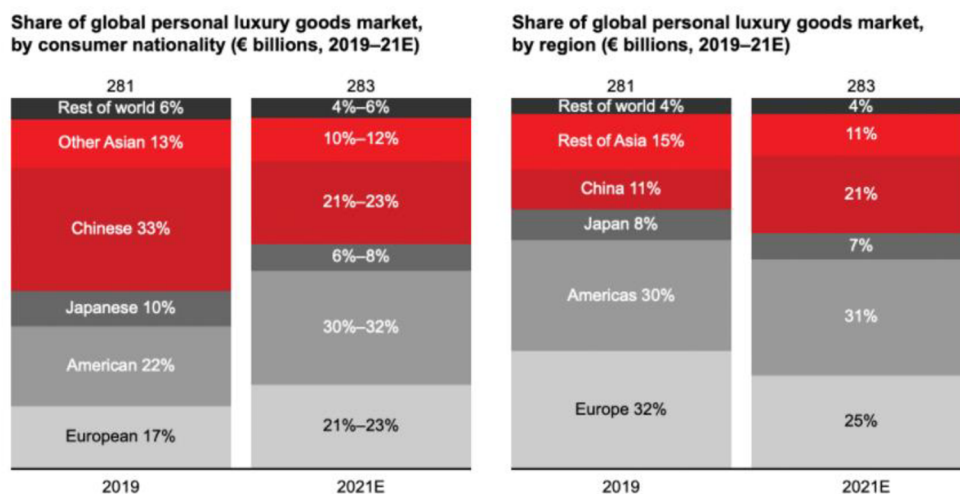
Wiedmann and Hennigs (2012) mentioned in their book. Luxury is a large and growing industry. The development of luxury goods is related to the social trend of "the rich get richer and the poor get poorer". The gap between the rich and the poor tends to widen, and the middle class is increasingly caught in a sort of "sandwich" stalemate. The still-well-managed middle class is increasingly trying to show that they are among the successful. However, we must especially take into account that this offsetting trend in Western industrialized countries is much stronger than in economically developing societies, especially in Asia. Furthermore, with regard to general consumption, especially luxury consumption, these developing countries have a) high backlogs of demand and b) wealth growth due to changes in global socio-economic strength and prosperity from old industrial leaders to new industrial leaders.



China becoming in a few years the number one market in the world, given its large population and the growing buying power of the Chinese. It will therefore become a very strong market for the luxury brands. And China will also be becoming for every luxury business the centre of their Asian development. In the future, many products will be developed with a specific Asian target or at least, an Asian interest. It is obvious that China is becoming more than just a luxury market. It will develop into a major source of new brands and new products. In the long run, China will probably become a major supplier of new ideas, new talent and new brands in the luxury field. Sidney, the president and CEO of Christian Dior Couture said. “Globally, mainland China’s share of the luxury market grew from about 20% in 2020 to approximately 21% in 2021,” said Bruno Lannes, partner at Bain & Company and report co-author. “We anticipate this growth to continue, putting the country on track to become the world’s largest luxury goods market by 2025—regardless of future international travel patterns.” (Sidney, 2021)

The findings of Bain & Company’s annual China Luxury Report 2021, despite mounting global social and economic challenges, China’s luxury goods market finished 2021 with strong double-digit growth overall, with some brands exceeding a 70% increase. Chinese consumers have continued to shop mostly in the mainland, given limited international travel options. This has led to a 48% increase of China’s domestic sales of personal luxury goods in 2020, and another 36% in 2021 totalling nearly RMB 471 billion, a near doubling in just 2 years. Domestic spending in the luxury market also continues to be strengthened due to duty-free opportunities, and digitalization. Following 2020 trends, market growth has varied significantly across brands, ranging from 10% to more than 70%, and categories. Leather goods was the fastest growing category at about a 60% growth rate, followed by fashion and lifestyle at about 40%. Jewelry spending increases were lower than in 2020, but still managed a growth of about 35%, while high-end watch purchases rose about 30% and luxury beauty spending increased about 20%. The share of global personal luxury goods market by consumer nationality and by region from year 2019 and year 2021 was demonstrated in Figure 3.10. (Bain & Company, 2021)

Figure 3.10 Share of global personal luxury goods market by consumer nationality and by region, year 2019 and year 2021 (euro, billions)



Source: Bain & Company, 2021

Bain’s research identified three major trends that are expected to shape the luxury market for years to come. Primarily an acceleration of several of the growth engines we noted in 2020, these trends indicate even stronger implications for personal luxury brands in the future. Those are: Hainan offshore duty-free shopping, further digitalization, and Continued repatriation.

Hainan’s duty-free stores emerged as a sizable new luxury hub last year, with sales there growing by more than 120% in 2020. In 2021, these sales increased about 90%, reaching nearly RMB 60 billion and contributing about 5% to China’s overall luxury goods market growth. Digitalization in China is high and increasing, and the trend has further accelerated due to the pandemic. As a result, much of marketing and consumer engagement activities have moved online, even as the offline store remain the primary channel for brand building and purchase conversion. Online luxury sales grew faster than offline across all categories, with online personal luxury sales growing almost 56%, while offline sales grew at 30%. In 2021, luxury online penetration reached a total of about 19%, excluding duty-free shopping. With duty-free penetration included, total luxury online penetration in China accounted for approximately 26% of sales. In 2020, Covid-19-related travel restrictions led mainland China’s portion of Chinese global luxury purchases to a peak of about 70% to 75% in 2020. In 2021, continued repatriation contributed to this share growing to more than 90%.

Beyond 2022, brands should anticipate the progressive re-opening of international travel, with implications on pricing harmonization across geographies. But in the short term, we expect that 2022 will produce low double-digit growth for personal luxury overall. (Bain & company, 2021)

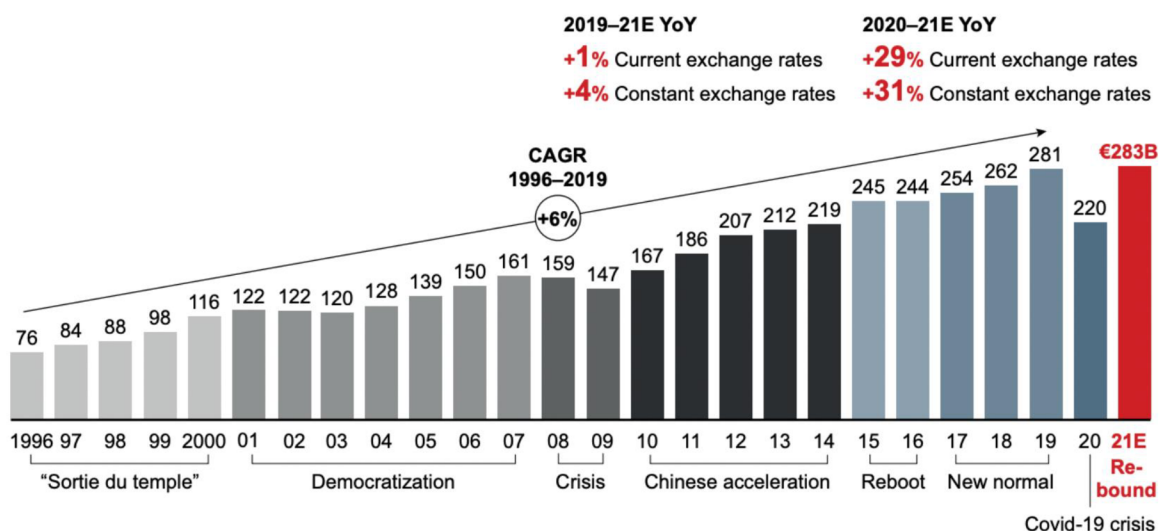
Mainland China's luxury goods market will likely achieve 48% growth in 2020, reaching nearly RMB 346 billion. A decrease in global travel in the wake of the early Covid-19 lockdowns prompted Chinese consumers to turn to national sources for their luxury purchases, sending the domestic market climbing. (Bain & Company, 2020)

China delivered more than half the global growth in luxury spending between 2012–2018, and is expected to deliver 65 percent of the world's additional spending heading into 2025, according to research based on UnionPay transaction data for the 2019 McKinsey China Luxury Report. In 2018, Chinese consumers at home and abroad spent 770 billion RMB (about \$115 billion US dollars) on luxury items—equivalent to a third of the global spend—with each luxury-consuming household spending an average of 80,000 Yuan RMB per year. Their outlay is set to almost double to 1.2 trillion RMB by 2025, when 40 percent of the world's spending on luxury goods will be conducted by Chinese consumers. (McKinsey & Company, 2019)

The mainland Chinese luxury market continued its strong performance over the past few years in 2019, with overall market sales increasing by 26% (at constant exchange rates) to 30 billion euros. Globally, Chinese consumers have contributed 90% to the sustained growth of the global personal luxury goods market, accounting for 35% of the total global personal luxury goods consumption (Bain & Company, 2020). With the world facing the threat of the Covid-19 outbreak in 2020, the domestic luxury goods market in China (i.e. the mainland Chinese market) had an exceptionally difficult start to 2020, but by the end of 2020 some brands had achieved double-digit or even triple-digits. digit growth. In fact, after the epidemic was brought under control, luxury goods sales in China ushered in a strong rebound. Outbound travel has been hindered by the epidemic, causing Chinese consumers to shift their overseas luxury goods consumption to China. Affected by this, the domestic luxury goods market in China began to pick up in April 2020, and achieved a growth of about 48% in 2020, reaching nearly RMB 346 billion (Bain & Company, 2021). The global personal

luxury goods market from 1996 to 2021 was shown in Figure 3.11. In 2021, the size of China's personal luxury goods market will double from 2019, with a year-on-year growth of 36% in 2021, reaching nearly US\$73.6 billion (approximately RMB 471 billion). The domestic luxury goods market (excluding Hong Kong, Macau and Taiwan) continued to maintain a double-digit growth rate, and the growth rate of some brands exceeded 70%. From a global perspective, in 2021, the proportion of the Chinese market in the total global luxury consumption will increase from about 20% in 2020 to about 21%. (Boston Consulting Group, 2021)

Figure 3.11 Global personal luxury goods market from year 1996 to year 2021 (euro, billions)



Source: Bain & Company, 2021

### 3.4 Luxury consumption factors

Vigneron and Johnson integrated five purchase motives, namely Veblenian, Snob, Bandwagon, Hedonist, and Perfectionist. They combined the personal-oriented motives of purchasing luxury goods with the social-oriented motives and considered these five both motives exist in luxury consumption at the same time (Vigneron and Johnson, 1999).

Regarding the motivation for luxury consumption, existing research shows that different people's behaviors vary according to their sensitivity to interpersonal influences (Bourne, 1957; Mason, 1981; Bearden & Etzel, 1982; Horiuchi, 1984; Bushman, 1993; Pantzalis, 1995). Explain consumer behavior related to luxury brands, in addition to

interpersonal aspects such as snobbery and ostentation (Leibenstein, 1950; Mason, 1992), personal aspects such as hedonism and perfectionism (Dubois & Laurent, 1994) and situational conditioning (eg, economic, social and political factors) must be considered (Vigneron & Johnson, 1999, 2004). Prestige or status brand consumption involves the purchase of higher-priced products for self-improvement (Eastman, Goldsmith, and Flynn, 1999), while luxury consumption involves the purchase of products of value to both the individual and significant others. Therefore, in addition to socially oriented luxury brand consumption and the human desire to "make a good impression", individual oriented consumption types should also be considered when managing luxury brand marketing. The question of what really adds luxury value in the consumer's perception is defined in this paper through the existence of four latent dimensions: financial, functional, individual, and social (Wiedmann, Hennigs, & Siebels, 2007).

Wiedmann and Hennigs (2009) tried to find out the value-based segmentation of luxury consumption behavior. Customers' perceptions of luxury and luxury brand consumption motives are not only related to a range of social factors, including status, success, distinction, and the human desire to impress others; they also depend on the financial, functional, and personal utility of the brand. nature. Given the fact that luxury value has social/personal as well as functional/financial dimensions, it is important to integrate all relevant dimensions of cognitive and affective value in a multidimensional model. Several influencing variables and value drivers may be related to four key dimensions of luxury value perception, such as price, quality and conspicuousness. Eventually, they find that price value, usability value, quality value, uniqueness value, self-identity value, hedonic value, materialistic value, conspicuousness value, and prestige value in social networks, those 9 factors are the main reasons affect consumption behavior.

The findings of HJ Choo (2012) show that luxury customer value represents a second-order structure. The research results provide satisfactory support for the four-value structure model consisting of utilitarian value, hedonic value, symbolic value, and economic value. Utilitarian value includes excellence value and functional value, while hedonic value includes aesthetic, pleasure, and experience value. Symbolic value is embodied in self-expression and social value. Regarding the impact of luxury customer value on relationship

quality, customers who perceive luxury brands as having high symbolic, economic, and functional value are more likely to develop positive relationships with brands.

Luxury consumption is rooted in various cultural backgrounds. For example, Wong and Ahuvia (1998) argue that Asians' luxury consumption is mainly influenced by factors such as Confucian collectivism, individual or group needs, and values of modesty and frugality. Logically, Chinese luxury consumers may be more concerned with external social needs rather than internal personal needs. As Yang (1981) said, the Chinese are concerned about their image within the group and often seek the inclusion of a certain social group by owning luxury brands. At the same time, such inclusion will differentiate group members from other factions. Wong and Ahuvia (2002) further argue that Asians are more likely to value symbolic value than the hedonic value of luxury goods, especially in the context of public consumption. It can be seen that Chinese consumers are very concerned about the brand and origin of luxury goods, and tend to prefer well-known foreign luxury brands with popular symbols.

Despite the lower average income, "face" may be an important motivation for Asian consumers' strong demand for luxury goods (eg, N. Zhou & Belk, 2004; Z. Zhou & Nakamoto, 2000). "Mianzi" is defined as "a positive social value that a person effectively asserts for himself in accordance with the course that others assume he has taken during a particular encounter" (Goffman, 1967, p. 5), and in Chinese culture it plays a more prominent and profound effect, not on Western culture (Ho, 1976). Furthermore, the concept refers to both personal qualities and impersonal characteristics such as wealth, social relationships, and authority (Ho, 1976). Legitimately, the symbolic values of status and prestige weave together luxury consumption and face. As N. Zhou and Belk put it, Asian consumers buy luxury goods mainly to enhance and preserve their "face". Likewise, Li and Su (2006) show that Chinese consumers are more likely to associate product brand and price than American consumers.

Gift-giving is considered another important motivation for Chinese people to buy luxury goods. Consuming expensive gifts reflects social class and maintaining a balance between group and individual needs. Ger and Belk (1996) emphasized that Asians often buy luxury goods for family members and "package" the family with luxury brands to show off

family wealth and status. Previous research (eg, Bond, 1991, 1996; Bond & Lee, 1981; Gu, Hung, & Tse, 2008) linked gift-giving with building relationships in Chinese society. Guanxi, interpreted as interpersonal relationships, plays a key role in all walks of life in Chinese daily life. Chinese culture values harmonious interpersonal relationships, and accordingly, the exchange of gifts or favours plays an important role in the maintenance and expansion of such relationships. People often have to reciprocate favours in return.

Thus, an interconnected and mutually restraining relationship develops and maintains over time (Bond, 1991, 1996; Hwang, 1987). Along with "face", the "relationship" culture encourages consumers to seek luxury and buy luxury brands, even beyond their reach. Chinese consumers tend to think that the more expensive the gift, the more recognized it will be, the more "face" it can get, and the better the relationship will be. A case in point is that in the business world, luxury goods such as Rolex watches are seen as the perfect gift to build relationships with other businessmen and Chinese government officials (Ahlstrom, 2009).

### **3.5 Method of questionnaire**

The questionnaire was invented in the late 1800s by the British anthropologist, explorer and statistician Sir Francis Galton. The questionnaire forms the backbone of any survey, and its success lies in the design of the questionnaire. It is defined as a questionnaire is simply a mimeographed or printed list of questions to be filled out by the respondent or for the respondent to comment.

Questionnaires are the main means of collecting quantitative raw data. Questionnaires enable the collection of quantitative data in a standardized manner, making the data internally consistent and coherent for easy analysis. Questionnaires should always have a clear purpose in relation to the research objectives, and it needs to be clear from the outset how the survey results will be used.

Use questionnaires in resource-limited situations, because the design and management costs of questionnaires are very low, time is an important resource consumed by questionnaires to the greatest extent, and the privacy of participants is protected, because participants can only be hidden and kept confidential when their identities are hidden, And

when corroborated with other survey findings, questionnaires may be useful confirmation tools when corroborated with other studies that have the resources to pursue other data collection strategies.

S. Roopa and MS. Rani (2012) suggest in their paper, the design of the questionnaire could separate to 5 stages of planning a questionnaire. Which are 1. initial considerations, 2. question content, 3. phrasing and response format, 4. question sequence and layout, 5. final questionnaire. There are about four different types of questionnaires designing for a survey. They are applied according to the purpose of the survey: 1. Contingency questions/Cascade format, 2. Matrix questions, 3. Closed-ended questions, 4. Open-ended questions. Ideal Requisites of a Questionnaire should: 1. Be composed of a simple and a specific language, 2. Demand one answer on one dimension, 3. Yield a truthful and accurate answer, 4. Accommodate all possible contingencies of a response, 5. Have mutually exclusive response options, 6. Produce variability in response, 7. Minimize social desirability. Methods to Reach Target Respondents can be segment to: 1. Face-to-face interview, 2. Telephonic interview, 3. Mail questions, 4. Internet questions.

Wiedmann and Hennigs (2009) used questionnaires to collect data in their study. Questionnaire items were scored on a 5-point Likert scale (1 means strongly disagree, 5 means strongly agree). The first version of the questionnaire consisted of 150 items, with two face verifications using exploratory interviews and expert interviews, and a pre-test of 80 respondents to identify the most important items and reduce the total. The study sample was defined as male or female respondents aged 18 years and older. A total of 750 interviews were conducted during the winter of the year 2006 to year 2007.

Y Wang, SJ Sun, and YP Song (2011) also use questionnaire in their research “Chinese luxury consumers: motivation, attitude, and behavior”. Their questionnaires were first written in English and then translated into Chinese. Then, translated by a bilingual third party to improve translation accuracy. Study participants were residents living in Chinese metropolises. The reason for the selection of participants from this city is based on the level of economic development in the region, and most residents may have contact with luxury goods. The questionnaire was conducted by a professional business research center. To measure individuals' motivation to buy luxury goods, a 26-item scale was adapted from



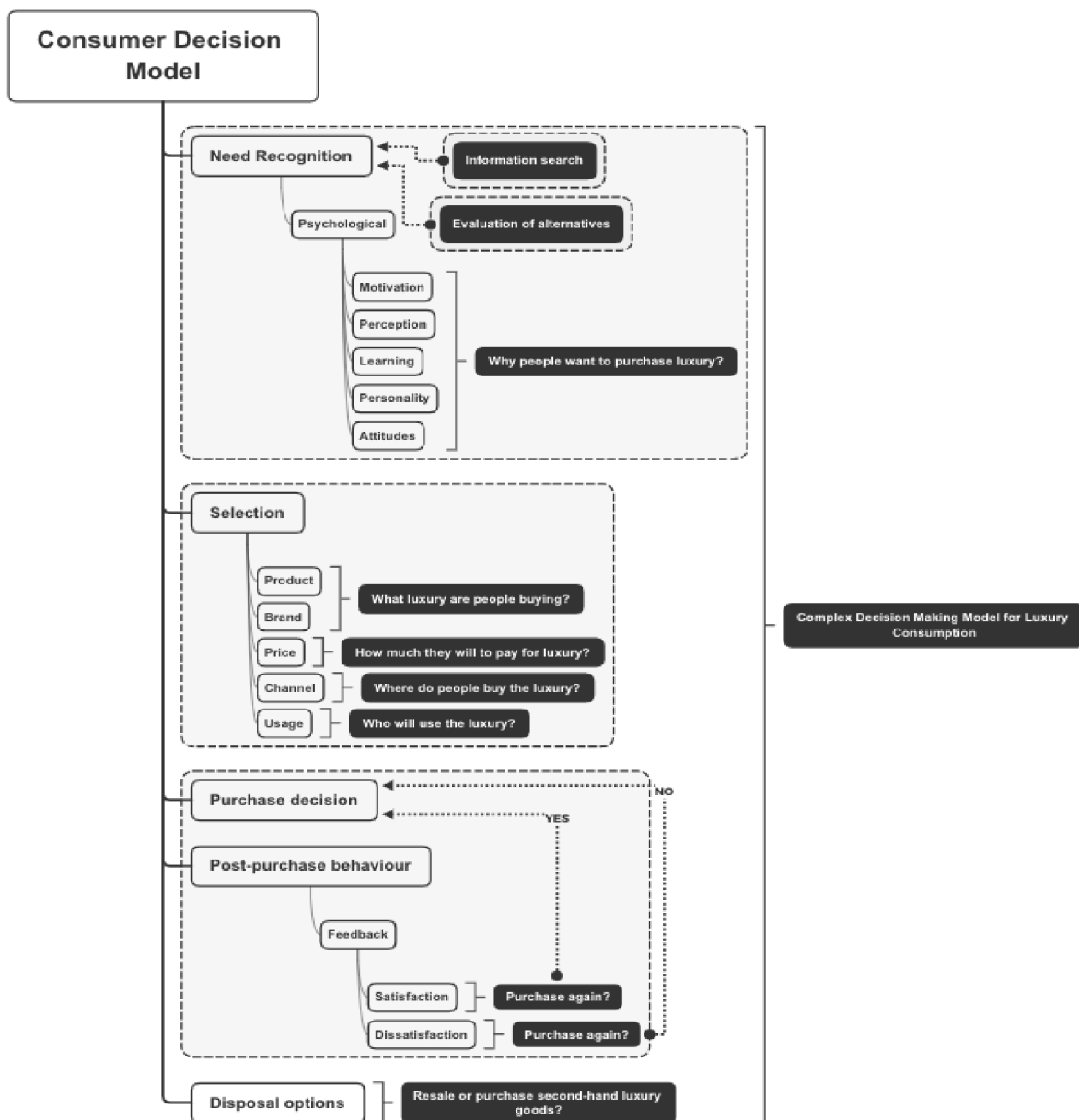
previous research. Responses were measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A principal component analysis was performed using a variance maximum rotation to examine the underlying structure of these 26 items measuring motivation to purchase luxury goods. Factors were extracted with reference to the rule of minimum eigenvalue of 1.0 and at least 2 loadings (60/40 loadings) per factor. A total of 21 items and 8 factors were retained, explaining 61.18% of the total variance.

## 4. Practical Part

### 4.1 Cognitive Model of luxury consumption

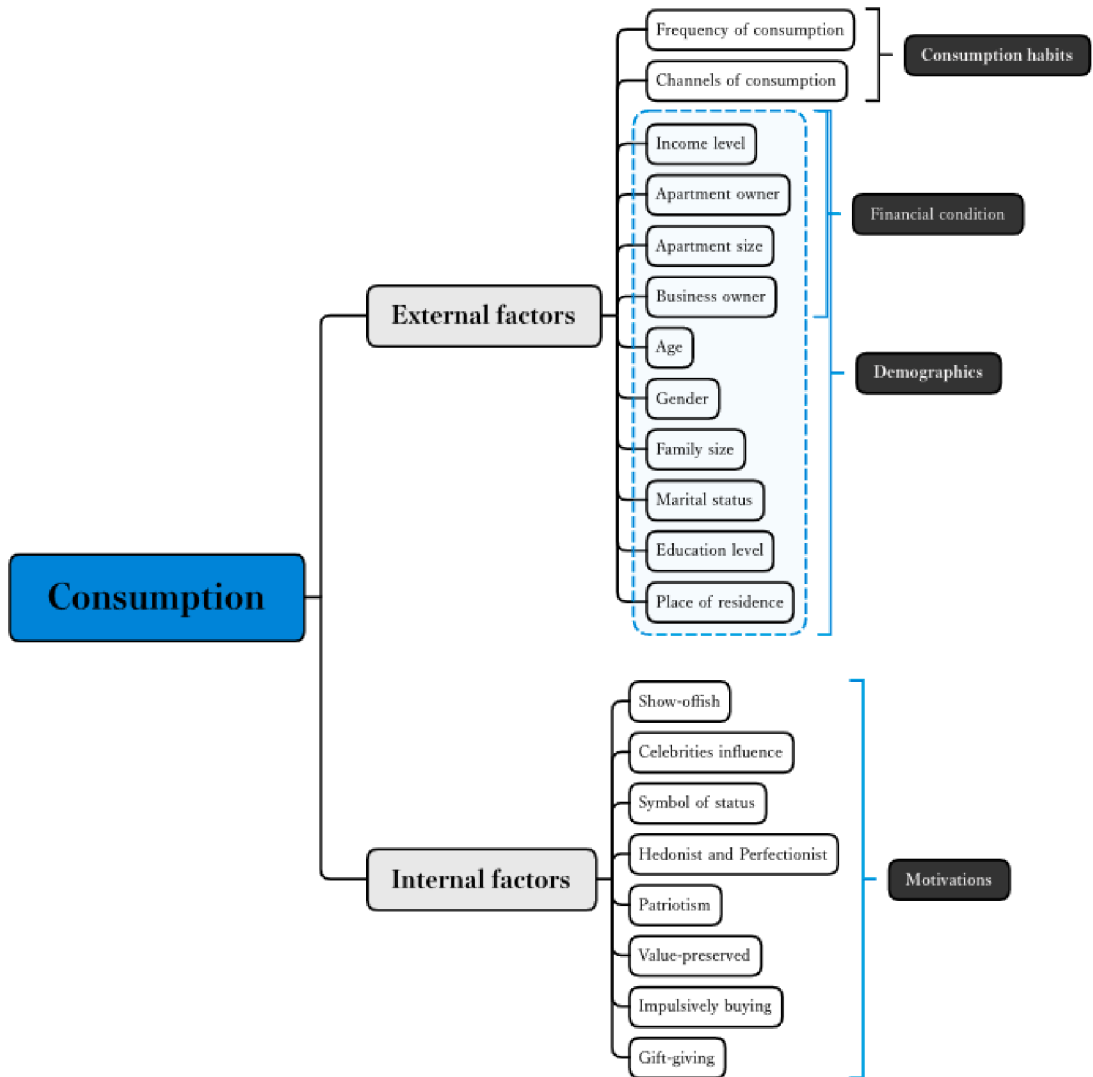
The consumer decision model mentioned in the literature review part of the thesis is one of the cognitive models invented by Howard and Sheth in 1969. The author based on this model to draw the Consumer Decision Model of luxury consumption following in Figure 4.1. Moreover, the Luxury Consumption Model established by author can be seen in Figure 4.2.

Figure 4.1 Consumer Decision Model of luxury Consumption



Source: Own processing

Figure 4.2 Conceptual Luxury Consumption Model



Source: Own processing

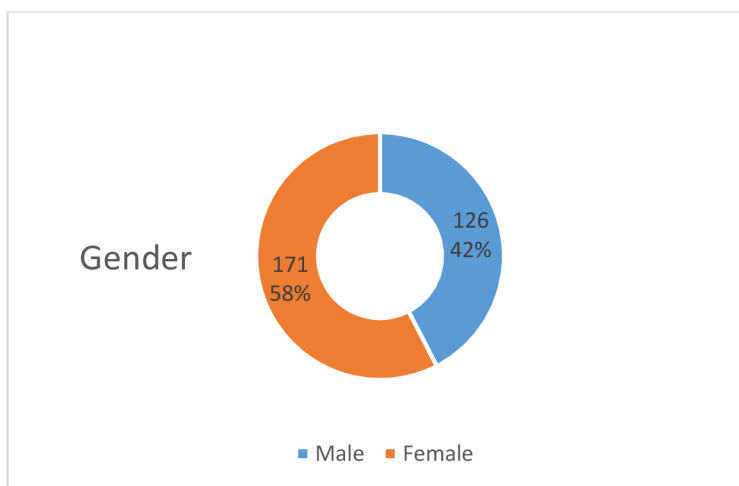
## 4.2 Questionnaire

### 4.2.1 Sampling

The questionnaire was created and surveyed by WenJuanXing platform ([www.wjx.cn](http://www.wjx.cn)). The survey date of the questionnaire was from March 2021 to March 2022 for a period of one year, and finally 334 questionnaires were collected, of which 297 were the available usable response. The availability over 88%. Regarding the sample, 126 participants were male, representing approximately 42% of the total respondents, and another 171 participants were female, representing 58% of the total respondents. The results are shown in Figure 4.3. The thesis mentioned in the Methodology section why more

consumers who live in Beijing, Shanghai, Guangzhou and Shenzhen these cities are expected to participate in this survey. As can be seen from Figure 4.4, more than 90% of the participants are indeed from these four big cities of mainland China, which is in line with our expectations.

Figure 4.3 Gender distribution of participants



Source: Own processing

Figure 4.4 Place of residence distribution of participants

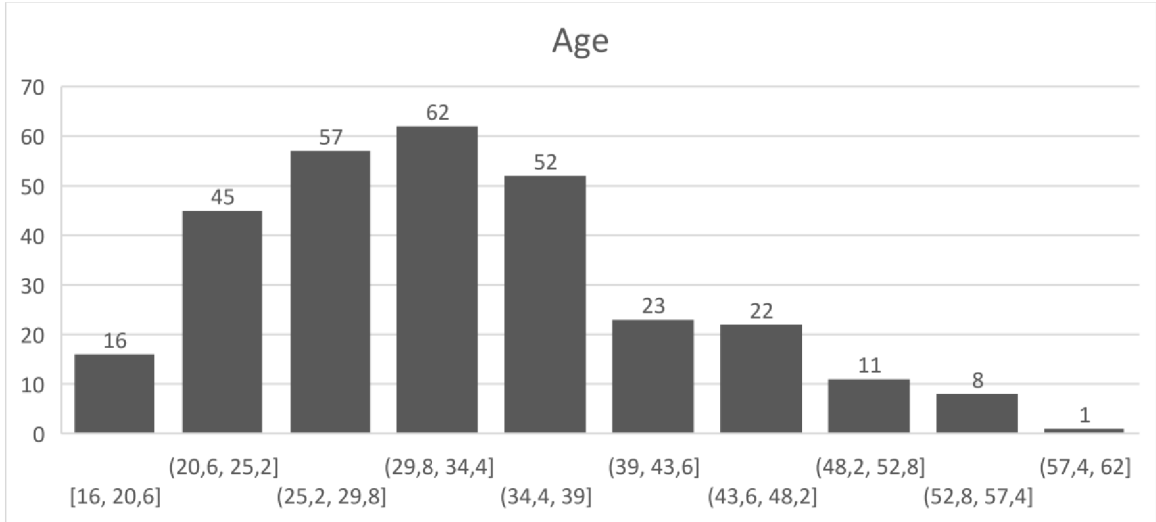
| Place of residence                  | participants | Percentage  |
|-------------------------------------|--------------|-------------|
| Beijing/Shanghai/Guangzhou/Shenzhen | 272          | 92%         |
| Other cities in Mainland China      | 25           | 8%          |
| <b>Count</b>                        | <b>297</b>   | <b>100%</b> |

Source: Own processing

Age and education level are also important in demographics research. So the questionnaire includes both factors in survey of luxury consumption. According to the questionnaire results, the distribution of age and education level are shown in Figure 4.5 and Figure 4.6 below. As shown by the bar chart, the majority of respondents with luxury consumption experience are between 20 years old to 40 years old. In terms of educational level, among the respondents with luxury purchase and consumption experience, 72% of participants have a bachelor's or higher degree. The remaining 28% of the respondents have the education level which lower than a bachelor's degree. For the relationship between

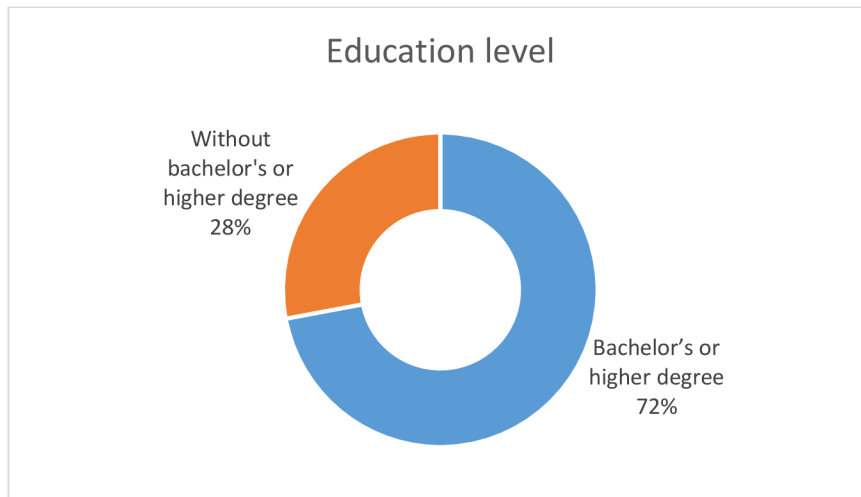
education level and consumption of luxury goods, it will be detailed analysis of the thesis in next minor chapter.

Figure 4.5 Age distribution of participants



Source: Own processing

Figure 4.6 Education level distribution of participants



Source: Own processing

## 4.2.2 Definition and Measurement

### 4.2.2.1 Questionnaire setting

The questionnaire contains a total of 24 questions, of which question No.3 is an identifying question, asking participants whether they have purchased or consumed luxury

goods. The full question is: “Have you ever consumed and purchased luxury products?” Only the questionnaires of the participants who answered “Yes” were used as the results for analysing. If “No” is selected, then end of the survey. Question 4 is critical, the answer will be quantitatively transformed, then used as a dependent variable in the economic model and econometric model.

Questions No.22, No.23 and No.24 are extension questions, related to consumption habits. They involve Purchasing channels, Purpose of using, and Attitudes towards second-hand luxury goods. The corresponding question of “Purchasing channels” is No.22: “Which channel do you use most of purchasing luxury products?” The options are multiple choices with more than one answer, even includes a open answer option, where the participants can answer the purchasing channels that are not in the options. The options include: “A. Offline official brand store; B. Online official brand store; C. Offline Multiply brands store or luxury Outlets; D. Online luxury e-commercial website and application; E. Purchase from overseas buyer; F. Purchase from Duty Free Stores; G. Other, please specify: \_\_\_\_”. “Purpose of using” corresponds to the question No.23: “What purpose do you often purchase luxury products?”, and the corresponding options are multiple choices with more than one answer. Options include: “A. Use by yourself; B. Business or social gift; C. Shop for lovers, friends, and family members; D. Collection; E. Resale and investment”. The corresponding question for “Attitudes towards second-hand luxury goods” is No.24: “What is your attitude towards second-hand luxury products?”, it is a multiple choices question, options include: “A. Never bought, resolutely resist; B. Never bought, but willing to try; C. Purchased before, but will not continue; D. Purchased, will continue to buy; E. I am not sure”.

Other questions in the questionnaire can correspond to the external influencing factors and internal influencing factors that mentioned in the previous chapters, which will be explained detailly in the next chapter.

#### **4.2.2.2 Measurement of factors**

In addition to the 5 questions mentioned above, the remaining 19 questions in this questionnaire are correspond to 19 different factors that affect Chinese consumers' consumption of luxury goods. They are respectively:

**Factor 1** is "Gender". The question that corresponding to this factor is No.1: "What is your gender?" and the options include: "A. Male; B. Female". After the dummy coding, we use value "0" represents "Male", "1" represents "Female". The Mean of factor 1 is 0.42. It means 42% of the respondents are male.

**Factor 2** is "Age". The question that corresponding to this factor is No.2: "How old are you?" The question is an open question. The answer of the responses is directly used in the dataset. The Mean of factor 1 is 33.05. It means the average age of the respondents is 33.05 years old.

**Factor 3** is "Frequency of consumption". The question that corresponding to this factor is No.5: "How often do you purchase luxury products? " And the options include: "1-10", represents "Very rare to Very often". High scores on this factor refer to a high frequency on purchase the luxury goods.

**Factor 4** is "Income level". The question that corresponding to this factor is No.6: "What is your net annual income level (if you are a full-time student, please include family support)?" and the options include: "A. 0-50,000 Yuan; B. 50,001-79,999 Yuan; C. 80,000-100,000 Yuan; D. 100,001-149,999 Yuan; E. 150,000-200,000 Yuan; F. 200,001-299,999 Yuan; G. 300,000-450,000 Yuan; H. 450,001-699,999 Yuan; I. 700,000-1,000,000 Yuan; J. 1,000,000-5,000,000 Yuan". After the binning, we use the mean value represents the income range, which are the value "25000; 65000; 90000; 125000; 175000; 250000; 375000; 575000; 850000; 3000000" represents "A to J". The Mean of factor 1 is 282138.05. It means the average net income level of respondents is 282,138.05 Chinese Yuan per person per year.

**Factor 5** is "Family size". The question that corresponding to this factor is No.7: "How many people are in your family (by household)?" and the options include: "A. 1; B.2; C. 3; D. 4; E. 5; F. 6-10". For the option F, the mean value "8" is used to represent it. The value of the answer of the responses is directly used in the dataset. The Mean of factor 5 is 3.04. It means the average family size of the respondents are 3.04 people per family.

**Factor 6** is “Marital status”. The question that corresponding to this factor is No.8: “What is your marital status?” and the options include: "A. Single (include divorced, long-term separated, widowed); B. Married". After the dummy coding, we use value “0” represents “Single”, “1” represents “Married”. The Mean of factor 6 is 0.48. It means 48% of the respondents are married.

**Factor 7** is “Apartment owner”. The question that corresponding to this factor is No.9: “Do you have your own apartment? (The one you bought.)” and the options include: "A. Yes; B. No". After the dummy coding, we use value “0” represents “No”, “1” represents “Yes”. The Mean of factor 7 is 0.72. It means 72% of respondents have their own apartment.

**Factor 8** is “Apartment size”. The question that corresponding to this factor is No.10: "What is the size of your current apartment (by m2)?" The question is an open question. The answer of the responses is directly used in the dataset. The Mean of factor 8 is 93.66. It means the average apartment size of the respondents is 93.66 square meter.

**Factor 9** is “Business owner”. The question that corresponding to this factor is No.11: “Do you and/or your family own a business?” and the options include: "A. Yes; B. No". After the dummy coding, we use value “0” represents “No”, “1” represents “Yes”. The Mean of factor 9 is 0.32. It means 32% of respondents have their own business or own family business.

**Factor 10** is “Education level”. The question that corresponding to this factor is No.12: “Do you have bachelor’s or higher degree (Graduate and above)?” and the options include: "A. Yes; B. No". After the dummy coding, we use value “0” represents “No”, “1” represents “Yes”. The Mean of factor 10 is 0.72. It means 72% of respondents have bachelor’s or higher degree.

**Factor 11** is “Place of residence”. The question that corresponding to this factor is No.13: “13. Do you live in Beijing/Shanghai/Guangzhou/Shenzhen?” and the options include: "A. Yes; B. No". After the dummy coding, we use value “0” represents “No”, “1” represents “Yes”. The Mean of factor 11 is 0.92. It means 92% of respondents live in Beijing or Shanghai or Guangzhou or Shenzhen these 4 cities.



**Factor 12** is “Show-offish”. The question that corresponding to this factor is No.14: "Do you care if other people can recognize you are wearing or using luxury products? For example, do you intend to buy the luxury products with conspicuous and easily recognizable brand logo? " And the options include: “1-10”, represents “Strongly disagree to Strongly agree”. High score on this factor refer to that the reason for showing off is a more important influence on their luxury purchases.

**Factor 13** is “Celebrities influence”. The question that corresponding to this factor is No.15: "Will you increase your purchase intent of the luxury products if they are with celebrity endorsement, idols copycatting, or same items of famous influencers? " And the options include: “1-10”, represents “Strongly disagree to Strongly agree”. High score on this factor refer to that the reason consumers buy luxury are influent by celebrities and famous stars even internet influencers is a more important influence on their luxury purchases.

**Factor 14** is “Gift-giving”. The question that corresponding to this factor is No.16: "Have you ever purchased luxury products for gift-giving? Include both business purpose and personal purpose. " And the options include: “1-10”, represents “Strongly disagree to Strongly agree”. High score on this factor refer to that consumers buy luxury is for giving as the gift is a more important reason on their luxury purchases.

**Factor 15** is “Symbol of status”. The question that corresponding to this factor is No.17: “Do you think buying and using luxury products is beneficial to showing your social status or social class? Include both work and social occasions.” and the options include: “1-10”, represents “Strongly disagree to Strongly agree”. High score on this factor refer to that consumers more agree that buy or use luxury helps showing their social status or social class.

**Factor 16** is “Hedonist and Perfectionist”. The question that corresponding to this factor is No.18: “Do you care about the luxury product itself (quality, design, creativity, technique, and service) more than its brand?” and the options include: “1-10”, represents “Strongly disagree to Strongly agree”. High score on this factor refer to that consumers more agree that buy or use luxury enhance their self-actualization and self-value, instead of showing off its brand. This factor could be compared with factor 12.

**Factor 17** is “Patriotism”. The question that corresponding to this factor is No.19: “Would you refuse to buy products from the luxury brand if it was accused "insulting China", “Chinese-racism”, or “politically incorrect”?” and the options include: “1-10”, represents “Strongly disagree to Strongly agree”. This factor is rarely mentioned in earlier research, but by the object of the author, believes patriotism is also an important reason affect people purchase or refuse to purchase a luxury brand. High score on this factor refer to highly possibility the consumers reject to purchase a luxury brand if it has politically incorrect accusation.

**Factor 18** is “Impulsively buying”. The question that corresponding to this factor is No.20: “Have you ever made an impulsive purchase of luxury products?” and the options include: “1-10”, represents “Strongly disagree to Strongly agree”. High score on this factor refer to highly possibility the consumers purchase luxury by impulsive shopping.

**Factor 19** is “Value-preserved”. The question that corresponding to this factor is No.21: “Do you care about the luxury products’ preserving value and resale value?” and the options include: “1-10”, represents “Strongly disagree to Strongly agree”. High score on this factor refer to that consumers more care the luxury goods’ preserving value and resale value when they purchase luxury.

### 4.3 Factor analysis and Hypotheses

Factor analysis is a statistical method used to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved variables called factors. Factor loadings are part of the outcome from factor analysis, which serves as a data reduction method designed to explain the correlations between observed variables using a smaller number of factors. Table 4,1 shows the descriptive statistics and factor loadings of factor 1 to factor 19.

Table 4.1 Descriptive statistics and Factor loadings

| Item                       | Factor | Mean        | S.D.      | Factor Loadings |
|----------------------------|--------|-------------|-----------|-----------------|
| Gender                     | 1      | 0.42        | 0.50      | 0.1796          |
| Age                        | 2      | 33.05       | 8.80      | 0.0377          |
| Frequency of consumption   | 3      | 4.44        | 2.19      | 0.6011          |
| Income level               | 4      | 282138.05   | 361455.47 | <b>0.8616</b>   |
| Family size                | 5      | 3.04        | 1.20      | 0.2522          |
| Marital status             | 6      | 0.48        | 0.50      | 0.0532          |
| Apartment owner            | 7      | 0.72        | 0.45      | 0.1550          |
| Apartment size             | 8      | 93.66       | 48.40     | <b>0.8048</b>   |
| Business owner             | 9      | 0.32        | 0.47      | 0.3893          |
| Education level            | 10     | 0.72        | 0.45      | 0.2298          |
| Place of residence         | 11     | 0.92        | 0.28      | 0.0587          |
| Show-offish                | 12     | <b>6.86</b> | 1.83      | <b>0.8347</b>   |
| Celebrities influence      | 13     | 4.16        | 2.82      | <b>0.8137</b>   |
| Gift-giving                | 14     | <b>6.90</b> | 7.70      | <b>0.8150</b>   |
| Symbol of status           | 15     | 4.48        | 2.06      | 0.7879          |
| Hedonist and Perfectionist | 16     | 4.26        | 1.92      | 0.7121          |
| Patriotism                 | 17     | <b>6.47</b> | 2.36      | <b>-0.8174</b>  |
| Impulsively buying         | 18     | 3.28        | 2.16      | 0.5152          |
| Value-preserved            | 19     | 4.47        | 2.18      | 0.6991          |

Source: Own processing

We defined when the absolute value of factor loading over 0,8, it exists statistical difference. Drawing on the existing research on the influencing factors of luxury consumption and the factor loadings above, the hypotheses are proposed below:

***Hypothesis 1***

Income level positively effects on Chinese consumer's consumption of luxury goods while keep other influencing factors remain unchanged.

***Hypothesis 2***

Apartment size positively effects on Chinese consumer's consumption of luxury goods while keep other influencing factors remain unchanged.

***Hypothesis 3***

Motivation of Show-offish positively effects on Chinese consumer's consumption of luxury goods while keep other influencing factors remain unchanged.

***Hypothesis 4***

Motivation of Celebrities influence positively effects on Chinese consumer's consumption of luxury goods while keep other influencing factors remain unchanged.

***Hypothesis 5***

Motivation of Gift-giving positively effects on Chinese consumer's consumption of luxury goods while keep other influencing factors remain unchanged.

***Hypothesis 6***

Motivation of Patriotism negatively effects on Chinese consumer's consumption of luxury goods while keep other influencing factors remain unchanged.

## 4.4 Economic Model and Econometric Model

### 4.4.1 Formulation of economic model

The formula of the economic model will be the following:

$$y = f(x_1, x_2, x_3, x_4, x_5, x_6)$$

$y$  = C-Luxury: Consumption of luxury of Chinese consumers (Yuan/person/year)

$x_1$  = NI: Net income (Yuan/person/year)

$x_2$  = AS: Apartment size (m<sup>2</sup>/person)

$x_3$  = M-SO: Motivation of Show-offish (level,  $0 < x_3 \leq 10$  )

$x_4$  = M-CI: Motivation of Celebrities influence (level,  $0 < x_4 \leq 10$  )

$x_5$  = M-GG: Motivation of Gift-giving (level,  $0 < x_5 \leq 10$  )

$x_6$  = M-P: Motivation of Patriotism (level,  $0 < x_6 \leq 10$  )

### 4.4.2 Formulation of econometric model

The formula of the econometric model will be the following:

$$y = \gamma_0 x_0 + \gamma_1 x_1 + \gamma_2 x_2 + \gamma_3 x_3 + \gamma_4 x_4 + \gamma_5 x_5 + \gamma_6 x_6 + u$$

$y$  = C-Luxury: Consumption of luxury of Chinese consumers (Yuan/person/year)

$x_0$  = Constant (intercept)

$x_1$  = NI: Net income (Yuan/person/year)

$x_2$  = AS: Apartment size (m<sup>2</sup>/person)

$x_3$  = M-SO: Motivation of Show-offish (level,  $0 < x_3 \leq 10$  )

$x_4$  = M-CI: Motivation of Celebrities influence (level,  $0 < x_4 \leq 10$  )

$x_5$  = M-GG: Motivation of Gift-giving (level,  $0 < x_5 \leq 10$  )

$x_6$  = M-P: Motivation of Patriotism (level,  $0 < x_6 \leq 10$  )

$\gamma_0 \dots \dots \gamma_6$  = Structural parameters of independent variables

$u$  = Error term

## 5. Results and Discussion

### 5.1 Econometric analysis results

#### 5.1.1 Correlation Matrix and collinearity

##### 5.1.1.1 Correlation Matrix of econometric model

Table 5.1 Result of Correlation Matrix, OLS, using observations 1-297

| Correlation Coefficients |        |        |         |        |         |         |    |
|--------------------------|--------|--------|---------|--------|---------|---------|----|
| Y                        | X1     | X2     | X3      | X4     | X5      | X6      |    |
| 1.0000                   | 0.8616 | 0.8048 | 0.8347  | 0.8137 | 0.8150  | -0.8174 | Y  |
|                          | 1.0000 | 0.6240 | -0.3746 | 0.3978 | 0.5901  | -0.7329 | X1 |
|                          |        | 1.0000 | -0.3920 | 0.4503 | 0.4115  | -0.5819 | X2 |
|                          |        |        | 1.0000  | 0.6121 | -0.5475 | 0.5926  | X3 |
|                          |        |        |         | 1.0000 | -0.3115 | 0.2680  | X4 |
|                          |        |        |         |        | 1.0000  | -0.6079 | X5 |
|                          |        |        |         |        |         | 1.0000  | X6 |

Source: Own processing of Gretl results

The table 5.1 is the correlation matrix, it shown the complex correlation coefficients between all the variables. According to the results, there is no perfect correlation between explanatory variables, and also no since the absolute value of coefficients are al less than 0.8.

##### 5.1.1.2 Collinearity test

Multicollinearity is a statistical concept where several independent variables in a model are correlated. Two variables are considered to be perfectly collinear if their correlation coefficient is +/- 1.0. Multicollinearity among independent variables will result in less reliable statistical inferences. Thus, the follow tests were be used to test collinearity of variables.

Table 5.2 Variance Inflation Factors

| Variance Inflation Factors |       |
|----------------------------|-------|
| X1                         | 2.545 |
| X2                         | 1.812 |
| X3                         | 2.402 |
| X4                         | 1.677 |
| X5                         | 3.048 |
| X6                         | 2.906 |

Source: Own processing of Gretl results

Table 5.2 shown the results of variance inflation factors. The minimum possible value = 1.0, when values > 10.0 may indicate a collinearity problem. As we can see, all the VIF values of variables are less than 10.0, which indicate there's no collinearity in the equation.

Table 5.3 Belsley-Kuh-Welsch Collinearity Diagnostics

| Belsley-Kuh-Welsch Variance Proportions |        |       |       |       |       |       |       |       |
|---|--------|-------|-------|-------|-------|-------|-------|-------|
| lambda                                  | cond   | const | X1    | X2    | X3    | X4    | X5    | X6    |
| 5.610                                   | 1.000  | 0.001 | 0.005 | 0.003 | 0.001 | 0.003 | 0.004 | 0.001 |
| 0.776                                   | 2.690  | 0.003 | 0.086 | 0.000 | 0.000 | 0.094 | 0.054 | 0.000 |
| 0.281                                   | 4.468  | 0.002 | 0.434 | 0.005 | 0.010 | 0.092 | 0.132 | 0.001 |
| 0.218                                   | 5.074  | 0.003 | 0.000 | 0.114 | 0.011 | 0.259 | 0.301 | 0.000 |
| 0.083                                   | 8.220  | 0.021 | 0.281 | 0.852 | 0.047 | 0.035 | 0.092 | 0.005 |
| 0.019                                   | 7.186  | 0.079 | 0.190 | 0.023 | 0.119 | 0.028 | 0.374 | 0.992 |
| 0.014                                   | 12.114 | 0.893 | 0.003 | 0.003 | 0.811 | 0.488 | 0.044 | 0.000 |

lambda = eigenvalues of inverse covariance matrix (smallest is 0.0138664)

cond = condition index

note: variance proportions columns sum to 1.0

Source: Own processing of Gretl results

According to BKW, Table 5.3 above, condition index  $\geq 30$  indicates "strong" near linear dependence, and condition index between 10 and 30 "moderately strong". Parameter estimates whose variance is mostly associated with problematic condition index values may themselves be considered problematic. The results displayed no condition index of the variables are higher than 30.0, no strong collinearity exist in the model.

### 5.1.2 Parameters Estimation of OLS Model

Table 5.4 The empirical results of OLS model

| OLS Model, using observations 1-297 |             |           |         |          |          |
|-------------------------------------|-------------|-----------|---------|----------|----------|
| Dependent variable: Y               |             |           |         |          |          |
| Variables                           | Coefficient | Std.error | T-ratio | P-value  | SS or SI |
| const                               | -38508.8    | 11737.1   | -3.281  | 0.0012   | SS***    |
| X1                                  | 0.158201    | 0.0078904 | 20.050  | 1.05E-56 | SS***    |
| X2                                  | 188.631     | 53.3227   | 3.538   | 0.0005   | SS***    |
| X3                                  | 2964.80     | 1531.12   | 1.936   | 0.0538   | SS*      |
| X4                                  | 1673.86     | 827.833   | 2.022   | 0.0441   | SS**     |
| X5                                  | 3230.64     | 404.311   | 7.990   | 3.20E-14 | SS***    |
| X6                                  | -2864.09    | 1159.38   | -2.470  | 0.0141   | SS**     |

Note: SS: Statistically significant parameter / SI: Statistically insignificant parameter

\* = significant at 10%; \*\* = significant at 5%; \*\*\* = significant at 1%

Source: Own processing of Gretl results

According to Table 5.4, the coefficient of OLS from Gretl results, the equation for this model is:

$$y = -38508.8 + 0.158201x_1 + 188.631x_2 + 2964.8x_3 + 1673.86x_4 + 3230.64x_5 - 2864.09x_6 + u$$

### 5.1.3 Economic verification

The estimated parameters show how many units the explained variable  $y$  (consumption of luxury of Chinese consumers) will change if one of the explanatory variables change in one unit.

When net income increases by 1 Yuan/person/year, luxury consumption will increase 0.16 Yuan/person/year;

When apartment size increases by 1  $m^2$ /person, luxury consumption will increase 188.63 Yuan/person/year;

When motivation of show-offish increases by 1 level, luxury consumption will increase 2964.8 Yuan/person/year;



When motivation of celebrities influence increases by 1 level, luxury consumption will increase 1673.86 Yuan/person/year;

When motivation of gift-giving increases by 1 level, luxury consumption will increase 3230.64 Yuan/person/year;

When motivation of patriotism increases by 1 level, luxury consumption will decrease 2864.09 Yuan/person/year.

## 5.1.4 Statistical verification

### 5.1.4.1 Goodness of fit

Table 5.5 R-squared and Adjusted R-squared

| R-squared and Adjusted R-squared |          |
|----------------------------------|----------|
| R-squared                        | 0.867277 |
| Adjusted R-squared               | 0.864531 |

Source: Own processing of Gretl results

As the Table 5.5 shown:

The coefficient of determination R-squared:  $R^2 = 0.867277$

The adjusted R-squared:  $R_{adj}^2 = 0.864531$

Table 5.6 ANOVA test

| Analysis of Variance  |                |     |             |
|---|----------------|-----|-------------|
|   | Sum of squares | df  | Mean square |
| Regression  | 1.9739E+12     | 6   | 3.2899E+11  |
| Residual  | 3.0201E+11     | 290 | 1.0417E+09  |
| Total   | 2.2760E+12     | 296 | 7.6892E+09  |
| R-squared = $1.97392e+012 / 2.27599e+012 = 0.867277$                    |                |     |             |
| F(6, 290) = $3.28986e+011 / 1.04165e+009 = 315.833$ [p-value 5.44e-124] |                |     |             |

Source: Own processing of Gretl results

The null hypothesis  $H_0$  to be tested is that:

$H_0$ : the mean outcome is the same across all categories,  $\mu_1 = \mu_2 = \dots = \mu_k$

$H_1$ : at least one of means are different from each other.

Very small p-value of F-statistics leads to rejection of null hypothesis.

As observed in Figure 5.6,  $F(6, 290) = 315.833$ ,  $p\text{-value} = 5.44e-124 < \alpha = 0.05$ , so we reject  $H_0$ , not all the means are equal.

The result means that the regression predictions fit the data with 86.7% accuracy, and over 86.5% of data can be explained by this model. They are all greater than 0.8, so model can be viewed as suited for data. In other word, 86.7% of the dependent variable luxury consumption of Chinese consumers can be explained as independent variables. In addition, based on the high value of the F-statistic with 315.833 (with p-value 544e-124), statistically significant regressions in this model can be found.

#### 5.1.4.2 Statistically significant of parameters and Hypotheses verification

In the P-test, the null hypothesis  $H_0$  to be tested is that:

$H_0$  : The parameter is statistically significant (SS)

$H_1$ : The parameter is statistically insignificant (SI)

If the P-value exceeds the  $\alpha$  at the chosen level of significance (10%, 5%, 1% level), we may not reject the null hypothesis, then the parameter is statistically significant in this equation. Otherwise, if  $p\text{-value} < \alpha$ , the null hypothesis will be rejected.

Table 5.7 P-test results

| P-test    |          |          |
|-----------|----------|----------|
| Variables | P-value  | SS or SI |
| const     | 0.0012   | SS***    |
| X1        | 1.05E-56 | SS***    |
| X2        | 0.0005   | SS***    |
| X3        | 0.0538   | SS*      |
| X4        | 0.0441   | SS**     |
| X5        | 3.20E-14 | SS***    |
| X6        | 0.0141   | SS**     |

Note: SS: Statistically significant parameter / SI: Statistically insignificant parameter

\* = significant at 10%; \*\* = significant at 5%; \*\*\* = significant at 1%

Source: Own processing of Gretl results

As demonstrated in Table 5.7:

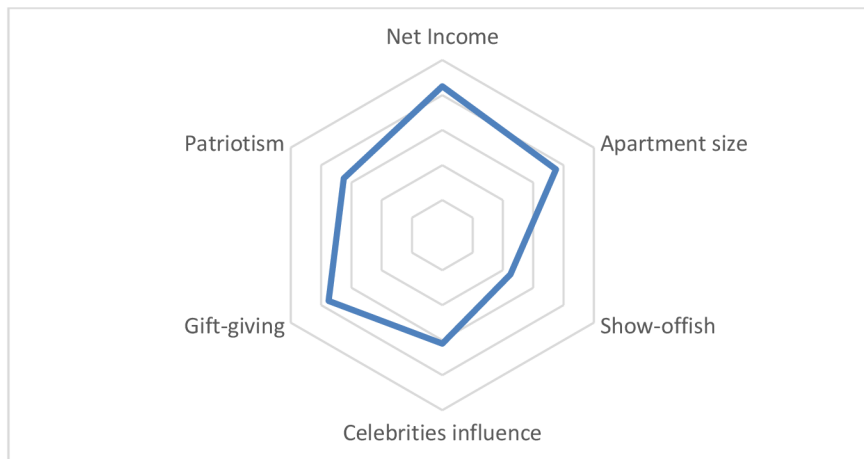
The P-value of constant variable,  $x_1$ ,  $x_2$ ,  $x_5$  in equation is less than  $\alpha=0.05$ , even less than  $\alpha=0.01$ . Therefore, the most important influencing determinants of consumption of luxury goods of Chinese consumers the Net income, Apartment size, and Motivation of Gift-giving. The **Hypothesis 1**, **Hypothesis 2**, and **Hypothesis 5** are accepted.

The P-value of  $x_4$  and  $x_6$  in equation is less than  $\alpha=0.05$ , but higher than  $\alpha=0.01$ . That means, the important influencing determinants of consumption of luxury goods of Chinese consumers the Motivation of Celebrities influence and the Motivation of Patriotism. The **Hypothesis 4** and **Hypothesis 6** are accepted.

In addition, the P-value of  $x_3$  is less than  $\alpha=0.1$ , but higher than  $\alpha=0.05$ . So, the Motivation of Show-offish is also the influencing determinant of consumption of luxury goods of Chinese consumers. The **Hypothesis 3** is accepted.

The visualized conceptual demonstration of the significance of the factors can be seen in Figure 5.1.

Figure 5.1 The Significance of factors in model



Source: Own processing

## 5.1.5 Econometric verification

### 5.1.5.1 Test for Heteroscedasticity

Considered the Breusch–Pagan (BP) test which is designed to detect only linear form of heteroskedasticity to test if the variance of the error term is a function of the regressors.

Assume that error variance  $\sigma_i^2 = \alpha_1 + \alpha_2 Z_2 + \alpha_3 Z_3 + \dots + \alpha_m Z_m$ . that is,  $\sigma_i^2$  is a linear function of the non-stochastic  $Z$  variables. If  $\alpha_2 = \alpha_3 = \dots = \alpha_m = 0$ ,  $\sigma_i^2 = \alpha_1$ , which is a constant. Therefore, to test whether  $\sigma_i^2$  is homoscedastic, one can test the hypothesis that:  $\alpha_2 = \alpha_3 = \dots = \alpha_m = 0$ .

The null hypothesis  $H_0$  to be tested is that:

$H_0$ : heteroskedasticity not present, the error variances are all equal ( $\alpha_i = 0$ ).

$H_1$ : heteroskedasticity exist, the error variances are a multiplicative function of one or more variables.

If p-value  $< \alpha$  we may reject the null hypothesis; otherwise, we may not reject it.

Table 5.8 Breusch-Pagan test for Heteroskedasticity

| OLS, using observations 1-297  |             |           |         |         |          |
|--|-------------|-----------|---------|---------|----------|
|  | Coefficient | Std.error | T-ratio | P-value | SS or SI |
| const  | -7.21437    | 3.0811    | -2.341  | 0.0199  | SS**     |
| X1   | -3.41E-06   | 2.04E-06  | -1.672  | 0.0956  | SS*      |
| X2   | 0.497277    | 0.0128367 | 3.874   | 0.0001  | SS***    |
| X3   | -0.11811    | 0.389915  | -0.3029 | 0.7622  | SI       |
| X4   | 0.383789    | 0.207052  | 1.854   | 0.0648  | SS*      |
| X5   | 0.18824     | 0.104653  | 1.799   | 0.0731  | SS*      |
| X6   | -0.117135   | 0.433479  | -0.2702 | 0.7872  | SI       |
| Explained sum of squares = 2106.94   |             |           |         |         |          |
| Test statistic: LM = 1053.468711, with p-value = P(Chi-square(6) > 1053.468711) = 2.43208e-224 |             |           |         |         |          |

Note: SS: Statistically significant parameter / SI: Statistically insignificant parameter

\* = significant at 10%; \*\* = significant at 5%; \*\*\* = significant at 1%

Source: Own processing of Gretl results

As observed in Figure 5.8 p-value = 2.43208e-224, smaller than  $\alpha=0.05$ , so we reject  $H_0$ , then there is heteroscedasticity in the model.

### 5.1.5.2 Normality of residual

The Doornik-Hansen test, the Shapiro-Wilk test, the Jarque-Bera test all can be applied to check whether sample data have the skewness and kurtosis matching a normal distribution. Samples from a normal distribution have an expected skewness of 0 and an expected excess kurtosis of 3.0.

The null hypothesis  $H_0$  to be tested is that:

$H_0$ : the error terms are normally distributed.

$H_1$ : the error terms are not normally distributed.

If the P-value exceeds the  $\alpha$  at the chosen level of significance (5%), we may not reject the null hypothesis, then the estimators are normally distributed. Otherwise, if  $p\text{-value} < \alpha$  we may reject the null hypothesis.

Table 5.9 Normality test

| Normality test             |          |           |
|----------------------------|----------|-----------|
| Test name                  | P-value  | Normality |
| Doornik-Hansen = 3.14064   | 0.207979 | Yes       |
| Shapiro-Wilk W = 0.935148  | 0.193867 | Yes       |
| Lilliefors = 0.119601      | 0.63     | Yes       |
| Jarque-Bera (JB) = 2.46766 | 0.591175 | Yes       |

with  $\alpha = 0.05$

Source: Own processing with Gretl results

As the Table 5.9 shows, in Doornik-Hansen test,  $p\text{-value} = 0.207979$ , in Shapiro-Wilk W test,  $p\text{-value} = 0.935148$ , in Lilliefors test,  $p\text{-value} = 0.63$ , in JB test,  $p\text{-value} = 0.591175$ , which are all higher than  $\alpha = 0.05$ , so we cannot reject  $H_0$ .

Overall, the error terms are normally distributed in this equation.

## 5.2 Statistical analysis results

In order to explore the influence relationship between the factors, the author classified the original data according to the age interval using the Binning method, and obtained 9 equally different age intervals. The other factors are averaged according to the age range, and shown in the following Table 5.10. Then the Loading Factors analysis is performed in Table 5.11, and the correlation between the transposed influencing factors is shown in the correlation matrix. When there the correlation coefficient is higher than 0.8, it may have related infection.

Table 5.10 Dataset by Age range distribution

| Number                  | Age (range)         | Frequency of data             | Average consumption (Yuan) | Average income (Yuan)    | Consumption on Income              | Average Shopping frequency | Average Family size        | Average Own Business    |
|-------------------------|---------------------|-------------------------------|----------------------------|--------------------------|------------------------------------|----------------------------|----------------------------|-------------------------|
| 1                       | 16-20               | 16                            | 20625.00                   | 138125.00                | 14.93%                             | 2.750                      | 2.563                      | 0.375                   |
| 2                       | 21-25               | 45                            | 27833.33                   | 165888.89                | 16.78%                             | 3.444                      | 2.689                      | 0.267                   |
| 3                       | 26-30               | 76                            | 53125.00                   | 252171.05                | 21.07%                             | 4.632                      | 3.079                      | 0.408                   |
| 4                       | 31-35               | 59                            | 64661.02                   | 390762.71                | 16.55%                             | 5.576                      | 3.102                      | 0.254                   |
| 5                       | 36-40               | 48                            | 63125.00                   | 344062.50                | 18.35%                             | 4.354                      | 3.125                      | 0.354                   |
| 6                       | 41-45               | 22                            | 48181.82                   | 267500.00                | 18.01%                             | 4.909                      | 3.409                      | 0.455                   |
| 7                       | 46-50               | 18                            | 33611.11                   | 214166.67                | 15.69%                             | 3.611                      | 3.056                      | 0.056                   |
| 8                       | 51-55               | 10                            | 29500.00                   | 214500.00                | 13.75%                             | 4.003                      | 3.107                      | 0.300                   |
| 9                       | 56-60               | 3                             | 33750.00                   | 250000.00                | 13.50%                             | 3.000                      | 3.000                      | 0.000                   |
| Average Education level | Average Show-offish | Average Celebrities influence | Average Gifting-giving     | Average Symbol of status | Average Hedonist and Perfectionist | Average Patriotism         | Average Impulsively buying | Average Value-preserved |
| 0.063                   | 5.983               | 7.746                         | 4.539                      | 2.813                    | 2.750                              | -4.813                     | 4.323                      | 2.750                   |
| 0.644                   | 4.733               | 7.556                         | 3.925                      | 3.689                    | 3.622                              | -7.667                     | 4.004                      | 4.489                   |
| 0.776                   | 5.526               | 5.750                         | 6.368                      | 6.255                    | 4.539                              | -6.645                     | 3.395                      | 4.737                   |
| 0.797                   | 5.458               | 3.917                         | 8.644                      | 6.814                    | 5.008                              | -6.780                     | 3.492                      | 4.932                   |
| 0.896                   | 5.563               | 1.917                         | 8.022                      | 5.938                    | 5.891                              | -7.024                     | 3.771                      | 4.125                   |
| 0.727                   | 5.409               | 1.636                         | 8.909                      | 4.988                    | 4.500                              | -6.636                     | 3.545                      | 4.818                   |
| 0.722                   | 4.444               | 1.778                         | 5.778                      | 5.015                    | 5.667                              | -6.222                     | 3.222                      | 5.944                   |
| 0.400                   | 4.400               | 1.300                         | 5.700                      | 4.877                    | 5.709                              | -7.700                     | 3.333                      | 3.900                   |
| 1.000                   | 2.333               | 1.000                         | 5.333                      | 4.000                    | 5.333                              | -7.667                     | 2.000                      | 3.667                   |

Source: Own processing

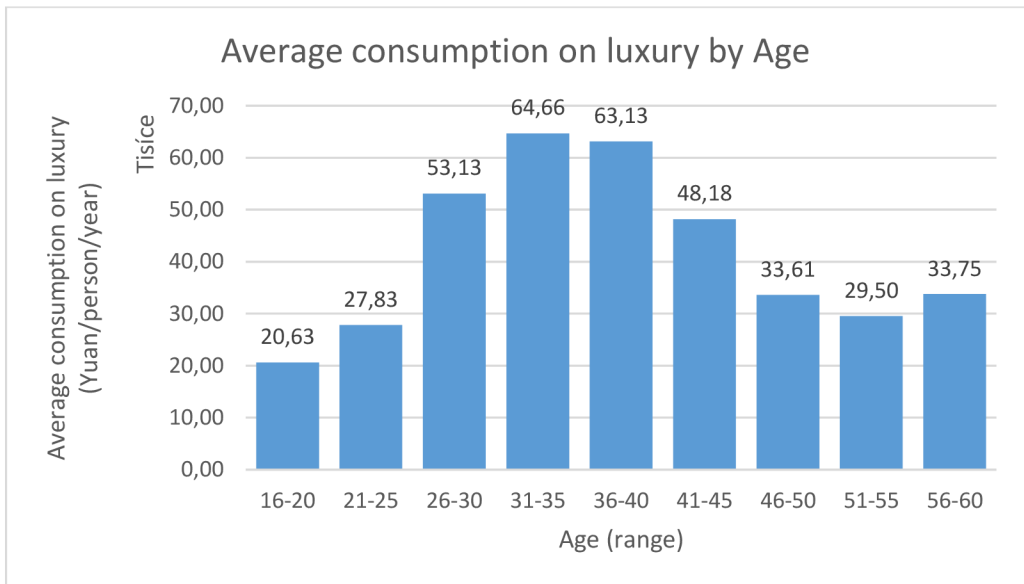
Table 5.11 Correlation Matrix of transposed factors

| Age     | Consumption on Income | Average Shopping frequency | Average Family size | Average Show-offish | Average Celebrities influence | Average Gifting-giving | Average Symbol of status | Average Hedonist and Perfectionist | Average Patriotism | Average Impulsively buying | Average Value-preserved | Factors                            |
|---------|-----------------------|----------------------------|---------------------|---------------------|-------------------------------|------------------------|--------------------------|------------------------------------|--------------------|----------------------------|-------------------------|------------------------------------|
| 1,00000 | -0,45731              | -0,00160                   | 0,59583             | -0,74057            | <b>-0,93594</b>               | 0,19371                | 0,14231                  | 0,79637                            | -0,52521           | <b>-0,81740</b>            | 0,21201                 | Age                                |
|         | 1,00000               | 0,56703                    | 0,30594             | 0,59562             | 0,26557                       | 0,42504                | 0,56330                  | -0,07546                           | 0,10174            | 0,33119                    | 0,38063                 | Consumption on Income              |
|         |                       | 1,00000                    | 0,71339             | 0,42592             | -0,22806                      | <b>0,86120</b>         | <b>0,88778</b>           | 0,33824                            | -0,17209           | 0,07701                    | 0,52071                 | Average Shopping frequency         |
|         |                       |                            | 1,00000             | -0,04551            | -0,77012                      | <b>0,82079</b>         | 0,68311                  | 0,67777                            | -0,33402           | -0,38666                   | 0,52347                 | Average Family size                |
|         |                       |                            |                     | 1,00000             | 0,49632                       | 0,34037                | 0,25388                  | -0,40343                           | 0,59151            | <b>0,87716</b>             | 0,01998                 | Average Show-offish                |
|         |                       |                            |                     |                     | 1,00000                       | -0,48664               | -0,34434                 | <b>-0,86918</b>                    | 0,42427            | 0,66694                    | -0,28893                | Average Celebrities influence      |
|         |                       |                            |                     |                     |                               | 1,00000                | 0,75920                  | 0,43049                            | -0,02053           | -0,03985                   | 0,37111                 | Average Gifting-giving             |
|         |                       |                            |                     |                     |                               |                        | 1,00000                  | 0,59764                            | -0,23403           | -0,13022                   | 0,58265                 | Average Symbol of status           |
|         |                       |                            |                     |                     |                               |                        |                          | 1,00000                            | -0,54092           | -0,58291                   | 0,44222                 | Average Hedonist and Perfectionist |
|         |                       |                            |                     |                     |                               |                        |                          |                                    | 1,00000            | 0,51080                    | -0,17885                | Average Patriotism                 |
|         |                       |                            |                     |                     |                               |                        |                          |                                    |                    | 1,00000                    | -0,14199                | Average Impulsively buying         |
|         |                       |                            |                     |                     |                               |                        |                          |                                    |                    |                            | 1,00000                 | Average Value-preserved            |

Source: Own processing by SPSS results

### 5.2.1 Age impacts on Consumption and Motivation

Figure 5.2 Consumption distribution by age range



Source: Own processing

Although from an economic point of view, there is no significant correlation between age and consumption in the regression model, but through statistical analysis, as shown in Figure 5.2, consumers aged 31-35 consume more. The average annual consumption is about 64,661.02 yuan per person, followed by consumers in the age range of 36-40, with an average annual consumption of about 63,125 yuan per person. Although in the survey, more participants with luxury consumption experience are from the 26-30 age group, but their spending on luxury goods is lower than that of the 31-35 age group and the 36-40 age group. It is speculated that a large reason may be related to the income level, as shown in Table 5.12.



Table 5.12 Consumption distribution by age range

| Average Consumption of luxury goods by Age |           |  |                                       |                       |
|--|-----------|--|---------------------------------------|-----------------------|
| Age (range)                                | Frequency | Average consumption (Yuan/person/year) | Average net income (Yuan/person/year) | Consumption on Income |
| 16-20                                      | 16        | 20625.00                               | 138125.00                             | 14.93%                |
| 21-25                                      | 45        | 27833.33                               | 165888.89                             | 16.78%                |
| 26-30                                      | 76        | 53125.00                               | 252171.05                             | 21.07%                |
| 31-35                                      | 59        | 64661.02                               | 390762.71                             | 16.55%                |
| 36-40                                      | 48        | 63125.00                               | 344062.50                             | 18.35%                |
| 41-45                                      | 22        | 48181.82                               | 267500.00                             | 18.01%                |
| 46-50                                      | 18        | 33611.11                               | 214166.67                             | 15.69%                |
| 51-55                                      | 10        | 29500.00                               | 214500.00                             | 13.75%                |
| 56-60                                      | 3         | 33750.00                               | 250000.00                             | 13.50%                |

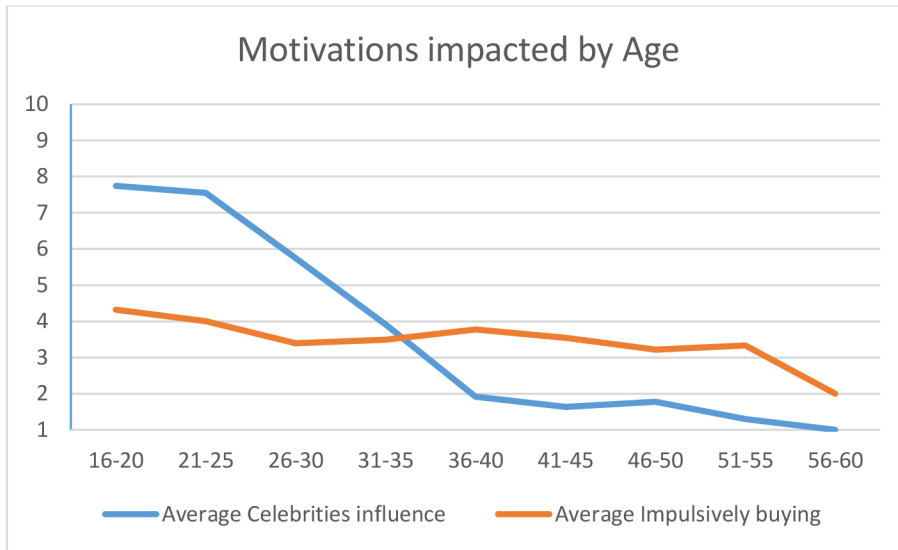
Source: Own processing

Although participants age group 26-30 do not have higher spending than participants age group 31-40, they may will to pay and spend more money on luxury goods. According to Table 5.12, the indicator of ratio of consumption on income, the participants with age from 26 to 30 spending more money on luxury from their disposable income, which is 21.07%. Secondly, willingness to spend money of luxury from their disposable income are the participant age group 36- 40, which is 18.01%

Indicated by table 5.11 the correlation matrix, age probably also the impact factor of motivation of luxury consumption. The most infected motivations are Celebrities influence and Impulsively buying. See the Figure 5.3.

Figure 5.3 shows when age increase, the consumption of luxury influenced by celebrities are decreasing, also the impulsively buying. The consumers in age group 16-25, are more likely to be influenced by celebrities than other age groups, and are more likely to buy luxury goods impulsively. However, both effects tended to decrease with age.

Figure 5.3 Motivation of consumption luxury impacted by Age

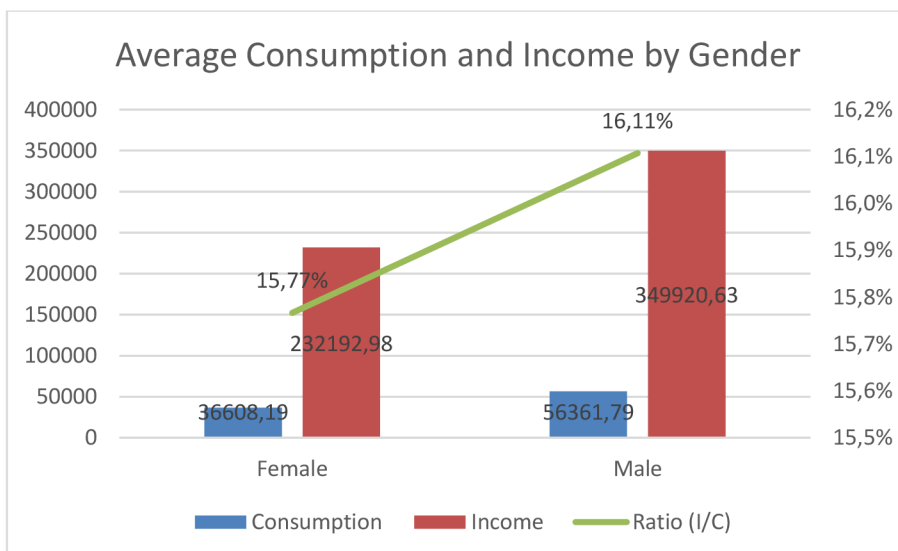


Source: Own processing

### 5.2.2 Gender impacts on Consumption

The author made a descriptive statistical analysis of the impact of gender on luxury consumption, and the results are shown in Figure 5.4.

Figure 5.4 Average consumption and income by Gender



Source: Own processing

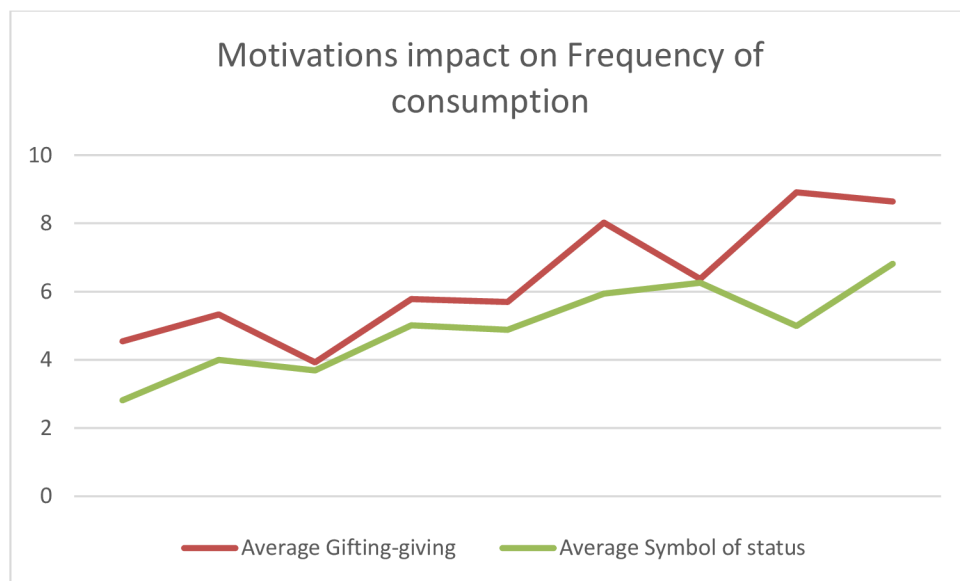
Gender is an important item in demographics statistics. Although it was not found in the economic test that gender is the main factor affecting Chinese consumers' purchase of

luxury goods. As shown in the Figure 5.4, the average consumption of luxury goods by Male consumers is 56,361.79 yuan per year, but 36,608.19 yuan per year for female. We can see from the consumption and income ratio in Figure 5.4 as well, that the Income/consumption ratio of male is 16.11%, while that of female is 15.77%, and the gap is only 0.34%. It turns out that gender probably is not a major factor of people's preference to spend more of their disposable income on luxury goods. The gender-based income difference may be the reason behind it.

### 5.2.3 Motivations impact on Frequency of consumption

The index in Table 5.11 also indicates the motivation of Gifting-giving and Symbol of status have positive impact on Frequency of consumption luxury goods. Their relationship can be demonstrated in figure 5.5. When the motivation intent of Gifting-giving and Symbol of status increase, the frequency of consumption also has trend of increasing.

Figure 5.5 Motivations impact on Frequency of consumption

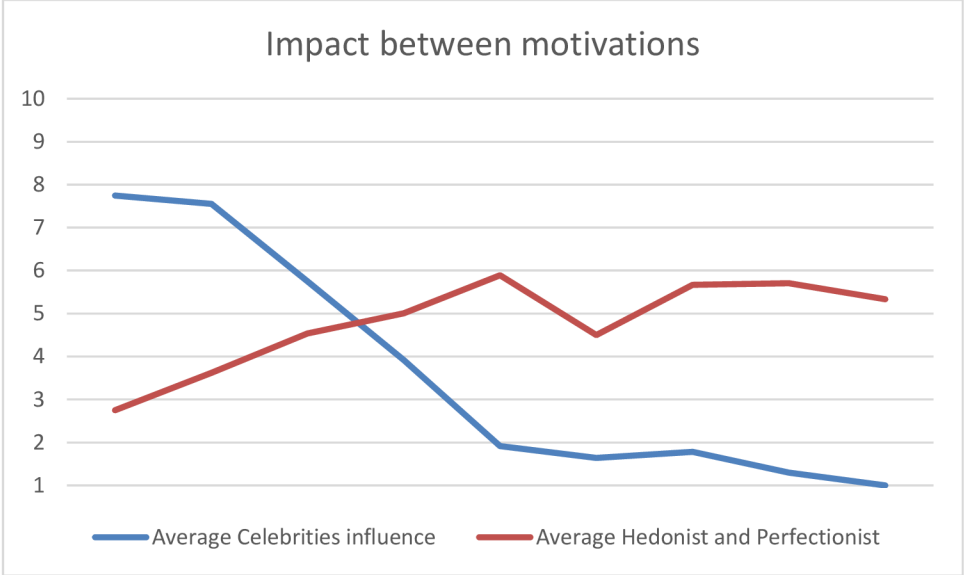


Source: Own processing

### 5.2.4 Impact between motivations

The index in Table 5.11 also indicates the impact between the motivations. The coefficient between Hedonist and Perfectionist and Celebrities influence is -0.869, it means they have negative effect with each other.

Figure 5.6 Impact between motivations of Hedonist and Perfectionist, and Celebrities influence

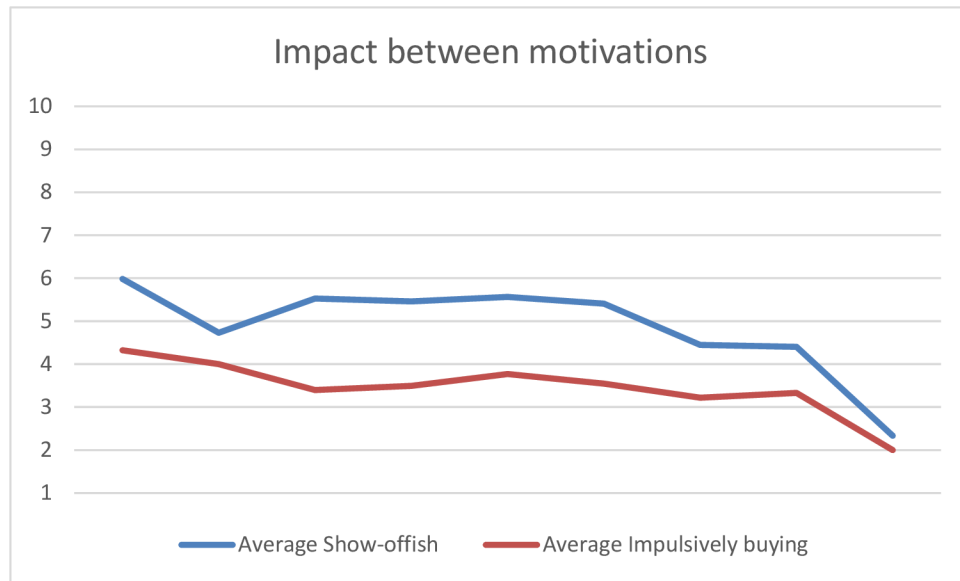


Source: Own processing

As shown in Figure 5.6 above, there is a negative correlation between two motive factors. The consumers’ motivation of consumption of Hedonist and Perfectionist increase, the motivation of celebrities influence of consumption luxury will decrease. Vice versa, the motivation of celebrities influence of consumption luxury increase, the motivation of hedonist and perfectionist of consumption luxury will decrease.

Table 5.11 also indicates the coefficient between Show-offish and Impulsively buying is 0.877, it means they have positive effect with each other.

Figure 5.7 Impact between motivations of Show-offish and Impulsively buying



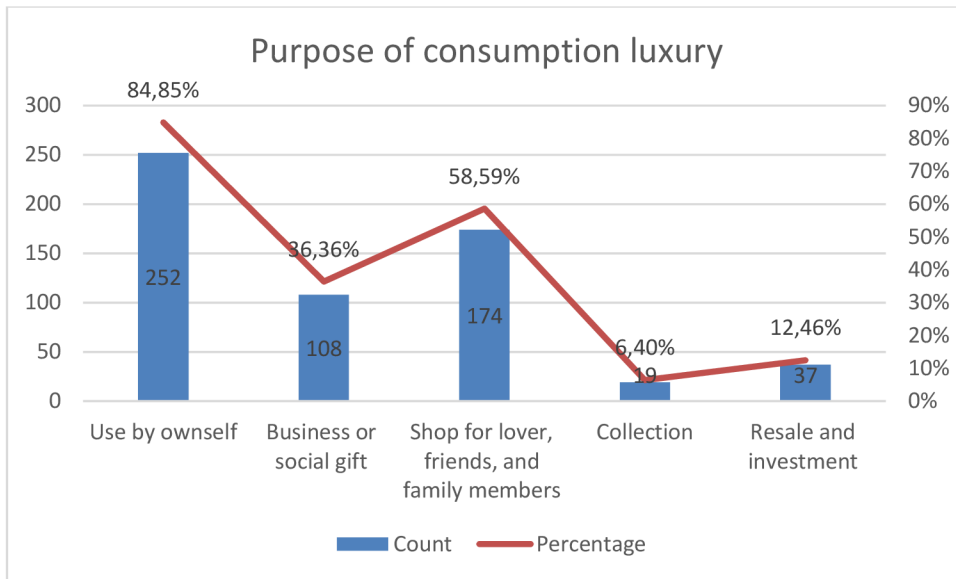
Source: Own processing

As shown in Figure 5.7 above, there is a positive correlation between two motive factors. The consumers' motivation of consumption of Show-offish decrease, the motivation of Impulsively buying of consumption luxury will decrease as well. Same, the motivation of Impulsively buying of consumption luxury decrease, the motivation of Show-offish of consumption luxury will decrease as well. Consumers with stronger conspicuous showing off motives are more likely to impulse buy luxury, also the consumers who are prone to impulsively purchasing luxury goods are more likely to have higher show-offish consumption motivation.

### 5.2.5 Purpose of using

In No.23 of the questionnaire, I surveyed the using purpose for consumption luxury goods of Chinese consumers. Since this question is a multiple-choice question with multiple options, the statistical results obtained are shown in Figure 5.8.

Figure 5.8 Purpose of consumption luxury



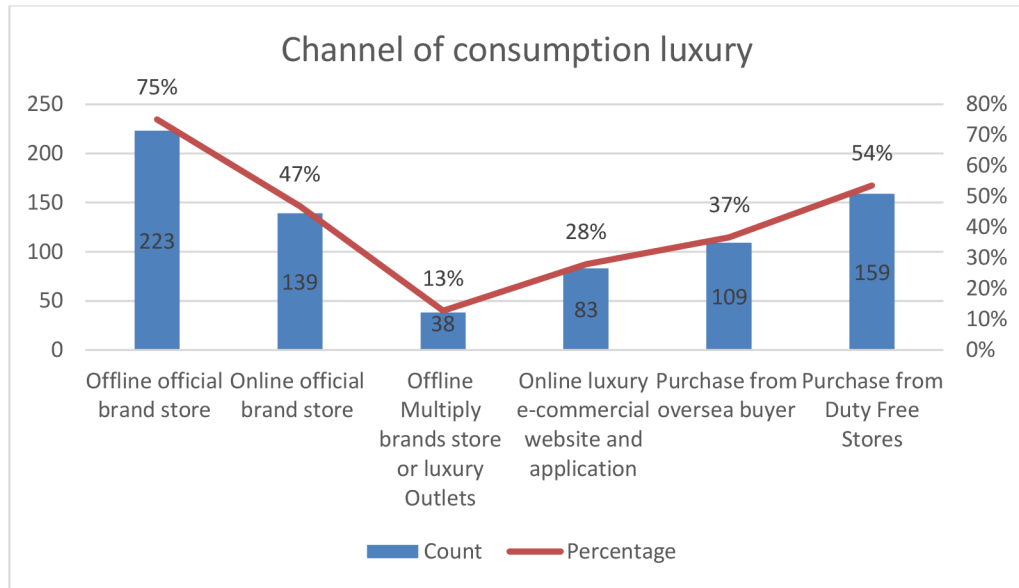
Source: Own processing

As the chart shown in Figure 5.8. Use by oneself is the most popular purpose of purchasing luxury. The 252 of participants of total 297 choice this option. The percentage is 84.85%. The next popular purpose of purchasing luxury is shop for lover, friends, and family members, 174 participants choice this option, which is 58.59% percentage of total participants. Then, the third purpose is business gift or social gift. Only 6.4% of consumers are purchasing luxury for collection. And 12.46% consumers are buying luxury for resale and investment, for example the professional buyer or part-time buyer. However, from the results we can say, the most Chinese consumers are purchasing luxury for using or wearing, not for collecting and exhibiting, or reselling and investing.

### 5.2.6 Channels of purchasing

In No.22 of the questionnaire, it surveyed the purchasing channel for consumption luxury goods of Chinese consumers. Since this question is a multiple-choice question with multiple options and an open answer, the statistical results obtained are shown in Figure 5.9.

Figure 5.9 Channel of consumption luxury



Source: Own processing

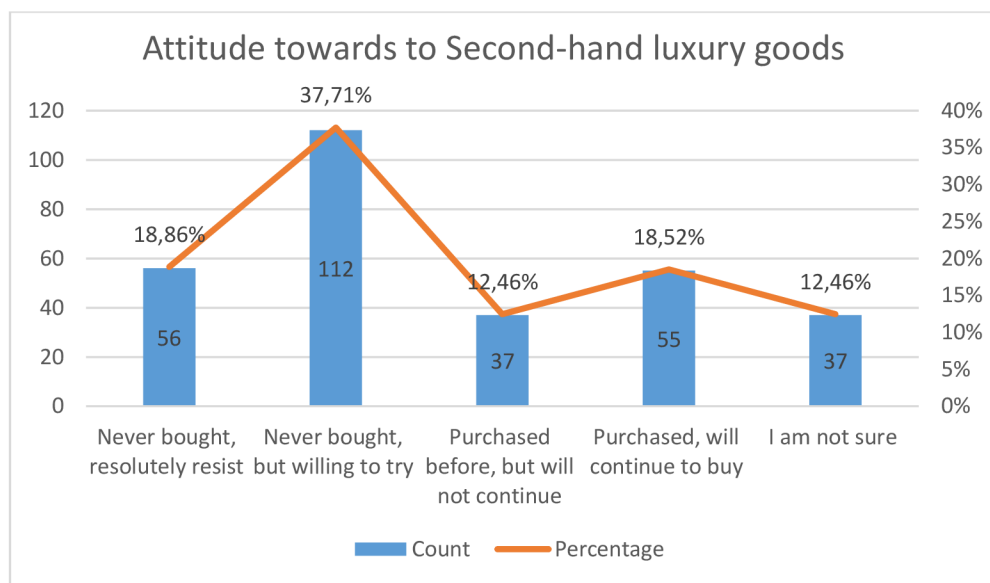
As the chart shown in Figure 5.9. Offline official brand store is the most popular purchasing channel of buying luxury goods. The 223 of participants of total 297 choice this option. The percentage is 75%. The next popular channel of purchasing luxury is Duty Free Stores (DFS), 159 participants choice this option, which is 54% percentage of total participants. Then, the online official brand store, purchase from buyers, and the online luxury e-commercial website and application are third, fourth, and fifth popular purchasing channels. Only 13% of consumers purchase luxury from offline multiply brands store or offline luxury outlets.

From the results found, the Chinese consumers prefer offline channels of purchasing luxury to online channels. Even nowadays, online shopping is becoming the important lifestyle of Chinses consumer, but for purchasing luxury, people still prefer to try it by themselves and also enjoying the good service by brand. Take a photo with store's brand's logo after purchasing, then post them on social media, is also very common among the young generations. It was also matched the motivation of show-offish. The reason why half of participants choice to purchase from duty free stores could be the price difference. Duty-free goods means items that are exempt from import customs tax, import consumption tax and value-added tax. All those taxes can cause around 30% to even 50% price difference. The

price advantage is the most important reason why consumers choose DFS purchasing channel.

From the open answer mentioned by responses, they also present another luxury purchase channel, the second-hand luxury store. Combined with the No.24 of the questionnaire, we got attitude to second-hand luxury goods following:

Figure 5.10 Attitude towards to Second-hand luxury goods



Source: Own processing

Following the display in the Figure 5.10, the 56.57% of participants have never purchased second-hand luxury goods. 30.98% of participants used to purchased second-hand luxury goods. The rest of 12.46% responses are not sure about their idea. Even over half of the survey participants never purchased second-hand luxury but also 56.23% of participants choice they are willing to try or will continue to buy the second-hand luxury. This number means that more than half of luxury consumers have an open-minded and positive attitude towards second-hand luxury goods. This is also in accordance with the prosperous phenomenon on second-hand luxury goods selling platforms and second-hand stores in China.

The price of luxury goods in the secondary market may be determined by many factors, including the profit of the intermediary agency, the scarcity of the products, and the



preserved-value and resale-value of the products and the brand. The preserved-value is also a motivational factor mentioned in the questionnaire. Although in the economic analysis in the previous chapter, it is not the main determinant factor of luxury consumption, but it is indeed one of the influencing factors of consumption (As shown in Table 4.1, factor of Value-preserved, Mean= 4.47, SD=2.18, coefficient= 0.6991). If when purchase the same brand, the same category, and with the similar price, whether consumers will give priority to the items with more preserved-value and resale-value worth further research in the future.

## 6. Conclusion

China is now on track to become the world's biggest luxury market surpass the Americas and Europe. The growth of China's luxury consumption is due to the rise of China's economy on the one hand, and the huge base of China's population on the other hand. In addition, the motivations and intentions behind Chinese consumers' purchase behaviour, is also the key to understand what is influencing their consumption, and how it influences on the consumption. In addition, understanding the reasons and motivations for Chinese consumers to buy and use luxury goods will also help luxury brands to better sell and marketing.

Under the phenomenon and observation mentioned above, the author decided to write this thesis. Firstly, the author investigated and studied the previous research, such as the former researchers' opinions and conclusions on luxury consumption, consumers' behaviour, the status and trend of luxury goods consumption in China in recent years, and other researchers' finding on consumers' purchasing motivation on luxury. After organization and arrangement, these constituted the theoretical part of this thesis. Then, based on the theoretical model of consumer behavior, the thesis proposed several possible influencing factors that affect Chinese consumers' consumption of luxury goods. Through the survey of questionnaire, 297 available responses were finally collected, and then the results were converted into quantitative data and to be used for next analysis. Through the data of the questionnaire results, the main influencing factors were extracted. Finally, through the econometric model, a regression formula and the equation were established, and the complex influencing relationship between luxury consumption and the main impact factors is obtained and demonstrated. At the end of the thesis, the statistical descriptive analysis of other influencing factors was carried out, and finally displayed in visualized tables and charts.

From the theoretical model and questionnaire analysis, the thesis draws the following conclusions:

Decisions affecting consumption are complex, it including consumption habits, demographic differences, psychological motivations, etc. The thesis defined the impact factors into two types: external factors and internal factors. The external factors include Frequency of consumption, Age, Gender, Income level, Family size, Marital status,

Apartment owner, Apartment size, Business owner, Education level, Place of residence. Internal factors include Show-offish, Celebrities influence, Gift-giving, Symbol of status, Hedonist and Perfectionist, Patriotism, Impulsively buying, Value-preserved.

From the econometric analysis, the thesis draws the following conclusions:

The determined factors impact Chinese consumers' consumption of luxury goods include: The most important influencing determinants of consumption of luxury goods of Chinese consumers the Net income, Apartment size, and Motivation of Gift-giving. That means, the important influencing determinants of consumption of luxury goods of Chinese consumers the Motivation of Celebrities influence and the Motivation of Patriotism. In addition, the Motivation of Show-offish is also the influencing determinant of consumption of luxury goods of Chinese consumers. The Net income, Apartment size, Motivation of Gift-giving, Motivation of Celebrities influence, and Motivation of Show-offish have the positive impact on luxury consumption, however, the Motivation of Patriotism has the negative impact on luxury consumption.

From the statistical analysis, the thesis draws the following conclusions:

The different age group has different consumption level of luxury, as well as their net income level. The age group 31-35 has the highest consumption on luxury, the average annual consumption is about 64 thousand Yuan per year. However, the age group 26-30 has the highest ratio of consumption on income, which is 21.07%, the age group 26-30 has the most willingness to spend money of luxury goods from their disposable income.

The different gender has different consumption level of luxury as well. However, the gender is not the infect reason of consumption luxury. The average consumption of luxury goods by Male consumers is 56,361.79 yuan per year, but 36,608.19 yuan per year for female. But the Income/consumption ratio of male is 16.11%, while that of female is 15.77%, and the gap is only 0.34%. It turns out that gender is not a major factor of people's preference to spend more from their disposable income on luxury goods. The gender-based income difference may be the reason behind it.

The consumption motivations are also affected by age. The motivation of celebrities influences and the motivation of impulsively buying has decrease trend by age increasing. The age group 16-25 are more likely to be influenced by celebrities than the other age groups, and are more likely to buy luxury impulsively as well.

The frequency of consumption luxury is infected by two main reasons, the motivation of Gifting-giving and the motivation of Symbol of status. Their effect on consumption frequency showed a positive correlation. When the motivation intent of Gifting-giving and Symbol of status increase, the frequency of consumption also has trend of increasing.

The results indicate the motivation factors are also affect between each other. The motivation of Hedonist and Perfectionist and the motivation of Celebrities influence have negative impact relation. The motivation of Hedonist and Perfectionist increase, the motivation of celebrities influence of consumption luxury will decrease. Vice versa, the motivation of celebrities influence of consumption luxury increase, the motivation of hedonist and perfectionist of consumption luxury will decrease. The motivation of Show-offish and the motivation of Impulsively buying have positive relation. Consumers with stronger conspicuous showing off motives are more likely to impulse buy luxury, also the consumers who are prone to impulsively purchasing luxury goods are more likely to have higher show-offish consumption motivation.

The popular purpose of using luxury is use by ownself, the next is shop for lover, friends, and family members, which are choice by 84.85% of participants and 58.59% percentage of total participants separately. Only 6.4% of consumers are purchasing luxury for collection, which was choose by the least participants. The most Chinese consumers are purchasing luxury for using or wearing, not for collecting and exhibiting, or reselling and investing.

Offline official brand store is the most popular purchasing channel of buying luxury goods. The percentage is 75%. The next popular channel of purchasing luxury is Duty Free Stores (DFS). Only 13% of consumers purchase luxury from offline multiply brands store or offline luxury outlets. The results shown the Chinese consumers prefer offline channels of purchasing luxury to online channels. Even nowadays, online shopping is becoming the important lifestyle of Chinses consumer, but for purchasing luxury, people still prefer to try it by themselves and also enjoying the good service by brand. The reason why half of participants choice to purchase from duty free stores could be the price difference. The price advantage is the most important reason why consumers choice DFS purchasing channel.

The 56.57% of participants have never purchased second-hand luxury goods. 30.98% of participants used to purchased second-hand luxury goods. Even over half of the survey participants never purchased second-hand luxury but also 56.23% of participants choice they are willing to try or will continue to buy the second-hand luxury. More than half of luxury

consumers have an open-minded and positive attitude towards second-hand luxury goods. The second-hand luxury has price advantages, but meanwhile the disadvantages of products quality and fake luxury risk. This is also in accordance with the prosperous phenomenon on second-hand luxury goods selling platforms and second-hand stores in China. The consumption of second-hand luxury goods could be an interesting research direction in the future.

The above conclusions reveal several implications for luxury brands: Celebrities have a huge influence on young people, and they are willing to purchase the products of the same items if their favourite idols and influencer having and wearing. Compare to showing off and conspicuous reasons, there has a new trend of Chinese consumers that people purchasing luxury goods for self-reward gifting and to give as a gift for family, friends and even for business purpose. Another suggestion for the luxury brand is do not try to piss off the patriotisms-increasingly Chinese consumers. People are more sensitive to political correctness and increasingly boycotting luxury brands that was accused “insulting China”, “Chinese-racism”, or “politically incorrect”. In addition, consumers in the age group of 26-35 years old could worthy more of attention, because they have higher incomes or higher willingness to spend their money on luxury goods.

Due to the author’s research ability and data availability, there are several limitations of this thesis that should be considered. The survey method of questionnaire is inflexible. The questionnaire is pre-designed by the designer, which makes the respondents' answers more limited and may miss some more detailed and in-depth information. The sample of the survey may not cover enough age groups to obtain more accurate data, due to the use of online survey methods. It may cause the age unevenly distributed in survey. The question of the questionnaire involves sensitive information such as income and apartment size, even though the survey is anonymous, the participants may be resistant to giving the real answer, maybe higher than the real consumption and income level, which will also lead to the lack of authenticity of the results.

## 7. References

- Ahtola, O. T. (1975). The vector model of preferences: An alternative to the Fishbein model. *Journal of Marketing Research*, 12(1), 52-59.
- Ajzen, I. (2006). *Behavioral interventions based on the theory of planned behavior*.
- Ajzen, I. (2006). *Constructing a theory of planned behavior questionnaire*.
- Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological bulletin*, 84(5), 888.
- Bain & Company (2019). *Luxury goods worldwide market study, Fall-Winter 2018*
- Bain & Company (2022). *The luxury market in China: 2021 a year of contrasts*
- Bellaiche, J. M., Mei-Pochtler, A., & Hanisch, D. (2010). The new world of luxury. *Report, Boston Consulting Group, Boston*.
- Berry, C. J. (1994). *The idea of luxury: A conceptual and historical investigation* (Vol. 30). Cambridge university press.
- Blackwell, R. D., Miniard, P. W., & Engel, J. F. (2006). *Consumer behavior*. South-Western Pub.
- Blackwell, R., DSouza, C., Taghian, M., Miniard, P., & Engel, J. (2006). *Consumer behaviour: an Asia Pacific approach*. Thomson.
- Blackwell, R., et al., 2001. *Consumer Behavior*. 9th ed. Orlando: Harcourt.
- Boparai, J. K., Singh, S., & Kathuria, P. (2018). How to design and validate a questionnaire: a guide. *Current clinical pharmacology*, 13(4), 210-215.

Boynton, P. M., & Greenhalgh, T. (2004). Selecting, designing, and developing your questionnaire. *Bmj*, 328(7451), 1312-1315.

Bray, J. P. (2008). *Consumer behaviour theory: approaches and models*.

Brun, A., & Castelli, C. (2013). The nature of luxury: a consumer perspective. *International Journal of Retail & Distribution Management*.

Carlson, J., & O'Cass, A. (2010). Exploring the relationships between e-service quality, satisfaction, attitudes and behaviours in content-driven e-service web sites. *Journal of services marketing*.

Chevalier, M., & Lu, P. X. (2010). *Luxury China: Market opportunities and potential*. John Wiley & Sons.

Choo, H. J., Moon, H., Kim, H., & Yoon, N. (2012). Luxury customer value. *Journal of Fashion Marketing and Management: An International Journal*.

Cziko, G. (2000). *The things we do: Using the lessons of Bernard and Darwin to understand the what, how, and why of our behavior*. MIT press.

Darley, W. K., Blankson, C., & Luethge, D. J. (2010). Toward an integrated framework for online consumer behavior and decision making process: A review. *Psychology & marketing*, 27(2), 94-116.

Dawnay, E. (2005). Behavioural Economics. *New Economics Foundation, London*. September, 22.

Dholakia, R. R., Johnson, J. L., Della Bitta, A. J., & Dholakia, N. (1993). Decision-making time in organizational buying behavior: an investigation of its antecedents. *Journal of the Academy of Marketing Science*, 21(4), 281-292.

Donoghue, S. (2000). Projective techniques in consumer research. *Journal of Consumer Sciences*, 28.

Dubois, B., & Duquesne, P. (1993). The market for luxury goods: Income versus culture. *European Journal of marketing*.

Dubois, D., Jung, S., & Ordabayeva, N. (2021). The psychology of luxury consumption. *Current Opinion in Psychology*, 39, 82-87.

Earl, P. (1990). *Behavioural economics*. Edward Elgar Publishing.

Edbring, E. G., Lehner, M., & Mont, O. (2016). Exploring consumer attitudes to alternative models of consumption: motivations and barriers. *Journal of Cleaner Production*, 123, 5-15.

Edmund W. J. Faison. (1977). The Neglected Variety Drive: A Useful Concept for Consumer Behavior. *Journal of Consumer Research*, 4(3), 172–175.

Englis, B. G., & Solomon, M. R. (1995). To be and not to be: Lifestyle imagery, reference groups, and the clustering of America. *Journal of Advertising*, 24(1), 13-28.

Faison, E. W. (1977). The neglected variety drive: A useful concept for consumer behavior. *Journal of consumer research*, 172-175.

Foxall, M. J., Zimmerman, L., Standley, R., & Bene Captain, B. (1990). A comparison of frequency and sources of nursing job stress perceived by intensive care, hospice and medical-surgical nurses. *Journal of Advanced Nursing*, 15(5), 577-584.

Galli, A., Wiedmann, T., Ercin, E., Knoblauch, D., Ewing, B., & Giljum, S. (2012). Integrating ecological, carbon and water footprint into a “footprint family” of indicators: definition and role in tracking human pressure on the planet. *Ecological indicators*, 16, 100-112.



- Gujarati, D. N., Porter, D. C., & Gunasekar, S. (2012). *Basic econometrics*. Tata mcgraw-hill education.
- Gujarati, D. N. (2021). *Essentials of econometrics*. SAGE Publications.
- Harris, L. R., & Brown, G. T. (2010). Mixing interview and questionnaire methods: Practical problems in aligning data. *Practical Assessment, Research, and Evaluation, 15*(1), 1.
- Heine, K. (2012). The concept of luxury brands. *Luxury brand management, 1*(2), 193-208.
- Hittleman, D. R., & Simon, A. J. (1997). *Interpreting educational research: An introduction for consumers of research*. Prentice-Hall, Inc., One Lake St., Upper Saddle River, NJ 07458.
- Howard, J. A., & Sheth, J. N. (1969). The theory of buyer behavior. *New York, 63*, 145.
- Husic, M., & Cicic, M. (2009). Luxury consumption factors. *Journal of Fashion Marketing and Management: an international journal*.
- Kapferer, J. N. (1998). Why are we seduced by luxury brands?. *Journal of Brand Management, 6*(1), 44-49.
- Kapferer, J. N. (2014). The future of luxury: Challenges and opportunities. *Journal of Brand Management, 21*(9), 716-726.
- Ko, E., Costello, J. P., & Taylor, C. R. (2019). What is a luxury brand? A new definition and review of the literature. *Journal of Business Research, 99*, 405-413.
- Kotler, P. (1994). Reconceptualizing marketing: an interview with Philip Kotler. *European Management Journal, 12*(4), 353-361.

Mazis, M. B., Ahtola, O. T., & Klippel, R. E. (1975). A comparison of four multi-attribute models in the prediction of consumer attitudes. *Journal of Consumer Research*, 2(1), 38-52.

McKinsey & Company (2020), *China Luxury Report 2019*

Neisser, U., Boodoo, G., Bouchard Jr, T. J., Boykin, A. W., Brody, N., Ceci, S. J., ... & Urbina, S. (1996). Intelligence: knowns and unknowns. *American psychologist*, 51(2), 77.

Nueno, J. L., & Quelch, J. A. (1998). The mass marketing of luxury. *Business horizons*, 41(6), 61-61.

Persky, J. (1995). The ethology of homo economicus. *Journal of Economic Perspectives*, 9(2), 221-231.

Richarme, M., & Colias, J. (2007). Perceptual Mapping: What Do Restaurant Brands Really Mean?. *Decision Analyst, Arlington, TX*.

Rihova, I., Buhalis, D., Moital, M., & Gouthro, M. B. (2015). Conceptualising customer-to-customer value co-creation in tourism. *International Journal of Tourism Research*, 17(4), 356-363.

Robertson, D. H. (1936). Some notes on Mr. Keynes' general theory of employment. *The Quarterly Journal of Economics*, 51(1), 168-191.

Roopa, S., & Rani, M. S. (2012). Questionnaire designing for a survey. *Journal of Indian Orthodontic Society*, 46(4\_suppl1), 273-277.

Roopa, S., & Rani, M. S. (2012). Questionnaire designing for a survey. *Journal of Indian Orthodontic Society*, 46(4\_suppl1), 273-277.

San, Y. W., & Yazdanifard, R. (2014). How consumer decision making process differ from youngster to older consumer generation. *Journal of Research in Marketing*, 2(2), 151-156.

Schiffman, L. G., et al., (2007). *Consumer Behavior*. 9th ed. New Jersey: Prentice Hall.

Schiffman, L., O'Cass, A., Paladino, A., & Carlson, J. (2013). *Consumer behaviour*. Pearson Higher Education AU.

Shaun P. Hargreaves Heap, What is the meaning of behavioural economics? *Cambridge Journal of Economics*, Volume 37, Issue 5, September 2013, Pages 985–1000

Simon, H. A. (1997). *Models of bounded rationality: Empirically grounded economic reason* (Vol. 3). MIT press.

Smith, A. (1937). *The wealth of nations [1776]* (Vol. 11937). na.

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of business research*, 104, 333-339.

Solomon, M. R. (2010). *Consumer behaviour: A European perspective*. Pearson education.

Solomon, M., Russell-Bennett, R., & Previte, J. (2012). *Consumer behaviour*. Pearson Higher Education AU.

Sternberg, R. J., & Lubart, T. I. (1996). Investing in creativity. *American psychologist*, 51(7), 677.

Vickers, J. S., & Renand, F. (2003). The marketing of luxury goods: An exploratory study—three conceptual dimensions. *The marketing review*, 3(4), 459-478.

Wang, X., Wang, H., Wang, J., Sun, R., Wu, J., Liu, S., ... & Zhang, Z. (2011). The genome of the mesopolyploid crop species *Brassica rapa*. *Nature genetics*, 43(10), 1035-1039.

Wang, Y., Sun, S., & Song, Y. (2011). Chinese luxury consumers: Motivation, attitude and behavior. *Journal of Promotion Management*, 17(3), 345-359.

Wiedmann, K. P., & Hennigs, N. (Eds.). (2012). *Luxury marketing: A challenge for theory and practice*. Springer Science & Business Media.

Wiedmann, K. P., Hennigs, N., & Siebels, A. (2007). Measuring consumers' luxury value perception: a cross-cultural framework. *Academy of Marketing Science Review*, 2007, 1.

Wiedmann, K. P., Hennigs, N., & Siebels, A. (2009). Value-based segmentation of luxury consumption behavior. *Psychology & Marketing*, 26(7), 625-651.

Yeoman, I. (2011). The changing behaviours of luxury consumption. *Journal of Revenue and Pricing Management*, 10(1), 47-50.

Zinkhan, G. M. (1992). Human nature and models of consumer decision making. *Journal of advertising*, 21(4), ii-ii.

Zinkhan, G. M., & Hirschheim, R. (1992). Truth in marketing theory and research: an alternative perspective. *Journal of Marketing*, 56(2), 80-88.

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## Appendix

Questionnaire English Version:

1. What is your gender?

- A. Male
- B. Female
- C. Other

2. How old are you?

Please leave your answer: \_\_\_\_\_

3. Have you ever consumed and purchased luxury goods?

- A. Yes
- B. No

(If No, survey end.) Thank you for your participation.

4. (If Yes) How much money did you spend on luxury goods within last 12 months?

- A. 0-5,000 Yuan
- B. 5,001-9,999 Yuan
- C. 10,000-25,000 Yuan
- D. 25,001-39,999 Yuan
- E. 40,000-60,000 Yuan
- F. 60,001-79,999 Yuan
- G. 80,000-100,000 Yuan
- H. 100,001-149,999 Yuan
- I. 150,000-300,000 Yuan
- J. 300,001-1,000,000 Yuan

5. How often do you purchase luxury goods? (1-10 represent Very rare to Very often)

- A. 1
- B. 2
- C. 3
- D. 4

- E. 5
- F. 6
- G. 7
- H. 8
- I. 9
- J. 10

6. What is your net annual income level (if you are a full-time student, please include family support)?

- A. 0-50,000 Yuan
- B. 50,001-79,999 Yuan
- C. 80,000-100,000 Yuan
- D. 100,001-149,999 Yuan
- E. 150,000-200,000 Yuan
- F. 200,001-299,999 Yuan
- G. 300,000-450,000 Yuan
- H. 450,001-699,999 Yuan
- I. 700,000-1,000,000 Yuan
- J. 1,000,000-5,000,000 Yuan

7. How many people are in your family (by household)?

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5
- F. 6-10

8. What is your marital status?

- A. Single (include divorced, long-term separated, widowed)
- B. Married

9. Do you have your own apartment? (The one you bought.)



- A. Yes
- B. No

10. What is the size of your current apartment (by m<sup>2</sup>)?

Please Answer: \_\_\_\_\_

11. Do you and/or your family own a business?

- A. Yes
- B. No

12. Do you have bachelor's or higher degree (Graduate and above)?

- A. Yes
- B. No

13. Do you live in Beijing/Shanghai/Guangzhou/Shenzhen?

- A. Yes
- B. No

14. Do you care if other people can recognize you are wearing or using luxury products? For example, do you intend to buy the luxury products with conspicuous and easily recognizable brand logo? (1-10 represent Strongly disagree to Strongly agree)

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5
- F. 6
- G. 7
- H. 8
- I. 9
- J. 10

15. Will you increase your purchase intent of the luxury products if they are with celebrity endorsement, idols copycatting, or same items of famous influencers? (1-10 represent Strongly disagree to Strongly agree)

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5
- F. 6
- G. 7
- H. 8
- I. 9
- J. 10

16. Have you ever purchased luxury products for gift-giving? Include both business purpose and personal purpose. (1-10 represent Strongly disagree to Strongly agree)

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5
- F. 6
- G. 7
- H. 8
- I. 9
- J. 10

17. Do you think buying and using luxury products is beneficial to showing your social status or social class? Include both work and social occasions. (1-10 represent Strongly disagree to Strongly agree)

- A. 1
- B. 2
- C. 3

- D. 4
- E. 5
- F. 6
- G. 7
- H. 8
- I. 9
- J. 10

18. Do you care about the luxury product itself (quality, design, creativity, technique, and service) more than its brand? (1-10 represent Strongly disagree to Strongly agree)

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5
- F. 6
- G. 7
- H. 8
- I. 9
- J. 10

19. Would you refuse to buy products from the luxury brand if it was accused "insulting China", "Chinese-racism", or "politically incorrect"? (1-10 represent Strongly disagree to Strongly agree)

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5
- F. 6
- G. 7
- H. 8
- I. 9

J. 10

20. Have you ever made an impulsive purchase of luxury products? (1-10 represent Strongly disagree to Strongly agree)

A. 1

B. 2

C. 3

D. 4

E. 5

F. 6

G. 7

H. 8

I. 9

J. 10

21. Do you care about the luxury products' preserving value and resale value? (1-10 represent Strongly disagree to Strongly agree)

A. 1

B. 2

C. 3

D. 4

E. 5

F. 6

G. 7

H. 8

I. 9

J. 10

22. Which channel do you use most of purchasing luxury products? (Multiple choices with more than one answer)

A. Offline official brand store

B. Online official brand store

C. Offline Multiply brands store or luxury Outlets

- D. Online luxury e-commercial website and application
- E. Purchase from oversea buyer
- F. Purchase from Duty Free Stores
- G. Other, please specify: \_\_\_\_\_

23. What purpose do you often purchase luxury goods? (Multiple choices with more than one answer)

- A. Use by yourself
- B. Business or social gift
- C. Shop for lover, friends, and family members
- D. Collection
- E. Resale and investment

24. What is your attitude towards second-hand luxury products?

- A. Never bought, resolutely resist
- B. Never bought, but willing to try
- C. Purchased before, but will not continue
- D. Purchased, will continue to buy
- E. I am not sure

Questionnaire original Chinese version:

1. 请问您的性别是?

- A、 男士
- B、 女性
- C、 其他

2. 您的年龄是?

请留下你的答案:\_\_\_\_\_

3. 您是否消费和购买过奢侈品?

- A、 是

B、否（如选择否，调查结束。感谢您的参与。）

4. 在过去 12 个月内，您在奢侈品上花了多少钱？

- A. 0-5,000 元
- B. 5,001-9,999 元
- C. 10,000-25,000 元
- D. 25,001-39,999 元
- E. 40,000-60,000 元
- F. 60,001-79,999 元
- G. 80,000-100,000 元
- H. 100,001-149,999 元
- I. 150,000-300,000 元
- J. 300,001-1,000,000 元

5. 您多久消费一次奢侈品？(1-10 代表“非常稀少”到“非常频繁”)

- A、 1
- B、 2
- C、 3
- D、 4
- E、 5
- F、 6
- G、 7
- H、 8
- I、 9
- J、 10

6. 您的年净收入水平是多少（如果您是全日制学生，请包括家庭资助）？

- A. 0-50,000 元
- B. 50,001-79,999 元
- C. 80,000-100,000 元

- D. 100,001-149,999 元
- E. 150,000-200,000 元
- F. 200,001-299,999 元
- G. 300,000-450,000 元
- H. 450,001-699,999 元
- I. 700,000-1,000,000 元
- J. 1,000,000-5,000,000 元

7. 您家有几口人（按户计算）？

- A、 1
- B、 2
- C、 3
- D、 4
- E、 5
- F、 6-10

8. 您的婚姻状况如何？

- A、 单身（包括未婚、离婚、长期分居、丧偶）
- B、 已婚

9. 您是否拥有自己的公寓（已购房）？

- A、 是
- B、 否

10. 您现在居住的公寓的面积是多少平方米？

请留下你的答案:\_\_\_\_\_

11. 您或您的家人是否自主经商或拥有家族企业或生意？

- A、 是
- B、 否

12. 您是否具有大专及以上学历?

A、是

B、否

13. 您是否居住在 北京/上海/广州/深圳 这四所城市?

A、是

B、否

14. 您是否在乎别人能认出你穿着或使用奢侈品?例如, 您是否倾向于购买带有明显品牌标志 logo 的奢侈品? (1-10 代表“非常不同意”到“非常同意”)

A、1

B、2

C、3

D、4

E、5

F、6

G、7

H、8

I、9

J、10

15. 您会因为某奢侈品是明星名人代言, 明星或偶像同款, 网红同款, 而增加购买意愿吗? (1-10 代表“非常不同意”到“非常同意”)

A、1

B、2

C、3

D、4

E、5

F、6



G、 7

H、 8

I、 9

J、 10

16. 您曾经以赠礼为目的购买过奢侈品吗? 包括商业赠礼和个人赠礼。(1-10 代表“非常不同意”到“非常同意”)

A、 1

B、 2

C、 3

D、 4

E、 5

F、 6

G、 7

H、 8

I、 9

J、 10

17. 您是否认为购买和使用奢侈品有利于展示您的社会地位? 包括工作场合和社交场合。(1-10 代表“非常不同意”到“非常同意”)

A、 1

B、 2

C、 3

D、 4

E、 5

F、 6

G、 7

H、 8

I、 9

J、 10

18. 您是否更关心奢侈品产品本身多过其品牌（产品的质量、设计、创意、技术和服务等）？（1-10 代表“非常不同意”到“非常同意”）

A、 1

B、 2

C、 3

D、 4

E、 5

F、 6

G、 7

H、 8

I、 9

J、 10

19. 如果某奢侈品（产品及品牌）被指控“辱华”或“政治不正确”，您会拒绝（抵制）购买该奢侈品吗？（1-10 代表“非常不同意”到“非常同意”）

A、 1

B、 2

C、 3

D、 4

E、 5

F、 6

G、 7

H、 8

I、 9

J、 10

20. 您是否有过冲动购买奢侈品的行为？（1-10 代表“非常不同意”到“非常同意”）

A、 1

- B、 2
- C、 3
- D、 4
- E、 5
- F、 6
- G、 7
- H、 8
- I、 9
- J、 10

21. 您购买奢侈品时会在意它的保值性（包括转售价值）吗？（1-10 代表“非常不同意”到“非常同意”）

- A、 1
- B、 2
- C、 3
- D、 4
- E、 5
- F、 6
- G、 7
- H、 8
- I、 9
- J、 10

22. 您最常使用哪几个渠道购买奢侈品？（多选）

- A、 品牌官方线下实体店
- B、 品牌官网或官方旗舰店（天猫，京东等）
- C、 线下买手店或奢侈品奥莱店
- D、 奢侈品电商网站及其手机 app（如得物，司库，Farfetch 等）
- E、 找人代购或找专职代购购买

F、从免税店购买（DFS）

G、其他，请注明：\_\_\_\_\_

23. 您最常购买奢侈品的目的是什么？（多选）

A、自己使用

B、商务赠礼或社交赠礼

C、为爱人，家人，亲朋好友购买

D、收藏与收集

E、转售或投资

24. 您对二手奢侈品的态度是什么？

A、从未买过，坚决抵制

B、从未买过，但愿意尝试

C、购买过，但不会继续

D、购买过，将继续购买

E、我不确定