

Chapter 1. Introduction

1.1 Background

Auctions have been used to sell everything for centuries. Electronic auction is a breakthrough and mainstream commercial application on Internet. E-auction not only allows commercial transaction a viable alternative but also reform traditional sales methods. E-auction can benefit both buyers and sellers but also offers users to extend to global market, find the price, save time, reduce costs, innovate purchasing activities. It is not surprised that the electronic auction, or we called e-auction, becomes one of the Web's great success stories. Through e-auction people purchasing behavior and business style were changed, and on-line auction sites in Taiwan like eBay and Yahoo have been more and more popular in recent years. Efficient e-auction soon becomes a worldwide and hot movement that cannot stop. The major platform providers like IBM and Microsoft have begun to build up their own auction support for their customers.

The most fun parts during the auction are bidding and haggling whether in traditional auctions or in e-auctions, and it is different from common trade we do in daily life. Bidders enjoy the competition go with auction activities. Sometimes we were the highest bidder of given item in some reasons during the auction because we may have significantly overestimated the actual values of the commodity. If you were ever in this case, you may have fallen prey to the winner's curse.

1.2 Outline of Winner's Curse

Yes, auction is not perfect; winner's curse hurts buyers. To consumers, there is a phenomenon so called "winner's curse" which appears in traditional auction and on e-auctions. The "winner's curse" may occur in competitive situations when a winner

finds that she had paid too much for a product of uncertain value (Bazerman and Samuelson, 1983).

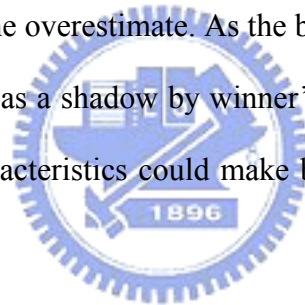
The given following scenario that cited from the study of Bazerman and Samuelson can help us to think about “winner’s curse” before we start more discussion. *You are the owner of a baseball team. A sometimes great, sometimes terrible pitcher has declared free agency. Like most teams, you are in need of good pitching. In the free agency draft, 10 teams(including yours) appear interested in the player. After negotiating with each team, the player accepts your offer. Is it time to celebrate (Bazerman and Samuelson, 1983)?*

People face the same problem like the scenario above in daily life. Consumers have ever made a winning bid on e-auction and then wonder they have overbid or not. Cox and Isaac asserted that the winner’s curse will not occur if all the bidders in a market behave rationally to optimize their economic gains (1984), but the economy is not perfect, and the consumers cannot be perfect rational. So, there are dozens of studies and papers address winner’s curse in different marketplace, such as winner’s curse has been applied to bidding on oil leases (Capen et al., 1971), Miller applied it on stock market investments in 1977, Cassing and Douglas put winner’s curse on baseball players’ market (1980), Mehta and Lee first showed that there is a phenomenon of winner’s curse that occurs in the B2C market of e-auctions in1999, and then Wonseok employed winner’s curse to compare the magnitude on B2C and C2C e-auctions in 2002. Above researchers demonstrate winner’s curse phenomenon and point out evidently irrational behavior of individual, and it is telling us there must be some exogenous or indigenous reasons that operate the consumer decision making before they do the bid.

1.3 Winner's Curse on E-auctions

The survey from Dykema et al. that suggests that B2C actions attract bargain hunters, whereas C2C auctions are more appealing to “hedonic” consumers who focus on winning or on enjoying the experience itself rather than on any economic savings (1999). The C2C consumers would show their naiveté more easily than B2C consumers, and under computer components nearly 60 percent of C2C auction users experienced the winner's curse, but only 43 percent of B2C users overpaid (Wonseok, 2002).

There may derive utility not only from monetary savings but also from the intrinsic enjoyment or competition that the mechanism naturally renders in C2C auctions setting (Milgrom and Weber, 1982). A bidder may win a bid to intend for show her power and control and do not care the overestimate. As the bidders' concept assorted, the optimistic bidders will be followed as a shadow by winner's curse during the auction (Lin, 2001). There may be some characteristics could make bidders heighten the bid than others or let bidders low their bid.



1.4 Motivation

By popularizing browser technology, auction becomes approachable, and do the bidding on line is more usual than other traditional auction act. But more and more buyers on e-auctions take long view now because they cannot feel a clearly paid less than they would have in offline negotiations. Make a bid on e-auctions is easy and common now, the will be more and more innocent consumers take the risk to meet the winner's curse when they start to bid on the website. I would like to know after that they would become wait-and-see or more aggressive participators and so on. There are a great number of users includes buyers and sellers have flocked to auction sites as a transaction media whereas there has been a little researched on consumers in this new

frontier of e-auctions. In this study, I will try to define the personal influences that include the characteristics and personality of the over-bidders on C2C e-auctions sites and observe how winner's curse influences their behavior to the next bid.

1.5 Research Purpose

A winner's curse may be inherent just like a gene, and she is caught into winner's curse easily because her innate characteristics. I will focus on consumers abide in C2C auctions and try to clarify that certain and particular personality of bidders curse with winner's curse. I will also trace their bidder behavior or attitude to understand they react when they realized they fell into the winner's curse, and then classify the different reactions into different personality characteristics. In short, I will try to arrange a relationship according to the characteristics of bidders on C2C auction with winner's curse and the reactions of them.



1.6 Sections and Flows

This article can be divided into five parts; the first chapter is introduction record about the e-auctions today, what winner's curse is, the motivation drive author to perform, and what direction the study is forward. Second chapter is literature review, in this part; the literature about winner's curse, consumer decision-making, and consumer characteristics will be review. Then, the data source, variables and methodology are going to be described in the third chapter. In Chapter 4, the empirical results and sample description will be declared. Last, chapter 5 includes the conclusions, discussions, limitations and future research. The research procedures could be show as Figure 1.

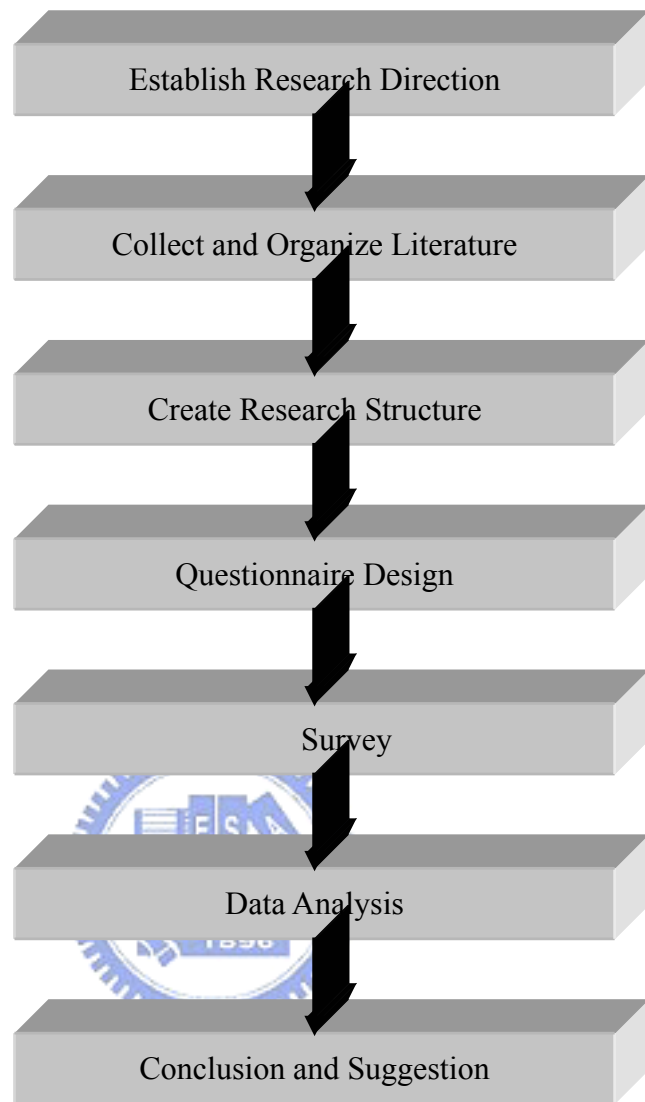


Figure 1.1 Research Flows

Source: This Study

Chapter2. Literature Review

2.1 Introduction of Auction

2.1.1 Auction

Image a scene that a lot of people sit around while a guy talks, saying: “Do I hear 40? 40? 40? We have 40! How about 60? Yes, we have 60! Give me 80. Anyone wants to bid 80 for this fine item?” The bidders top the current bid by signal like touching their noses, nodding their heads, or otherwise. After a few minutes, you hear “Going...going...gone!” and someone become a new owner of something. Above is a scenario we can always see in movies and it is how auctions work formally.

The word “auction” itself is derived from the Latin *augere*, which means “to increase” (or “augmentation”), via the participle *auctus* (“increasing”). Auctions have been used since antiquity for the sale of a variety of objects. Herodotus¹ reports that auctions were used in Babylon as early as 500 B.C. Today the range and the value of objects sold by auction have grown to staggering proportions. Art objects and antiques had always been sold at the fall of the auctioneer’s hammer. The rights to use public property such as timber rights, offshore oil leases, and the modern electromagnetic spectrum for communication have been sold by means of auctions. A worldwide phenomenon in the past two decades that bond issues, long-term securities, transportation systems, industrial enterprises, and the transfer of assets from public to private hands and so on have been sold by auctions conducted by government institutions, banks, or other syndicates. Today all kinds of items, from fish, fresh flowers, house, cars, to all you can image and you cannot image are sold by means of auctions, of course, include offline

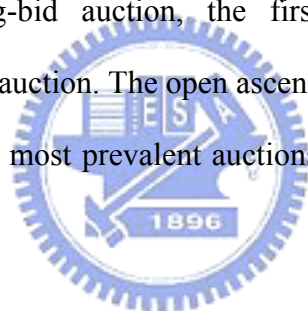
¹ Herodotus is the first Greek historian. He was not the first historian, but he was the first to make investigation the key to history. He wanted to find what actually happened, so he traveled extensively in the Eastern Mediterranean, including visits to Egypt and Persia. He talked to many people, including people who actually witnessed the events he wrote about.

and online auctions.

Thanks to the browser technology made auctions available through the Internet and the use of buyers' e-auctions began to emerge as a significant purchasing tool in the late 1990s (Tom Flynn, 2003). Application of auctions become popular by the emerging and developmental Internet technology, and now open an auction or join an auction is handy and easy. In following section, "E-auctions" the most prevalent way of auction will be discussed.

2.1.2 The standard auction types

There are four basic types of auctions widely used and analyzed: the ascending-bid auction, the descending-bid auction, the first-price sealed-bid auction, and the second-prices sealed-bid auction. The open ascending price or we called English auction is the oldest and perhaps most prevalent auctions form, but other types of auctions are used as well.



2.1.2.1 Ascending Auctions (English Auctions)

In the ascending auction, we also called the open, oral, or English auction, the price is successively raised until only one bidder remains, and that bidder wins the object at the final price. By raising price, the auction ends when only a single bidder is still interested. In the online world, English auctions are controlled by duration: when a certain amount of time has elapsed-a few days, a week, or whatever-the highest bidder gets the items at the price bid if there is not reserve price.

2.1.2.2 Descending-bid Auction (Dutch Auction)

The descending-bid auction at the first used in the sale of flowers in the

Netherlands and so also called the Dutch auction by economists. A Dutch auction is used when a seller wants to sell more than one item. Basically, the seller offers bundle items in one single auction. The price paid is determined by the lowest winning bid, although it very confusing but can be advantage for buyers. The auctioneer begins by calling out a price high enough so that presumably no bidder is interested in buying the object at that price. This price is gradually lowered until some bidders indicated her interest. The object is then sold to this bidder at the given price.

2.1.2.3 First-price Sealed-bid Auction

In the first-price sealed-bid auction each bidder give a single bid independently, without seeing other's bids, and then the object is sold to the bidder who makes the highest bid. The winner should pay the price she gave for the object.

2.1.2.4 Second-price Sealed-bid Auction

In the second-price sealed –bid auction, like First-price sealed-bid auction, each bidder give a single bid independently, without seeing others' bids, and the object is sold to the bidder who makes the highest bid. However, the price she pays is the second-highest bidder's bid, or “second price”. This auction is sometimes called a Vickrey auction.

2.1.3 E-auctions

There has been a tremendous growth in the number of Internet auction websites, where individuals can put up items for sale under common auction rules, and the value of goods sold there. The vast majority of online auctions are so-called English auctions, where you know the opening price; you make you highest of the bids wins at the end of

a predetermined amount of time. English auction is mentioned before, so we need not speak more here.

In the online world, there are still some sites work like the model of Dutch auctions. The auctioneer starts with a high figure and reduces the price, finally selling the item to the first person who accepts the price quotation, such as Mercado (www.mercado.com).

There is still some other type of e-auctions, like Private auctions, where you can't see who else has bid, even after the auction is over. The closed auctions where you can't read about the item up for bid with out permission from the seller. Both of those two auctions can prevent someone from knowing what they are looking for and who they are.

Finally, a reserve price auction we might be run across is that the seller can have a secret price that must be met before the item will be sold. The items with reserve price we can see all over the place in the online auction world.

The bidding system embedded in online auctions websites that is a convenient tool for bidders to monitor the merchandise they want and help bidders top the bid in necessary. When an auction is going to last a week rather than ten minutes, this automatic bidding system will help you out. The proxy will be the best assistant to help you win the bid easily but not exist in traditional auctions.

2.2 Winner's Curse

The rationale for the overbidding is that (1) while the average bidder may accurately estimate the value of the commodity up for sale in an auction, some bidders will underestimate this value and others will overestimate it, (2) the bidder who most greatly overestimates the value of the commodity will typically win the auction and (3) the amount of overestimation will often be greater than the difference between the

winning bidder's estimate of the value of the commodity and her bid. Thus the winner of a competitive auction should expect to find that the commodity acquired is worth substantially less than prior estimate of its value (1983 Samuelson & Bazerman). If the bidder is in the situation, the winner's curse is for her.

A tragic story about winner's curse happened in Roma Empire in 193 A.D. in the history. When Emperor Pertinax was murdered by the praetorian guard, the very wealthy Julianus and the urban prefect (and father-in-law of Pertinax), Flavius Sulpicianus, literally conducted a bidding war for the empire, offering donatives to secure the support of the praetorians. Julianus won, promising 25,000 sesterces per man. The winner, Didius Julianus, was duly declared emperor but lasted for only two months and Julianus was beheaded what is perhaps the earliest and extreme instance of the "winner's curse".

The winner's curse is a concept first written about in 1971 by three Atlantic Richfield Company engineers, Capen, Clapp, and Campbell. The idea Capen et al. (1971) address is simple. Capen et al. assume oil companies would like to buy the right of drilling on a particular parcel of land, and that the rights are worth the same amount to all bidders. Furthermore, suppose the each bidding firm evaluates the rights of drilling by its own experts. It is quit difficult to estimate the amount of oil in a give location accurately, according to the value that expert address the company may bid more than the evaluation or less than it. When the firm who indeed wins the auction may be the one whose experts provided the highest estimate. If this happens, the winner is likely to be a loser. There are two ways make the winner's curse happen: The winning bid exceed the value of the tract, so the firm loses money. The second one is the value of the tract is less than the experts' estimate, and the winning firm is disappointed. We can understand that the winning bidder will not right away figure out they are in cursed beyond the win, however, she may need time to be conscious.

In 1983, a well-known and important experiment was going to be done with the MBA students in Boston Business School by Bazerman and Samuelson, and their studies suggests that the winner's curse may be a common phenomenon. In the experiment, they took a jar and filled it with coins, each jar had a value of \$8, and then the jar was auctioned off to unknown students. A total of 48 auctions were conducted for in each of 12 microeconomics classes. The students were not provided any feedback until the whole experiment was completed. The students' mean estimate of the jars was \$5.13, the mean winning bid was \$10.01, and so the average loss to the winning bidder was \$2.01. From this experiment, we find that there is a great deal of variation in the existence and magnitude of the winner's curse effect (1983, Bazerman and Samuelson).

The quantity of literature in winner's curse is not so much like we image but there are scholars gradually apply winner's curse in different marketplaces and different country, address evidence to prove the existence of winner's curse in bones, stocks, e-auction and other financial markets, and discuss why the winner's curse occurs.

Why does the winner's curse occur? Bazerman and Samuelson use a few minor assumptions to demonstrate graphically the logic of the effect in an auction context. They suppose that the bidders' value and the estimate of actual value of the commodity are normal distribution but the distribution of bids is determined by a leftward shift of the distribution of estimates and also assume that the true value equals to the mean estimate value and true value will be equal for all bidders. As Figure 2.1 shows, a winning bid drawn from the right tail of the bid distribution may exceed the actual value of the good. Likewise, when the winner's margin of overestimation exceeds the discount in making a bid, she will overpay for the item acquired and fall prey to the winner's curse.

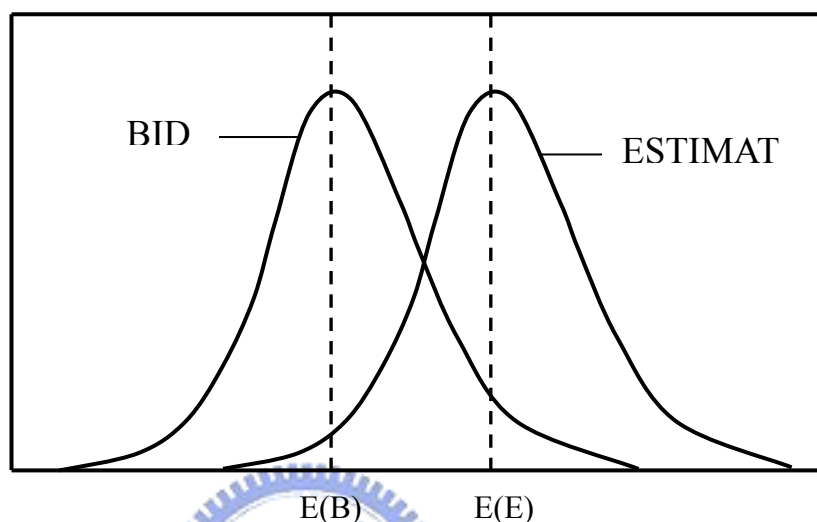


Figure 2.1 Graphic Illustration of the Winner's Curse
 Source: BAZERMAN & SAMUELSON, 1983, p.620

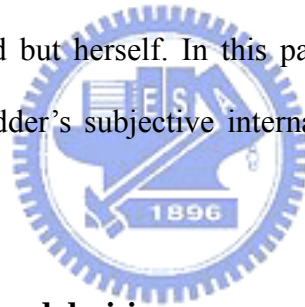
2.3 Winner's curse on e-auctions

There are a lot of experiments and surveys to prove the existence of the winner's curse in different types of markets. The most famous experiment is the "a jar of coins" that conducted by Bazerman and Samuelson, in Boston Business school. Bazerman and Samuelson compared the values of jars of coins and the outbid price to prove the existence of winner's curse.

In the context of electronic auctions, Mehta and Lee initiated the empirical research on the winner's curse and found the winners curse apparently exists in the B2C electronic auction. After Mehta and Lee, Woneok examine winner's curse in both C2C and B2C electronic auctions and compare the likelihood and magnitude of the winner's curse. Woneok collected and compared the market prices and final prices of "new"

computer components to make sure the winner's curse exists in electronic auctions. Woneok try to setup a standard by market price to measure the winner is in curse or not, so he can only put his eyes on "new" goods. It is difficult to discuss the used goods by using a market price, but winner's curse still happen when bid a used goods in electronic auctions. There is a big part of goods is used good but not new goods on auction sites.

The similar point to jar of coins experiment and the collection prices to compare is they both try to prove the existence of winner's curse by offering an objective value to estimate the winner is in curse or not but move from the meaning of winner's curse, only the winner could make sure she in curse or not. The winner decides the valuation by her subjective judgment, there is no one could tell or suggest the winning bidder's ideal value is an overbid but herself. In this paper, a few questions will be asked to compare the winning bidder's subjective internal reference price and final price they paid.



2.4 Consumer behavior and decision

2.4.1 Consumer decision

Engel et al. explain that consumers decision making is influenced and shaped by many factors and determinants, which fall into these three categories: (1) individual differences; (2) environmental influences; and (3) psychological processes. Let's focus on the first point "individual differences". There are five major categories of individual differences that affect behavior: (1) consumer resources; (2) knowledge; (3) attitudes; (4) motivation; and (5) personality, values, and lifestyle. The factors above would drive and influence consumer decision-process during the auction, and then make consumers win the bid just matching their own value, or unfortunately overpaid for the given item. This

study moves from personalities to understand indigenous facet to lead consumers who are in winner's curse.

Bazerman and Samuelson consider that there are two factors can affect the incidence and magnitude of the winner's curse: (1) the degree of uncertainly concerning the values of the item up for bid and (2) the number of competing bidders. (1983). The two points is all about the setting of auctions, and are considered into exogenous factors.

2.4.2 Consumers behavior Model

Market researchers have been trying for decades to understand consumer behavior. Their findings are summarized in a model of consumer behavior. Turban et al. adjusted this model for the EC environment and explain the EC consumer purchasing decision process by it (Turban, 2000). I would like to apply this model to tell the personal characteristics and individual differences can influence the on line consumers bidding behavior. Online consumers' characteristics can be expected to play an important role when doing a bargain because characteristics impact information process. According to the model of EC consumer behavior shown in Figure 2.2, the buyer's characteristics, the environment, the technology and the so on can influence the buyers' decisions. On the right of Figure 2.2 shows that the buyer's decisions includes buy or not, what to buy, where to buy, when to buy, repeat purchases or not, and how much to spend. Before we start to explore the personal characteristics of bidders in winner's curse, we can be sure that personal characteristics is one of the important factors to drive the bidder decide how much to spend. How much to spend is the biggest problem for a bidder, personal characteristics, and environmental characteristics can influence then force the bidder move into winner's curse. There are still a lot of consumer behavior models can explain

the personal characteristics can influence buyers' behavior and price cognition, but in this time we are going to put our sight on the next section — personality theory.

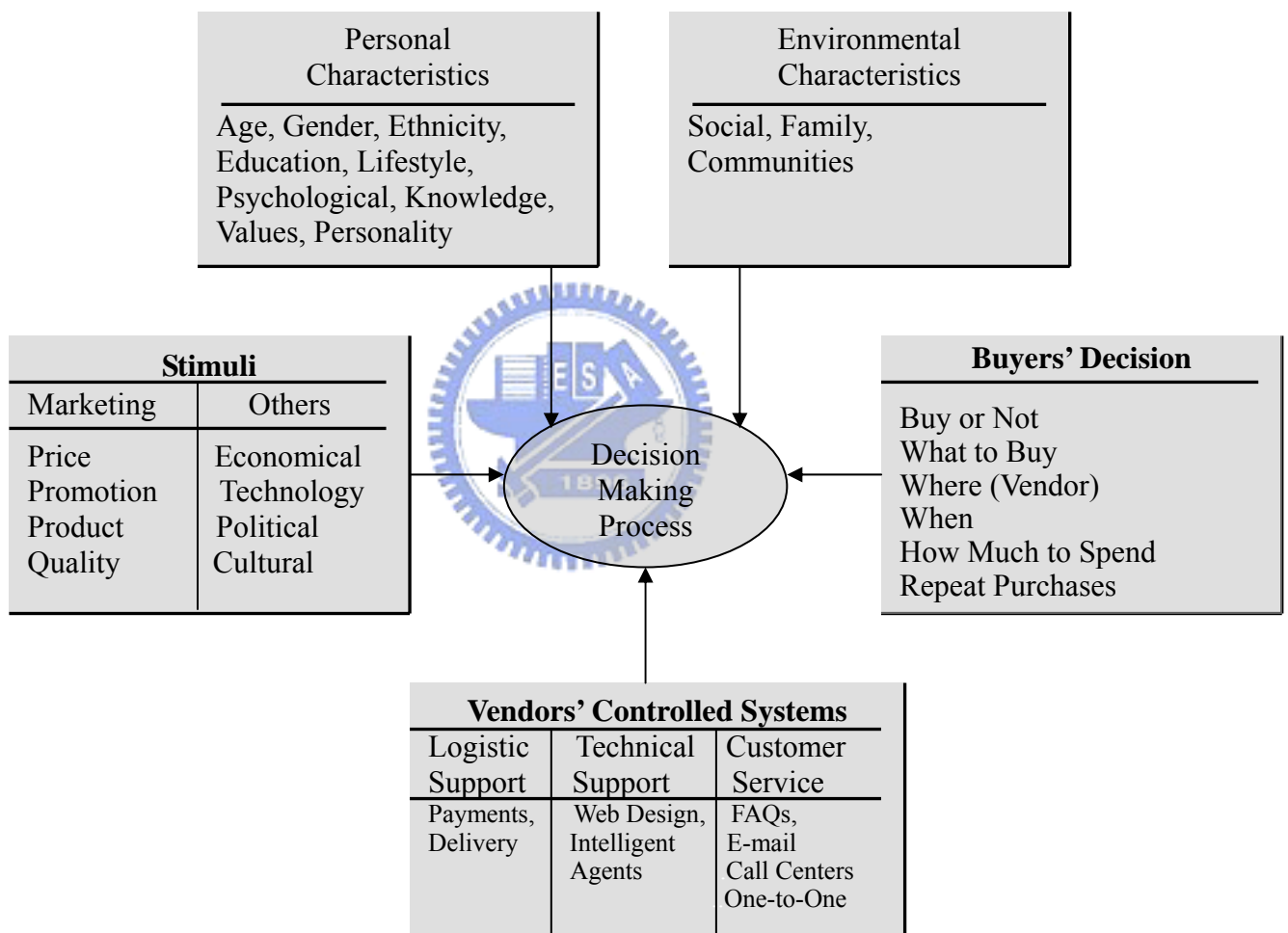


Figure 2.2 Electronic Commerce Consumer Behavior Model

Source: Zinezone, c/o GMGI Co.

2.5 Personality and Assessment

2.5.1 Personality

The term “personality”, unfortunately, analysts do not agree on any general definition of it, but to some how tie “personality” to the concept of consistent responses to the world of stimuli surrounding the individual. Man does tend to be consistent in the coping with his environment. Therefore, since individuals do react fairly consistently in a variety of environmental situations, these generalized patterns of response or modes of coping with the world can be called personality. Each person has personality characteristics that influence his or her buying behavior. By personality, we mean a set of distinguishing human psychological traits that lead to relatively consistent and enduring responses to environmental stimuli (Kotler, 2003). Harold (1971) suggests that purchasing behavior, media choice, innovation, segmentation, fear, social influence, product choice, opinion leadership, risk taking, attitude change, and almost anything else one can think of have been linked to personality. Psychologists have developed hundreds of scales to measure personality trait constructs derived from theory and research to distinguish individuals from the ways of their characteristic styles of thinking, feeling, and behaving. Over the past forty years, theory and research in the trait view of personality have slowly converged on five broad factors to explain a majority of variance in the natural language descriptions of behavior that we can call “Big Five” or “Five-factors Model”.

2.5.2 Five factor Model (FFM)

The studies of Big five can be traced back from 1936, Allport and Odber’s classification provided some initial structure of the personality lexicon. In 1943, Cattell

used the Allport and Odbert list as a starting point for his multidimensional model of personality structure. Cattell reduced the 4500 trait terms to a mere 35 variables. Cattell eliminated more than 99% of the terms to make the data analysis more easily by saving his time and cost. Then, Cattell conducted several oblique factor analyses and concluded that he had identified 12 personality factors. This five-factor structure has been replicated by Norman (1963), Borgatta (1964), and Digman and Takemoto-Chock (1981) in lists derived from Cattell's 35 variables. These factors are typically labeled: 1. Extraversion or Surgency, 2. Agreeableness, 3. Conscientiousness, 4. Emotional stability versus Neuroticism, and 5. Intellect or Openness. These factors eventually became known as the "Big Five" (Goldberg, 1981).

Much of the term for personality is summarized by the FFM, and the model has been of great utility to the field by integrating and systematizing diverse conceptions and measures (Lawrence and Oliver, 1999). Beside, the big five have been recovered repeatedly in factor analyses of peer ratings, in similar ratings of self, expert ratings of trait descriptors and have been postulated to encompass individual differences in enduring motivational, attitudinal, emotional, and interpersonal styles, and the five-factor model seems to be an unusually robust and comprehensive representation of personality structure, which makes it an ideal framework to be adjusted in this paper.

The Big Five represents a taxonomic scheme for describing at a global level the basic dimensions of normal personality: Neuroticism contrasts emotional stability with a broad range of negative feelings, Extraversion and Agreeableness are both summarize traits hat are interpersonal, Openness to Experience describes the breadth, depth, and complexity of an individual's mental and experiential life, and Conscientiousness primarily describes task-and goal-directed behavior and socially required impulse control.(Lawrence and Oliver, 1997). Five dimensions can be reordered to spell out the word OCEAN (John, 1990). In the Five-Factor Model, each factor has a precise factor

definitions vary and methodological and theoretical inconsistencies prevent complete agreement, but Harold (1971) suggest that consumer behavior researchers must develop their own definitions to measure personality variables. According to Harold, the personality could be adopted appropriately to fit the researchers' need. Now, we try to review and discuss the composition of each factor.

Neuroticism. Costa and McCrae (1985) described Neuroticism as representing emotional instability and maladjustment characterized by negative emotions such as fear anger, disgust, sadness, anxiety, and guilt. Tellegen (1985) suggested that Neuroticism functions as a warning system, activated by perceptions of environmental uncertainty, that interfere with one's ability to adapt. In the way, Neuroticism may be logically related to conflict strategy preferences. Auction setting is just like a confliction situation, and this condition may lead individuals fall into the winner's curse. Individuals coping with the conflict in auctions is likely to arouse negative affect, if individuals high in existing levels of anxiety, depression, and self-consciousness may influence their judgments the during auctions.

Extraversion. Over the 75 years since Extraversion has be conceptualization, the meaning of Extraversion has steadily evolved from an early emphasis on unreliability, impulsivity, and social insensitivity to contemporary views that stress social facility, ambition, energy, enthusiasm, dominance, and positive affectivity. Extraversion is thought to tap individual predispositions to view one's actions as positive, emotionally satisfying, and effectual. The individuals high in Extraversion are wondered that they are more easily to be one of the members in club of winner's curse because the Extraversion implies a more impulsive person with lower self-control (Eysenck and Eysenck, 1985). Lower self-control and impulsiveness are both characteristics of compulsive buying behavior. (Natarajan and Goff, 1991)

Openness to Experience. Openness refers to individual differences in the breadth

and depth of consciousness, and is generally thought to involve intellectual activity, cultural sophistication, thoughtfulness, originality, imagination, need for variety, and preference for cognitive complexity (McCrae, 1996; McCrae & Costa, 1997). Openness factor subsumes behaviors that convey a willingness to entertain and experience novelty, whether in interests, people, situations, values, or ideas, and a sense of divergent, creative thinking (Costa & McCrae, 1992). When open individuals meet confliction, they are expected to express flexibility, adaptability, generation of new resolution alternatives, and consideration of the opponent's view. So maybe they would be survive from competitive auction setting and block the winner's curse.

Agreeableness. Grazizno et al. (1996) characterized the Big Fiver factor, Agreeableness, as the personality dimension that is most concerned with interpersonal behavior. Agreeableness involves trust altruism, kindness and sympathy; and is contrasted with self-centred antagonism, and low Agreeable persons as antagonistic, skeptical, and competitive (Costa and McCrae, 1992). The trust, compliance and tendermindedness aspects of the agreeable personality emphasize the willingness to please others and to behavior in a socially acceptable manner.

Conscientiousness. Hogen and Ones (1997) defined Conscientiousness as social conformity and impulse control, conceptual interpretations. Conscientiousness refers to responsible, disciplined, organized and trustworthy individuals who strive after goals and adhere to principles (Costa and McCrae, 1992). One characteristic of this type of individual is deliberation, cautiousness and careful consideration of the consequences of their actions, include auction. Duijsens and Diekstra in 1996 address that conscientiousness is negatively related to impulsiveness. Based on the latter empirical evidence, the Conscientiousness seems not to easily become a sufferer of winner's curse.

To illustrate the meaning of the factors, Table 1 lists a number of trait adjectives that describe individuals scoring high and low on each factor. The factor definitions in Table 2.1 are based on the work by Costa and McCrae (1985, 1992).

Table 2.1
The Big Five Trait Factors and Illustrative Scales

Characteristics of the High Score	Trait Scales	Characteristics of the Low Score
	NEUROTICISM (N)	
Worrying, nervous, emotional, insecure, inadequate, hypochondriacal	Assesses adjustment vs. emotional instability. Identifies individuals prone to psychological distress, unrealistic ideas, excessive cravings or urges, and maladaptive coping responses	Calm, relaxed, unemotional, hardy, secure, self-satisfied
	EXTRAVERSION (E)	
Sociable, active, talkative, person-oriented, optimistic, fun-loving, affectionate	Assesses quantity and intensity of interpersonal interaction; activity level; need for stimulation; and capacity for joy	Reserved, sober, unexuberant, aloof, task-oriented, retiring, quiet
	OPENNESS (O)	
Curious, broad interests, creative, original, imaginative, untraditional	Assesses proactive seeking and appreciation of experience for its own sake, toleration for and exploration of the unfamiliar.	Conventional, down-to-earth, narrow interests, unartistic, unanalytical
	AGREEABLENESS (N)	
Soft-hearted, good-natured, trusting, helpful, forgiving, gullible, straightforward	Assesses the quality of one's interpersonal orientation along a continuum from compassion to antagonism in thoughts, feelings, and actions.	Cynical, rude, suspicious, uncooperative, vengeful, ruthless, irritable, manipulative
	CONSCIENTIOUSNESS (C)	
Organized, reliable, hardworking, self-disciplined, punctual, scrupulous, neat, ambitious, preserving	Assesses the individual's degree of organization, persistence, and motivation in goal-directed behavior. Contrasts dependable, fastidious people with those who are lackadaisical and sloppy.	Aimless, unreliable, lazy, careless, lax, negligent, weak-willed, hedonistic

Source: Costa & McCrae, 1985, p.2

The FFM is becoming a theory of personality, McCrae and John (1992) suggest that is implicitly adopts the basic tenets of trait theory –that individuals can be characterized in terms of relatively enduring patterns of thoughts, feelings, and actions; that trait can be quantitatively assessed; that they show some degree of cross-situational consistency; and so on. The hundreds of studies of personality correlates that employ measures of the FFM both presume and confirm that personality traits exist (Lawrence and Oliver, 1999). The Five-factor model (FFM) of personality is going to be the model of personality adopted in this paper.

2.5.3 NEO Personality Inventory Revised

There are many instruments could be used to measure the Big Five, although relatively few tap all five dimensions. The NEO Personality Inventory Revised (NEO-PI-R) is a concise measure of this Five-Five Model and of some of the important traits that define the factors. In 1992, Costa and McCrae have developed a questionnaire, the NEO-Personality Inventory Revised (NEO-PI-R) and its shorten version the NEO Five Factor Inventory (NEO-FFI), to measure the Big Five personality factors.

Costa and McCrae originally had focused only on the three factors of Neuroticism, Extraversion, and Openness, thus the title is NEO-Personality Inventory. Subsequently they added the factors of agreeableness and conscientiousness to conform to the five-factors model. Furthermore, they differentiated each of the Big Five factors into six more specific facets, and then 8 items measure each facet, so that the most recent NEO-PI-R consists of a total of 240 items (i.e., 5 factors X 6 facets X 8 items) and NEO-FFI consists 60 items. McCrae and Costa (1990) argue strongly for use of questionnaire to assess personality and are critical of projective tests and clinical interviews. For each item, subjects indicate the extent to which they agree or disagree,

using a five-point rating scale. The resulting scales all have good reliability and show validity across different data sources. McCrae and Costa argue that the five factors, as assessed by the NEO-PI, are both necessary and sufficient for describing the basic dimensions of personality. Indeed, they go beyond this to suggest that “no other system is as complete and yet as parsimonious” (1990, McCrae and Costa).

Table 2.2

NEO-PI-R Facet Scales Associated with the Big Five Trait Factors

NEUROTICISM	: anxiety, angry hostility, depression, self-consciousness, impulsiveness, vulnerability
EXTRAVERSION	: warmth, gregariousness, assertiveness, activity, excitement seeking, positive emotions
OPENNESS	: Fantasy, aesthetics, feelings, actions, ideas, values
AGREEABLENESS	: trust, straightforwardness, altruism, compliance, modesty, Tendermindedness
CONSCIENTIOUSNESS	: competence, order, dutifulness, achievement, striving, self-discipline, deliberation

Source: The NEO Personality Inventory Manual (p. 2), by P.T. Costa, Jr. and R. R. McCrae, 1985, Odessa, FL: Psychological Assessment Resources; NEO PI-R, Professional Manual. (p. 3), by P. T. Costa and R. R. McCrae, 1992, Odessa, FL: Psychological Assessment Resources.

2.6 What’s new in this paper?

Woneok judged a bidder in curse by if the final bid is higher than the average price that collects from block markets. If the final bid is high than the average price, she would be regarded as a bidder in curse, if not, she is a really champion at auction contest. The way to judge if a bidder in curse or not is easy but not so fair because a

bidder ought to have right and mind to subjectively evaluate the worth of prize she got from the seller. Otherwise, the second hand goods always are difficult to estimate their objective price, so the study is not easy to repeat at second hand market. For example, the trouble will be meet when we try to collect the standard or average price for a Sony Play Station2 in one year used or three years used.

This study is according to a bidder's subjective description and reaction to judge she is in curse or not, and the different between former researches and this study is the way to confirm a bidder in curse or not. Using an average price for a standard is suitable and objective, but we should admit the worth of the target always depends on her sense.

Let's take a simple example, a young lady lives on offshore island or remote countryside might be content with getting a new Sony digital camera on the website even if the price is higher than the "average price". In Woneok's study, the lady be a bidder in curse, actually, she didn't think so. The price a bidder overpaid than the average price might for the joy or convenience brought to her, and the bidder never thought she is in curse, although she knew the average price is lower than the final bid she offered.

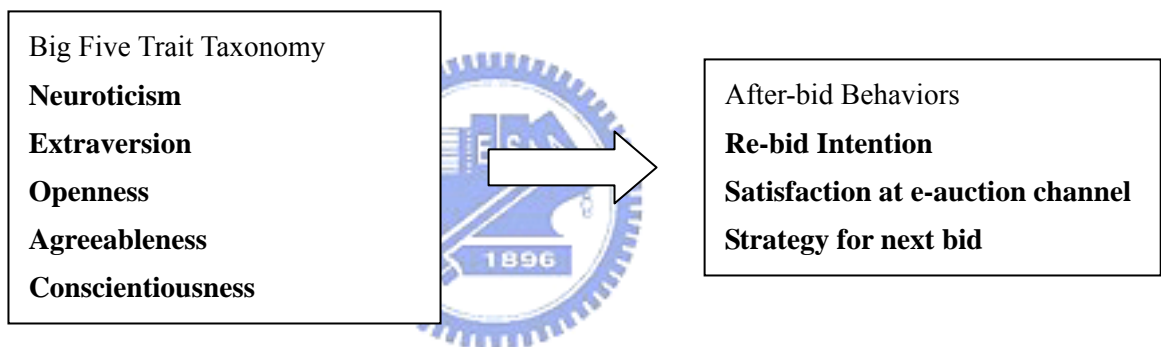
In short, the way to decide a consumer in curse or not would depend on her subjective values but not the average price in this study. Furthermore, the former researches never surely link or indicate the relationship between the personality of consumers and winner's curse.

Chapter 3 Methodology

3.1 Research Framework

To investigate how personality traits drive the cursed bidders on websites, this study takes five trait taxonomy as independent variables, and consider the after-bid behaviors as the dependent variables. Besides, the main purpose of this study tends to develop a bidder behavior model base on different personality traits. The framework of this paper would look like the following Figure3.1.

Figure 3.1 Research Framework



Source: This study

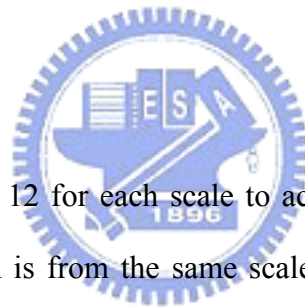
3.2 Questionnaire Design

In order to reach the objective of the study, the questionnaire was designed. The questionnaire for this study could be divided into four parts, and there are almost 90 items in it. The first part is about consumers' bidding behavior and experience. The second part is about satisfaction with purchasing on the e-auction website. The following part is a simple test for assessment respondents' personality tendency. The final part is basic information of respondents.

3.2.1 Personality Assessment

Personality measures in this paper is NEO-PI-R's shorter version—NEO Five Factor Inventory (NEO-FFI) because the NEO PI-R from S consists 240 items and with administration time of 35-45 minutes. To avoid the lengthy administration time, in this study, a shortened version, NEO-FFI, is adopted to measure Five Factor that its administration time is 10-15 minutes. NEO-FFI is a self-report, quick, reliable, and accurate measure of the five domains, and also administered to adults with 6th grade reading level. Moreover, it correlates with the NEO PI-R domain scales at 0.77-0.92 and has a 0.68-0.86 consistency values. We can also call NEO-FFI is NEO-FFM (NEO-Five Factor Model) personality Inventory.

3.2.2 NEO-FFM test



There are 60 items, 12 for each scale to acquire bidder's personality tendency in the test. Every fifth item is from the same scale, such as items 1, 6, 11, and so on is supposed to assess Neuroticism, and the reverse-scored items would be implied inside as well. The 60 items be given on the second part after the part of knowing personal online bidding experiences in the questionnaire. The following table can help to apprehend the intention of each item. Items in bold is reverse-scored.

Neuroticism (N)	1,6,11, 16 ,21,26, 31 ,36,41, 46 ,51,56.
Extraversion (E)	2,7, 12 ,17,22, 27 ,32,37, 42 ,47,52, 57 .
Openness (O)	3 ,8,13, 18 , 23 ,28, 33 , 38 ,43, 48 ,53,58.
Agreeable (A)	4, 9 ,14,19, 24 , 29 ,34, 39 , 44 ,49, 54 ,59.
Conscientiousness (C)	5,10, 15 ,20, 30 ,35,40, 45 ,50, 55 ,60.


Figure 3.2 Items for each scale

Source: NEO-FFM test

3.2.3 Satisfaction Measure

To measure the after-bid satisfaction and attitude toward e-auctions channel, questionnaire design refers Hong's study on the consumers' satisfaction and decision-making on Internet shopping and He's online cosmetics purchasing research on 2003. After modified and extracted the questions in their questionnaires to fit the purpose of this study, 9 questions were created to measure bidders' attitude on online bidding. The 10th question is a simple and designed to understand if they have intention to bid on e-auction website again. The 10 questions will be put on the second part of the questionnaire.

3.2.4 Bidders' Experience



There are several questions designed for bidders to understand their winning experience on e-auction website, such as “Have you ever been unsatisfied with the good you got from the e-auctions?” “Have you ever felt the final price you paid is over your personal reference price after you got the prize?” or “If you have had a chance to repeat the auction, would you like to set the same winning bid for your target?” Whether a bidder is in curse or not could be traced out following her answer, supposed that respondent all answered honestly and did not care about lost face. The bidder would be defined as a winner in curse if she have ever felt the final bid is an overpayment, or her input during a whole auction procedure is bigger than output, like the good she got or the service she deserved.

3.3 Subject Population

The population of this study is the customers who ever bidden on electronic auction websites and felt her final bid is an overbid. The samples this paper need are online bidders ever overpaid for their mark, although the consumers ever won on the e-auctions website is invited to fill out the questionnaire. Everyone ever won on e-auctions might be one of our sample, but the bidder always content herself with the prize would be filtered out by a few questions exist in first part of questionnaire. All the questions would be disclosed and appendix.

3.4 Data collection and selection

The primary data were obtained by the printing and web questionnaires from March to April 2004. The questionnaire website was set up and let random consumers who have ever won on e-auctions fill it out. The IP from each respondent was recorded to prevent the web questionnaire from being filled up over and over. 120 printing questionnaires were forward to individuals around colleges of north Taiwan, and 100 of 120 copies were received and filled. There are 553 replies collected from questionnaire web site, and the total respondents are 653. After selection, the number in course is 236.

3.5 Analytic Methods

SPSS (Statistical Package of the Social Science) was used to process the data acquired. The statistical techniques utilized to this study are summarized as follows:

1. Factor analysis was used to extract factors from the 60 items into 21 items.
2. Reliability analysis was utilized to estimate the reliability coefficients.
3. Cluster Analysis: Factor scores were then used in a cluster analysis to obtain some

idea about the number of homogeneous groups represented by the data.

4. K-means cluster: Quick cluster analysis was run on the total respondents.
5. Multiple regression analysis was then employed to analyze the formation of satisfaction and intention of repurchase within five factors.
6. ANOVA was utilized to understand the performance of satisfaction and intention of repurchase within clusters.



Chapter 4 Data Analysis

According to the data that respondents provided, there are 236 of 653 online bidders have ever fallen into winner's curse by the definition of this study. That means 236 bidders felt they overpaid after got the good they won. A half of them, 126, would not give the same price if the bid could be replayed again. 236 bidders were regarded as the valid sample after the selection, 36% in 653 bidders is in curse, and half of cursed bidders want their money back.

4.1 The structure of respondents

The table below reveals that the sample ratio of male to female is about 1 to 1, and the sample in workforce is about 30% and student is about 70%. Female in workforce and student sample is both 30%, and male in workforce and student sample is 70%. The age lies in between 16 to 52. The bidders age from 19 to 28 is more than 90% in valid samples. Beside, there is up to 66% sample have college educational level, and among exceed 30% of them own master's degree.

The disposable income of each person is low and below 15,000 NT dollars is more 60%. Because the student sample is almost 70%, it directly influences the income level of the respondents.

Table 4.1 Data Structure

Item	Classification	Frequency	Percentage (%)
Sex	Male	109	46.19 %
	Female	127	53.81 %
Marital Status	Married	14	5.93 %
	Single	222	94.07 %
Age	Less than 19 years old	28	11.86 %
	20-29 years old	192	81.36 %
	30-39 years old	14	5.93 %
	More than 40 years old	2	0.85 %
Education Level	High School, Vocational School or below	8	3.39 %
	Junior College or University	156	66.10 %
	Graduate School	72	30.51 %
Vocation	Agriculture, Forestry, Fishery, Animal Husbandry and Mining Industry	1	0.42 %
	Manufacturing Industry	13	5.51 %
	IT	8	3.39 %
	Service Industry	24	10.17 %
	Soldier, Public Servant and Faculty	8	3.39 %
	Students	161	68.22 %
	Unstable	4	1.69 %
	Others	17	7.20 %
	Income	NT\$15,000 or below	160
NT\$15,001 - 25,000		10	4.24 %
NT\$25,001 - 35,000		32	13.56 %
NT\$35,001 - 45,000		19	8.05 %
NT\$45,001 - 55,000		4	1.69 %
Above NT\$55,001		11	4.66 %

Source: This study

4.2 Personality Trait Factors analysis

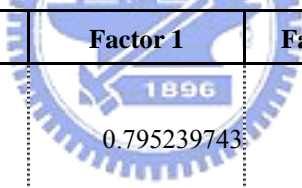
The use of Cronbach's Alpha coefficient is popular; the assessment personality in this paper is also measured by Cronbach's Alpha. The value of Alpha is 0.7338, so this

study has a fine reliability.

Considering about the culture, translation, social custom, and others, there must be some question unsuitable in analyses. There are some questions erased after reliability measure.

According to 21 questions in the third part of the questionnaire, the factor analysis was done by Principal Components Analysis to extract the factors needed, and then factor transformation matrix by Varimax Rotation. Finally, the factors whose eigenvalue is bigger than 1, would be selected and distributed into 5 traits. They are separately Conscientiousness, Extraversion, Agreeableness, Openness, and Individualism. Their statistics analysis results include factor loadings, eigenvalues and, explained variances and so on are revealed in the table below.

Table 4.2 Factors Analysis



Question	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
I'm pretty good about pacing myself so as to get things done on time.	0.795239743				
I often feel helpless and want someone else to solve my problems.	0.744947732				
I have a clear set of goals and work toward them in an orderly fashion.	0.644516107				
I keep my belonging neat and clean.	0.639032273				
When I make a commitment, I can always be counted on to follow through.	0.561641473				
I never seem to be able to get organized.	0.51184127				
I am a very active person.		0.416310713			

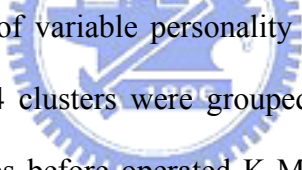
I am a cheerful, high-spirited person.		0.794717285			
I often feel as if I'm bursting with energy.		0.744554097			
I am not a cheerful optimist.		0.638721828			
I really enjoy talking to people.		0.583425327			
I rarely feel lonely or blue.		-0.526832726			
Sometimes I feel completely worthless.		-0.33764058			
Some people think I'm selfish and egotistical.			0.780003182		
Some people think of me as cold and calculating.			0.778496655		
I often get into argument with my family and co-workers.			0.662836166		
I tend to be cynical of skeptical of others' intentions.			0.588089707		
Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement.				0.8646949	
Poetry has little or no effect on me.				0.7380596	
I often enjoy playing with theories or abstract ideas.				0.6057301	
I would rather go my own way than be a leader of others.					0.686430661
Eigenvalue	4.862	2.217	1.732	1.585	1.244
Explained Variance	14.324	13.522	11.434	8.748	7.401
Accumulative Variance	14.324	27.846	39.28	48.028	55.429
Factors	Conscientiousness	Extroversion	Agreeableness	Openness	Individualism

Source: This study

In the original Big five, it does not have Individualism, but has Neuroticism, but in Taiwan society, respondents rarely admit their Neuroticism tendency and try to hide it.

The NEO-FFI is a good inventory to examine and assess the five factors of personality on the premise that respondents could answer not only positive questions but also negative questions frankly. It is not easy for Taiwan respondents not to avoid answering the negative questions, and admitting that they are gloomy and lonely. In Neuroticism, the result shows apparently not so much different, so Neuroticism would be combined with Extraversion. During the procedure of analysis, there is an interesting appearance that is a specific item apparently independent to other personal traits of Big five. Although the item is used to measure Agreeableness, according to its content, “If necessary, I am willing to manipulate people to get what I want”, give a call Individualism” to represent its unique.

4.3 Personality Trait Block Analysis



Inputting the value of variable personality traits to operated K-Means Cluster to make groups, and then 4 clusters were grouped up. To average the number of each group, so we set 3 groups before operated K-Means Cluster again, and 3 groups was founded. The result of cluster and factor analysis can be seen on Table4.4. Each cluster was given name by factors descriptions and their contents, separately is, B, and C. There are 99 observations in cluster A, 75 in cluster b, and resting 62 in cluster C. In order to make sure the 3 clusters is steady and independent, and the Discriminant Analysis was done to assure the 3 clusters is distinguished from each other and each respondents was distribute to accurate cluster. Under this test, the personality trait of interpretation ability of each cluster could be exhibited. After Discriminant Analysis, up to 98.7% observations can be assured that they are distributed into a clear and appropriate cluster.

Group A shows more Conscientiousness, Extraversion, Openness and Individualism than B and C, but less Agreeable than B and C. B and C have similar

characteristics but not in Openness, B and C are both negative Extraversion, Conscientiousness, and Individualism, and then have a positive Agreeable.

Only A has negative Agreeable, but the gap between B and C is small. To B and C, A is very high in Conscientiousness, Extraversion, and Individualism. Mostly, B and C are look like have the same characteristics, but only B has a very negative Openness and C has a relatively high Openness to A and B.

After we understand the different from the 3 clusters, I try to give each a call to represent their own special feature. I name Group A “Maverick” because it has very high Individualism than others. Group B and Group C are all get negative Individualism but only Group A has really high Individualism, so it gets a name “Maverick”.

Group B was named “Conventionalist” because of only Group B in negative Openness to Experience. Conventionalist also has the highest Agreeableness than others.

I give Group C a name “Artist” to show high and positive Openness to Experience. We can see Group C and Group B show almost the same tendency toward Extraversion, Agreeableness, Conscientiousness, Individualism in the Figure4.3, and their only difference is in Openness to Experience. Group B gets negative, but Group C gets positive.

In order to make sure the 3 clusters is steady and independent, and the Discriminant Analysis was done to assure the 3 clusters is distinguished from each other and each respondents was distribute to accurate cluster. Under this test, the personality trait of interpretation ability of each cluster could be exhibited. After Discriminant Analysis, up to 98.7% observations can be assured that they are distributed into a clear and appropriate cluster.

Table 4.3 Cluster Analysis

	A	B	C
	Cluster 1	Cluster 2	Cluster 3
	<i>Mean</i>	<i>Mean</i>	<i>Mean</i>
Conscientiousness	0.499983	-0.468272	-0.345458
Extroversion	0.571316	-0.217447	-0.797202
Agreeableness	-0.01302	0.167422	0.1214426
Openness	0.247964	-1.030087	0.8389356
Individualism	0.481775	-0.154943	-0.273742
Frequency	99	75	62
Factor Sets	Maverick	Conventionalist	Artist

Source: This Study

4.4 Characteristics of bidders in curse

After converted the Table 4.3 into frequency, a simple table could be acquired below. Go thought table, we can find the number in low Conscientiousness is greater than the high Conscientiousness, the number in low Extraversion is greater than the high Extraversion, the number in high Agreeableness is greater than the number low in Agreeableness, and so on.

Use this sample frequency distribution table, and then we can easily interpret which characteristics is likely to be a candidate fall into winner's curse in her next bid.

Table 4.4 Frequency in each Factor

Level Factor	High	Low	Summary
Conscientiousness	99	137	The number in low Conscientiousness is greater than the number in high
Extroversion	99	137	The number in low Extraversion is greater than the number in high
Agreeableness	137	99	The number in high Agreeableness is greater than the number in low
Openness	161	75	The number in high Openness to Experience is greater than the number in low
Individualism	75	137	The number in low Individualism is greater than the number in high

Source: This Study

4.5 Winner's curse affairs



The detail about the experience they are in winner's curse on the e-auctions sites includes what is their final bid, the characteristic of the good, and what strategy their should take to avoid winner's curse next time. The strategy they suggest to take is often an answer of why they're in curse.

1. Final bid: The final bid gathers at the price under 1,500, but that may because our sample is 70% from the student samples, and their disposal income is average under 15,000. It is not surprised that the price under 1,500 is more than 75%.

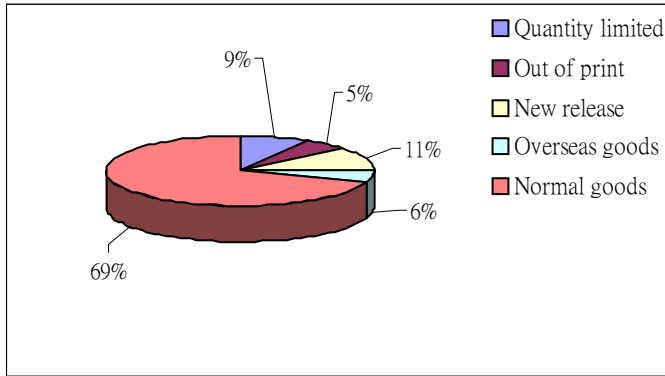


Figure 4.1

Source: This Study

2. Properties of the target: The goods auctioned on the website could be separated from new goods and used goods. New goods or used goods do not have interaction with each cluster. Half winners are cursed with new goods, and the others are with used goods. The special goods, such as the good out of print, quantity limitation, new release, and normal goods do not directly affect people lift up the bid. The exceptional goods cannot make bidder in curse easily like our imagination. People don't fall into winner's curse because the target is more remarkable.

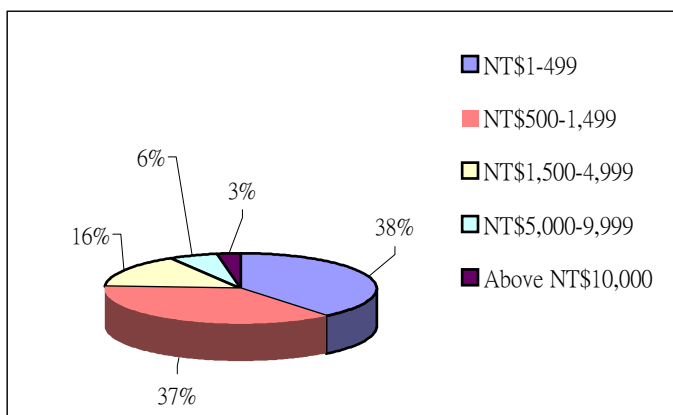


Figure 4.2

Source: This Study

3. Experience: About 70% bidders believe that in course experience can help their next bid, but it doesn't mean they will bid again. There are still 30% bidders do not make sure the experience in course could help them out in next bid.

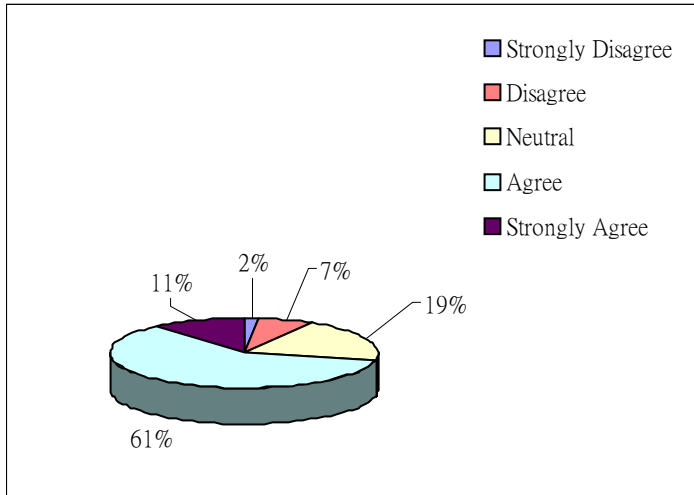


Figure 4.3

Source: This Study

4. Next bid strategy: Their strategy for next bid can reflect the reason made they in course. There are over 50% people consider that they should have enough information before purchasing. That may mean they did not adequately understand the conditions and functions of the target or other similar products before they started to bid. Surprising, there are about 14% observations believe they should start to bid before they decide to buy the target next time. There are about 8% observations think they should not do a too quickly bid when they try to bid in the future. Only 5% people will be concerned about the competitive in their next bid.

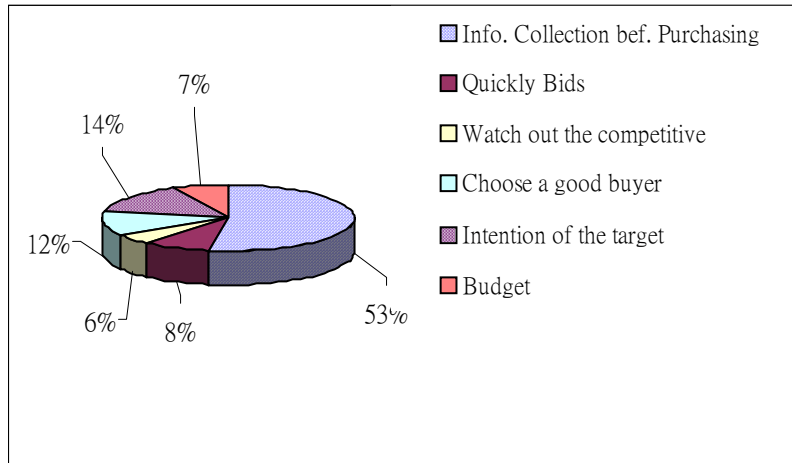


Figure 4.4

Source: This Study

4.6 Five factors to satisfaction and attitude

A series of stepwise regression analyses were then performed to predict satisfaction with e-auction channel by the five performance factors in aggregate.

The factor “Conscientiousness” is only one factor in five can influence their satisfaction level. $F\text{-value}=9.263 > F(1, 234)$ ($\alpha=0.05$) and $P\text{-value}=0.003$, so Conscientiousness can significantly influence the satisfaction level.

4.7 Five factors to repurchase intention (intention to re-bid)

To predict intention of re-bid or repurchase by the five performance factors in aggregate a stepwise regression analysis was performed.

Conscientiousness and Extroversion can both significantly affect the intention to re-bid on e-auction websites. In deal with factor “Conscientiousness” , the $F\text{-value}=80577 > F(1, 234)$ ($\alpha=0.05$) and $P\text{-value}=0.004$. The other factor “Extroversion” with $F\text{-value}=4.33 > F(2, 233)$ ($\alpha=0.05$) and $P\text{-value}=0.002$.

4.8 Three clusters to satisfaction and attitude

After ANOVA was run to estimate the relationship between clusters and satisfaction, we can find that satisfaction would be different by the three clusters. F value = $5.667 > F(2, 233)$ ($\alpha=0.05$), the P -value = 0.004 , so we can judge that the average satisfaction level of three clusters would be the same in general.

Then, went through the Scheffe method, we can also find the average satisfaction of Maverick would be the same as Artist. The average satisfaction of Maverick and Conventionalist are significant different. The average satisfaction of Maverick is greater than Conventionalist. P -value = 0.006 .

4.9 Three clusters to repurchase intention (intention to re-bid)

After ANOVA was run to estimate the relationship between clusters and repurchase intention, we can find that repurchase intention would be different by the three clusters. F value = $4.041 > F(2, 233)$ ($\alpha=0.05$), the P -value = 0.019 , so we can judge that the average of the intention of re-bid of three clusters would not be the same in aggregate.

After went through the Scheffe method, we can also find the average intention of re-bid to Maverick would be the same as Artist. The average intention of Maverick and Conventionalist are significant different. The average of intention repurchase of Maverick is also greater than Conventionalist. P -value = 0.006 .

Chapter 5 Discussions and Conclusions

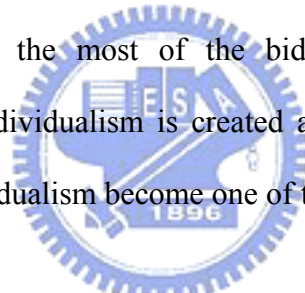
5.1 Major Findings and Conclusions

After analyzed the data, three clusters were established to distinguish customers who fell into winner's curse. The Five-factor Model still maintains five factors, but canceled the factor "Neuroticism" and added another factor "Individualism" to adjust it. A man with high Individualism means "He would rather go his own way than be a leader of others." Now the result of data analysis was used to explain the findings in this paper.

5.1.1 Main role in winner's curse

1. In the effective samples, the number in low Conscientiousness is greater than the number in high: That means the most of the bidders in winner's curse have a low Conscientiousness. The content of Conscientiousness has been discussed in Chapter 2. The individual in high Conscientiousness is deliberation, cautiousness and careful consideration of consequences of their actions, so the result does not surprise us. The bidder has high Conscientiousness means she does the auction by heart and prepare well before her action.
2. In the effective samples, the number in low Extraversion is greater than the number in high: That means the most of the bidders in winner's curse have a low Extraversion. The characteristics of the high score can be described as "optimistic", "sociable", "fun-loving" and so forth. Lin in 2001 indicated that the winner's curse is like a shadow following the optimist. In this study, the cursed bidders have high score in Extraversion is less than the bidders have low score. The optimistic bidders have positive affectivity may result in satisfaction with target when they won the bid.

3. In to the effective samples, the number in high Agreeableness is greater than the number in low: That means the most of the bidders in winner's curse have a high Agreeableness. According to the content of Agreeableness, the bidder in low Agreeableness is used to competitive, so the low Agreeableness may not fall into winner's curse so easily like the ones in high Agreeableness.
4. In the effective samples, the number in high Openness to Experience is greater than the number in low: That means the most of the bidders in winner's curse have a high Openness to Experience. The auction is seen like a confliction, and the people have high Openness to Experience is supposed to deal confliction well than the people in low score (Moberg, 2001). Surprising, the result we get here is converse.
5. In the effective samples, the number in low Individualism is greater than the number in high: That means the most of the bidders in winner's curse have a low Individualism. The Individualism is created after the data analysis. Interesting, the people with low Individualism become one of the main roles in winner's curse.



5.1.2 Five factors V.S. After-bid Satisfaction and Intention of Re-bid

According to the result from data analysis, in general the different personality factors would influence their attitude in satisfaction with the website and e-auction channel. "Conscientiousness" has significant effect than other factors in satisfaction, and four resting factors cannot directly affect satisfaction. Conscientiousness between satisfaction exist positive relative.

High Conscientiousness would get more satisfaction than low Conscientiousness. I think that the bidder hardly felt good after the curse but there have positive relative in satisfaction. That is a good sign for website management because they will not blame you by bad experience. A positive relationship means they are not satisfied with your

website or e-auction channel because of their mental or money lose. Noticeably, the explanation power of Conscientiousness in satisfaction is low, although it is significant in statistics analysis.

The result also shows that the different personality factors would affect their intention of re-bid, or we can say repurchase. That means bidder in different level of trait will

5.1.3 Three clusters V.S. After-bid Satisfaction and Intention of Re-bid

According to the outcome of data analysis, the different clusters would influence their attitude in satisfaction with the auction websites and e-auction. The Conventionalist and Artist have similar tendency except Openness to Experience, and both of them have the same satisfaction with e-auctions website and e-auction channel. Conventionalist and Maverick have significant different in satisfaction, and satisfaction of Maverick is greater than Conventionalist. It is not very amazing because the characteristics of Conventionalist and Maverick are all converse in five factors. They should have different view and feeling in opinion all the time. Artist and Maverick show the same satisfaction.

Based on the result, we can also find that in cursed bidders in the different clusters would influence their intention of re-bid. The result is the same in satisfaction and intention of re-bid. Artist and Maverick have the similar intention of re-bid. Conventionalist and Artist have the similar intention of re-bid. The significant different still exist between Conventionalist and Maverick, and they are definitely opposite to each other in personality traits.

5.2 Limitations and Recommendations

The Five-factor Model adopted in this study has a fine applicability. However, there are still scholars question why personality differences can be reduced or extracted into only just five traits, and they wonder how broad the five dimensions can represent personality in abstraction. The personality also changes by the growth of age, so the same simple could be receivable different answers and results if all of them do the test again. To measure personality, the NEO-PI-R is a systematic assessment but it has 240 items in the test. Application of NEO-PI-R will be more ideal and reliable, but there are 240 items in NEO-PI-R and administration time exceed 35 minutes. To avoid consumers distraction and increase the return of the questionnaire, the NEO-PI-R's shorter version that has 60 items in the test and takes 10 to 15 minutes is still adopted to assess personality in this study, although the NEO-PI-R's shorter version is not as valid as NEO-PI-R.

Furthermore, Neuroticism Facets was erased after the data analysis. If individual is in a high Neuroticism, we can say she is have tendency in anxiety, depression, impulsiveness and so on. Neuroticism facets are going to be intangible because people rarely admit they are gloomy, alone, worried in Taiwan sociality. When Taiwanese respondents meet such question like, "I am not a worrier", they tend to give a neutral answer during the test. It is not very surprised if we know Taiwanese seldom to ask a remedy for their mental problems. In this situation, to study about the influence of Neuroticism to winner's curse is difficult but needed.

There are too many students sample in this study, so the final bid price become low. Maybe the start bid or the final bid could influence the probability of consumers in curse. I mean the probability of consumers fall into winner's curse may be higher because higher final bid and start bid. Features of their in curse experience were queried

include the final price, the characteristics of the target, and their next bid strategy. Author thinks single feature of in curse experience could be a very good direction for future researches.

The researches addressed the explanation of why consumers fall into winner's curse always turns to the competitive auction setting. They thought the competitive is the main reason to cause winner's curse. The setting of on line auction in Taiwan is not so competitive as we image because bidders do not think their competitive needed to notice at their next auction. Most of the bidders still think that their information about the item and relative items is not enough before the end of the auction. The information collection should have much influence to bidders in giving the bid; moreover, poor information collection conducts the bidders in curse.

The way to judge a bidder in curse or not in curse is still questioned. In oil leases market, you can decide a bidder in curse or not in curse by the amount of oil could be mined for. Items we got from website could just for personal use. That means oil leases could be measured by objective mining value, but others could not measure what the bidder bought from auctioneer but only the user. The former researches survey the winner's curse that is used the objective price, so they can only know the condition in whole new goods. In this study, judge a bidder in curse or not in curse determines by subjective concept by the bidders. How to understand the subjective concept of consumers is not easy job because there are still some consumers do not admit their misses and would not answer the question truly. It is hard to acquire effective sample. If the effective samples could be bigger, the result would be more reliable and accurate. This paper tried to understand and judge a bidder is in curse or not in curse by questionnaire. There must be controversial but it could not avoided because the way to conduct this study is new and original.

The personality is the main point in this paper, but there is no denying that

personality is just one of the roles play in this auction game. There are still a lot of reasons need to be discussed to understand what make winner's curse happen.

Although the industry of Internet experienced the slump, we all see that e-commerce is growing constantly. Dozens of researches in exploring online consumers are published, but the online consumers are still unfamiliar to us now. To manage increasing online consumers, the researches about understand them are in urgent need. Here, author is also looking forward to development of a completely theory for online consumers.

