

Behind the thriving scene of the Chinese art market

-- A research into major market trends at Chinese art market, 2006- 2011

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Abstract

Since 2006, the Chinese art market has amazed the world with an unprecedented growth rate. Due to its recent emergence and disparity from the Western art market, it remains an indispensable yet unfamiliar subject for the art world. This study penetrates through the thriving scene of the Chinese art market, fills part of the gap by presenting an in-depth analysis of its market structure, and depicts the route of development during 2006-2011, the booming period of the Chinese art market.

As one of the most important and largest emerging art markets, what are the key trends in the Chinese art market from 2006 to 2011? This question serves as the main research question that guides throughout the research. To answer this question, research at three levels is unfolded, with regards to the functioning of the Chinese art market, the geographical shift from west to east, and the market performance of contemporary Chinese art. As the most vibrant art category, Contemporary Chinese art is chosen as the focal art sector in the empirical part since its transaction cover both the Western and Eastern art market and it really took off at secondary art market since 2005, in line with the booming period of the Chinese art market.

To fulfill the research purpose, an original data-set with 3750 sales records of paintings and prints is created containing 17 top contemporary Chinese artists auctioned within the research period is constructed. In the main data-set, 107 paintings are quickly resold form a sub-data-set. Empirical evidence shows that the transaction center of contemporary Chinese art is shifting back east, and that speculation is an important driver of the market, which consequently leads to a highly volatile market that fails to generate promising financial return.

Key words: the Chinese art market, contemporary Chinese art, art investment, auction, speculation.

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I. Introduction

There is a conventional belief among Chinese collectors that during troubled times, gold is the best collection; while in prosperous time, fine art is the most rewarding investment¹. It's undeniable that one of the most important phenomena in global art market in the first decade of 21th century is the rise of the Chinese art market. Dating back to China in the 1980s, accompanied with economic reform and the Open Door policy, art trade was eventually liberalized though the art market infrastructure was considerably incomplete. The talent of young Chinese artists was soon recognized worldwide. Since 2005, the earliest generation of Chinese contemporists started to fetch high prices at auctions in the global art scene. On the other hand, the art market infrastructure in China starts to grow in the early 1980s and soon entered into an accelerated growing period in early 21th century. Chinese buyers are witnessed to bid for art of all categories, mostly Chinese artworks, in auction rooms worldwide. With the accelerated globalization of art market and the expansion of Asian art markets, global art market today is becoming increasingly polycentric.

As the market's passion for contemporary Chinese art has started to cool down recently, it's now the high time to conclude and investigate its performance during the booming decade. Although the art market is known to be intrinsically uncertain and unregulated, the Western market has been functioning for centuries and has formed distinct market structure and rules. However, the recently joined emerging markets are still at a preliminary stage. Though the market structure developed in Western art market can be found in the Chinese art market as well, it has displayed distinctive characteristics in various aspects². Moreover, the development of the Chinese art market in a relatively short period and the cultural disparity between east and west have formed great obstacles for the art world to understand the underlying features of this emerging art market.

¹ The original saying is in Chinese: luanshi huangjin, shengshi shuhua (in Chinese pinyin), and it's translated by the author.

² See chapter II.

The explosive media reports on skyrocketing prices at local auction houses and the phenomenal growth of the art market scale of China depicts only one side of the Chinese art market. This thesis seeks to give an insight into the market trends at a burgeoning period and reveal the underlying reasons that lead this regional market to its current status. As a result, a research question is formed to guide the research: ***What're the key market trends in the Chinese art market from 2006 to 2011?*** To answer this question in details, some sub-questions at three levels are developed: the Chinese art market, Eastern vs. Western art market, and the market performance of contemporary Chinese art.

1. What's the relationship between art market and broader economy in China?
2. In what ways does the Chinese art market differ from Western art market?
3. Regarding contemporary Chinese art at secondary market worldwide, is there a geographical transition of transaction from West to East?
4. To what extent is speculation present in investing contemporary Chinese art?

The remainder of this thesis runs as follows. In chapter 2, the structure of art market, how it functions and some highlights on art market from the perspective of cultural economists will be displayed. In chapter three, the newly formed Chinese art market will be explored in full detail. Its development route since 1908s is shown in section 3.2. The primary art market (section 3.3) is also introduced though the secondary Chinese art market (section 3.4) remains the focal point. Various sectors of fine art in the Chinese art market are listed in section 3.4.2. Among the many art categories, contemporary Chinese has showcased eye-catching performance both outside and within China. In section 3.4.3, key buyers both form local and abroad are introduced. Key to the development of the Chinese art market, the general context (section 3.5) including macro-economic environment, regulation, taxation, transaction centers and underlying problems is an indispensable aspect to understand the working patterns of the Chinese art market. In the part of empirical analysis (chapter 4), a main data-set (section 4.2) of top 17 contemporary Chinese artists and a sub-sample (section 4.3) of

speculative bids are constructed to analyze the market trends of contemporary Chinese art sold in global secondary art market. The general conclusion is addressed in chapter 5, followed by contribution, limitation of this study, and some suggestions for future research (chapter 6).

II. Theoretical framework - the art market

2.1. Art market structure

Composed of a diverse range of art categories and stretched out to all continents around the world, “the art market” contains in reality a plural connotation. Due to the fact that artworks are essentially heterogeneous, the market settings and players involved vary accordingly. For instance, it can be classified into local, regional, and international levels or by art categories (Robertson, 2005). As a result, cultural economists have drawn up market segmentation in order to approach this subject more accurately. Though there is more than one way of market segmentation, the most prevailing one, composed of primary and secondary submarkets, has been most commonly acknowledged and extensively applied in studies of this field (Heilbrun and Gray, 2001; Towse, 2010; Velthuis, 2003).

In other cases, the market has been further divided into three subsections. According to Singer and Lynch (1994), the primary market is where artists sell the pieces to collectors and dealers; the secondary market is where the artworks are sold from the dealers, i.e. the dealer market; and the third market is where auction houses distribute the artworks to collectors and dealers, i.e. the auction market. In effect, there exists no substantial difference between these two ways of segmentation. Only Singer and Lynch (1994) have separated the dealer market from the auction market. In this thesis, the market structure composed of primary and secondary market will be used since it is more pervasively applied by researchers in this field. Based on different criteria and focus, the market could be divided in other means including the organized and unorganized, high-end and low-end, and market segmentation based on characteristics of art objects or geographical location.

2.2. Primary and secondary market

Generally, art markets can be sliced into two layers: the primary market and the secondary market (Heilbrun and Gray, 2001; Towse, 2010; Velthuis, 2003). On the primary market, the first sale of artworks takes place. Towse (2010) goes further by

restricting that it is where only artworks created by living artists sold for the first time. In the sphere of secondary market, artworks are sold at least for a second time.

In the primary market where the very first transaction of artworks takes place, they're sold either directly from the artists themselves or through an intermediary such as galleries or art dealers (Velthuis, 2003). This market segment is characterized by excess supply and relatively low prices, compared to the secondary market (Towse, 2003). Purchase of art in the primary market is often accompanied with high risk because a large proportion of works are created by young and unknown artists, the information is incomplete and the transaction costs are unpredictable (Heilbrun and Gray, 2003).

The secondary market comprises auction houses and dealers operating internationally on one end, and private dealers, business organizations, art museums, and galleries on the other, among which the auction plays the vital role in this market sphere. Transaction takes place in the form of auction or by a private dealer. Unlike the primary market, supply on the secondary market is often in fixed quantity and are more likely to end up in higher prices (Towse, 2010). In addition, more information about the artworks is available and the information cost is relatively low nowadays (Heilbrun and Gray, 2003).

Though the secondary market accounts for the higher end, the primary market outweighs the secondary market in terms of quantity. It's been estimated that only one in four transactions happens in the realm of secondary market and three quarters in the primary market (Towse, 2010). Based on this fact, we can further deter that only a small fraction, possibly less than one third, of the art objects sold on the primary market would have a chance reappear in the second sphere (Velthuis, 2003). However, only a scanty number of studies (Rengers and Velthuis, 2002; Wang, 2009) have been done in the primary market. The major academic focus has been placed on the secondary market, auction in particular (Towse, 2010; Velthuis, 2003). The difficulty

of acquiring reliable data on the primary market is the major cause of this phenomenon. There exists no system of publishing sales records in galleries. Even if the data is acquired after all, its trustworthiness is still doubtful (Rengers and Velthuis, 2002).

2.3. Main players

In essence, the functioning of art world can be broken down to the performances of various sorts of players whose interaction with each other strongly influences the mechanism of art market and the value of art. Therefore, it's of vital importance for us to give an insight into the behavior of these players at the marketplace from an economic perspective. Due to the scope of this paper, only a limited number of art market participants are selected, ranging from the artists who are the producer of artworks; dealer and gallery, and auction houses functioning as the distribution channel at the marketplace; collector, investor and speculator, and museum who dominate the demand end.

a. Artists

It seems that the role of artist has been largely neglected in literature on art market, though they're the original suppliers without whom the market has no chance to exist. In effect, artists have limited power on market functioning, or even on the pricing structure of their own works. Few artists could survive through solely relying on the profitability of their artworks and turn to a multiple job holding strategy. Moreover, even fewer of them could make up to the group of "artists as celebrity".

Contemporary artists are often represented by galleries without wiring up a standard, legally binding contract since in reality, complete terms couldn't be included in a contract. Though some artists sell directly to customers in their studios, more of them tend to choose an intermediary because they lack the business skills and knowledge of art dealers (Caves, 2003). There are, however, exceptional cases in which artists such as Damien Hirst, Takashi Murakami, are willing to and able to cross the boundary and

work as artist-entrepreneurs.

b. Dealers and gallery

In sharp contrast to auction market, dealers and gallery are more flexible market units that mediate supply and demand in art trade, mostly operating individually and on a small scale. Highly concentrated on particular art categories such as contemporary art or Oriental art, their business could be classified into small to medium enterprises. However, the total size of this part cannot be neglected, which reached around € 23.2 billion sales, 55% of the global art market in 2008 (TEFAF, 2010). At the upper end of this business, dealers' major customers are usually a fixed and small group of affluent buyers and their connection based upon solid loyalty in a long time; while at the lower end, dealers serve to unfixed and anonymous group of casual buyers, buying for decorative reasons or as a tourist souvenir. Under all circumstances, dealers attribute their profit to information asymmetries in terms of the value of the artwork, the willingness to pay on the demand side and the resources for sale on the supply side (Velthuis, 2011). Admittedly, it's rather difficult to obtain the exact number of dealers active on this market, and the transaction records usually unavailable. These features have deterred researchers from further exploring the functioning of this market segment.

Stemming from the Dutch and Flemish dealers in late 16th century, dealers in the modern time tend to behave like entrepreneurs, characterized by self-promotion and innovation (Chong, 2005). In the pre-modern era, dealers occasionally employed artists while in current art market, dealers make direct acquisition or sell works on consignment by artists. Direct acquisition takes place more often on the secondary market and consignment is most commonly practiced by galleries and contemporary artists today. Equipped with considerable amount of resources, information and knowledge, dealers and galleries function as "gatekeepers" of the art market through selecting young artists and influencing buyers' taste. Tied up with the long-term career development of the artist, galleries often strive to build a firm market and

consistent price structure for an artist's work so as to reach a win-win result for both parties (Velthuis, 2003). Situated in the rapidly changing global art market, dealers start to operate internationally, to take part in art fairs and make use of online sales channel (TEFAF, 2010).

c. Auction houses

Often looked up as the weather-vane of the art market, auction houses hold a considerable higher end and keeps giving rise to sky-rocketing prices that constantly reported on media. Besides, it also serves as the most extensively studied subject of art market because of the abundant and publicly available data. In this thesis, the auction market is also the main focus. The art market has been dominated by a few auction houses for long, among those the duo-poly of Christie's and Sotheby's has been the most influential (Towse, 2010).

Public auctions either directly determine the price of the most important artworks circulating on the market, or in an indirect way via offering references to art dealers and galleries. The most commonly adopted auction procedure is the English auction where prices ascend in open bidding while other alternative ways such as the Dutch auction structure starts from the highest price downwards. The English auction starts low and ends up at a "hammer price", which is just part of the final price, consisting further of the "buyer's premium" and "seller's commission". Some items have a secret reserve price, if not reached, these artworks would be "bought in" (Ashenfelter, 2003). It has been proven by some studies that the value of these "bought in" objects could be affected in future reappearances on the auction.

Along with the rise of emerging art markets, some new auction houses from these regions have appeared in the art scene. Since 2006, the Chinese auction market started to expand at an accelerated speed and ascended to the largest marketplace in terms of auction revenue in 2010. Of course, this phenomenon will be elaborated in following sections. Another change is the growth of online auctioneering since mid-1990s.

However, there's no prove that online auction would threat the market share of brick-and-mortar auction houses. Up to date, online auctioneering has accounted for the lower end of the market (Robertson, 2005).

d. Collector, investor and speculator

Regarding their motives and goals to start buying art, art buyers could be classified into collectors, investors and speculators. In practice, these three types of art buyers differ from each other distinctively in both their choice of artworks, and their attitude towards risk and return on art. Besides, it's also viable to classify art buyers into individual buyers, corporate buyers and public buyers. However, in order to give an insight of buyers' impact on the market mechanism, the previous approach is selected. The following section focuses primarily on their function in the market, and how does their behavior influence the workings of art markets.

Collector

The behavior of collecting art, is triggered by strong passion for art, by the selfish desire to own things to themselves, by the altruistic desire to own them for others, and the relatively crude desire to stop others owning them (Goodwin, 2008). After all, they're driven by the love for art instead of profit seeking goals, the guiding principle held by the "pure collectors". Collectors, mostly private collectors, play an important role on the art markets and they hold a dominant position. Through vertical collection, or in other words collection of a significant amount of some artists' work, a collector can build up his own reputation, control the demand of this artist's work on the market and even influence the career of the artist. What's more, the collectors' strong impact can also be found in the way art is exhibited to the public and what kind of art is produced by artists. Dating back to the 19th century, museums founded at that time were based on donations from private collectors (Chong, 2005).

It has been observed that the contemporary art collectors commonly have a thirst for information and competition. Not content with the secondary information provided by

art dealers, collectors actively attend international art fairs and subscribe to art market publications. Hence, major collectors are often well-informed about the market trend and knowledgeable about their special field of interest (Grampp, 1989). In the meanwhile, they seek to differentiate themselves from each other and result in the various ways that they manage their collection, among which are donation to museum, resale it on the market or building exhibition facilities to display it (Jeffri, 2003).

Today, the impact of art collectors has grown even much larger. In a survey of TEFAF's 2009 art market report, it has been revealed that art collectors are usually well-educated, successful professionals whose professional lives offer them a great deal of international travel, through which their interests in emerging art markets were spurred. Moreover, although they attribute their habit of collection to "aesthetic, decorative, intellectual or historical reasons", most of them have acknowledged the promising monetary value of art as a long-term investment (McAndrew, 2010).

Investor

In effect, the boundary line between collector and investor is blurring. Instead of viewing them as two separate market participants, it's more realistic to consider them as two compatible sides of one individual. Even the conventional "pure collectors" couldn't deny the fact that art could yield considerable profit (McAndrew, 2010). From investors' perspective, art is a financial vehicle next to other assets, which "can be bought at one price, sold later at another, and meanwhile can be enjoyed" (Grampp, 1989). However, due to limited knowledge in this field, investors often rely on dealers in the primary and secondary market to receive information (Robertson, 2005). Corporate collecting is one typical type of profit oriented and risk-averse art investors.

Art has been increasingly selected as a diverse means in investment portfolios because it generates considerable return in the long run and diversifying the risk of investors' portfolio. Nonetheless, some factors, such as information asymmetry, high transaction costs, low liquidity and long holding periods, are deterring art from developing into a

solid investment vehicle. This trend is also discernible in the academic field. Since the 1970s, accumulating studies have been centered on the returns to art investment (Goodwin, 2008).

Speculator

Driven by the goal of profit maximization, speculators enjoy taking risks and don't derive any psychic return from owning art pieces. Therefore, speculators are prone to contemporary art, especially the progressive tendencies in contemporary art, whose price highly volatile and aesthetic value uncertain. Typical speculators are bankers and businessman who combine rational calculation in purchasing art. Their guiding principle is "buy low and sell high, and buy enough paintings to be able to influence the market" (Moulin, 1987).

Nonetheless, in the face of increasing unpredictable financial risk, transaction cost, taxation, or unforeseen restrictions on art trade, change in taste, pure speculators would likely to retreat from the art markets and shift to other more profitable financial markets. In contrast, the pure collectors are invariant to these shifts in the terms of trade and would hold on to collecting art. When the number of pure collectors outweighs speculators, the equilibrium financial return would be lower and psychic return hold a larger part in total return. However, if the speculators dominate the market, the equilibrium financial return would be so high as in the other financial markets and the percentage of psychic return drops (Frey and Eichenberger, 2003).

e. Museums

On the art market, museums form one particular type of buyers who acquire artworks to enrich their collection. Therefore, they have to compete against other wealthy individuals and their purchase often subject to severe constraints. Once acquired by a museum, or by other prestigious collections, the artwork is granted with the highest approval for its artistic quality and the monetary value of the artists' entire oeuvre would likely to increase accordingly (Velthuis, 2005). In reality, public museums'

participation at auction would lead to above-average hammer prices since museums usually target at the high-quality objects, hence with higher prices, and their demand inelastic (Pommerehne and Feld, 1997). In this respect, museums are influential gatekeepers whose purchase would likely to give rise to new fashion and taste.

However, museums also have the potential to act as suppliers, in very rare case though. Museums contain a substantial stock of artworks, a large proportion of them seldom seen by the public. It's estimated that in most countries (except U.S.), only a quarter or half of the publicly owned art is ever displayed to the public. In time of financial crisis and subsidy cuts, it might be a solution for museums to sell or loan some of the unwanted public-sector art. In practice, this approach still remains controversial and has encountered great opposition (Goodwin, 2008).

2.4. Determinants of art price

From the record prices generated by van Gogh, Picasso and Renoir to the most recent *Scream*, which fetched over \$119 million, it is the skyrocketing art prices, mostly auction prices, periodically reported on media that keep drawing the public's attention to the art world, which gives rise to their curiosity about the pricing system for art. Like any other commodity, price of art is subject to the interplay between demand and supply. In the art world, art price is the major yardstick to measure the degree of success of artists. Though as an indicator of economic value, art price fails to tell the aesthetic value of art.

In order to comprehend the pricing of art, three types of variables should be considered, among which are physical properties of the art piece, when and where it will be available (Sagot-Duvauroux, 2003). In addition, within the range of physical properties, artist and work-of-art related features have potent impact on the price of art. For instance, artist related features such as nationality, gender, living status, reputation and record of exhibitions; work-of-art related characteristics include the work's condition, size, provenance, subject, and material (Anderson, 1974; Frey and

Pommerehne, 1989; Sagot-Duvaurox, 2003). Some empirical studies (Velthuis and Rengers, 2001; Reiting, 1961 & 1970) further indicate that among all those features, size is more important than other features, which is valid especially in the lower end of artworks. Notably, the name of the artist and authenticity of the piece are the major predictors of the value of artwork. Even the same piece, its value could fluctuate in different time and places. Firstly, art prices at auction are relatively higher than those sold in gallery. Secondly, the prices of art sold in different cities, such as New York, London and Hong Kong, fail to obey the rule of one price. Empirical evidence has found that art prices differ systematically in different auction houses and geographical locations (Ashenfelter and Graddy, 2003). In spite of these general principles embedded in the pricing of art, the extent to which these variables predict the price remains unclear.

2.5. Art as investment

2.5.1. Empirical studies on art investment

Ever since the seminal academic contribution by Anderson (1974), *Paintings as an investment*, scores of studies on this subject have been carried out over the past decades. Attributed to these studies, art as investment is now one of the most extensively studied subject within the realm of cultural economics.

According to Frey and Eichenberger (2003), these studies commonly have the following three goals when assessing the financial returns on art objects. Firstly, to view the art market as another financial market so that it can be compared to alternative financial investment. Secondly, art market provides the researchers with a new area to apply technical virtuosity. In fact, Blaug (2001) has directly pointed out that the reason why art market has been so extensively studied is because the ample data accessible and the possibility to apply econometric tools. Thirdly, the economists' personal involvement in art triggered their research interest into this field³.

³ Cultural economists such as Lionel (Lord) Robbins, Alan Peacock, and David Thorsby have participated actively in art administrations (Towse, 1997).

Shortly after Anderson's (1974) pioneering work, other early studies include Stein (1977) and Butler (1979). Another fundamental work in this field was done by Baumol (1986) which started the recent wave of studies on this subject, starting from the great boom of art market in the late 1990s. This study was further reexamined by Buelens and Ginsburgh (1992). While a large part of these studies explored art objects' profitability over a certain period disregarding the origins of the artworks (Frey and Pommerehne, 1989; Goetzmann, 1993; Beggs and Graddy, 2008), other studies turn to explore the financial returns of paintings from different countries in a particular period, for instance, Buelens and Ginsburgh divide the general data-set into four sub-datasets: British, Dutch, Italian schools and French impressionists in four time periods (Buelens and Ginsburgh, 1992; Mok. et al., 1993; Agnello and Pierce, 1996; Higgs and Worthington, 2005). While the growth of art literature since Baumol's (1986) goes hand in hand with the boom of art market since late 80s, the current growing focus on regional art markets corresponds to the development of regional art markets. Studies of the latter sort will be of special importance to this research.

No matter how the existent studies differ from each other in terms of period or region researched, they generally come to the conclusion that art as investment underperforms the traditional financial assets and art only scores high when aesthetic return is taken into account (Anderson, 1974; Stein, 1977; Baumol, 1986; Goetzmann, 1993). What's more, the art market correlates with the financial market and the monetary values of paintings are not secure during economic recessions (Stein, 1977; Goetzmann, 1993; Mei and Moses, 2002). In addition, Chanel (1996) showed that with a lag of about one year, art and financial markets have a strong link. Therefore, not only is art a less lucrative asset, but also a less good choice to be included in a diversified financial portfolio. This section will display an in-depth introduction to the findings of the existent studies.

Anderson's (1974) seminal research used a combination of data from Mayer (1971)

and Reitlinger (1961, 1970). When examining the influence of painting characteristics on prices, he found that only several variables are significant; among those are time, size, and artist repute. The rate of price appreciation was 3.3% per year. He further used the repeat-sales method to calculate the rate of return for five year intervals from 1780 to 1970 for the entire sample and for various schools and arrived at a mean nominal return of 4.9%. Anderson (1974) thus concluded that when adjusted for risk, paintings are not attractive investment means. Stein (1977) used auction records of paintings by painters who have died before 1946 and constructed annual price indices for the United States and Britain markets. His findings showed that paintings is not a more attractive asset than other traditional financial means, moreover, paintings' values are not secure during economic recessions which made a less wise choice to diversify one's financial portfolios.

After several years' pause, cultural economists' interest in the financial return on art objects was stimulated again by Baumol's (1986) *Unnatural Value: Or art investment as floating crap game*. Based on Reitlinger's data-set, Baumol (1986) adopted the repeat sales regression. After eliminating multiple sales with a time interval of less than 20 years, Baumol constructed a dataset of 640 transactions between 1652 and 1961. The research reached at an annual compounded rate of return of 0.55% in real terms, and the median return is 0.85%, though slightly higher still stands far lower than returns on British government security. Baumol also stressed that art prices are rather unnatural in the classical sense and float aimlessly. Rather pessimistic about art as an investment, Baumol even claimed that no prediction would help investors to gain more profit from art.

Among all the successive studies after Baumol's (1986), Buelens and Ginsburgh (1992) showed a strong tie with it for they literally revisited Baumol's (1986) original research. They extended the dataset by including all resales and those sales pairs separated by at least 20years. Their results turned out to be 0.65% for all resales, and 0.87% for the sub-set of paintings resold after 20 years. Though somewhat higher

than Baumol's 0.55%, their findings stand in line with each other. Buelens and Ginsburgh proceeded deeper into sub-groups of four schools during four different periods. They found that art objects' performance as investment vary significantly per school and period. For some art schools during particular periods, they could yield compatible returns against bonds. Baumol's (1986) 0.55% rate of return was largely affected by English paintings, which accounted for fifty per cent of the data-set. Their findings testified that art could be attractive investment means at particular times which undermines Baumol's (1986) assertive claim. In spite of calculating financial returns on paintings, Buelens and Ginsburgh's (1992) extended data-set also allow them to test the taste hypothesis indirectly.

Frey and Pommerehen (1989) improved the limitations embedded in the previous studies Anderson (1974), Stein (1977) and Baumol (1986) by extending the data period to 1987, covering more countries, taking into account the transaction costs. They applied a repeat-sale method, and came to the same conclusion as their predecessors that art is not a lucrative investment. In addition, they discovered that art turns more profitable in the postwar years, compared with the period 1650-1949.

Similar to Anderson (1974) and Baumol (1986), Goetzmann (1993) referred to the transaction records in Reitlinger (1961, 1963, 1971) and Mayer's *International Auction Records* with detailed information (various years: 1971-1987). Goetzmann (1993) constructed an annual index from 1720 to 1990 and discovered three bull markets in art, 1780-1820, 1840-1870 and 1940-1986, as well as three bear markets, 1830-1840, 1880-1900 and 1930-1940. The annual nominal return is estimated to be 3.2%. However, art remains a risky investment and the art market correlates with the stocks. Therefore, art appears to be a less attractive investment means, even only to diversify the investment portfolios.

Unlike previous studies' reliance on Reitlinger's data source, Mei and Moses (2002) constructed a large repeat sale data-set, based on data from New York Public Library

and Watson Library at the Metropolitan Museum of Art, and analyzed the annual index for American, Old Master, Impressionist and Modern paintings. Mei and Moses (2002) discovered that art outperforms some fixed-return securities while underperforms stocks. They further verified the underperformance of masterpieces and the possible violation of the “law of one price” (Mei and Moses, 2002).

Beggs and Graddy (2008) apply a combined data-set to research the “burned” effect. They used Ashenfelter and Richardson’s Impressionist and Modern Art data-set, Art Index (www.artindex.com) and Mei and Moses art index. The study found that failure between two successful sales would significantly lower the paintings’ future return (Beggs and Graddy, 2008).

Along with the expansion of the global art market and surge of local art market, some studies have been recently conducted to analyze the financial return in these regional markets. These studies are of special relevance to this research. In effect, the early study of Buelens and Ginsburgh (1992) has contributed to this area by analyzing the price movements of four art schools, defined by the origin of the paintings, in four time intervals. More recently, to fill the gap of art literature on Australian artworks, Higgs and Worthington (2005) adopted a hedonic approach to construct an annual price index for the Australian art market. Their data-set composed of auction records of 37605 paintings by sixty well-known Australian artists during 1973-2003. How to define who these “well-known” Australian artists are is actually based on the discussion between the researchers and art auctioneers, curators and dealer. The criterion of data construction is obviously subjective and they try to compose an extensive list of Australian artists whose works are most sought after on the market and who spend most of the time living in Australia. They found that the 6.96% average return on Australian art and a 16.51% standard deviation stands in line with the risk and return in other international art markets.

Existing empirical studies on the rate of return of art objects have been centered on

the Western art. This gap of study on rate of return of art outside the Western world has been filled by the study conducted by Mok et al. (1993) from Chinese University of Hong Kong, whose research examined the rate of return of modern Chinese paintings. Based on auction records from Sotheby's and Christie's, they constructed a data-set of only 20 Modern Chinese paintings that have been auctioned twice during 1980-90. The small scale of the sample is because the rather short auction history of Modern Chinese paintings. The annualized rate of return on Modern Chinese paintings was 0.529, higher than the market portfolios in Hong Kong and Singapore, while still underperforms Taiwan. When adjusted for risk, the rate of return drops to 0.7368, lower than any of the regional portfolios. Given the risk of art investment, it still underperforms the financial return of traditional asset portfolios in Singapore, Hong Kong and Taiwan during the period of 1980 to 1990. In this respect, their findings appear to be consistent with those of their peers focused on Western art. Moreover, the paintings resold quickly within two years yield a -0.076% return.

2.5.2. Methodology

With abundant number of previous studies in this field, various measurement methodologies have been developed and tested. Dating back to the seminal study of Anderson (1974), a hedonic price index was constructed and the repeat-sale regression was used to calculate annual appreciation of paintings. Notwithstanding other inventive methods such as naïve art index method and hybrid model, until now, these two methods are mostly chosen and commonly acknowledged, hedonic regression model and repeat-sales model. Their functions, as well as benefit and drawback will be demonstrated in the following part.

a. Hedonic regression

The hedonic approach is often used to examine price determinants, efficiency of the market and buyers' behavior (Frey and Eichenberger, 2003). In a hedonic framework, all sales are viewed as single transaction and the art objects' features are recorded (Higgs and Worthington, 2005). The hedonic method was initially developed for

housing because real estates are all heterogeneous commodities and their prices are directly influenced by their own characteristics (Chanel and Ginsburgh, 1995). It was then introduced to study the art market by Anderson (1974), followed by Stein (1977), Goetzmann (1993), Frey and Pommerehne (1989), Higgs and Worthington (2005).

Without doubt, a clear advantage of hedonic regression against repeat-sale is its more extensive coverage of sales records. All auction records are included no matter how many times the same object has been auctioned (Chanel and Ginsburgh, 1995). As a result, empirical findings based on hedonic model would be more representative, by the same token, the hedonic model would construct a more solid foundation for research on financial return and the efficiency of art market (Chanel and Ginsburgh, 1995). On the other hand, a shortcoming of this method is the unavailability of data since hedonic method requires a higher standard on data selection. It was partially due to the difficulty of obtaining data with detailed information on specific features of artworks that some researchers turned to the repeat-sale regression.

b. Repeat-sale regression

Earlier known as “double sale method”, the repeat sales approach requires that the paintings have to be sold at least twice during a time interval (Frey and Eichenberger, 2003). This method has been adopted by Anderson (1974), Baumol (1986), Goetzmann (1993), Mei and Moses (2002) Mok. et al. (1993) to follow the changes of value in resold paintings (Higgs and Worthington, 2005). Similar to the hedonic approach, repeat-sales method was originally applied to calculate the financial returns on real-estate. It was introduced into the art market by Anderson (1974).

The benefit of repeat-sales method is that it is based upon gross investor returns and price pairs of the same painting, therefore and is invariant to the arbitrary specifications of a hedonic model (Goetzmann, 1993; Mei and Moses, 2002). Whereas compared to the hedonic method, the drawback of repeat-sale is obvious since it eliminates the records of paintings sold once (Goetzmann, 1993). What's

more, since repeat-sales method only compiles data of paintings which have been auctioned for several times, it might lead to a biased result. Therefore, Goetzmann (1993) suggested that the annual return calculated by repeat-sale regression should be considered only as appropriate, or the upper bound of the real average return.

2.5.3. Limitations and shortcomings

Notwithstanding the abundant amount of existing studies on art as investment and the efforts of researchers to improve the methodology, studies on art market are beset with several problems. The following section will give an insight into these difficulties and possible solutions.

a. Data

Entangled with the problem of lack of continuous data, Baumol (1986) once described data on art market as “woefully incomplete and even those that are available art not easy to come by” (Baumol, 1986, p.11). He tried to overcome this obstacle by referring to Reitlinger’s (1961) “extensive compendium of the sales of art works” (Baumol, 1986, p.11) which served as the main data source for various studies in the earlier period (Anderson, 1974; Baumol, 1986; Goetzmann, 1993; Chanel and Ginsburgh, 1993; Frey and Pommerehne, 1989; Buelen and Ginsburgh, 1993). However, Reitlinger’s (1961) subjectivity of data selection would lead to a biased result. The 800 “most known painters of the world”, deceased artists only, are selected by Reitlinger based on auction sales of art works (Frey and Pommerehne, 1989). As a result, the high and low end of the return distribution are undermined because the paintings whose value drop after auction sale would not be included, and the masterpieces end up in museum collections as well (Goetzmann, 1993).

If it were not for the scanty amount of studies on the primary market, it might be taken for granted that empirical studies on art price equal those on auction prices. The auction data are often applied for their reliability and quality. On one hand, auction prices are “publicly available and reliable” (Frey and Eichenberger, 2003, p.165). On

the other hand, the limited availability of data and lack of transparency in the primary market make itself a less appealing research object (Rengers and Velthuis, 2002). Nonetheless, the primary market, composed of gallery sales and direct-from-artists sales, definitely deserves special attention. It accounts for the major amount of total transactions while only one quarter of artworks is sold on auction (Towse, 2010; Sagot-Duvaurox, 2011). Even between two successful auction sales, the artwork could be sold at primary market, and this would pose strong influence on the return obtained by existing studies (Guerzoni, 1994). What's more, the majority of artworks sold in primary market would never appear on secondary market (Rengers and Velthuis, 2002).

Reliance on secondary market data would lead to upwardly biased result. This bias would be exacerbated especially when repeated sales approach is used. Mei and Moses (2002) admitted that their data-set would suffer from a "backward-filled" bias because only paintings sold after 1950 in Christie's and Sotheby's are accepted in their sample. Only if these sales exist in Christie's and Sotheby's records, would their provenance before 1950 be traced. Ashenfelter and Graddy (2003) further argued that through including only price of paintings repeatedly auctioned, paintings of extremely high and low value are excluded. "Paintings that fall drastically in value or are not generally in demand are generally not resold at auction; in addition, paintings that are donated to museums generally do not reappear." (Ashenfelter and Graddy, 2003, p.768) As a result, due to the upward bias owing to the dominance of auction data, the research findings couldn't be generalized to the whole art market.

Not all studies look for data on their own. Some choose to combine existing data-sets and forge them into one according to the particular situation in their research. Due to the inconsistent characteristics of each data-set, such a combination would end up with unexpected biases.

Beggs and Graddy (2008) referred to three sources to construct their repeat sales

data-set in order to test the “burned” effect. Firstly, they looked into Ashenfelter and Richardson’s data-set of Impressionist and Modern Art, where they collected items that have failed at least once and sold at least once. Secondly, they tracked the previous and future sales of these deals on Art Index (www.artprice.com). Thirdly, in order to control for time effects, they supplement their data-set with Mei and Moses’ (2002) subset from 1965 to 2003 including only Impressionist and Modern Art (Beggs and Graddy, 2008). The incompatibility between their dataset and Mei and Moses’ which were initially build for two different research purposes have aroused the major problem in their study. Mei and Moses’ data-set (2002) contains more well-known paintings since it’s initially designed to examine the underperformance of masterpiece effects. Beggs and Graddy (2008) disregard the sales record outside from Christie’s and Sotheby’s which are originally contained in Mei and Moses’ (2002) because the Ashenfelter and Richardson’s data-set only covers Christie’s and Sotheby’s sales. In addition, the different holding period in the two data-sets could also nurture biased result. Furthermore, the intrinsic elements contained in Mei and Moses could bring bias as originally analyzed in Mei and Moses (2002). Though Beggs and Graddy (2008) acknowledged these problems, they assumed that the potential biases head to opposite directions and are thus controllably small. However, considering the immeasurability of these biases, their confidence lacks sufficient proof.

b. Transaction cost and other cost

It’s commonly known that transaction cost accounts for a large proportion in art prices. If we take into account buyer’s premium and sellers’ commission, it would take up to 25% of the value of the object (Ashenfelter and Graddy, 2003). Frey and Eichenberger (2003) reaffirmed it by supplementing that when other costs, such as insurance fee, are included, transaction cost could reach 30%. Therefore, Mei and Moses (2002) even advise that “art may be appropriate for long-term investment only so that the transaction costs can be spread over many years” (Mei and Moses, 2002, p.1666).

In Mei and Moses’ (2002) original dataset, buyers’ commissions are included. When

Beggs and Graddy (2008) applied this as one of their three data sources, they improved it by removing the buyers' commission so as to keep it comparable with two other sources. However, most studies to date have disregarded transaction cost mainly due to the difficulty to get the concrete amount of transaction cost which varies considerably per case. Regarding the quantity of transaction cost, this neglect would cause significant bias (Frey and Eichenberger, 2003). What's more, stocks and bonds, against which art as investment often compared, don't comprise such a high transaction cost (Ashenfelter and Graddy, 2003).

Compared with transaction cost, taxation is even more seriously neglected. Nonetheless, it's extraordinarily difficult for researchers to calculate the effect of taxation because it varies per country and period, and there rarely exists any clear records of the actual taxation occurred (Frey and Eichenberger, 2003). What makes it a tougher issue is the fact that the final location of the painting after purchase remains unclear. Therefore, cultural economists would have difficulty in confirming which country's tax to apply (Frey and Eichenberger, 2003). In spite of transaction cost and taxation, other maintenance cost should not be neglected. Among which insurance, upkeep and display would cost a considerable amount of money (Butler, 1979). Until now, cultural economists fail to find any solution to this issue. It might a solution to compare gross and net sales figures disregarding where and when the transaction takes place, which would bear on an over-evaluation of returns on art (Baumol, 1986). Frey and Pommerehne (1989) suggest that the additional costs would cause a greater bias to rather short holding period, but of less relevance to a longer holding period, for instance 20 years and longer.

c. Comparison to financial assets

Most of the studies compare financial returns on art to those on bonds and stocks, notwithstanding the great differences between art as investment and the other traditional financial assets. The dividend of stock represents the monetary return to investors while art produces psychic returns. These studies generally prove that art

underperforms other financial portfolios and due to its strong correlation with stock market, it may not serve to be an attractive investment to diversify the investors' portfolio (Goetzmann, 1993). Nonetheless, stocks and bonds are homogeneous goods frequently transacted on the financial markets, while real-estate shares more relevance to art since both of them are less liquid heterogeneous commodities and their prices are directly influenced by their own characteristics (Chanel and Ginsburgh, 1995).

d. Psychic return

Various studies have proven that art underperforms stocks and bonds, and the only reason that art still remains an attractive investment is because of its aesthetic value that generates psychic return to its owner (Goetzmann, 1993). Baumol (2007) elaborates on the market of art and other items that offer purchasers not only financial return but also psychic returns. In this case, the art market could reach market equilibrium only if investment in art generates lower financial return. Otherwise, investors would fall over each other to buy paintings instead of stock or bond with the same initial price, holding period and financial return, for the extra psychic return generated by art. Though these studies have neglected concrete means of measurement of this psychic return, three possible solutions have been raised. Firstly, the psychic return could be based upon the rental fees for art objects, though art renting hasn't been promoted to a large extent yet. Secondly, estimate the willingness to pay of the visitors to view arts in museums. Thirdly, calculate the prices paid for copies of originals (Frey and Eichenberger, 2003).

2.6. Art market and broader economy

Amid the current economic climate, the art market has witnessed the expansion of emerging art markets and deepening globalization of art buyers' background. These phenomena have certified again, art follows money. Notwithstanding the scanty amount of studies on the relationship between art market and the broader economy, it has been found that the macro-economic conditions have significant impact on the ebb and flow in the art market. It indicates that analysis of the national and global

state of economy could help to predict the booming period in the art market.

Generally speaking, the more wealth a nation possesses, the more solid its foundation to develop the art market. In a strong economy, supply and demand for art consumption will be triggered due to not only the stronger buying power of buyers and sellers' higher expectation of the profitability of art, and thus the higher the equilibrium price in the marketplace (Frey and Pommerehne, 1989). Moreover, the wealth of the wealthy, comprising the high income group in the population, exerts even stronger impact on art prices. With more money in disposal, the wealthy tends to spend more on art, thus the art prices grow. In other words, income inequality may lead to the booming art market (Goetzmann et al., 2010).

As one of the direct methods to measure the change of wealth, equity market has been commonly adopted in empirical studies to examine its relationship with art markets. Again, the link between art market and broader economic trend has been proved (Goetzmann et al., 2010; Chanel, 1995; Worthington and Higgs, 2003). Though it's evident that art prices follow stock market trends in relatively short run, how they interact with each other in the long term remains to be discovered.

2.1. Conclusion

Though there exist various academic approaches regarding art market structure, this study applies the division between primary and secondary art market, the latter being the focus of this study. Among various groups of players at stage, the "pure collectors" seem to diminish while the new type of "collector-investor" prevails and speculators active. Several subjects in art market have attracted cultural economics, and the most broadly studied is art as an investment. Though scores of studies have already proved art an inferior investment vehicle, continuous empirical studies have been carried out which keep exploring the financial return on various art categories based upon differing methods. Most of them have applied either the hedonic or the repeat-sales method, and almost all of them have been based on data from Western art market.

Other highlights in empirical studies on art market have covered subjects such as the determinants of art prices, and the relationship between art market and the broader economy. In the following chapter, corresponding elements in the Chinese art market will be filled into this theoretical framework.

III. The Chinese art market

3.1. Introduction

In the past decade, one of the most significant changes occurring to the art world is the rise of emerging art markets, among which China has drawn much of the attention during the past few years. In 2007, the Chinese art market surprisingly overtook France to become the third largest market in terms of auction turnover and it took China three years to climb to the first place in 2010 (Artprice, 2011). Notably, China's recent upsurge is limited to the secondary market, which is also the primary focus of this study. Before proceeding to a deeper analysis of the market, it's essential to clarify that, by "the Chinese art market", it is the indigenous art market in mainland China that is referred to. Of course, it's inevitable to relate to other trade centers for Chinese art such as Hong Kong, New York, and London in the consecutive sections of this study. In contrast to regional art markets elsewhere in the world, however, the art market in mainland China has shown distinct characteristics.

Still an immature regional market, the Chinese art market is rarely studied by cultural economists. Mok et al. (1993) is the pioneer in this field. In their seminal study, the rate of return of modern Chinese paintings has been analyzed. Their study is evidently limited by the small market share for modern Chinese paintings from 1980-1990, comprising only 20 paintings sold twice at auction during this time span. As a result, modern Chinese art as an investment alternative underperform the traditional asset portfolios in Singapore, Hong Kong and Taiwan during 1980-1990. In another study, Kraeussl and Logher (2008) put three emerging art markets: Russia, China and India together, to examine the risk and return characteristics at these three markets. In the case of China, returns on Chinese art demonstrated a negative correlation with other common financial assets, indicating its potential as a hedge during financial market downswings.

The following parts of this chapter are constructed as below. A brief overview of the historical development of the Chinese art market since the modern time will be given

in section 3.2. Section 3.3 casts a glance at the primary market. Section 3.4 thoroughly analyzes the secondary market with an emphasis on supply (section 3.4.2), demand (section 3.4.3), auction houses (section 3.4.4), and general context (section 3.4.5).

3.2. Brief history of the Chinese art market

After the fall of Qing dynasty in 1911 and before 1949, certain art trade centers came into existence in China: Tianjin, Beijing and Shanghai, all of them located in the coastal area. Many art dealers set up in Shanghai to sell Chinese art to international buyers travelling to China. At that time, Shanghai stood out for its large port and close distance to many archaeological digs (Watson, 1992). When the Chinese civil war ended in 1949, China was undergoing a succession of upheavals. Some of the most successful art dealers, such as T.Y. King, Joseph Chan, Edward Chow and Robert Chang, moved to Hong Kong along with their art stocks. Hong Kong's position as leading art center for Chinese art was built at that time (Robertson, 2005).

Since 1949, art trade and private ownership of art were forbidden, providing no chance to develop art market infrastructure. When the development of art market is suspended in mainland China, Hong Kong flourished as the Oriental trade center for Chinese art. In 1973, Sotheby's inaugurated their first sale in Hong Kong and Christie's followed in 1986. Cross the straits, it was not until 1992 that the private art market was legalized by the Communist authorities. Early in 1991, a new contemporary art journal, *Art Market (Yishu Shichang)*, called upon the need of building up a market infrastructure to serve the circulation of contemporary Chinese art within China (Hung, 2010). Since then, the local art market infrastructure has been growing vastly.

Afterwards, around 2000 auction houses sprang up across China while few of them could survive (Lien, 2008). Several players have cemented their leading position through fierce competition, among which are China Guardian, whose first auction

took place in 1993, and Poly International, which only established in 2005 (McAndrew, 2009). Concurrently, there also came a trend of construction of private museums. It's estimated that in 2006, there exist 2000 museums in China, compared with 830 a decade ago (Lien, 2008). As an official cultural event, the third Shanghai Biennale in 2000 is a noteworthy breakthrough for its wide coverage of installations, video, and multimedia work; meanwhile, it initiated collaboration between major public museum and Western curators, signaling the beginning of mega-exhibitions at an international level across the country (Hung, 2010).

The past few years have witnessed the expansion of the Chinese art market at an accelerated speed. In 2006, the record prices set by contemporary Chinese artists at global stage correlates with the expansion of the market scale of local art market. Moreover, Chinese contemporary artists account for a quarter of the top 100 contemporary artists by value (Goodwin, 2008). In 2007, records prices achieved for Chinese art cover all categories, both within China and abroad. As a result, China overtook France to be the third largest regional art market, accounting for 8% of the global art market turnover at auction in 2007 (McAndrew, 2009). Contrary to any prediction at that time, it remained at this position in the following two years. Prompted by the joining of local art funds, China ascended to the first place in 2010, surpassing United States, and remained so until 2011 (Arprice, 2012).

3.3. Primary art market in China

Since the legalization of art market in 1992, art galleries proliferated in Beijing and Shanghai. In the preliminary stage, some of these galleries were established by Westerners living in China (Robertson, 2011). This market segment has undergone dramatic changes since then. In a recent art gallery survey conducted by Art Market Research Center and Bazaar Art magazine (2012), it's been reported that there are currently 1512 established art galleries, most of them located in Beijing (40%), while the rest of them clustered in Shanghai (16%), Hong Kong and Taiwan (8%). More than half of these galleries art set up from 2000 to 2006, suggesting that a large

number of the galleries established in the earlier period didn't survive (AMRC and Bazaar Art, 2011). The most important galleries are Pace Beijing (branch of the New York based Pace Wildenstein, set up in 2008), Long March Space (established in 2000), and ShanghART (established in 1996 in Shanghai, branch in Beijing opened in 2008).

In effect, the size of primary market in China is even larger if we take into account private antique outlets, art markets and other vendors, in the case of which, the number of art dealers in China and Hong Kong could climb to 50,000 (McAndrew, 2009). Though the primary market is largely scattered and its sales record inaccessible to the public, the dealer sector within China and Hong Kong takes up almost 50% of the total turnover in the Chinese art market in 2007 and 2008. Moreover, auction houses have advantage in Chinese brush painting and calligraphy; art dealers in China outperform auction houses in categories such as Modern and Contemporary art, jade and bronze (McAndrew, 2009 and 2010).

3.4. Secondary art market in China, 2006-2011

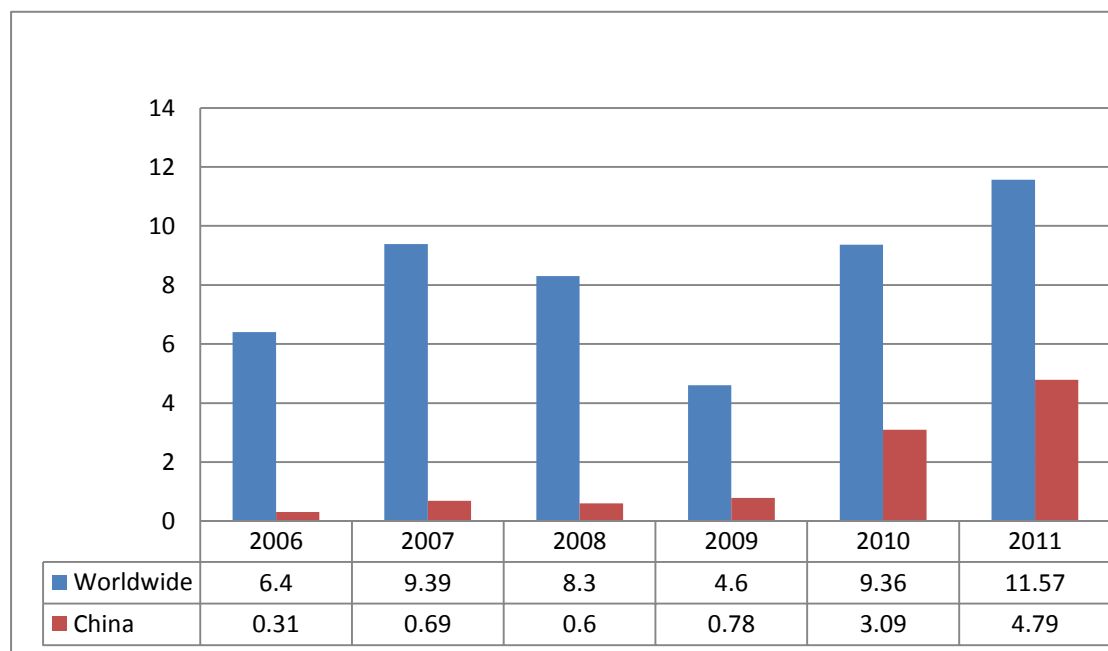
3.4.1. Introduction

Compared to the moderate growing speed and high elimination rate in the primary art market in China, the secondary market is absolutely developing at an accelerated speed. It's been estimated that auction prices are on average 25% higher than dealer price in China (Robertson, 2011). An important contributor to this phenomenon is the fact that Chinese buyers and sellers favor auction houses to art dealers as the transaction platform for art trade, since auction houses in China charge far lower commission fee (10%-15%) than art dealers (50%).

After the preliminary stage in the 1990s, the secondary market sees its spectacular growth in the past decade. However, there lacks complete and reliable data of this segment prior to 2006 (McAndrew, 2009), which makes it problematic to measure the market scale at that time. Notwithstanding the exhibitions held by Chinese artists in

the global stage since 1990s, their performance remained unremarkable at secondary market. The Chinese art only came under spotlight in 2006, when works of contemporary Chinese artists consecutively broke records in the global stage. For instance, one painting in Zhang Xiaogang’s *Big Family* series was auctioned for 76,000 US dollars in 2003, and the price of this same painting was auctioned at \$ 6.1 million in 2008 (Hung, 2011). On the other hand, the market share of indigenous Chinese art market grew into a considerable scale in 2006. Concurrently, contemporary Chinese art had its most astonishing leap from 2005 to 2006 with a 938% increase in value and 477% in volume of lots. Therefore, the research subject of this study is narrowed down to the Chinese auction market from 2006 to 2011. Not coincidentally, the market performance of contemporary Chinese art offers an intriguing perspective.

Figure 1: Overview of fine art auction sales revenue, worldwide and China 2006-2011



Data source: Artprice.

As displayed in Figure 1, the size of the Chinese art market was trivial in 2006, which largely consists of contribution from Hong Kong. From 2006 to 2007, the market nearly doubled. Amid the depressive economic climate in 2008, the market contracted

by 13% in 2008. In 2009, it bounced back by 30% to an even higher level than 2007, while in the same year, the fine art turnover worldwide contracted by 45%. In other words, the Chinese auction market got rid of the negative effect of financial crisis ahead of the other countries did. When other regions are still struggling in the aftermath of financial crisis, China's market displayed strong resilience. 2010 was definitely a remarkable year in the history of the Chinese art market, during which the Chinese Fine Art sales revenue almost tripled its size. This momentum remained until 2011, at which year the market grew at 55% (Artprice, 2012). Notwithstanding the unstoppable trend, there rise some signs of market adjustment in the second half of 2011, since when the lots sold and average price paid have decreased considerably (Artron, 2012).

Irrespective of the twists and turns caused by economic crisis, the aggregate sales revenue of global art market almost doubled from 2006 to 2011, and the Chinese art market keeps gaining ground from incumbent players. In 2006, sales revenue generated in the Chinese art market accounted for around 4.8% of the global art market. This proportion leaps greatly forward in 2009 to 17% and soars to 41% in 2011.

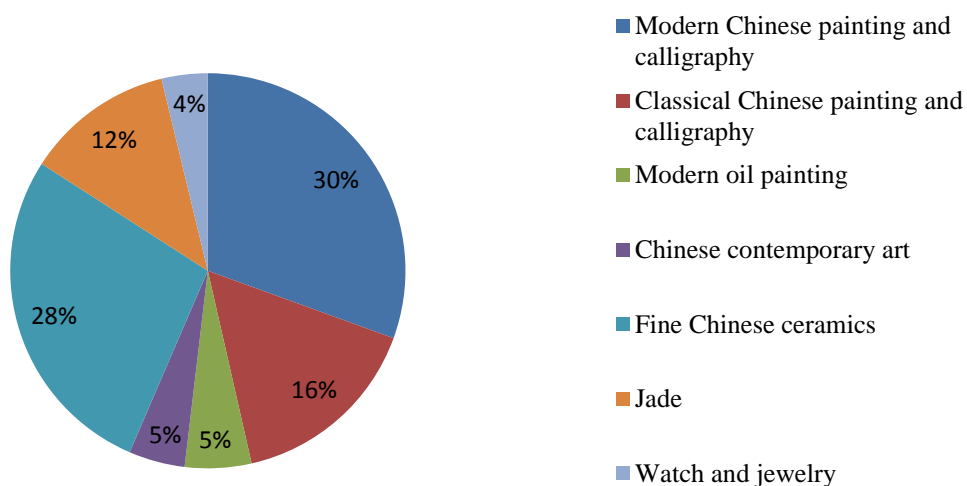
It's especially worth noting that there exists a significant difference between the Chinese art market and its Western counterparts in terms of median price. It's discernible that average prices of fine art sold at secondary market in China are generally three quarters of those sold at Western auction market. However, the median price in China is more than three times of that at Western auction sales. This finding indicates that composition of fine art sold in China differs significantly from that in Western auction market. Fine art sold in China covers a much broader price range (McAndrew, 2010).

3.4.2. Supply at the secondary art market in China

The long history of Chinese civilization has left the country with a huge stock of

artworks covering a broad spectrum of categories, artistic styles and time span. In order to give an overview of the supply end of the auction segment, it's of vital importance to understand the characteristics and market performance of various categories, among which fine ceramics and decorative art, Chinese painting and calligraphy and Modern and Contemporary art hold the absolute majority. In 2011, these three major art categories comprise 92.13% of the total sales and Chinese paintings and calligraphy along takes up 59.98%. Figure 2 is based on the survey conducted by Art market monitor Artron in the first quarter of 2012. It's demonstrated that though collectors' interest are scattered among various categories, collectors are obviously inclined to Modern Chinese painting and calligraphy, ceramics, classical Chinese painting and calligraphy, and jade. Contrary to the current market share occupied by modern oil painting⁴ and contemporary Chinese art, mainland Chinese collectors have shown much less expectation towards their market performance in the short run (Artron, 2012).

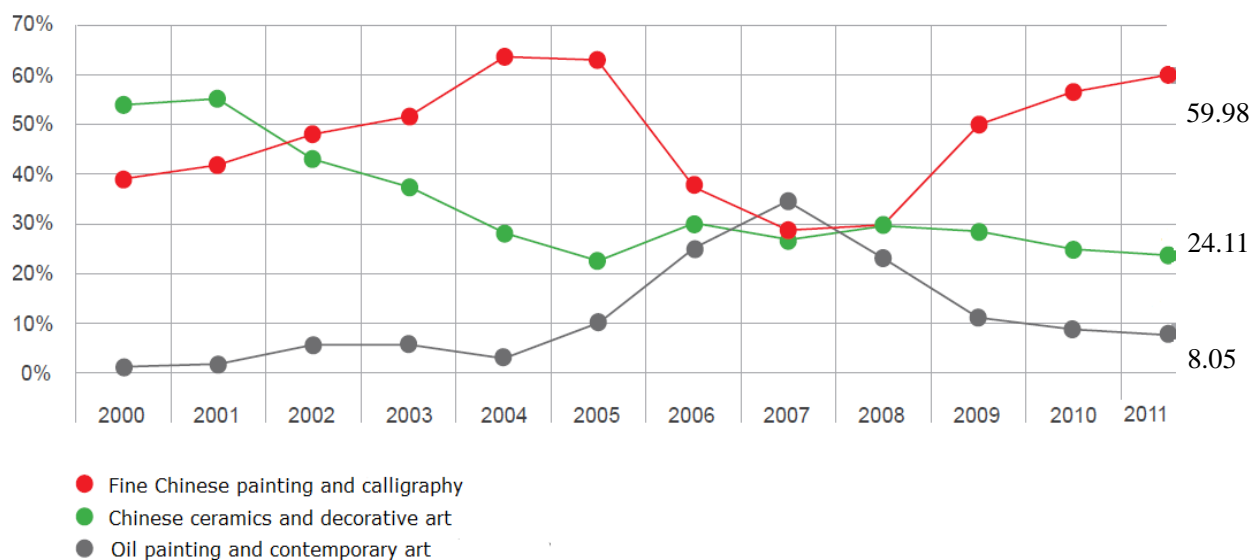
Figure 2: Popularity of major art categories in Q1 of 2012 in mainland Chinese art market.



Source: Artron (2012).

⁴ In Chinese art market, oil painting is especially highlighted so as to be differentiated from traditional Chinese painting and calligraphy since oil painting is introduced into China in the modern era, while traditional Chinese painting and calligraphy is originated in China.

Figure 3: Auction sales revenue of major art categories in mainland Chinese art market, 2006-2011.



Source: Artron (2012).

Figure 3 illustrates that Chinese painting and calligraphy have been holding the first place at local auction in the whole decade. Fine Chinese ceramics has established its second place with a stable market performance. After a dramatic surge from 2004 to 2007, oil painting and contemporary art have hold back to a third place. What’s also noticeable is the way in which the market reacts to the 2008 financial crisis. Since then, the traditional art whose artistic value has been long confirmed has become more appealing to Chinese buyers than the “younger” contemporary art. Moreover, the gap between the most preferred art category and modern and contemporary art has kept widening (Artron, 2012).

a. Fine Chinese ceramics and decorative art

Differing from the global auction market where decorative art sells more in terms of number of lots while generating less sales revenue, this sector nurtures extremely high records in Chinese marketplace. Antiquity builds up a solid foundation of the Chinese

art market. The monetary and aesthetic value of antiquity is highly respected, and often yields spectacular auction records. In effect, the most expensive Chinese art ever sold at an auction is a Qianlong porcelain vase (ca. 1740s) that reached an astonishing price of \$69.3 million at Bainbridges Auctions in 2010 partly due to the rarity of the small number of well-preserved high-end ceramics (Artron, 2012). There's no doubt that the most well-known type of Chinese antiquity to the world is Chinese ceramics. From 16th to 19th century, China was the largest exporter of porcelain, and the only source for a long period of time. Nonetheless, the "exported" ceramics were especially tailored for the demand from abroad. It is the ceramics belonging to the imperial collection that are most highly valued in the indigenous Chinese art market. Due to the traditional practice of filling tombs with burial objects, a massive stock of antiquity is still lying underground (Lien, 2008).

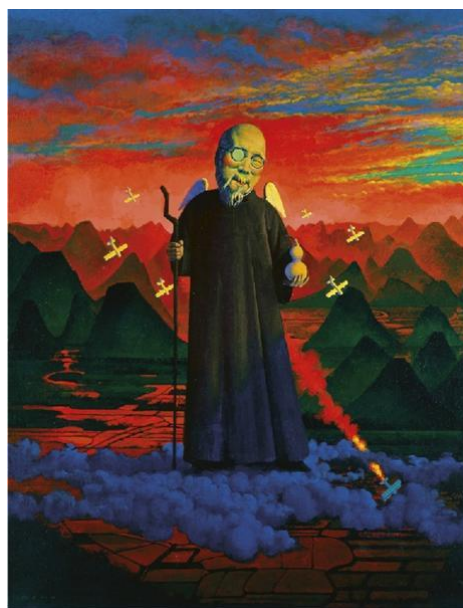
b. Chinese painting and calligraphy

Painting and calligraphy altogether have formed the Chinese conception of "fine arts". Commanding half of the auction turnover in China, Chinese painting and calligraphy undoubtedly acts as the benchmark of the market, the market share of which is only comparable to the total percentage of antiquity and modern and contemporary painting combined (Robertson, 2011). Represented by landscape painting, Chinese painting and calligraphy have been considered as of the highest aesthetic value among all forms of art (Lien, 2008). The discipline of traditional Chinese art requires artists to pursue a noble spirit so as to nurture the "artistic conception" of his own and then express it in an unskillful manner (Robertson, 2011). Notably, it's necessary to acquire sufficient knowledge of Chinese history, art and culture in order to fully appreciate the value of these works. This premise forms a high threshold for foreign buyers. As a result, this section has long been dominated by Chinese collectors. Under the threat of high-quality forgeries⁵, verification of the authenticity and provenance of these objects is a critical procedure.

⁵ See "Existing problems" in 3.5.

c. Modern and Contemporary Chinese art

Apart from the proximity in terms of time, there's a specific reason why modern and contemporary Chinese art form a singular category at auction within China. From the International perspective, contemporary art refers to art created by artists born after 1945 (McAndrew, 2011). However, in China the artistic transition into contemporary art was abruptly stopped due to social upheavals. In effect, it was not until the late 1970s did the contemporary Chinese art emerge. Even after the “birth” of contemporary Chinese art in 1979⁶, the young Chinese artists and art critics still identified their practice as “modern art”, since they considered themselves undergoing a delayed modernization period, much later than their Western counterparts. During 1990s, this conception is gradually replaced by “contemporary art” or “experimental art” (Hung, 2011). Due to the research subject of this paper, the primary focus has been laid on contemporary Chinese art. Therefore, the modern masters such as Qi Baishi (1864-1957), Wu Guanzhong (1919-2010), Zhang Daqian (1899-1903), Zou Wuki (1921) will be excluded from this study. Although the extraordinary auction records they've achieved since 2009 until 2011 have overshadowed the contemporary Chinese artists (Hung, 2011).



*Portrait of Qi Baishi*⁷
By Liu Ye
Acrylic on canvas, 1996
111.5x86.2cm

⁶ The year 1979 is widely accepted as the official starting year of contemporary Chinese year. Coinciding with a democracy movement, the first group of unofficial art exhibitions was held in public spaces for the first time in mainland China (Hung, 2011).

⁷ This piece belongs to the prestigious Ullens Collection, and it was auctioned at Sotheby's Hong Kong in October 2011. The lot was sold at \$1,809,594 (www.sotheby's.com).

Early stages of development

Since the Great Proletarian Cultural Revolution was initiated in 1966, all art related activities were suspended with the exception of the practice of official art, represented by “Red Classics”, which was able to sustain and prosper with support from the government. Driven by the belief of art-for-art’s sake, young Chinese artists gathered together and learned from Western modern art, ranging from Romantic, Impressionist, to Post-Impressionist paintings. For instance, one of these groups is called *No-Name Painting Society (Wu Ming Huahui)*, composed of twenty to thirty young artists in Beijing, most of them art amateurs without formal art education (Hung, 2010). In 1977, the Eleventh Party Congress officially ended the Cultural Revolution. Shortly after, art academies reopened and started to admit students in 1978. The first group of unofficial exhibitions staged in 1979 formally announced the emergence of contemporary Chinese art. It’s recorded that from 1984 to 1986, more than eighty unofficial art groups, composed of artists in their twenties, were established across over twenty three provinces. This exuberant period in the preliminary stage of contemporary Chinese art was remembered as the ’85 New Art Wave (Hung, 2011).

The social context transformed progressively in 1980s as the economic reforms and Open door policy was thoroughly carried out. As a consequence, contemporary Chinese art also benefited since on one hand, many Chinese artists emigrated to the West and Japan; on the other hand, flows of Western art were introduced into China in the form of reproduction and exhibition. Concurrently, various art movements appeared including Scar Art, Chinese Abstraction and Expression while the most prominent ones are the Cynical Realism and Political Pop. Situated in the rapidly changing society, the younger generation of contemporary Chinese artists in the 1990s shifted their creative origin towards the notion of self-identity. Fang Lijun, Yue Minjun and Zeng Fanzhi are the most reputable figures from this generation whose paintings have repeatedly broke auction records both domestically and abroad (Hung,

2011). In the same period, their overseas seniors have been gradually recognized by the international art community (McAndrew, 2009).

Globalization of contemporary Chinese art

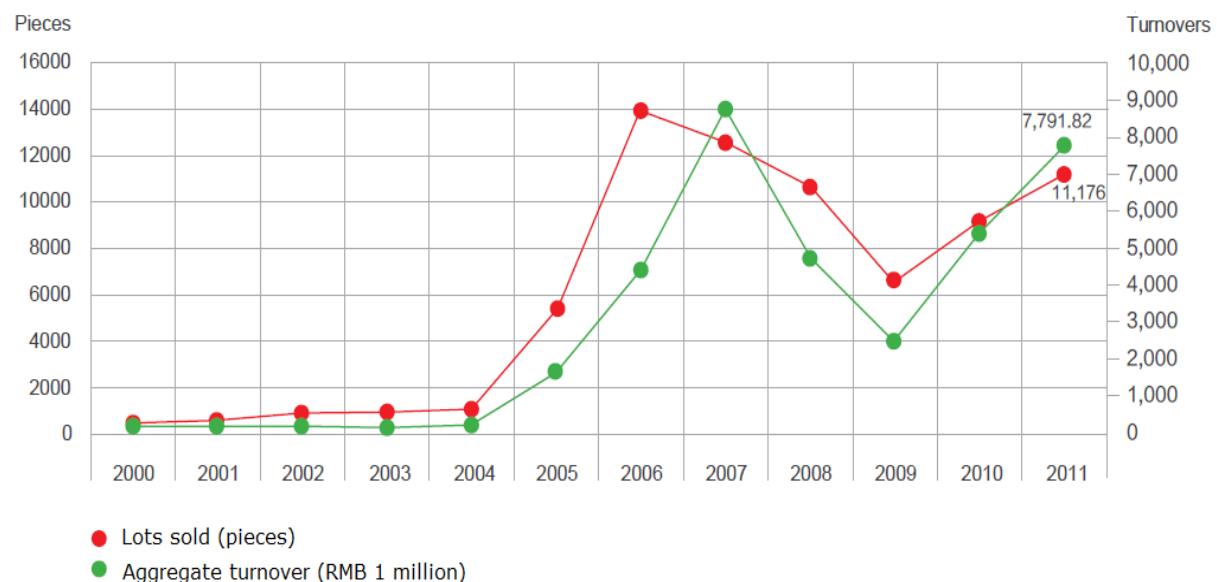
Owing to the help of Hong Kong, Taiwan, and Western curators, contemporary Chinese art was finally introduced to the global stage in the early 1990s. Signified by some major events held in 1993 such as the world tour of the “China’s New Art, Post-1989” organized by Hong Kong’s Hanart TZ Gallery, and debut of Chinese “avant-garde” artists in the 50th Venice Biennale, contemporary Chinese art has gained significant attention from the International art scene. The Chinese artists emigrated abroad in the 1980s have also acquired significant honor and recognition from International art community, the most successful among them should be Cai Guoqiang, Xu Bin and Gu Wenda. Not coincidentally, by 2008, almost every major gallery in New York represents one or more Chinese artists, composed of not only the early emigrated Chinese artists but also the domestic Chinese artists. Attracted by China in transformation, the Chinese artists overseas have been going back to China for various purposes. As early as the 1990s, Ai Weiwei, Wang Gongxin, and Lin Tian Miao went home from the US, same as Zhang Dali from Italy. Later in the 2000s, more well-known Chinese artists living abroad returned to throw exhibitions or carry out art projects in mainland China (Hung, 2011).

Contemporary Chinese art at auction

In 2006 when the Chinese avant-garde artists led by Zhang Xiaogang, Yue Minjun broke 1 million dollar record one after another, Contemporary Chinese art consolidated its status at global auction market. The growth momentum of Contemporary Chinese art remained strong in 2007, which accounted for 24% of global Contemporary auction sales, with 75 pieces exceeding \$ 1 million and 36 artists included in the “Contemporary Top 100 list” by Artprice (McAndrew, 2008 and 2010). In the face of global financial crisis, Contemporary Chinese art entered a two year long downward spiral. Since 2010, this market segment has rebounded and

entered into a rational development period. However, it should be noted that the boom in Contemporary Chinese art up to 2008 is largely attributed to Western buyers and the restriction imposed on export of Chinese antiquities. In contrary, it was not accepted at once in mainland China. In effect, it has been criticized for its “made for export” purpose. Admittedly, some works are mainly created to suit the taste of Western buyers.

Figure 4: Auction turnover and number of lots of Contemporary art at secondary art market within China, 2000-2011.



Source: Artron (2012)

The continued growth of China’s contemporary market is mainly attributed to the top end. Irrespective of the 47% decrease in the number of lots sold in 2010, suggesting a contraction at supply side, this market still increased by 121% in value, with an 300% advancement in average price from 2009 to 2010. This point is further reinforced by the fact that 73% of all transactions over € 50,000 happen in US and China, the first two leading contemporary art markets by value (McAndrew, 2011). There’s no doubt the market for contemporary Chinese art is truly international. The outstanding result it has achieved is mainly attributed to European and American buyers, joined by mainland buyers in recent years (Robertson, 2011).

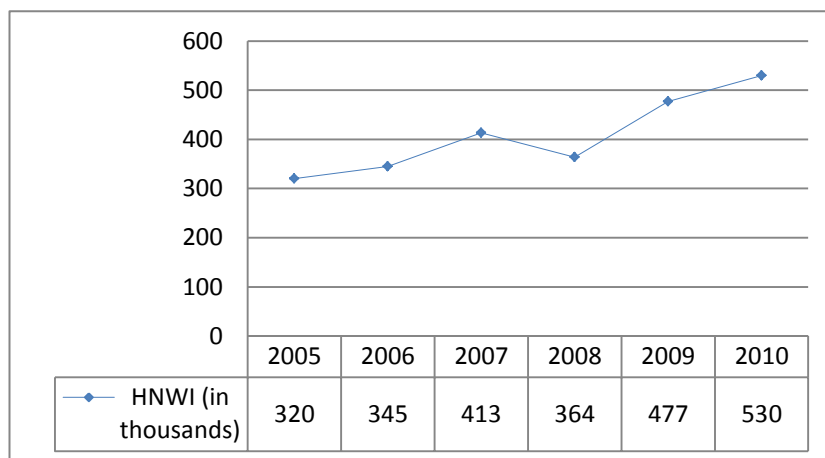
3.4.3. Demand at the secondary art market in China

a. Chinese individual buyers

There's no doubt that the burgeoning economy in China is producing a new wealthy class and a larger base of middle-class. The former, who are currently active at auction worldwide, is definitely the direct consumers of art. It has been reinforced by the fact that only this minority group is capable of buying top end artworks that drive the general trend of the marketplace. Whereas the middle class in China still hasn't formed a habit of purchasing art.

Though the most influential buyers remain those from Europe and US, China's new wealth class has formed an important buying force. In 2008, the population of China's HNWI surpassed UK and became the fourth largest. In addition, it's recorded that the percentage of participation of Chinese buyers at auction worldwide has doubled from around 4% in 2005 to 8% in 2008 (McAndrew, 2010), in line with the expansion of HNWI. Concurrently, the scale of China's art market climbed to the third largest in the world. Affected by the global financial crisis, there's a considerable shift of target in art consumption. The "older" artworks with long-term tangible value and price stability begin to outshine the volatile Contemporary art (McAndrew, 2010).

Figure 5: High net worth income population in mainland China, 2005-2010.



Source: Capgemini and Merrill Lynch (2006-2011)

Nonetheless, Chinese buyers are driven by various motives to spend in art, some of which distinctively differs from buyers from other region. Firstly, China's new wealthy class purchases art for prestige, to demonstrate their newly acquired wealth and social status. Secondly, it's to reconnect with the heritage of Chinese civilization. In effect, certain objects with special provenance are acquired by Chinese buyers out of patriotic reasons, the most typical case being the "Summer Palace" collection. From 1980s to 1990s, in spite of the antiquities exported legally from China, some valuable pieces were taken away during the European occupations through violence. Nowadays, Chinese buyers are keen on repatriating these works. Once repatriated, these objects would be placed in local museums, and out of global circulation. Combined with restriction on export of valuable antiquities, it's reasonable to predict the global circulation of high end Chinese antiquities would be shrinking in long term (McAndrew, 2008).

Thirdly, buying art is considered as a lucrative investment and a possible inflation hedge. What's more, it's an established tradition in China to exchange art as "gift" to friends or business partners. It could be dated back to the ancient time when scholar-officials and intellectuals give art as "gift" to each other to avoid using money and intermediary (Robertson, 2011). Compared to the newly created Contemporary art, the older categories and genres such as antiquities, Chinese painting and calligraphy are more attractive to Chinese individual buyers.

b. Chinese institutional buyers

Aside from the individual bidders, another influential type of local buyers is institutional buyers, especially art funds. It was in June 2007 that the first Chinese art fund was launched by Minsheng Banking corporation, an active player in art and culture sector, licensed by the China Banking Regulatory Commission (McAndrew, 2008). Until November 2011, more than 70 art funds have been founded by nearly 30 institutions in China, reaching an aggregate scale of RMB5.77 billion yuan. Notably,

the top 20 art funds account for RMB5.65 billion yuan. The entrance of art funds since 2007 corresponds to the surge of the Chinese art market amid the aftermath of global financial crisis. Equipped with abundant financial resources, art funds have acted as aggressive bidders at marketplace, mainly aiming at the top end segments. Generally speaking, art funds would keep the top end quality works for a medium to long term, around 5 years. While a high proportion of their stock is filled with works of established artists, for less than 2 years (Artron, 2012). Art funds mainly sell through public auction.

In spite of art funds, museum also exerts an important institutional buying force. In 1978, when China carried out economics reform, there were only 14 museums in Beijing, while in 2011, there were 159 registered museums in Beijing. This could be largely explained by China's tradition of public collecting in the arts (McAndrew, 2009). The National Museum of China is one of the most recently built, which was established in 2003 by merging two existing museums then: the Museum of the Chinese Revolution and the National Museum of Chinese History. Founded in 1998, the Poly Art museum has been a strong buyer in the Chinese market since 2000. Poly Art Museum is affiliated to Beijing Poly International Auction Co. Ltd., a state-owned enterprise (McAndrew, 2009). China Minsheng Bank has been a forerunner in the construction of private museums. In the past five years, it has already rebuilt Beijing Yan-Huang Art Museum and Shanghai Minsheng Art Museum, while the Beijing Minsheng Art Museum still under construction. Free access to public museums has been implemented by the Ministry of Culture and Finance since 2008. The goal is to make all the public museums free of access by the end of 2012 (Artprice, 2011).

c. European and US buyers

Western buyers have long been purchasing all sorts of Chinese art, from ceramics to Contemporary Chinese art. They've formed a solid buyers' base at the top end of Chinese art in global circulation. In the case of Contemporary Chinese art, they should be given the credit for the boom of Contemporary Chinese art at global auction

up to 2008. Some Western collectors bought artworks directly from artist's studio during their visit to China during 1980 and 1990s; the most famous of them is the former Swiss ambassador Uli Sigg. Starting in 1985, he has witnessed the whole development of Contemporary Chinese art. Not only a star collector owning 1200 pieces, is he also the founder of Contemporary Chinese Art Awards, the most influential honor in Contemporary Chinese art arena. Among Western collectors, Guy and Myriam Ullens stand out not only for their prestigious collection, but also their commitment in promoting Contemporary Chinese art at international stage. Opened in November 2007, Ullens Center for Contemporary Art serves as a non-profit art center to promote Contemporary Art in Beijing's famous 798 art district. The unequaled value of Ullens' collection was proved in 2011 when Sotheby's Ullens collection sales, composed of 90 lots spreaded in "The Nascence of Avant-Garde China" sales in spring and "Experimentation and Evolution" in autumn, generated aggregate revenue of HKD 132 million with 93% lots sold (Artron, 2012).

d. Other Asian buyers

Throughout history, the neighboring Asian countries have been influenced by Chinese civilization. This tradition has evolved into purchase of Chinese art today. In the 1980s, when mainland buyers haven't shown up in the marketplace, Taiwanese and Japanese buyers were active buyers for Chinese art, especially Chinese ceramics (McAndrew, 2008). Collectors from other South East Asian countries began to play a vital role in recent decade. The most famous among them should be Budi Tek, Chinese-Indonesian collector who was listed eighth at Art & Auction's top 10 most influential figures in the art world.

3.4.4. Distribution channel: auction house

The booming domestic market has given rise to a bunch of local auction houses, among which China Guardian and Poly International are the major representatives. In terms of auction sales of Chinese art, China Guardian takes up 2% and Poly International 1% of global auction turnover in 2011, next to Christie's 7% and

Sotheby's 4% (Artprice, 2012).

Founded in 1993, China Guardian's establishment indicates the end of the monopoly of state-owned companies in art trade. The highest bid worldwide in 2011, Qi Baishi's *Eagle standing on Pine Trees, Four character couplet in Seal Script* was auctioned at China Guardian, reaching a record price of \$ 57.2 million (Artprice, 2012). Poly International is another flagship auction house. Affiliated to China Poly Group Corporation, financially found Poly International entered the auction arena aggressively in 2005. Beijing Council, which ranked fifth globally in terms of auction turnover in 2011, was founded by Dong Guoqiang, with aid from Liu Yiqian, who is a star collector based in Shanghai. Including Beijing Hanhai (founded in 1994, ranked seventh globally in 2011) (Artprice, 2012), all the aforementioned auction houses in first tier are based in Beijing (McAndrew, 2008). Due to the shrinking supply in the domestic market, local auction houses are actively repatriating Chinese artifacts dispersed globally.

Though China officially opened up to foreign competition in 2004, it's still a challenging task for foreign companies to set their foot in China due to a ban on exporting most valuable antiquities out of China and not fully convertible currency. In reality, there are only two cases of foreign auction houses operating in mainland China in the form of collaboration between foreign auction houses and local capital. In 2005, Christie's licensed its brand to Forever International Auction House in Beijing in exchange for a fee. Two years later, Artcurial launched its first auction in Shanghai in cooperation with Bruno Wu, Chinese media tycoon (McAndrew, 2008).

Meanwhile, Christie's and Sotheby's branches in Hong Kong are regarded as the most influential players, which were set up in 1986 and 1973 respectively. Before China's demand for art is aroused, Sotheby's and Christie's allocated half of sales of Chinese art in Hong Kong, and half elsewhere. As China's art market expands quickly, Christie's and Sotheby's have moved more than 75% of sales of Chinese art to Hong

Kong in 2009 (McAndrew, 2009).

3.5. General context

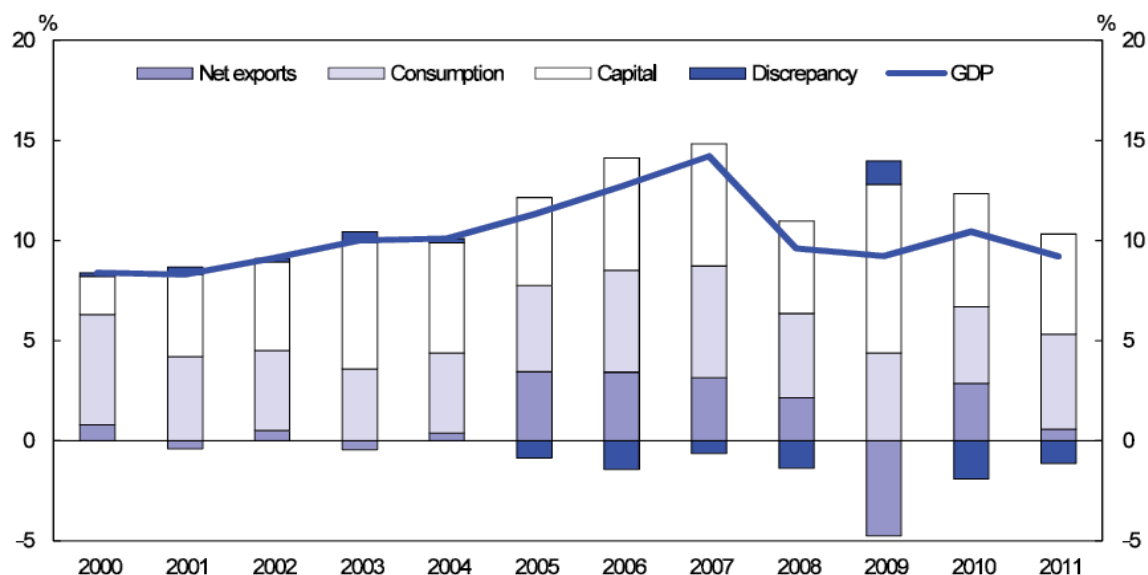
3.5.1. Macroeconomic environment

It was after the reform and opening-up policy in 1978 that China's economy really took off. After three decades' development, China grew into the second largest economy in 2011, surpassing Japan. China's current economy scale is gradually built up, based upon consecutive high-wheeling growth. It's especially worth noting that the real growth of GDP ascended to 10.0% in 2003 and maintained at the double digit level until 2007. The growth rate speeded down to 9.6 in 2008 and afterwards an annual growth rate of 8 has been considered as imperative. Since 2012, target of economic growth is further adjusted to a more moderate level of 7.5%. In the medium run, it's expected to gain a 7 percent average growth rate until 2015, during the course of China's twelfth five-year guideline (The Economist, 2012).

Based upon China's substantial productivity and low-cost labor, export has acted as an important component of economic engine and a symbol of China's accumulating strength. However, the degree to which export is influential to China's economic growth has been exaggerated. In effect, it appears that investment is the real leading contributor, followed by net export and consumption. For instance, investment accounts for 48% of China's GDP, nearly half of it, in 2011, largely prompted by moves taken by the state-owned enterprises and mainly spending on plant, machinery, buildings and infrastructure. In the same year, household consumption only takes one third of GDP growth (The Economist, 2012). In the most recent years, demand from Europe and U.S. has been shrinking due to the sweeping economic crisis. As a result, China's export destinations have been increasingly diversified, among which emerging markets have become more important. On the other hand, import is also increasing, mainly composed of commodities and capital goods (IMF, 2011). If we look at import and export of art sector along, it appears that China has always been a net importer, since a large proportion of export has been drifted to Hong Kong. Since

2003, export of art has increased steadily, most of which are Contemporary artworks (McAndrew, 2010).

Figure 6: Contributions to China's GDP growth, 2000-2011.



Resource: OECD
Data source: CEIC

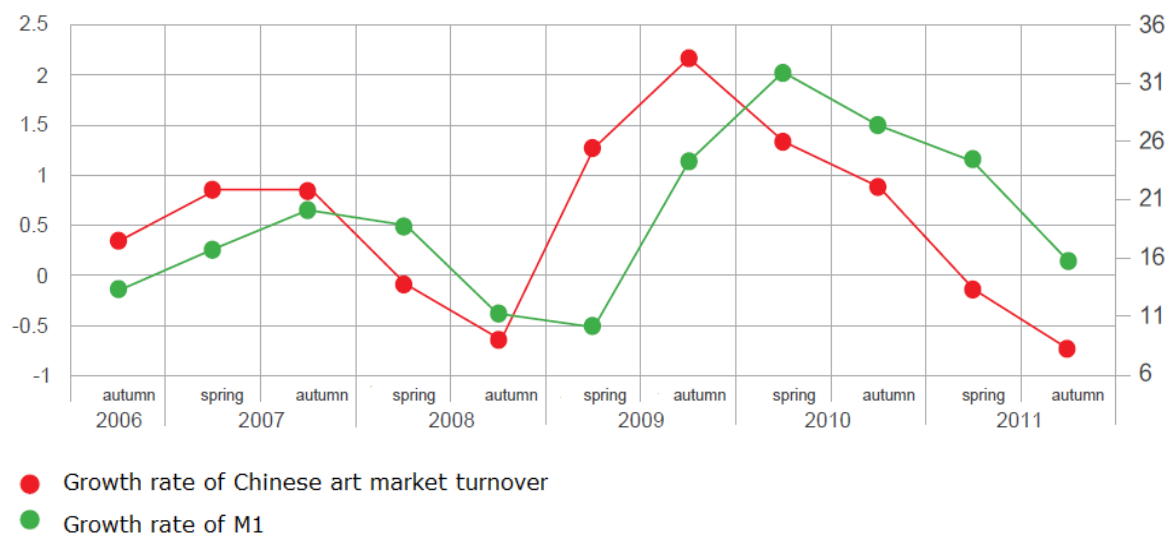
However, as a consequence of expanding investment, concerns for overheating and inflation have also been aroused. In 2007, the double pressure from overheated investment and inflation forced the government to adopt a tightening monetary policy, which lasted until the first half of 2008 (Tanaka, 2010). Partly as a strategy to prevent import inflation tied up with global commodity hikes, the revaluation of the RMB's exchange rate started in 2005 and accomplished a 21% of revaluation until 2008. On the other hand, inflation is driven by food prices at home. The inflation rate climbed to a three-year high of 6.5% in July 2011, and about two thirds of the growth is caused by surge in food price. Afterwards, the inflation rate has returned to a more comfortable level (IMF, 2011 and 2012). At the same time, stocks of capital have flooded into the real estate sector. Government has taken a set of measures to curb price inflation and speculation. Up to date, the government measures turn out to be effective. Real estate investment has held up well, owing to the construction of

social housing nationwide. In the long run, the government might implement property tax, raise capital cost and channel surplus of capital to alternative investment means (IMF, 2011). It has become gradually evident that China is at a critical turning point. In July 2008, the Financial and Economic Committee of the National People's Congress officially announced that the national economy is at the end of "high growth and low inflation", and about to entering into an era of "high growth and high inflation". In the long run, it will reach a stage of "low growth and high inflation" (Tanaka, 2011) .

The Chinese art market and M1

Situated in the booming Chinese economy, the art market trend corresponds to changes in macroeconomic environment. Among all those macroeconomic indicators, a strong connection between growth rate of the Chinese art market turnover and the growth rate of M1 has been discovered by Art Market Monitor of Artron. Since 2006, there always exists a six month lag between the growth rate of the Chinese art market turnover and the growth rate of M1, which indicates that substantial stock of capital has flooded into the art market and a speculative sphere. In the case of 2011, for instance, after macroeconomic indicators showed the economy was entering a downward spiral in the first half of 2011, the government took up a tight monetary policy, which directly led to the drop of year-on-year growth rate of monetary supply M1 and M2 from 21.2% and 19.7% in 2010 to 13.1% and 15.9% until June 2011 respectively. On the other hand, the art market obtained significant growth in the first half of 2011, irrespective of the tightened monetary policy. However, as the government maintained the tightened monetary policy in the second half of 2011 and M1 and M2 continued to fall, the art market also suffered, ending up with a growth rate even worse than during the 2008 financial crisis (Artron, 2012).

Figure 7: Correlation between the growth rate of M1 and the growth rate of Chinese Fine Art auction turnover, 2006-2011



Source: Artron (2012); Art Market Monitor and Artron WIND.

Transformation and policy shift

The year 2008 is not only renowned for the breakout of global financial crisis; it also witnessed the transformation of China's economic development. In effect, the weak global economy and depressive prospect in the near future has underscored the importance for China to launch its transformation, and to evolve into a more balancing economy.

In early 2008, signs showed that China might run into stagflation rather than inflation. On March 12, Sichuan Province was hit by a strong earthquake with magnitude of 8.0. This unexpected incident cost China 845.1 billion yuan of direct loses. Until the first half of 2008, a tightening monetary policy has been strictly carried out to cope with overheated investment and inflation. Accompanied with the drastic change in external environment hit by global financial crisis, China shifted to a "flexible and prudent" monetary policy. In order to sustain "stable and relatively fast" economic growth, reliance on investment and export should be revised, and the overall economic structure should be altered to trigger the potential of domestic demand, of which

consumption ranks as the most important factor (Tanaka, 2011).

Prompted by the fall of Lehman Brothers in September, the State Council Standing Committee released an investment package worthy of 4 trillion yuan, which will be fully implemented by the end of 2010. This is also followed by 24 provinces' regional investment plans, which totaled 18 trillion yuan. Guided by the "scientific development concept", the investment package is modified to focus primarily on investment quality, elimination of outdated production capacity and the expansion of consumption demand. There's no doubt that all of these goals stand in line with the general target of economic transformation. Furthermore, the macroeconomic policy rapidly shifted from a tight monetary policy to an easing one, with interest rates lowered twice and reserve deposit once in October (Tanaka, 2011). Though the current crisis in Europe imposes another threat from abroad, China's economy outlook remains positive, supported by rising real wages and a healthy job market. Moreover, robust revenue growth has provided the government with sufficient resources to improve its pension system, pursue a comprehensive healthcare reform starting in 2009, and increase private spending (IMF, 2011 and 2012). To sum up, the current macroeconomic situation and government policy are supportive to realize the potential of private consumption, and are favorable to the development of art market as well

3.5.2. Regulation

It is with the aid of the issuance of relevant regulations that the burgeoning auction market came into being. The legal context related to secondary art market in China is mainly based upon the *Auction Law of the People's Republic of China* and the *Law of Cultural Relics protection*. Stemmed from *Circular on the Public Auctioning of Disposed Public Property* issued in 1992, *Auction Law* was issued in 1996 by State Council, which in essence allowed auction houses to re-emerge in China (McAndrew, 2008). Though amended in 2004, the loopholes embodied in existent *Auction Law* have given rise to a series of market irregularities. On one hand, it failed to limit the

behavior of consigner and buyer, thus, leading to rampant fakes at auction and high ratio of unpaid bids. On the other hand, auction houses are not obliged to be responsible for the authenticity of artworks auctioned, which considerably threatens the interest of consumers.

While the Auction Law builds up a general legal context and market rules for the auction market of fine art, *Law of Cultural Relics Protection* imposes more restrictions regarding the international circulation of Chinese cultural relics. The revised *Law of Cultural Relics protection* was released in 2002 to replace 1982 version. The major progress in the 2002 version should be the legalization of private ownership and collection of cultural relics and legalizes transactions involving cultural relics, which have been prohibited for a long period since all cultural relics were used to be considered as state-owned. However, private transaction concerning “state-owned relics and non-state-owned relics in institutional collections, murals, sculptures and other structural component in any state-owned immovable cultural relics” is still forbidden. Moreover, relics to be auctioned should be examined and permitted by the provincial governments at first (Dutra, 2004).

Furthermore, according to article 55, “auction enterprises engaged in auction of cultural relics in the form of Chinese-foreign equity joint venture, Chinese-foreign contractual joint venture or wholly foreign-owned venture is prohibited” (Chinese government’s official web portal, 2002), which sets a major obstacle for foreign auction houses to set foot in mainland China. Other restrictions in regard with specific categories of cultural relics are listed below. Relics created before 1911, the end of Qing Dynasty, are banned from being taken abroad by individuals, with an exception of the items from outside People’s Republic of China which have gone through relevant import procedure; foreigners are forbidden from taking any cultural relic predating 1795 abroad, end of reign of Qianlong (r. 1736-1795) emperor of Qing Dynasty (1636-1911); artworks created after 1911 are principally free from restrictions except those viewed of precious relics. Aside from the national policies on

trade in art, a bilateral agreement between China and U.S. was formed in 2009, aimed at restricting the import of certain categories of archaeological objects from China (McAndrew, 2010); artworks created by particular modern masters deceased after 1949 are forbidden from exporting, ranging from all works of 10 modern masters including Li Keran (1907-1989) and Xu Beihong (1895-1953), to works of 23 modern masters including Qi Baishi (1864-1957) and Zhang Daqian (1899-1983) in principal, and most valuable works of 107 masters; similarly, works of 140 earlier masters from 1795 to 1949 are also limited from export (Beijing Municipal Administration of Cultural Heritage, 2005). All these restrictions listed above are seen as a strategy taken by Chinese government to curb the illegal export and tomb-robbery stimulated by increasing demand from abroad. In the face of market irregularities, current laws and regulation seem ineffective. As the market calls upon more stringent regulations, the Ministry of Culture is drawing up *Regulation on the Administration of Art market*. In reality, China's regulation in the area of art market is still undergoing a construction process.

3.5.3. Taxation

Compared to neighboring markets such as Hong Kong, Taiwan, and Singapore where no tariff is imposed on import of fine art, the current 6% tariff on art imported to China is rather high. In effect, the tariff was even higher before issuance of *Tariff Implementation Scheme in 2012* in which tariff on fine art was lowered 50% provisionally in 2012 in order to facilitate the developing local art market (General Administration of Customs of the People's Republic of China, 2012). There's also a 10% capital gain tax whenever an art object is resold within China. Plus a stamp duty of 0.03% when the deal is closed, transaction of art in China could claim so high as 33.03% of taxation. Currently, there imposes no taxation on wealth or inheritance in China (McAndrew, 2008).

Such a high level of taxation deems to affect market dynamism and is responsible for a series of consequences. In order to avoid taxation, a large proportion of art trade is

shifted to Hong Kong, since where the transaction is concluded largely affects the degree of taxation. In mainland China, the 15 “Free Trade Zones” also offer an alternative to legally avoid high taxation rate. If artworks are taken into these particular zones as “bonded material”, they’re concurrently exempt from sales and import taxes. Other sorts of taxation such as VAT taxation and capital gain would only take place when the object is resold outside the zones (McAndrew, 2008). Due to high level of taxation, the cost for Chinese collectors to repatriate Chinese artifacts dispersed abroad is significantly inflated, and thus dampens the construction of local museum collections. The art sector in China is looking forward to tax deduction in the future.

3.5.4. Art centers: Beijing and Hong Kong

It has become gradually clear that Hong Kong and Beijing have consolidated their leading positions as Chinese art centers, followed by Shanghai, Hangzhou, Chengdu etc. With distinctive advantages, Hong Kong holds as the center for International trade in Chinese art while Beijing mainly focuses on domestic circulation.

Hong Kong’s potential to develop into a platform for international art trade was initially discovered in 1973 when Sotheby’s launched its first sales there. Christie’s followed its footsteps in 1986. Ever since then, Hong Kong has become an important transaction center for Chinese artworks, along with London and New York (McAndrew, 2008). In the Far East, Hong Kong has dominated the market for a long period, until the arrival of Beijing as a competitive player. In 2008, 43% of auction sales of Chinese art took place in Hong Kong, and 40% in Beijing. As the mainland consumption in art expands, Beijing ascended to the largest auction center with an sales revenue of \$3.17 billion, almost 27% of global aggregate auction revenue, followed by New York, London and Hong Long (\$796 million) (Artprice, 2012).

Hong Kong’s leading position remains solid due to various reasons. On one hand, its geographical location helps to reach not only collectors from China, but also the

whole South East Pacific region. On the other hand, its commerce friendly environment offers a combination of benefits to facilitate trade and business, such as no tax on art sales, import or export of art, strict banking secrecy and peg between Hong Kong dollar and US dollar. Though Beijing outweighs Hong Kong in terms of scale, it's still an immature market. Unless there's any significant change to China's currency or taxation currency, Beijing could then compete against Hong Kong in real term. Currently, these two cities compensate each other, with Hong Kong excelling in Contemporary art, antiquities and Fine Chinese Ceramics; Beijing in Modern and Classical Painting and Calligraphy (McAndrew, 2009).

3.5.5. Existing problems

The market boom and surging record prices have given birth to a number of irregular practices. This quickly developing regional market is, however, beset with severe problems that cloud its long-term sustainable growth and the credibility of local auction houses has been thrown into doubts. Moreover, these problems are deeply intertwined with each other and involve all sorts of actors on the market, ranging from buyers, auction houses to regulators. The most striking problems are pervasive fakes and forgery, payment delay or refusal, and false trading. (Artron, 2012)

Fakes and forgery

In reality, the tradition of counterfeiting high-quality forgeries could be traced back to China's ancient history, during which period craftsmen consider it a great honor if their high-quality forgeries could deceive the appraisal of experts. This tradition has been given the name archaism (Lien, 2008). While the ancient craftsmen counterfeit to prove the level of technique, their current peers do so in seek of high profit. The booming market and sky-high prices have given strong incentives to the manufacturing of fakes. It's not exaggerated to say that fakes and forgery have formed their own industry nowadays.

Among all those art categories, the one that suffered most from this problem is the

antique sector. According to art market investigator, in 2001, about half of the antiques from Ming and Qing dynasty auctioned could be real while today, this percentage has dropped to about 20% (Ho, 2011). What's ironic is the fact that even modern technologies have failed to verify the authenticity of the high quality fakes and are forced to be improved. After all, the forgery issue has significantly dampened the antique sector, and has driven collectors away to more recently created artworks, such as modern and contemporary art (McAndrew, 2009). But that doesn't mean modern and contemporary art is exempt from the curse of fakes. In effect, the modern artworks are also targeted by con artists as about half of the pre-1949 artworks are estimated to be fakes. The big names of Chinese modern masters including Wu Guanzhong, Qi Baishi and Xu Beihong are the most commonly seen victims (Ho, 2011). Although it's harder to produce fakes of living artists since they're all alive and could diagnose the authenticity of the paintings themselves, the contemporary sector is not exempt from this problem. In October 2011, Zhang Xiaogang revealed on micro-blog that the painting *The Little Girl* to be auctioned at Beijing Tranthy Auction House is a counterfeit. In effect, this painting has already been auctioned by another auction house in Beijing.

Payment delay or refusal

Though record prices have been achieved in Beijing, it is an open secret that a large proportion of these works have been auctioned but not paid eventually. According to Chinese Association of Auctioneers, only 237 of lots over ten million yuan auctioned in 2010 have been paid until April 2011, while a staggering percentage of 41.91% of artworks have not been paid or refused by the buyers to pay. In this year along, paintings failed to be paid on time amount to 5.5 billion yuan. It is said that the most common reason of payment delay or refusal is the uncertainty of the authenticity of the artworks. The underlying problem is the lack of authoritative art appraisal institutions in China (Chinese Association of Auctioneers, 2011). As a consequence, the local auction houses are forced to raise buyers' premium in order to compensate their lost. In a much worse scenario, Sotheby's Hong Kong sued a mainland buyer for

not paying Zao Wu-ki's 10.1.68, which broke the record price of this Chinese French modern master in Sotheby's Hong Kong's autumn sale (Jing Daily, 2012).

In other cases, Chinese buyers may refuse to pay for the lots, mostly antiques, which were illegally brought abroad during war times in modern area, as a patriotic gesture. Due to the turmoil and drastic social changes taking place in the modern era, a large proportion of Chinese artworks have been taken abroad. As a consequence, a lot of museum quality artworks are now scattered around the world. In 2008, a mainland buyer refused to pay for the two bronze incense burners, which belong to the Summer Palace collection in Qing Dynasty, the Palace of which was destroyed by French and British troops. (Robertson, 2011)

False trading and unreliable statistics

Behind the rapid expansion and outstanding figures is the extremely disordered market. Especially among small auction houses, irregular practices often take place which range from private dealing, under-the-counter dealing and other illegal operations (Artron, 2012). The auction house would collude with sellers to inflate the price. What's worse, this irregular secondary market would give rise to other problems such as fakes and payment delay. The lack of credibility has been spread to the whole market. It has even been reported that, art auction has been used as a way of money laundering (Jiao, 2011). These rampant irregular practices on the secondary market have damaged the overall image while the lack of reliable data makes it harder for market observers to tell the reality from superficial auction records.

Apart from the above mentioned major problems, there also exist other peripheral problems which can be found in the general context of the art market. For instance, lack of regulation is considered to be of vital importance. Relevant regulations didn't come into place until the 1990s. Notwithstanding the existing regulations which relatively alleviate the rampant irregularities on the market, compared with the scale and pervasiveness of fakes, faulty auctions and payment delay, the scanty regulations

seems powerless and more stringent and comprehensive laws are needed. Other problems include limited openness to foreign competition and not yet fully convertible currency (McAndrew, 2009).

3.6. Conclusion

Officially, the Chinese art market is born in 1992 and the contemporary Chinese art in 1979. In the following decade, it underwent a preliminary developing stage with an incomplete market infrastructure. Through qualitative research in chapter 3, some research questions can be answered.

From 2006 to 2011, the booming period of the Chinese art market, several market trends can be concluded as follows. The market infrastructure is quickly built up, ranging from gallery, auction house, museum, to Art Fairs. The auction market has experienced most rapid growth, where all art categories have fetched record prices. However, ceramics, Chinese painting and calligraphy have shown stronger market performance and larger market share than contemporary Chinese art. At the demand side, new buyers from mainland China have joined the art world, though mainland art buyers are troubled with the high taxation on art. It's believed that direct or indirect tax deduction is possible in the near future.

In mainland China, Beijing's leading place has been consolidate, which is not only the center of primary, secondary art market, but also the home to art clusters. Restricted from entering the mainland market, international auction houses choose to reach the mainland market via Hong Kong. Underlying the booming façade of the Chinese art market are severe problems dampening its future prospects. Regulators are aware of the severe situation and the pending *Regulation on the Administration of Art Market* is expected to tackle prevailing market irregularities.

Secondly, the Chinese art market is susceptible to macro-economic environment both home and abroad. China's steady economy growth has constructed solid ground for

the art market to grow. A strong correlation is found between domestic market sales revenue and M1 growth rate. The outbreak of 2008 financial crisis has dampened the market growth; however, the negative effect lasted only a short period of time. Moreover, the policy shift in China, as the government's solution against the aftermath of global economic crisis, distinctively favors economic restructure and stimulates domestic consumption, which are both advantageous for local art market in the long run.

Though the Chinese art market shares an identical market structure with its Western counterparts, there are also some significant differences between these two parts of the art world. Firstly, due to disparate cultural system, the perception of fine art greatly differs from east to west. Fine art is traditionally conceived as Chinese painting and calligraphy in China, and decorative art enjoys a higher status in China than at Western auction market. As a result, ceramics and Chinese painting and calligraphy are favored by Chinese collectors than contemporary art. The situation is even strengthened after the global economic crisis. Secondly, the composition of fine art in China is characterized by a broader price range than Western art market. Thirdly, new Chinese collectors have shown clear preference towards transacting at auction than the primary art market.

IV. Empirical analysis

4.1. Data source

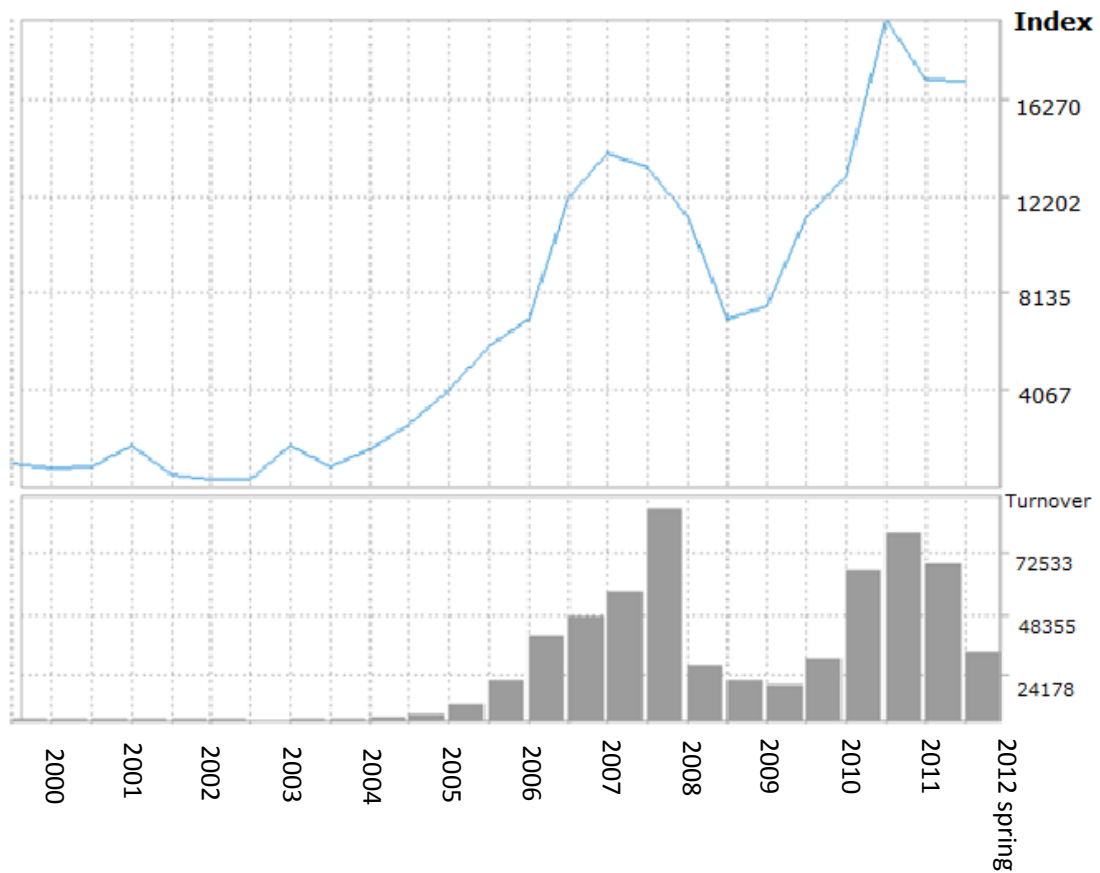
Not all these studies on art investment would construct a data-set of their own. A large amount of these studies would directly gather data from existent data-set or combine several data-sets. As predecessor in this area, Reitlinger's (1961) substantial data-set in *The Economics of Taste* serves as a reputable source for various studies, most of them are the rather early works such as Anderson (1974), Baumol (1986), Goetzmann (1993), Chanel and Ginsburgh (1993), Frey and Pommerehne (1989), Buelen and Ginsburgh (1993). In addition, Mayer's (1971) *International Auction Records* have been combined by Anderson (1973) and Goetzmann (1993) for it provides more detailed information of the paintings. Next to Reitlinger's (1961) momentous dataset, another compatible source is established by Mei and Moses (2002). Mei and Moses (2002) collected 4896 price pairs of repeated sales during 1875-2000 from New York Library and Watson Library at the Metropolitan Museum of Art. The large scale of their data-set attributes to their estimation of annual index of art prices of three art trends: American, Old Master and Impressionist. Mei and Moses' data-set benefits successive studies as well. Beggs and Graddy (2008) combined auction records at Sotheby's and Christie's in New York and London, Art Index (www.artindex.com) and the Mei and Moses' art index. Selection of data and construction of data-set would lead to biased results in some cases. The relationship between data and bias would be explained in details in the following section.

In order to analyze the market trend and returns on contemporary Chinese art during the period of 2006-2011, auction records of top 17 contemporary Chinese artists have been collected to facilitate this research. Among existing empirical studies on art market, no research has been carried out on the auction sales of contemporary Chinese art, primarily because it only came under spotlight since 2005 with rapidly ascending prices and the difficulty to acquire complete sales records of it from both the Eastern and Western art market. The most comparable data-set is constructed by Mok et al (1993) on modern Chinese paintings. Covering the period 1980-90, 20 paintings are

found to have been auctioned twice at Christie's and Sotheby's Hong Kong. Their sample of repeated sales is based upon auction archive of about 4000 auction sales records of modern Chinese paintings.

Due to the fact that the market for contemporary Chinese art is truly international, it's essential for this study to cover auction records in east and west. To fulfill this research purpose, a combination of Eastern and Western on-line data source is applied. First of all, the selection of top 17 contemporary Chinese artists is based upon the "Top Contemporary 18 Index" published by Artron in 2008. One artist is discarded for his works have never been auctioned outside mainland China, and couldn't facilitate the study into geographical shift from west to east of contemporary Chinese art. As the barometer of the Chinese art market, artron.com has released a set of Artron Art Market Index (AAMI) to trace the Chinese art market trends. Along with the "Top Contemporary 18 Index", there's also a "Painting and Calligraphy Auction Index" composed of auction records of 400 best-selling artists who practice traditional Chinese art, and "Top 100 Oil Painting Index" which cover 100 Chinese oil painters since the beginning of 20th century.

Figure 8: Top Contemporary 18 Index, 2000 spring-2012 spring.



Source: artron.com <http://index.artron.net/indexall.php?cbid=12>: visited at June 17, 2012.

Ranging from 2000 spring to 2012 spring, 3498 lots are included in the database among which 2916 lots were sold, thus resulting in an unsold rate of 17%. The aggregate value of the whole data-set mounts to 310 million yuan and the index is set on price/pingchi (a commonly adopted measuring unit in traditional Chinese painting and calligraphy, which equals 33.3 cm X 33.3 cm). All the data included are gathered from auction records of auction houses located in mainland China, neighboring regions such as Hong Kong, Taiwan and Macau, and Western countries. However, after comparing the lots auctioned at Western market contained in Artron’s database and the original data listed in the websites of Western auction houses, it’s discovered that Artron significantly lacks in data from abroad. To remedy this loophole embodied in Artron database, I refer to the original database of Western auction houses to supplement the imperfection of Artron’s database. Therefore, the on-line database of Christie’s, Sotheby’s, Phillips de Pury, and Bonhams are visited.

As shown in Figure 8, the market scale remains trivial before 2006 and the first wave of bull market starts in 2004 spring and ends in 2008 spring though the index already drops in 2007 autumn. Affected by the global financial crisis, the market scale contracted to a great extent in 2008 autumn. As a result, the market turnover in 2009 spring is almost the equivalent of the market size in 2006 spring. The market didn't stay at the bottom for long. It started to recover in 2010 spring and soon reached the top in 2011 spring. Though the Artron index reached an unprecedented high in 2011 spring, the aggregate turnover still couldn't compete against the record set in 2008 spring. Since 2011 autumn, the market adjusted downwards again. Since Artron doesn't comprise complete sale records of contemporary Chinese art sold abroad, all these analysis should be confined to the performances of contemporary Chinese art in Eastern art market. This study covers this shortage through combining domestic auction records and those from abroad.

4.2. Main data-set

a. Data description

To suit the research purpose of this paper, auction records of 17 contemporary Chinese artists whose works have been circulating in the global art market are collected. A data-set comprising 3570 auction records from 2006 to 2011 is constructed, among which 380 lots unsold. These auctions take place not only in leading art centers like New York and London, but also the local auction houses in the emerging Asian art market. The sample comprises only paintings and prints, records of sculpture are discarded. Since the on-line database fails to provide complete observable paintings characteristics and the limited scope of this research, variables concerning the intrinsic characteristics of the lots such as size, medium, and estimated price are not included in the main data-set. Apart from artwork related information (name of artwork, date of auction, price realized including hammer price and buyer's premium), more detailed records are taken down covering three aspects of the item: artist, price and place. In order to facilitate data processing in the following section,

all sale records are directly recorded in U.S. dollar. In the original database of Artron, 18 artists are included. However, paintings of one of them, Luo Zhongli (b.1948) (a leading Chinese realist painter), have never been auctioned in Western art market. Since it contradicts with the research purposes, which is to illustrate the shift of transaction center between east and west, auction records of this artist has been discarded. In total, 17 contemporary Chinese artists are displaced in this data-set. The Table 1 gives a preliminary insight into the unsold rate of various artists in different year. It indicates that contemporary Chinese art underwent significant growth and reaches a maxim auction volume (835) in 2007. Under the influence from global financial crisis, the unsold rate rises drastically in 2008. While the unsold rate hikes even higher in 2009, the number of paintings put on auction also diminished in large scale. Since 2008 and until 2011, the unsold rate of contemporary Chinese art has been hovering above 10.6%, the average unsold rate during this time interval, suggesting that the market volatility increases after the breakout of global financial crisis.

Table 1: Unsold rate of top 17 contemporary Chinese artists

Year	2006	2007	2008	2009	2010	2011
Unsold lots	50	33	110	50	64	73
Total lots	605	835	780	304	453	593
Unsold rate	8.3%	4.0%	14.1%	16.4%	13.9%	12.3%

Artists

The fact that 13 artists in the dataset (Table 2), nearly three quarters of the sample, currently work and live in Beijing coincides with the ongoing trend that Beijing is developing into the art center of mainland China. Moreover, 12 of the artists were born in the 1960s, three in the 1950s, one in 1942 and one in 1970. It's evident that these best-selling contemporary Chinese artists belong to the first generation of contemporary Chinese artists who have experienced a series of social upheavals, from

the suppression on art creation during Cultural Revolution, dramatic change from command economy to market economy, and the recent rise of local art market. Undoubtedly, these social and political incidents are deeply engraved in the memory of these young contemporary Chinese artists, which are later expressed in their art creation. Among the artists included in this research, Li Shan and Wang Guangyi are conventionally categorized under “political pop”. Whereas the representative figures such as comrades, Chairman Mao can be found in almost every artist’s work. Moreover, seven artists in the data-set have created portraits for Chairman Mao.



*Chairman Mao*⁸
By Zeng Fanzhi
Oil on canvas, 2005
130.2 x 110.1 cm

All of the artists, except Yan Pei Ming, receive a bachelor diploma in mainland China, and four continued their education abroad, while only Yan Pei Ming emigrated and stayed abroad. Among all the art academies on the list, Central Academy of Fine Arts in Beijing has nurtured seven of the most successful contemporary Chinese artists, followed by Sichuan Academy of Fine Arts.

Table 2: Information on top 17 contemporary Chinese artists, 2006-2011

Name of artist	Year and place of birth	Art academy	Current residence
Zhang	1958;	Graduated from Sichuan Academy of Fine	Beijing

⁸ This piece was auctioned at Christie’s HK in May 2007 and November 2010 respectively (www.christies.com).

Xiaogang	Kunming	Arts, Chongqing	
Liu Ye	1964; Beijing	Graduated from School of Arts & Crafts Beijing, China; Graduated from Central Academy of Fine Arts Beijing, China; MFA, Hochschule der Kunst Berlin, Bildende Kunst Berlin, Germany	Beijing
Zeng Fanzhi	1964; Wuhan	Graduated at Hubei Academy of Fine Arts, Oil Painting Department	Beijing
Liu Xiaodong	1963; Liaoning	Central Academy of Fine Arts; Madrid Complutense University, MFA (Spain)	Beijing
Yue Minjun	1962; Heilongjiang	Graduated from Hebei Normal University, oil painting department	Beijing
Fang Lijun	1963; Handan	Hebei Light Industry College, Ceramic Art Studies; Graduate at Print Dept. the Central Academy of Fine Arts, Beijing	Beijing
Liu Wei	1965; Beijing	Graduated from Print Making Department, Central Academy of Fine Arts, Beijing, China	Beijing
Zhou Chunya	1955; Chongqing	Graduated from the Department Painting, Sichuan Academy of Fine Art, China; Graduated from Experiment Art Department, Kassel Academy of Fine Art. Kassel, Germany	Chengdu
Li Shan	1942; Lanxi	Graduates from Heilongjiang University, Heilongjiang; Graduates from Shanghai Theater Academy, Arts Department (oil painting)	Shanghai
Wang Guangyi	1957; Haerbin	Graduated from the Oil Painting Department, Zhejiang Academy of Fine Arts (NZAF), Hangzhou China	Beijing
Yang Shaobin	1963; Tangshan	Graduates from the Hebei Light Industry Institute	Beijing
Yin Zhaoyang	1970; Nanyang	Graduated from Printing Department of Central Academy of Fine Arts, Beijing, China	Beijing
Qi Zhilong	1962; Inner Mongolia	Graduated Central Academy of Fine Arts, Beijing, China	Beijing
Feng Zhengjie	1968; Sichuan	Fine Arts Education Dept of Sichuan Academy of Fine Arts, BFA	Beijing
Guo Jin	1964; Chengdu	Graduated from Sichuan Academy of Fine Arts, oil painting department	Chongqing
Zeng Hao	1963; Kunming	Graduated at the Central Academy of Fine Arts, Beijing China	Beijing

Yan Pei Ming	1960; Shanghai	Graduated at the École des Beaux-Arts, France	Dijon, France
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Source: www.artnet.com; www.artron.net; www.wikipedia.com; www.zhangxiaogang.org: all visited on June 17, 2012.

Location

In the data-set, 15 cities have held auction for contemporary Chinese art; 9 of them in Asian art market and 6 in Europe and America. In terms of market scale, Hong Kong definitely ranks at the first place with a total sales revenue of 415.4 million, followed by Beijing, London and New York. It should be noted that Hong Kong is the only city where international and local auction houses operate concurrently. Moreover, Hangzhou, Shanghai and Taipei are also influential transaction centers for contemporary Chinese art. Unlike in the Western art market where auctions of contemporary Chinese art are centered on several leading auction houses whose business is located internationally, sales are scattered among a number of auction houses in the Eastern market. In mainland China, Beijing outweighs other cities in terms of number of auction houses, number of lots and total turnover. It's noticeable that almost all auction houses in mainland China operate locally. Though the business is distributed among dozens of local auction houses, several of them such as Poly Beijing, China Guardian, and Beijing Council have shown great advantages.

Table 3: Information on location of auction sales of top 17 contemporary Chinese artists, 2006-2011

City	Auction House	Number of lots	Unsold rate	Sales revenue
Beijing	Beijing Council	111	20.7%	\$23,704,744
	Chengxuan	90	13.3%	\$12,295,849
	Chengming	2	0%	\$49,087
	China Guardian	113	24.8%	\$35,797,458
	Googut Beijing	4	75%	\$13,440
	Hanghai Beijing	82	22%	\$20,451,561
	Huacheng Beijing	38	15.8%	\$3,769,407
	Jiixin Beijing	1	100%	\$0

	Jiuge Beijing	3	0%	\$47,501
	Poly Beijing	340	14.7%	\$141,469,940
	Rongbao Beijing	51	3.9%	\$5,204,036
	Taipingyang Beijing	1	100%	\$0
	Yonghe Jiacheng Beijing	1	0%	\$14,085
	Yongle Beijing	2	100%	\$0
	Zhongchengxing Beijing	8	0%	\$1,050,467
	Zhongding Beijing	8	0%	\$728,397
	Zhongpai Beijing	1	0%	\$21,809
		856		\$244,617,781
Chengdu	Shibijia	4	0%	\$97,183
		4		\$97,183
Guangzhou	Huayi Guangdong	8	25%	\$718,762
	Poly Guangdong	6	16.7%	\$301,211
	Yipai Guangzhou	2	0%	\$149,938
		16		\$1,169,911
Hangzhou	Nanbei Hangzhou	1	100%	\$0
	Xiling Yingshe HZ	50	6%	\$12,556,403
	Zheshang HZ	73	6.8%	\$11,536,760
	Zhongcai HZ	17	29.4%	\$459,697
		141		\$24,552,860
Hong Kong	Bonhams HK	5	40%	\$370,115
	Chongyuan Baoqu HK	3	66.7%	\$85,323
	Christie's HK	577	8.3%	\$200,407,569
	Ravenel HK	3	0%	\$2,151,740
	Sotheby's	597	8%	\$212,409,973
		1,186		\$415,424,720
Jiangsu	Jiaheng Jiangsu	20	30%	\$1,109,967
		20		\$1,109,967
Macau	Chongyuan Macau	6	50%	\$96,421
		6		\$96,421
Shanghai	Chongyuan SH	3	33.3%	\$60,793
	Daoming SH	33	15.2%	\$3,900,655
	Dongfang SH	1	0%	\$24,535
	Duoyunxuan SH	35	20%	\$4,552,190
	Gongmei SH	1	0%	\$11,549
	Guopai SH	20	5%	\$1,150,704
	Honghai SH	4	100%	\$0
	Hosane SH	108	8.3%	\$24,574,944
	Jiatai SH	11	36.4%	\$500,670

	Jinghua SH	1	0%	\$10,905
	Taipingyang SH	5	20%	\$198,742
	Tianheng SH	17	11.8%	\$1,345,704
		239		\$36,331,391
Taipei	Jingxunlou Taipei	14	0%	\$4,595,107
	Kinsley Taipei	22	4.5%	\$5,997,926
	Ravenel Taipei	113	8%	\$32,076,469
	Taichung	2	0%	\$75,594
	Yiliu Taipei	4	0%	\$220,389
	Zhongcheng Taipei	24	0%	\$5,956,509
		179		\$48,921,994
Amsterdam	Christie's AM	3	0%	\$56,770
	Sotheby's AM	15	0%	\$455,093
		18		\$511,863
London	Bonhams LD	3	100%	\$0
	Christie's LD	129	3.9%	\$36,948,902
	Phillips de Pury LD	143	26.6%	\$40,931,621
	Sotheby's LD	146	0.7%	\$59,808,468
	Sotheby's Olympia	4	0%	\$34,669
		425		\$137,723,660
Milan	Sotheby's Milan	1	0%	\$38,385
		1		\$38,385
New York	Christie's NY	102	0%	\$22,433,025
	Phillips de Pury NY	47	36.2%	\$6,618,450
	Sotheby's NY	309	0%	\$78,038,504
		458		\$107,089,979
Paris	Christie's Paris	8	0%	\$737,759
	Sotheby's Paris	10	0%	\$562,388
		18		\$1,300,147
San Francisco	Bonhams San Francisco	4	0%	\$870,770
		4		\$870,770

b. Methodology

Due to incompleteness of on-line database and restriction of research scope, this data-set lacks significantly in detailed information on characteristics of artworks. As a result, the current data-set is ill-suited for the application of hedonic method. Nonetheless, this data-set comprise a substantial amount of auction records covering not only Eastern and Western auction market, but also internationally operative auction houses and small local auction houses, which allow an analysis into the

geographical transition of contemporary Chinese art in secondary art market from 2006 to 2011. Dependent upon variables ranging from date, location, price and basic artwork-related information, a comparison of market share is conducted between east and west, and several important art centers including Beijing, Hong Kong, London and New York are highlighted. Afterwards, the annual transition of market share from west to east is exhibited in Figure 10. In addition, the market performance of each artist is displayed in the following section. A correlate analyze is run in SPSS to investigate the effect of artists' experience abroad on the percentage of sales held in Western art market.

c. Result

Artist

Through the main data-set, underlying patterns concerning the artist and location of auction is revealed. First of all, among the 17 artists included in the list, Zhang Xiaogang and Zeng Fanzhi are definitely the most sought after ones. Accompanied with Liu Ye, Liu Xiaodong, Yue Minjun and Fang Lijun, they've occupied 83% of the top end of the market, represented by sales above \$1 million, suggesting that the top end is dominated by a number of artists.

Table 4: Sales revenue, unsold rate per 17 contemporary Chinese artists, 2006-2011

Name of artist	Number of lots	Percentage of sales in Western art market	Unsold rate	Sales revenue	Number of items sold over \$1 million	Average price
Zhang Xiaogang	309	48.2%	7.4%	\$176,715,917	44	\$571,896
Liu Ye	166	27.7%	5.4%	\$69,405,563	26	\$418,106
Zeng Fanzhi	320	20.9%	10.3%	\$198,223,289	64	\$619,448
Liu Xiaodong	152	5.3%	15.1%	\$71,859,804	17	\$472,762
Yue Minjun	232	33.2%	12.5%	\$115,554,514	34	\$498,080
Fang Lijun	151	33%	6.0%	\$54,916,024	15	\$363,682
Liu Wei	209	17.7%	6.7%	\$42,658,356	8	\$204,107

Zhou Chunya	534	1.9%	8.8%	\$92,817,910	9	\$173,816
Li Shan	172	27.9%	14.0%	\$20,833,837	3	\$121,127
Wang Guangyi	355	51.3%	11%	\$63,137,086	7	\$177,851
Yang Shaobin	184	22.8%	13%	\$23,249,329	1	\$126,355
Yin Zhaoyang	215	4.2%	20%	\$24,092,297	0	\$112,057
Qi Zhilong	96	15.6%	12.5%	\$8,201,479	0	\$85,432
Feng Zhengjie	104	59.6%	6.7%	\$8,909,222	0	\$85,666
Guo Jin	167	16.2%	18.0%	\$5,848,630	4	\$35,022
Zeng Hao	81	11.1%	3.7%	\$5,205,183	0	\$64,262
Yan Pei Ming	123	69.9%	11%	\$38,333,540	8	\$311,655

In the SPSS analyze, “For” refers to the experience of artist abroad, with “1” matched with no foreign education or emigration, “2” with foreign education, “3” with emigration, and “4” with foreign education plus emigration. “PWAM” refers to the percentage of artists’ auction sales held in Western art market. The positive Pearson coefficient of 0.417 indicates that the more foreign experience the artist has, the more his sales is conducted in Western art market. However, it should be noted that the sample of artists is rather small, since only three contemporary Chinese artists included in the data-set has received education in foreign art academy, and only Yan Pei Ming immigrated to France.

Table 5: Correlation artists’ experience abroad and percentage of auction at Western art market

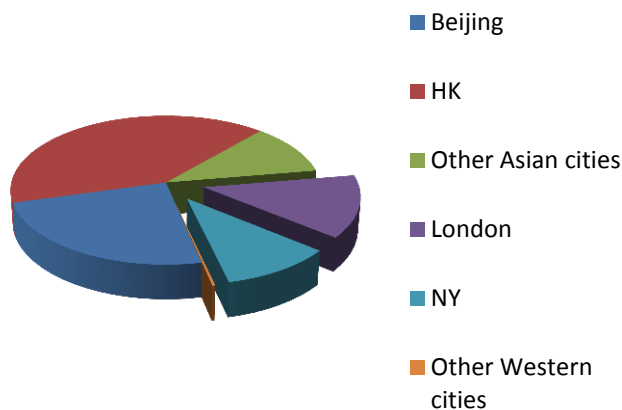
		For	PWAM
For	Pearson Correlation	1	.417
	Sig. (2-tailed)		.095
	Sum of Squares and Cross-products	9.529	102.094
	Covariance	.596	6.381
	N	17	17

PWAM	Pearson Correlation	.417	1
	Sig. (2-tailed)	.095	
	Sum of Squares and Cross-products	102.094	6277.021
	Covariance	6.381	392.314
	N	17	17

Location

From the figure of distribution of auction sales among various cities, it's evident that the Eastern market share outweighs its Western counterpart regarding market scale. Hong Kong is definitely the transaction center of contemporary Chinese art in secondary art market.

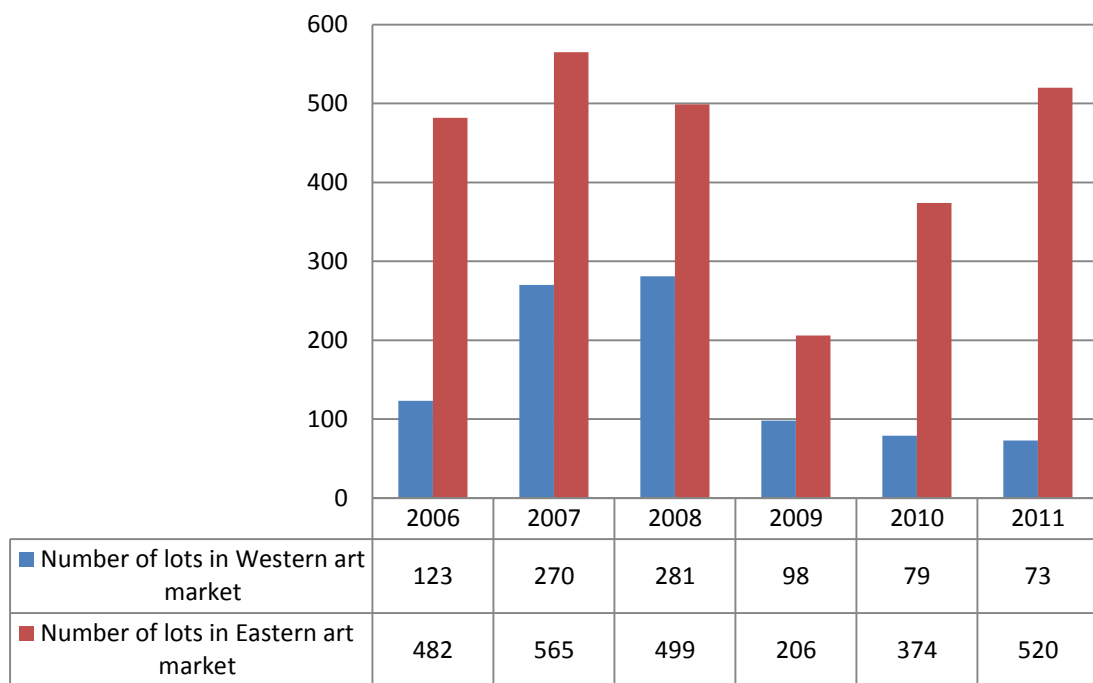
Figure 9: Distribution of sales revenue of contemporary Chinese art in global auction market from 2006 to 2011



The majority of Asian art market at the auction of contemporary Chinese art has been gradually obtained through years' of accumulation. Between 2007 and 2009, auction sales in Western art market accounts for almost one third of the total sales annually. However, in 2010 and 2011, the gap between east and west rapidly expanded; meanwhile, the total sales contradicted significantly. Apparently, more sales are shifted towards east since demand for contemporary Chinese art from Western art market shrinks under the influence of economic crisis. Regarding the city where auction is held, nine cities in the Eastern art market has appeared in the data-set, and

six in the Western art market. Selected by number of sales, the first-tier auction centers are definitely Beijing, Hong Kong, London and New York, followed by the second-tier cities including Hang Zhou, Shanghai and Taipei. Occasionally, auction sales of contemporary Chinese art have also taken place in Amsterdam, Chengdu, Guangdong, Jiangsu, Macau, Milan and San Francisco.

Figure 10: Distribution of number of auction lots of contemporary Chinese art among Eastern and Western art market, 2006-2011



4.3. Sub-data-set

a. Data description

Based on the main data-set, paintings that have been repeatedly auctioned are selected to construct a sub-data-set to study financial return and price changes of contemporary Chinese art, 2006-2011. In order to identify repeated sales, more detailed artwork-related information is recorded. Identical names of artwork and creator don't suffice, since a large number of paintings in a grand series share the same name (i.e. Great Criticism Series of Zhang Xiaogang, Green Dog Series of Zhou Chunya).

Therefore, explicit provenance, size, year of creation, artist's signature and photos attached on website are all critical factors to verify identical paintings. In addition, pairs with unsold record and paintings whose previous auction dates back prior to 2006 are discarded. Moreover, only prints with concrete provenance information suggesting previous auction sale are included.

In the main data-set, 107 paintings have been successfully auctioned at least twice and 219 lots are included in the subsample, among which three paintings have been auctioned three times, and one painting has appeared at auction for four times. The sub-sample accounts for around 6% of the whole data-set. Surprisingly, Zhou Chunya alone has 71 paintings that have been repeatedly auctioned, almost two thirds of the whole subsample.

Since its recent rise, contemporary Chinese art has been conceived as a highly speculative sector. Conventionally, the turn-over of ownership is relatively low in a rational art market without speculation. Nonetheless, it's estimated that artwork changes its ownership after 10 years on average (Mok. et al, 1993). In Buelens and Ginsburgh's (1993) empirical study, paintings sold more than once within twenty years are defined as speculative transactions. During the period 1980-90, 20 modern Chinese paintings have been resold within 10 years, among 4000 Hong Kong auction records in total. The 107 contemporary Chinese paintings resold within 6 years significantly outweigh Mok. et al's (1993) data-set, suggesting a highly speculative market sphere. As a result, the sub-sample is also conceived as sample of "speculative sales".

b. Methodology

The holding period P_{n-1} in this research is defined as T_n (year of resale) minus T_{n-1} (year of previous sale), in case of $T_n - T_{n-1} < 1$, the holding period is considered as one year. To calculate the rate of return on the most speculative transactions of contemporary Chinese art, the double sales approach created by

Baumol (1986), later applied in Adamowska (2008), Frey and Pommerehne (1988, 1989), and Landes (2000) is adopted. The continuous compounding formula used in Adamowska (2008): $r = \ln (p_t / p_{t-1}) / (t_1 - t_0)$, which is developed from Baumol's (1986): $p_t = p_{t-1} e^{r(t_1-t_0)}$, is used in this study.

c. Result

The average holding period of sub-sample is 2 years, and 41 paintings, more than one third of the whole sub-sample, are quickly resold within one year. As the holding period lasts longer, there appear less repeated sales. All indicates contemporary Chinese art a highly speculative art sector.

Table 6: Breakdown of holding period in sub-dataset

Holding period	0-1	1-2	2-3	3-4	4-5	Total
Pairs of repeated auction	41	24	21	20	5	112
Percentage	36.6%	21%	18.8%	17.9%	4.5%	100%

In the sub-sample of speculative bids, only 16% transactions take place in Western art market, significantly lower than the share of Western art market in the main data-set (29%). While 22% of first sale happen in Western auction market, it only accounts for 12% of second sales. Therefore, it's reasonable to conclude that not only does auction market of contemporary Chinese art shifts towards east, but also the speculative bubble is drifting along. The rate of return of the whole sub-data-set is 0.21. It's also found that the financial return on contemporary Chinese art is extremely polarized. Thirty paintings (28% of the repeat sales sample) failed to generate a higher price when put on auction again. The average return of paintings with ascending prices is 0.37 and three paintings doubled their price in resale. Along with the 5.7% annual return in Kraeussl and Logher (2010), and the 0.529 rate of return calculated by Mok. et al (1993), empirical results have revealed low financial return in the Chinese art market, which significantly differ from the media report. This finding indicates that media report has significantly exaggerated the growth in the Chinese art market. The

780% growth rate for the contemporary Chinese art market published by Artprice has found no proof in the academic research in the Chinese art market.

4.4. Conclusion

The market performance of contemporary Chinese art offers an interesting perspective to understand the ongoing market trends not only in China's emerging art market, but also the global art market which is experiencing a critical change in its structure. To fulfill this purpose, an original data-set of auction sales of top 17 contemporary Chinese artists is developed. The main data-set consisting of 3750 items sold involving 15 cities provides substantial resource to analyze the geographical transition of contemporary Chinese art at secondary art market from 2006 to 2011. The sub-data-set composed of 107 paintings resold quickly within the research period enable a research into the presence of speculation in investing in contemporary Chinese art.

Firstly, some underlying market trends are revealed. The empirical evidence shows that the top end of auction sales of contemporary Chinese art is controlled by a small group of artists. In addition, artists' experience abroad has a positive correlation with the percentage of his sales in Western art market. Geographically, sales have been clustered in several cities: the first-tier city of secondary market for contemporary Chinese art including Beijing, Hong Kong, New York and London; the second-tier cities including Hangzhou, Shanghai and Taipei. It's also discovered that the composition of secondary art market in emerging Asian art markets differ from their Western counterparts. While auction in well-established Western art markets are centered among a few leading auction houses which are internationally operative, Chinese auction market is composed of a large number of small-scale auction houses operating locally, however, several local auction houses have showed great strengths in recent years. Meanwhile, the geographical transition from west to east is proved to be going on, the pace of which is even accelerated by the explosion of global financial crisis.

Although it's difficult to measure the degree of speculation on contemporary Chinese art, several empirical results have proved the existence of high degree of speculation. The average unsold rate is around 10.6% and keeps rising. Average holding period of paintings in sub-sample is two years. What's more, among the 107 paintings, 30 were resold at a lower price in the subsequent sale.

V. Conclusion

This master thesis attempts to combine a research into market trends of the emerging Chinese art market with existing theoretical framework and empirical methodology. Since no previous study has been done on this regional market, this study partly fills the gap and provides more insight into the intrinsic market mechanism of the Chinese art market. The study focuses primarily on contemporary Chinese art to study the price change of this art category, geographical transition of Chinese art from west back to east. Meanwhile, this study has contributed to existing literature through the construction of its own data-set. Research findings can be categorized into four aspects concerning major market trends of the Chinese art market from 2006 to 2011.

Though the qualitative research in chapter three confirms that the indigenous Chinese art market is growing at an accelerated speed, empirical findings in chapter four break the perception that Chinese art is a lucrative investment. Firstly, this research unveils that though the Chinese art market has formed a market structure similar to the Western art market, it's embodied with distinctive characteristics in terms of perception of value of art, composition at supply end, buyers' behavior and general context. Secondly, it's discovered that the Chinese art market is susceptible to macroeconomic environment not only at home but also from abroad. The M1 growth rate serves as an important indicator of the growth of the Chinese art market. Thirdly, attracted by the expanding domestic market, transaction of Chinese art has increasingly moved from the Western art market towards east. Last but not least, the market of contemporary Chinese art along is immersed in speculative atmosphere and is highly volatile, though the degree of speculation remains immeasurable.

However, due to the limitation of research scope and data source, this study lacks in detailed information on artwork related variables. As a result, future research can seek to refine data on Chinese art market and fill in the gap of research on emerging art markets. Nonetheless, under the influences from emerging art markets and global economic crisis, the new market structure and discipline should be further studied.

Moreover, methodology concerning measurement of speculation in art investment can be developed in future studies.

VI. Bibliography - Art market in general

- Adamowska, Weronika (2008), "Is art such a good investment? --Investing in fine art on the international and Polish auction market", EUR master thesis.
- Agnello, R.J. and Pierce, R.K. (1996), "Financial Returns, Price Determinants, and Genre Effects in American Art Investment", *Journal of Cultural Economics*, 20(4): 359-383.
- Anderson, R.C. (1974), 'Paintings as an Investment', *Economic Inquiry*, 12(1): 13-26.
- Ashenfelter, Orley & Graddy, Kathryn (2002). "Art Auctions: A Survey of Empirical Studies," NBER Working Papers 8997, National Bureau of Economic Research, Inc.
- Ashenfelter, Orley (2003), "Art auctions". In Ruth Towse (Ed.), *A handbook of cultural Economics*, First edition, Cheltenham: Edward Elgar, 32-39.
- Ashenfelter, Orley. and Graddy, Kathryn. (2003), "Auctions and the price of art". *Journal of Economic Literature* 41 (3), 763-787.
- Baumol, William J. (1986), "Unnatural value: Or art investment as floating crap game". *The American Economic Review*, Vol. 76, No. 2 (May, 1986), pp. 10-14.
- Baumol, William J. (2007), "Returns in cost diseased markets with psychic benefits: Two apparently conflicting models of equilibrium". Working paper, Universiteit Utrecht.
- Blaug, Mark (2001) "Where are we now on cultural economics?" *Journal of economic surveys*, Vol. 15 No. 2.
- Buelens, Nathalie and Ginsburgh, Victor (1993), "Revisiting Baumol's 'art as floating crap game'". *European Economic Review* 37 (1993) 1351-1371, North Holland.
- Butler, John (1979), *Art as investment*. London: The Economist Intelligence Unit Ltd.
- Bryman, Alan (2008), *Social research methods* (3rd edition), Oxford University Press.
- Chanel, O. (1995), 'Is art market behaviour predictable?', *European Economic Review*, 39(3-4): 519-527.
- Chanel, O., Gérard-Varet, L.-A. and Ginsburgh, V. (1996), 'The Relevance of Hedonic Price Indices: The Case of Paintings', *Journal of Cultural Economics*, 20(1): 1-24.
- Grampp, William D., 1989, *Pricing the priceless: Art, artists and economics* (Basic

- Books Inc., New York).
- Frey, B. (2003) "Art investment returns" Ch. 10 in B. Frey *Arts and Economics. Analysis and Cultural Policy*. Second edition, Springer.
- Frey, B and Eichenberger, Reiner (2003) "Art investment returns" Ch. 10 in B. Frey *Arts and Economics. Analysis and Cultural Policy*. Second edition, Springer.
- Frey, B.S. and Pommerehne, W.W. (1989), 'Art Investment: An Empirical Inquiry', *Southern Economic Journal*, 56(2): 396-409.
- Goetzmann, W.N. (1993), 'Accounting for Taste: Art and the Financial Markets over Three Centuries', *American Economic Review*, 83(5): 1370-1376.
- Goetzmann, W.N., Renneboog, L. And Spaenjers, C. (2010), *Art and Money*. Unpublished article. Tilburg University.
- Goodwin, James (2008), *The International Art Markets: The Essential Guide for Collectors and Investors*, London: Kogan Page.
- Grampp, William D. (1989), *Pricing the priceless: art, artists, and economics*, New York: Basic Books, Inc.
- Guerzoni, G. (1994), "Testing Reitlinger's sample reliability", paper presented at the 8th conference on cultural economics, Witten, August.
- Heilbrun, J. & Gray, C.M. (2007), *Economics of Art and Culture*. Cambridge, New York: Cambridge University Press (2nd Edition, 1st Edition 2001).
- Helen Higgs & Andrew Worthington, 2005. "Financial Returns and Price Determinants in the Australian Art Market, 1973-2003," *The Economic Record*, The Economic Society of Australia, vol. 81(253), pages 113-123, 06.
- Higgs, H. and Worthington, A.C. (2005), 'Financial Returns and Price Determinants in the Australian Art Market, 1973-2003', *Economic Record*, 81(253): 113-123.
- Jianping M. and M. Moses (2002), "Art as investment and the underperformance of masterpieces" *American Economic Review* 92 (5): 1656-68.
- Landes, W.M. (2000), "Winning the Art Lottery: The Economic Returns to the Ganz Collection", John M. Olin Law and Economics Working Paper No. 76, Second series, The Law School, University of Chicago, Chicago.
- McAndrew, Clare (2010), *The International Art Market 2007-2009. Trends in the Art*

- Trade during Global Recession*, Helvoirt: TEFAF.
- Mok. et al. (1993), "Modern Chinese paintings: an investment alternative?". *Southern Economic Journal*, Vol. 59, No. 4 (Apr., 1993), pp. 808-816
- Moulin, Raymonde (1987), *The French art market: a sociological view*, Rutgers University Press.
- Olav Velthuis, "Art dealers," in Towse (2011), *A handbook of cultural economics*. Second edition, Cheltenham: Edward Elgar, 28-32.
- Pesando, James & Shum, Pauline (1999), "The Returns to Picasso's Prints and to Traditional Financial Assets, 1977 to 1996," *Journal of Cultural Economics*, Springer, vol. 23(3), pages 181-190, August.
- Pommerehne, W.W. and Feld, L.P. (1997), 'The Impact of Museum Purchase on the Auction Prices of Paintings', *Journal of Cultural Economics*, 21(3): 249-271.
- Rengers, Merijn and Velthuis, Olav (2002), "Determinants of Prices for Contemporary Art in Dutch Galleries, 1992-1998", *Journal of Cultural Economics*, 26, 1-28.
- Robertson, Iain (2005), *Understanding International art markets and management*, New York: Routledge.
- Sagot-Duvauroux (2011) "Art prices" Ch. 5 in Ruth towse (ed.) (2011) *A Handbook of Cultural Economics*.
- Sanning, Lee W. & Shaffer, Sherrill L. & Sharratt, Jo Marie, 2007. "Alternative investments: the case of wine," Working Papers 37322, American Association of Wine Economists.
- Stein, John Picard (1977), "The monetary appreciation of paintings". *Journal of Political Economy*, Vol. 85, No. 5 (Oct., 1977), pp. 1021-1036
- Towse, Ruth (1997), "Introduction". In Ruth Towse (ed) (1997) *Cultural Economics: the arts, heritage and the media industries*, volume I, Edward Elgar Publishing, 2 volumes.
- Towse, Ruth (2010), *A Textbook of Cultural Economics*, New York: Cambridge University Press.
- Towse, Ruth (ed.) (2011), *A Handbook of Cultural Economics*. Edward Elgar.

- Velthuis, Olav (2003), "Visual arts". In Ruth Towse (Ed.), *A handbook of cultural Economics*, Cheltenham: Edward Elgar, 470-475.
- Velthuis, O. (2005), *Talking Prices: Symbolic Meanings of Prices on the Market for Contemporary Art*, Princeton University Press, Princeton and Oxford.
- Wang, Tingting (2010), "The emerging Chinese art market: what contributes to the price surge of Chinese Contemporary Art, 2004-2008?". Master thesis of EUR.
- Wang, Xuan (2009), "Gallery's Role in Contemporary Chinese Art Market", Master thesis, The Ohio State University.
- Worthington, Andrew C., and Helen Higgs. 2003. "Art as an investment: Short- and long-term comovements in major painting markets." *Empirical Economics*, 28 (4): 649-668.

Reference – The Chinese art market:

AMRC and Bazaar Art (2011), “Top 100 galleries”, *Bazaar Art*, Vol. 269 (September, 2011): 282-296.

Artron (2012), “Chinese art auction market: report of 2011”, *Art market monitor of Artron*.

Beijing Municipal Administration of Cultural Heritage (2005), “Notification about appraisal standards of artworks restricted from export, created by modern masters deceased after 1949 and modern masters from 1795 to 1949”, Retrieved from: <http://www.bjww.gov.cn/2005/8-3/174026.html>

Chinese Association of Auctioneers (2011), “Zhongguo Wenwu Yishu Pin Paimai Shichang TongjiBaogao 201” (Annual Report of China Art Auction 2010). Retrieved from: <http://www.caa123.org.cn/main/index.jsp>

Chinese government’s official web portal (2002), *Law of the People's Republic of China on Protection of Cultural Relics (Order of the President No.76)*. Retrieved from: http://english.gov.cn/laws/2005-10/09/content_75322.htm

Dutra, Michael L. (2004), “Sir, how much is that Ming vase in the window? : Protecting Cultural Relics in the People’s Republic of China”, *Asian Pacific Law and Policy Journal*, 2004. Retrieved from: http://blog.hawaii.edu/aplpj/files/2011/11/APLPJ_05.1_dutra.pdf

General Administration of Customs of the People’s Republic of China (2012), *Tariff Implementation Scheme in 2012*. Retrieved from: <http://www.customs.gov.cn/publish/portal0/tab399/info353823.htm>

Goodwin, James (2008), “Introduction” in James Goodwin (eds.) *The International art markets: The essential guide for collectors and investors*. Kogan Page.

Ho, Ai Li (2011, Jan. 23), Fakes flood Chinese art market. *Straits Times*, Singapore Press Holdings Limited.

Hung, Wu (eds.) (2010), *Contemporary Chinese art: Primary documents*. The Museum of Modern Art, New York.

International Monetary Fund (2012), *China Economic Outlook 2012*. Retrieved from: <http://www.imf.org/external/country/CHN/rr/2012/020612.pdf>

- International Monetary Fund (2011), *China Economic Outlook 2011*. Retrieved from:
<http://www.imf.org/external/country/CHN/rr/2012/020612.pdf>
- Jiao, Priscilla (2011, June, 20), Art auctions 'marred by fakes, cheats'. *South China Morning Post*. Retrieved from
<http://topics.scmp.com/news/china-news-watch/article/Art-auctions-marred-by-fakes-cheats>
- Jing Daily, (2012, March, 20), “China Now World’s Largest Art & Antiques Market, But What Does It Mean?”. Retrieved from
<http://www.jingdaily.com/en/culture/china-now-worlds-largest-art-antiques-market-but-what-does-this-mean/>
- Kraeußl, Roman and Logher, Robin (2010), “Emerging art markets”, VU University Amsterdam.
- Lien, Ruben (2008), “China” in James Goodwin (eds.) *The International art markets: The essential guide for collectors and investors*. Kogan Page.
- McAndrew C. (2009). *Emerging Economies and the Art Trade in 2008, Globalisation and the Art Market*. European Fine Art Foundation.
- McAndrew C. (2010). *The International art market 2007-2009: trends in the art trade during global recession*. European Fine Art Foundation.
- McAndrew C. (2011). *The global art market in 2010: crisis and recovery*. European Fine Art Foundation.
- Mok. et al. (1993), “Modern Chinese paintings: an investment alternative?”. *Southern Economic Journal*, Vol. 59, No. 4 (Apr., 1993), pp. 808-816
- Robertson, Iain (2005), “Art, religion, history, money” in Iain Robertson (eds.), *Understanding International art markets and management*, New York: Routledge.
- Robertson I (2011), “Greater China” in *A new art from emerging markets*, London: Lund Humphries.
- Tanaka, Osamu (2010), “China’s Macroeconomic Policy Shift in 2008: Political Process from Tightening to Easing”. *Public policy review*, Vol.6, No.3, March 2010, pp. 473-510.
- The Economist (2012), “Pedalling prosperity-Special report: China’s economy”.

Retrieved from: <http://www.economist.com/node/21555762>

Watson, Peter (1992), *From Manet to Manhattan: The Rise of the Modern Art Market*,
First edition, New York: Random House.

www.artprice.com (2012), “Art market report 2011”.

www.artprice.com (2011), “Art market report 2010”.

www.artprice.com (2010), “Art market report 2009”.

www.artprice.com (2009), “Art market report 2008”.

www.artprice.com (2008), “Art market report 2007”.

www.artprice.com (2007), “Art market report 2006”.

Capgemini and Merrill Lynch (2011), *World wealth report 2010*. Retrieved from:
<http://www.ml.com/media/114235.pdf>

Capgemini and Merrill Lynch (2010), *World wealth report 2009*. Retrieved from:
http://www.capgemini.com/m/en/tl/World_Wealth_Report_2010.pdf

Capgemini and Merrill Lynch (2009), *World wealth report 2008*. Retrieved from:
http://www.capgemini.com/insights-and-resources/by-publication/2009_world_wealth_report/

Capgemini and Merrill Lynch (2008), *World wealth report 2007*. Retrieved from:
http://www.capgemini.com/insights-and-resources/by-publication/world_wealth_report_2008/

Capgemini and Merrill Lynch (2007), *World wealth report 2006*. Retrieved from:
http://www.capgemini.com/insights-and-resources/by-publication/world_wealth_report_2007/

Website:

www.artnet.com

www.artron.net

www.bonhams.com/

www.christies.com

www.phillipsdepure.com

www.sothebys.com

www.wikipedia.com

www.zhangxiaogang.org

Appendix – Sub-dataset⁹

Artist	Name of Artwork	Date of auction	Price realized	Auction house
Fang Lijun	1999,2,1(SET OF SIX HANGING SCROLLS)	2011/11/27	342,875	Christie's HK
Fang Lijun	1999,2,1(SET OF SIX HANGING SCROLLS)	2009/10/6	250,299	Sotheby's HK
Fang Lijun	Little Angel	2010/12/1	100,800	Poly Beijing
Fang Lijun	Little Angel	2007/6/1	95,775	Poly Beijing
Fang Lijun	Series 1, No. 5	2011/5/28	2,831,302	Christie's HK
Fang Lijun	Series 1, No. 5	2006/11/16	531,200	Christie's NY
Fang Lijun	Tiannv Sanhua	2007/5/31	429,577	Poly Beijing
Fang Lijun	Tiannv Sanhua	2006/9/28	231,722	Zhongchengxin Beijing
Feng Zhengjie	Chinese Girl Series No.17	2009/9/24	34,375	Sotheby's NY
Feng Zhengjie	Chinese girl series No. 17	2008/7/1	62,406	Christie's LD
Feng Zhengjie	Untitled (Chinese portrait series)	2008/11/12	104,500	Sotheby's NY
Feng Zhengjie	Untitled (Chinese portrait series)	2007/9/20	115,000	Sotheby's NY
Guo Jin	Acrobatic girl	2008/6/25	73,043	Daoming SH
Guo Jin	Acrobatic girl	2006/12/21	49,071	Daoming SH
Guo Jin	Backstage No.2	2011/10/3	24,073	Sotheby's HK
Guo Jin	Backstage No.2	2010/6/6	58,800	Hanghai Beijing
Guo Jin	Backstage No.2	2008/10/5	40,222	Sotheby's HK

⁹ Considering the scope of this thesis, the whole data-set is not included in the appendix.

Guo Jin	Backstage No.2	2008/6/27	99,014	Hosane SH
Guo Jin	On stage No.9	2010/10/4	25,772	Sotheby's HK
Guo Jin	On stage No.9	2007/3/21	36,000	Sotheby's NY
Guo Jin	Sleeping girl	2011/5/20	43,125	Huachen Beijing
Guo Jin	Sleeping girl	2006/11/21	27,261	Poly Beijing
Guo Jin	The Happy Children No. 12	2010/12/19	39,199	Jingxunlou Taipei
Guo Jin	The Happy Children No. 12	2007/11/25	62,948	Christie's HK
Li Shan	ROUGE SERIES: DOUBLE MAO	2010/10/4	32,215	Sotheby's HK
Li Shan	ROUGE SERIES: DOUBLE MAO	2007/6/22	43,094	Sotheby's LD
Li Shan	Shui Xiang	2008/12/17	16,800	Daoming SH
Li Shan	Shui Xiang	2007/7/10	11,549	Gongmei SH
Li Shan	Untitled 2006	2008/12/21	8,064	Jiuge Beijing
Li Shan	Untitled 2006	2007/12/18	11,268	Jiuge Beijing
Li Shan	What's this? 1982	2010/12/1	100,800	Poly Beijing
Li Shan	What's this? 1982	2007/6/1	60,563	Guopai SH
Li Shan	Zhu Jiajiao	2007/7/7	10,038	Duoyunxuan SH
Li Shan	Zhu Jiajiao	2006/12/20	8,860	Duoyunxuan SH
Liu Wei	Dog	2011/10/3	110,415	Sotheby's HK
Liu Wei	Dog	2006/11/26	37,174	Christie's HK
Liu Wei	Gatinhasoruentaiferram (Man with Root)	2011/10/3	60,985	Sotheby's HK
Liu Wei	Gatinhasoruentaiferram (Man with Root)	2010/6/30	48,781	Phillips de Pury LD
Liu Wei	LANDSCAPE NO.2(IN 6 PARTS)	2010/10/4	35,437	Sotheby's HK
Liu Wei	LANDSCAPE NO.2(IN 6 PARTS)	2008/9/17	9,572	Sotheby's NY
Liu Wei	Lian	2011/7/16	77,625	Xiling Yingshe HZ
Liu Wei	Lian	2007/6/28	64,533	Hosane SH

Liu Xiaodong	Dreaming 1991	2010/12/11	520,800	Hanghai Beijing
Liu Xiaodong	Dreaming 1991	2006/9/28	149,938	Zhongchengxin Beijing
Liu Xiaodong	Fishing	2011/5/29	219,381	Christie's HK
Liu Xiaodong	Fishing	2006/10/9	137,729	Sotheby's HK
Liu Xiaodong	Inside and outside wall	2009/11/10	164,640	Hanghai Beijing
Liu Xiaodong	Inside and outside wall	2007/11/29	207,939	Poly Beijing
Liu Xiaodong	MEN & WOMEN	2009/10/6	389,640	Sotheby's HK
Liu Xiaodong	MEN & WOMEN	2008/9/17	182,500	Sotheby's NY
Liu Xiaodong	Smoke at riverside	2011/5/20	724,500	Hanghai Beijing
Liu Xiaodong	Smoke at riverside	2008/5/10	832,000	Hanghai Beijing
Liu Xiaodong	Suhui.Shuizhi	2011/11/18	276,000	Hanghai Beijing
Liu Xiaodong	Suhui.Shuizhi	2007/12/9	401,536	Rongbao Beijing
Liu Xiaodong	Suhui.Shuizhi	2007/1/6	211,268	Zheshang HZ
Liu Xiaodong	Two girls in the water	2010/6/16	168,000	Huayi Guangdong
Liu Xiaodong	Two girls in the water	2006/11/21	51,797	Poly Beijing
Liu Xiaodong	Yuhong in costume	2010/12/11	201,600	Hanghai Beijing
Liu Xiaodong	Yuhong in costume	2006/5/14	149,938	Rongbao Beijing
Liu Ye	Bleah!	2011/5/28	1,458,237	Christie's HK
Liu Ye	Bleah!	2007/5/16	600,000	Sotheby's NY
Liu Ye	Little navy	2010/6/2	2,016,000	Poly Beijing
Liu Ye	Little navy	2007/11/30	917,798	Poly Beijing
Liu Ye	Miaow	2011/12/3	1,095,375	Poly Beijing
Liu Ye	Miaow	2008/12/4	806,400	Poly Beijing
Liu Ye	Portrait of a battleship	2007/11/30	315,493	Poly Beijing
Liu Ye	Portrait of a battleship	2006/11/23	211,276	Chengxuan Beijing

Liu Ye	Untitled	2010/11/28	119,020	Christie's HK
Liu Ye	Untitled	2008/7/1	69,595	Christie's LD
Qi Zhilong	Icon No.3 2006	2007/12/15	154,878	Zheshang HZ
Qi Zhilong	Icon No.3 2006	2006/6/6	115,861	Chengxuan Beijing
Wang Guangyi	Audi	2010/10/16	98,123	Sotheby's LD
Wang Guangyi	Audi	2007/5/17	144,000	Christie's NY
Wang Guangyi	Geshi Zhongde Shengyin 2	2008/6/27	681,739	Hosane SH
Wang Guangyi	Geshi Zhongde Shengyin 2	2007/11/30	501,921	Poly Beijing
Wang Guangyi	Great Criticism: Nestlé	2010/10/15	59,675	Christie's LD
Wang Guangyi	Great Criticism: Nestlé	2007/3/21	57,000	Sotheby's NY
Wang Guangyi	GREAT CRITICISM SERIES: KODAK	2011/10/3	202,856	Sotheby's HK
Wang Guangyi	GREAT CRITICISM SERIES: KODAK	2008/9/17	314,500	Sotheby's NY
Wang Guangyi	GREAT CRITICISM SERIES: NIKON	2010/6/29	32,032	Sotheby's LD
Wang Guangyi	GREAT CRITICISM SERIES: NIKON	2009/3/10	18,750	Sotheby's NY
Wang Guangyi	GREAT CRITICISM SERIES: M&M'S	2010/10/4	157,209	Sotheby's HK
Wang Guangyi	GREAT CRITICISM SERIES: M&M'S	2006/9/20	180,000	Sotheby's NY
Wang Guangyi	MARLBORO	2011/10/3	141,229	Sotheby's HK
Wang Guangyi	MARLBORO	2010/5/13	110,500	Sotheby's NY
Wang Guangyi	Red Rationality: Revision of Idols	2011/5/28	931,723	Christie's HK
Wang Guangyi	Red Rationality: Revision of Idols	2007/10/7	619,639	Sotheby's HK
Wang Guangyi	Swatch	2010/10/16	107,735	Sotheby's LD

Wang Guangyi	Swatch	2007/6/21	274,758	Christie's LD
Yan Pei Ming	Mao	2009/10/6	548,976	Sotheby's LD
Yan Pei Ming	Mao	2007/4/7	521,995	Sotheby's HK
Yan Pei Ming	Portrait of Brigitte Gairard	2011/6/29	78,751	Christie's LD
Yan Pei Ming	Portrait of Brigitte Gairard	2007/2/9	74,995	Christie's LD
Yang Shaobin	The next is you	2008/5/22	176,000	Beijing Council
Yang Shaobin	The next is you	2006/11/21	163,569	Poly Beijing
Yang Shaobin	UNTITLED (POLICE SERIES)	2010/10/4	87,625	Sotheby's HK
Yang Shaobin	UNTITLED (POLICE SERIES)	2007/6/22	119,706	Sotheby's LD
Yin Zhaoyang	King	2007/6/10	98,592	Rongbao Beijing
Yin Zhaoyang	King	2006/5/14	40,892	Rongbao Beijing
Yin Zhaoyang	Two smoking men	2007/12/15	186,428	Zheshang HZ
Yin Zhaoyang	Two smoking men	2006/6/25	74,969	Hanghai Beijing
Yue Minjun	Big Chimney	2010/12/5	806,400	Beijing Council
Yue Minjun	Big Chimney	2006/11/21	545,229	Poly Beijing
Yue Minjun	Portrait of the Artist and His Friends	2011/11/26	2,972,443	Christie's HK
Yue Minjun	Portrait of the Artist and His Friends	2007/5/27	2,629,038	Christie's HK
Yue Minjun	Red Boat	2011/11/26	1,961,864	Christie's HK
Yue Minjun	Red Boat	2007/11/25	1,633,108	Christie's HK
Yue Minjun	The Massacre at Chios 1994	2011/11/26	4,199,575	Christie's HK
Yue Minjun	The Massacre at Chios 1994	2007/10/7	4,084,202	Sotheby's HK
Zeng Fanzhi	Chairman Mao	2010/11/28	499,369	Christie's HK
Zeng Fanzhi	Chairman Mao	2007/5/27	539,158	Christie's HK
Zeng Fanzhi	Hospital Series - Seeing Patients	2008/7/1	385,920	Christie's LD
Zeng Fanzhi	Hospital Series - Seeing Patients	2006/5/28	170,933	Christie's HK

Zeng Fanzhi	Mao + Calling	2011/11/27	1.162,682	Christie's HK
Zeng Fanzhi	Mao + Calling	2006/11/26	304,624	Christie's HK
Zeng Fanzhi	Mask series	2011/10/3	64,195	Sotheby's HK
Zeng Fanzhi	Mask series	2008/9/17	50,000	Sotheby's NY
Zeng Fanzhi	Peak 2003	2009/5/29	168,000	Poly Beijing
Zeng Fanzhi	Peak 2003	2007/11/29	172,087	Poly Beijing
Zeng Fanzhi	Peak 2003	2006/5/14	61,338	Rongbao Beijing
Zeng Fanzhi	Scenary 2005	2010/12/5	319,200	Beijing Council
Zeng Fanzhi	Scenary 2005	2010/6/2	336,000	Poly Beijing
Zeng Fanzhi	Scenary 2006	2008/5/22	288,000	Beijing Council
Zeng Fanzhi	Scenary 2006	2007/5/13	129,065	China Guardian
Zeng Fanzhi	Tiananmen	2011/11/26	1,817,496	Christie's HK
Zeng Fanzhi	Tiananmen	2009/10/6	807,665	Sotheby's HK
Zeng Fanzhi	We No.2	2009/10/6	544,464	Sotheby's HK
Zeng Fanzhi	We No.2	2008/2/7	446,946	Christie's LD
Zeng Hao	9 JULY 2003,4PM	2010/10/4	16,108	Sotheby's HK
Zeng Hao	9 JULY 2003,4PM	2008/10/5	67,526	Sotheby's HK
Zhang Xiaogang	Big Family Series:Childhood No.2	2010/12/10	1,173,000	Hosane SH
Zhang Xiaogang	Big Family Series:Childhood No.2	2008/6/29	1,655,652	Zheshang HZ
Zhang Xiaogang	Bloodline Series: Yellow Baby	2010/10/4	853,053	Sotheby's HK
Zhang Xiaogang	Bloodline Series: Yellow Baby	2007/3/21	\$456,000	Sotheby's NY

Zhang Xiaogang	Bloodline Series:Comrade No.17	2007/2/7	\$700,857	Sotheby's LD
Zhang Xiaogang	Bloodline Series:Comrade No.17	2006/12/3	1,052,831	Ravenel Taipei
Zhang Xiaogang	Bloodline: Big Family No.1	2011/10/3	8,424,952	Sotheby's HK
Zhang Xiaogang	Bloodline: Big Family No.1	2008/10/4	2,751,820	Sotheby's HK
Zhang Xiaogang	Girl wearing red scarf	2008/12/1	365,419	Ravenel Taipei
Zhang Xiaogang	Girl wearing red scarf	2007/5/12	464,789	Chengxuan Beijing
Zhang Xiaogang	Sailor (Girl)	2008/11/12	482,500	Sotheby's NY
Zhang Xiaogang	Sailor (Girl)	2006/3/31	\$486,400	Sotheby's NY
Zhang Xiaogang	Woman and cloud	2009/12/12	87,360	Hosane SH
Zhang Xiaogang	Woman and cloud	2008/5/29	96,000	Poly Beijing
Zhou Chunya	Black line.Red figure	2010/12/5	1,024,800	Beijing Council
Zhou Chunya	Black line.Red figure	2008/5/22	456,000	Beijing Council
Zhou Chunya	Chrysanthemum 1997	2009/1/3	92,400	Xiling Yingshe HZ
Zhou Chunya	Chrysanthemum 1997	2008/5/31	104,803	Kinsley Taipei
Zhou Chunya	Figure tied with stone	2007/12/9	548,198	Zhongcheng Taipei
Zhou Chunya	Figure tied with stone	2006/11/23	102,230	Chengxuan Beijing

Zhou Chunya	Flora	2010/12/13	159,600	Zheshang HZ
Zhou Chunya	Flora	2006/11/22	55,886	China Guardian
Zhou Chunya	Flower 1997	2010/5/30	77,136	Christie's HK
Zhou Chunya	Flower 1997	2006/12/3	17,637	Ravenel Taipei
Zhou Chunya	Flower 2000	2010/11/14	77,280	Rongbao Beijing
Zhou Chunya	Flower 2000	2008/5/3	77,000	Zhongcai HZ
Zhou Chunya	Flower 2000	2007/6/1	33,803	Guopai SH
Zhou Chunya	Flower 2000	2006/6/4	40,892	Poly Beijing
Zhou Chunya	Flower 2004	2011/7/1	72,450	Daoming SH
Zhou Chunya	Flower 2004	2009/12/18	36,960	Xiling Yingshe HZ
Zhou Chunya	Green Dog 2000	2007/6/2	154,930	Beijing Council
Zhou Chunya	Green dog 2000	2006/12/3	95,415	Jiaheng Jiangsu
Zhou Chunya	Green Dog 2001	2009/12/16	285,600	Beijing Council
Zhou Chunya	Green Dog 2001	2007/11/30	272,471	Poly Beijing
Zhou Chunya	Green Dog 2003	2011/11/13	327,014	Huacheng Beijing
Zhou Chunya	Green Dog 2003	2011/6/2	172,500	Poly Beijing
Zhou Chunya	Green Dog 2003	2010/7/3	134,400	Xiling Yingshe HZ
Zhou Chunya	Green Dog 2003	2010/6/2	134,400	Poly Beijing
Zhou Chunya	Green Dog 2004	2010/5/30	142,366	Christie's HK
Zhou Chunya	Green dog 2004	2006/11/21	47,708	Poly Beijing
Zhou Chunya	Green Dog 2006	2009/5/9	117,600	Hanghai Beijing
Zhou Chunya	Green Dog 2006	2008/5/29	240,000	Poly Beijing
Zhou Chunya	Green Heigen No.6	2009/11/23	84,000	Chengxuan Beijing
Zhou Chunya	Green Heigen No.6	2007/11/25	155,918	Christie's HK
Zhou Chunya	Heigen and mistress 1998	2008/12/6	85,323	Chongyuan Baoqu HK

Zhou Chunya	Heigen and mistress 1998	2008/6/23	64,928	Jiatai SH
Zhou Chunya	Heigen at play 2000	2009/11/10	67,200	Hanghai Beijing
Zhou Chunya	Heigen at play 2000	2007/12/2	138,974	Ravenel Taipei
Zhou Chunya	Horse 2003	2008/5/28	240,000	Poly Beijing
Zhou Chunya	Horse 2003	2007/1/6	78,873	Zheshang HZ
Zhou Chunya	I'm the view	2011/12/17	301,875	Hosane SH
Zhou Chunya	I'm the view	2008/4/28	224,000	China Guardian
Zhou Chunya	Lily 2000	2007/12/1	110,280	Kinsley Taipei
Zhou Chunya	Lily 2000	2006/8/19	58,612	Zheshang HZ
Zhou Chunya	Lily 2002	2010/7/3	84,000	Xiling Yingshe HZ
Zhou Chunya	Lily 2002	2007/4/15	39,437	Zhongcai HZ
Zhou Chunya	Lily 2003	2007/12/2	69,487	Ravenel Taipei
Zhou Chunya	Lily 2003	2006/12/20	20,446	Hosane SH
Zhou Chunya	Lotus 1994	2011/5/22	139,725	Chengxuan Beijing
Zhou Chunya	Lotus 1994	2007/5/12	67,606	Chengxuan Beijing
Zhou Chunya	Mountain rock	2010/6/20	109,438	Jingxunlou Taipei
Zhou Chunya	Mountain rock	2006/12/10	81,125	Jingxunlou Taipei
Zhou Chunya	Old man No.2 1978	2007/12/15	24,379	Zheshang HZ
Zhou Chunya	Old man No.2 1978	2006/5/28	10,632	Zhongding Beijing
Zhou Chunya	Rock Series 1999	2006/11/21	163,569	Poly Beijing
Zhou Chunya	Rock Series 1999	2006/4/29	122,677	Zhongchengxin Beijing
Zhou Chunya	Shanshui spirit	2010/12/2	75,600	Poly Beijing
Zhou Chunya	Shanshui spirit	2008/6/25	68,174	Tianheng SH
Zhou Chunya	Shanshui spirit	2007/8/12	48,592	Jiaheng Jiangsu
Zhou Chunya	Shanshui spirit	2006/11/23	21,809	Huacheng Beijing

Zhou Chunya	Sleeping beauty 1995	2009/5/30	134,400	Chengxuan Beijing
Zhou Chunya	Sleeping beauty 1995	2007/12/23	129,065	Hosane SH
Zhou Chunya	Spirit of Landscape 2000	2007/11/25	140,423	Christie's HK
Zhou Chunya	Spirit of Landscape 2000	2007/6/1	91,549	Poly Beijing
Zhou Chunya	Standing Heigen at Pingyuan	2011/5/30	370,418	Ravenel Taipei
Zhou Chunya	Standing Heigen at Pingyuan	2009/5/29	151,200	China Guardian
Zhou Chunya	Stone Series	2010/11/28	1,244,540	Christie's HK
Zhou Chunya	Stone Series	2007/5/27	975,620	Christie's HK
Zhou Chunya	Taihu Rock 1999	2010/6/17	571,200	Daoming SH
Zhou Chunya	Taihu Rock 1999	2006/12/20	143,123	Hosane SH
Zhou Chunya	Taohua Fenxiang	2010/7/3	403,200	Xiling Yingshe HZ
Zhou Chunya	Taohua Fenxiang	2008/6/27	422,029	Hosane SH
Zhou Chunya	Two dogs 2004	2007/11/30	301,152	Poly Beijing
Zhou Chunya	Two dogs 2004	2006/6/5	204,461	China Guardian
Zhou Chunya	Vase	2011/11/18	138,000	Hanghai Beijing
Zhou Chunya	Vase	2010/12/5	59,386	Ravenel Taipei