THE PRICE OF ART

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THE PRICE OF ART
Uncertainty and reputation in the art field

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ABSTRACT: How do prices for contemporary art come into being? Buyers of contemporary art face a problem of fundamental uncertainty, because what passes as quality is difficult to determine, and buyers can hardly estimate how a specific piece of art will perform as an investment. Since a market for contemporary art presupposes the possibility of at least limited rational purchasing decisions, uncertainty must be reduced. We argue that the value of an art work or artist originates in an intersubjective process of assessment and conferring of reputation by experts in the art field, such as gallery owners, curators, critics, art dealers, journalists, and collectors, who help establish the artistic reputation of a work or an artist. The quality signals emerging from the art field enable buyers to assess the economic value of art works. We tested this initial hypothesis against two datasets containing data on art prices and information from the biographies of artists.

Key words: price formation; art markets; culture; uncertainty

1. Introduction

Research on markets is a key theme in economic sociology (Fliqstein 2001; White 2001; François 2008; Beckert 2009). Markets are the most important institutions of capitalist economies, and understanding them is not only of theoretical importance, but also relevant to economic policy. Economic sociology, in contrast to economic theory, prioritizes questions of the cultural, institutional, and sociostructural foundations of markets. The possibility of market exchange cannot be based on individual calculations of economically rational actors alone, but must be attributed to the social contexts in which actors are ‘embedded’ and that also shape their expectations (Granovetter 1985; Dobbin 2004).

Economic sociologists follow two distinct ways of selecting what markets to study. Some opt for those markets that can be expected to
function in ways most similar to the markets described in economic theory. Financial markets are particularly prominent here (Abolafia 1996; Knorr-Cetina and Preda 2005). If the findings from market sociology can be shown to be significant for these markets, they presumably will have even more validity for other markets. Others, however, opt to study markets closely linked to non-economic, cultural ideas of value in order to investigate their influence on market practices (Zelizer 1979; Healy 2005).

The market for contemporary art belongs to this second category, because the very monetary valuation of art works is already a controversial topic within the art world. Those who criticize the commercialization of art argue over the influence of sponsors, and lament the low incomes artists make for a living. Marxist art theorists have taken the art market as evidence of the commodification of culture, and are suspicious of how a price tag ‘trivializes’ the unique value of a work of art (Velthuis 2005). Other influential accounts hold that art and the market are ‘hostile worlds’, opposed to each other (Bourdieu 1999; Zelizer 2000).

Yet the collision of sacred aesthetic values with the profane nexus of money is not only an obvious challenge for the art field, the art market also poses its set of difficulties to the discipline of economics. Classical economists such as Adam Smith, Stanley Jevons, and Alfred Marshall all came across the art market while developing their theories of value and price formation, and they all agreed that it was an exception that went beyond the limits of their theories (Velthuis 2005). Although economics of the arts has certainly been established as a specialization within economics (Ginsburgh and Throsby 2006), titles such as ‘Pricing the Priceless’ (Grampp 1989) or ‘Why Is a Rauschenberg So Expensive?’ (Frey and Pommerehne 1993) are evidence of the challenge that this market presents to economic theory.

In this article, we approach the question of how to price a seemingly priceless object, such as a work of art, from an institutionalist perspective.1

The initial theoretical premise of our study is that common assumptions in economics about the role of supply and demand in price formation in contemporary art markets require further specification. Buyers of contemporary art face a basic problem of fundamental uncertainty, since most art works are individual pieces whose quality (Candela et al. 2004) is entirely

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1. The sociology of markets has two dominant theoretical approaches: the network approach (Burt 1992; White 2001, etc.), which focuses on the structure of relationships between market actors (individuals, organizations), and the institutional approach (Fliedstein 1996, 2001, etc.), which gives priority to the role of rules, habits, conceptions of control, law, and governance structures. Both approaches agree that the restriction of competition and the consequent enabling of ‘stable worlds’ (Fliedstein 1996: 658) must be recognized as prerequisites for markets to develop.
based on aesthetic judgments, and whose performance as an investment object can hardly be estimated. The art market is thus an example of a market for ‘singular goods’ (Karpik 2010). Given that a market for contemporary art can only arise when actors can confidently judge quality and prices, this fundamental uncertainty for buyers has to be reduced.

We argue that this happens within the field of art and its respective media rather than in the economic field. The economic value of a work of art is primarily determined by its artistic value, which is constructed within the art world, rather than by attending to the expensive materials used in its production, or its scarcity of supply. As a result, contemporary art is valued based on qualities that are not a function of technical skill, production costs or external criteria. Indeed, the artistic status of an art work or artist – the ‘quality’ – evolves from an intersubjective process of experts, institutions, and media in the art field assessing work and conferring reputation (Bourdieu 1999; Janssen 2001).2 This reputation is perceived as a quality signal by buyers and is therefore the basis for determining the economic value of art works.

Two datasets were compiled to test this preliminary hypothesis. One gallery dataset contains various reputation indicators for 30 artists and price information for 446 works by these artists represented by galleries in Berlin and Leipzig. The auction database contains reputation indicators for 23 internationally renowned artists from German-speaking countries over an average of 30 years of their careers, as well as prices reached at international auctions for 1094 art works by these artists. This article is therefore among the first to report on a comparative study of the determinants of gallery and auction prices for art works (Hutter et al. 2007).

Having laid out our theoretical perspective, we will clarify our procedure for creating the two databases in the second section. We will then present the results of our empirical analysis of price determinants in the art market in the third section. In the last part of the article, we summarize our results and discuss them in regard to our opening question and the hypothesis guiding our research.

2. Theoretical Background: Price Determination in the Art Market from the Perspective of Economic Sociology and the Sociology of Art

Economics of the arts interprets the art market with the help of standard theoretical and methodological instruments from economics. Art markets

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2. Indeed, art buyers from the modern period and earlier also relied on the judgments of experts, who estimated the authenticity, provenance, quality, and condition of each object.
are seen as normal competitive markets in which price formation takes place according to the mechanism of supply and demand. The motivation for purchasing art is therefore primarily seen as financial speculation: the expectation of realizing a profit from a later sale (Baumol 1986). Studies of long-term profits from art investment have been inconclusive and suggest different findings: art investments are less profitable than alternative investments in the financial market, they are equally profitable, or they provide advantages in diversified portfolios (Frey and Eichenberger 1995; Renneboog and van Houtte 2002; Worthington and Higgs 2004; Campbell 2007). Hence, economists see another motivation for art purchases in the utility that originates from the aesthetics of the work of art. The aesthetic benefit itself is then modeled as part of the economic utility function (Grampp 1989; Frey and Eichenberger 1995).

Studies in the economics of the arts, which derive prices from hedonic price functions, go beyond the scope of these standard applications. Such price functions are based on the assumption that commodities comprise a bundle of different properties that are valued separately from one another by consumers. Finding commodities of the type studied that differ in various properties is sufficient to attribute differences in price to their differing properties (Rosen 1974; Chanel et al. 1996; Renneboog and Spaenjers 2010). Several authors (Frey and Pommerehne 1993; Campos and Leite Barbosa 2009) have carried out studies of the art market from this perspective. They have attempted to identify the fundamental determinants of supply and demand in the art market and have established their particular influence on the price of art.

These studies are based on the premise that the different properties of an art work can indeed be appraised separately from one another, but this division is theoretical. They merely point out the reasons why one variable or another might have something vaguely to do with supply or demand in the art market, resorting to everyday knowledge as a justification rather than to any form of economic or sociological theory. That such everyday notions of supply and demand do not explain prices for art works is shown by Ursprung and Wiermann (2011) who demonstrate that an artist’s death, which is often taken as an indicator of scarcity of supply, in itself does not have an impact on the prices paid for his or her art works. Only when artistic reputation is taken into account is the death of an artist relevant to price formation. In order to be able to understand the importance of the factors a collector or buyer take into account when assessing the price of an art work, we need a market theory that will account for the specifics of the art market’s pricing mechanisms.

One such theoretical starting point can be found in the problem of uncertainty (Beckert 1996, 2009). As a matter of principle, art market participants are uncertain as to whether the goods for purchase have any
artistic value at all, let alone long-term economic value (Moulin 1987; Janssen 2001: 327, 335; Yoge 2010). Buyers therefore take a risk insofar as their consumption or investment decision cannot be calculated by rational means. Uncertainty arises in the art market because neither the production costs nor the objective functions of art objects provide clues to assist in the formulation of an appropriate price. Art works cannot be compared to products from other ‘manufacturers’ of the same ‘quality, size and style’ in order to assess their market price because the objectifiable criteria normally available in other commodity markets that support price estimation are lacking. Art works are ‘singular goods’ (Karpik 2010), and they do not conform to the assumption of homogeneity in standard economic price theory.

Buyers also face uncertainty regarding the exact quality of the product in other markets. This can be due to an asymmetric distribution of information regarding product quality (Akerlof 1970) or aspects unknown to either party at the time the sale contract is drawn up. The latter holds true particularly in the case of custom-configured assets for investment that are understood to be ‘unique’. But in both cases the uncertainty about the quality of a product lies in the lack of knowledge about its objective properties. By the time a contract is finalized, potential conflicts between buyers and sellers over such ‘incomplete contracts’ can at least be mitigated through the predefinition of conflict regulation mechanisms (price reductions, arbitration panels, warranties), thereby reducing uncertainty. Comparable mechanisms for reducing uncertainty in art purchases are not feasible, because an art work’s value does not derive from objectifiable properties in the work itself, but rather from a process of intersubjective recognition of artistic value. Hence, the uncertainty regarding the adequate price for art emerges from the contingency of what qualifies as quality (Rössel 2007: 167).

Economic sociologists (White 2001; Beckert 1996, 2009; Fligstein 2001) point out that no market with stable demand can arise for products whose properties are characterized by fundamental uncertainty. The calculation basis for rational decision-making is missing, and – in the best case – buyers are investors accustomed to speculative trading. Markets require ‘stable worlds’ (Fligstein 2001) in order to establish the necessary trust in what are, in principle, unforeseeable transactions. In order for an art market to emerge, uncertainty over the right price to be paid for an art work must be reduced and the prospect of positive value growth credibly signaled. We argue that the crucial differentiating properties of a work of art are not those that affect the material aspects of the work, or the general economic conditions, but rather the symbolic forms of recognition and reputation prevalent in a given art field. Therefore, art buyers look for signals from this field indicative of the presumed quality of artists and
their works. In order to understand how the art market and art prices are constituted, we must turn our attention to the institutions and mechanisms of the art world that create structures of symbolic recognition through distribution of reputation (Becker 1982), which at the same time form the foundation for the intentional rational behaviour of actors in this market.

Quality signals are based on the submission of judgments made by viewers of an art work (Bourdieu 1999; Janssen 2001; Martin 2007). The uncertainty of the artistic value of a work can therefore be understood as uncertainty regarding the correctness of these judgments on its artistic quality. Correctness here means that other assessments of this work of art share this judgment, so that there is agreement within the market on the work’s artistic value (Martin 2007: 18). Hence we assume that the reduction of uncertainty in the art market is not only arrived at through agreement on artistic quality as such, but more specifically through intersubjective agreement on the significance of artistic judgments. The legitimating actors and institutions (Rouget et al. 1991) making judgments in the art market – particularly art schools and intermediary institutions in the field of art (galleries, museums, auction houses, arts journals, critics, etc.) – are themselves judged in terms of the significance of their judgments on the quality of art. Institutions in the art world are thus differentiated according to their various reputations, and their judgments are valued in different ways. Contemporary art buyers assume that signals from actors and institutions with high status and well-known reputation in the art world are more reliable than quality signals from low-status participants in this field (Podolny 1993; Thompson 2008: 19ff).

Our approach to the establishment of a reputation hierarchy in the art world fits in well with the empirically substantiated formal model of the emergence of status hierarchies put forward by Gould (2002). He shows that in fields where no underlying measure of quality exists or where quality is difficult to observe, status hierarchies are mainly based on socially provided assessments of quality, which give rise to a self-reinforcing process of quality judgments. The less underlying measures of quality are observable and the more important this self-reinforcing process of quality judgment is for the establishment of status hierarchies, the more status hierarchies are exaggerated (Gould 2002: 1156). This is exactly what we observe in the art world, where reputation and rewards have a highly unequal distribution, resulting in few superstars achieving fame and high amounts of money and a high number of artists facing unemployment and uncertain earnings (Caves 2000: 73–83). Increasingly, reputation in the art field is constructed via public discourse in the media, while traditional experts are losing influence (Bourdieu 1999; Zahner 2006).
To collectors of contemporary art, the value of an art work comes less from the judgment academics make on its artistic importance than from the artist’s access to the scarce resources of art market institutions and the arts media. The higher the reputation of these scarce resources, the stronger the signal sent about the quality of an artist and his/her work. This corresponds to findings from art sociology which show, for instance, that known artists in comparison with their unknown peers—regardless of how naïve and ‘popular’ they are now, or of their status as eccentric outsiders (cf. Becker 1982: 226–71)—have higher levels of education, better connections to other artists in social networks, and a wide range of contacts with galleries (Giuffre 1999; Janssen 2001). Alongside an artist’s education, art institutions are also responsible for the establishment of reputation and the allocation of recognition in the field of art. Such institutions and organizations—galleries, publishers, and television and radio broadcasters—expose the work of an artist to a wider audience (Hirsch 1972; Bystryn 1978). The selection of an artist by these prominent establishments is thus an important step in achieving a reputation (Caves 2000: 37–51). The institutions of art distribution comprise not only the institutions directly active in the art market, but also those establishments that value, assess, and, when applicable, introduce art to the wider public. This includes art critics, who bring to public attention the work of artists, assess their aesthetic merits, and thus contribute to their reputation. Similarly, museums invite artists to take part in exhibitions, as do art-oriented, price-giving panels (Hirsch 1972; Becker 1984: 131ff.). Reputation is generated through various institutional mechanisms and accepted rules, which enable an individual to gain recognition as an artist and thus have his/her work praised by galleries, critics, museum curators, and academic panels alike (Becker 1982).

However, the social translation of artistic reputation and quality into market prices differs between gallery sales in the primary market and auction sales in the secondary art market. According to Velthuis’ qualitative study of the New York and Amsterdam art markets, gallery owners follow quite specific cultural scripts in their pricing decisions (Velthuis 2005: 116–31). They start with relatively low prices for art works by young artists, they increase prices based on the length of the artists’ careers, changes in their reputations, and past sales. They usually do not price works of the same size but of different quality from the same artist differently. The systematic and gradual pattern of price increases for works by a given artist

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3. The primary art market is where an artwork is sold for the first time. Usually a gallery makes this sale based on a set price, which, however, is subject to negotiation. The secondary art market refers to the resale market for art works, usually through an art dealer or at auction (Velthuis 2011).
in the primary art market has been corroborated in an econometric study by Hutter et al. (2007). Up to now there has been no systematic quantitative evidence for Velthuis’ thesis that galleries do not differentiate prices between different works by the same artist. The gallery pricing strategy described above is obviously different from pricing behavior at art auctions where a certain work with a specific reputation is sold. Therefore, we should expect gallery prices to be more homogeneous than auction prices and to follow a more predictable path than auction prices.

Based on these theoretical considerations, we examine the connection between prices for contemporary art and artists’ access to the scarce resources of training institutions and bodies that promote and deal in art. The initial hypothesis is that the price of art correlates with artists’ access to institutions in the art world which grant reputation. Access to these institutions is read by art buyers as information on the underlying quality of artists and their works. However, according to the research summarized here, the translation of artistic reputation into market prices should differ between primary and secondary art markets. We argue that if we control for other variables that influence price, particularly material features such as the size and material of a work in relation to other works by the same artist, and the influence on demand through changes in opportunity costs on the consumer side, the price of a work of art can be explained by this access to institutions. The price for contemporary art is thus formed through a social process in which mutually acknowledged recognition by institutions that pass judgment on art delivers the decisive data to determine price.

3. Data and Methods

Based on these theoretical considerations we tested two hypotheses, which draw on our previous discussion:

\[ H1: \] The works of contemporary artists with better access to legitimating institutions with a strong reputation in the art market realize higher prices in the primary (galleries) and the secondary (auctions) art market.

\[ H2: \] The empirical relationship between artistic reputation and art prices differs between the primary and secondary art market. In the primary art market we expect a more gradual development of prices as the career of an artist progresses, whereas in the secondary market we expect a stronger impact of the actual indicators of reputation. Moreover, in the primary market prices should vary mainly between artists and not between their works, whereas on the secondary market prices are expected to vary more strongly between an individual artist’s works.
In order to prove our hypotheses empirically, we compiled datasets of artists that contain information of the prices paid for individual artworks (dependent variable).4 We also compiled data which directly measured the access artists had to those legitimating institutions of the art market that confer reputation, and which, according to our thesis, signal quality to purchasers and therefore explain price formation in the art market (independent variables). In addition, we assessed the reputations of these institutions. To be able to distinguish the assumed effects in the secondary and the primary market we built two datasets, which we called ‘auction price data’ and ‘gallery data’.

The auction database contains data on 23 internationally renowned artists from German-speaking countries and follows their activities in the art world from the start of their careers until the year 2000 (depending on the artist, career duration is between 9 and 51 years). The data also includes prices for over 1000 works by the artists studied that were sold at international auctions. As a starting point for the auction price data, we used a ranking of the 100 most important international artists according to verifiable criteria, known as the ‘Kunstkompass’ (cf. Rohr-Bongard 2001). From this list we chose all of the artists from German-speaking countries for which complete biographical information was available. For each of the 23 artists we carried out a complete reconstruction of their artistic career, which enabled us to discern how their reputation in the field of art was formed and to analyze the formation of prices for their art works. We drew upon publications by and about the artists we considered in our survey, as well as information from the Internet. The beginning of each artist’s career was defined as the year of their first exhibition, or the beginning of their art study. Moreover, we compiled information on auction prices achieved by 1094 art works by these artists between 1974 and 2000. All prices were converted into Euros from the year 1995 in order to facilitate comparison. To gather as many auction prices as possible we consulted the Kunstpreisjahrbuch and the Internet database www.artprice.com.

Determining the reputation of a range of institutions and actors within the art world, such as the galleries representing the artists, was our next step. The names of these people and institutions were readily available in trade media and secondary literature. Analyzing their reputation was essential, based on our hypothesis that art purchasers prefer to rely on quality signals from high-status participants in the art field. We conducted a written survey of 130 renowned galleries, art professors, museum curators and art journalists from several regions and cities of Germany, achieving a response rate of 32%. We asked them to estimate the importance of the galleries and training institutions considered in our

4. This research project was funded by the Fritz Thyssen Foundation.
survey, and to name those exhibitions in past decades that had been especially meaningful in the evolution of contemporary art. This enabled us to include direct measures of artistic reputation in our study.

The gallery database comprises information on 30 artists represented by galleries in Leipzig and Berlin catering to a national and international audience. These galleries provided us with price lists of exhibitions from the years 2000 to 2001 as well as CVs for the artists listed. Information was also acquired from other sources like art journals and art databanks. Altogether we were able to compile sufficient information on 30 artists and 446 art works. We also conducted a written poll of 40 art experts (art professors, renowned galleries, museum curators, and art journalists) from Germany for this database, with a response rate of 47.5%, to estimate the reputation of the galleries representing these artists. Since we also included items from the first survey in the second one, we were able to test the reliability of the experts’ estimates. The correlation between both estimates was between 0.82 and 0.88, an entirely satisfactory level. The two datasets in combination allow us to answer the second hypothesis: we can analyze the difference in the relationship between reputation in the art world and prices in the primary and secondary art market.

For both the gallery data and the auction price data, we chose the price of an art work per square centimeter as a dependent variable. In order to control for the influences of different production costs or materials used in individual art works, we considered the type of art (painting, print, drawing, photographs) as well as the size of the object in thousands of square centimeter. In order to measure the reputation of the artists, we used a number of variables: the length of their careers, the reputation of their galleries, the arts media awareness of the artist, their awards (such as prizes and grants), and whether they held a professorship at an art school. All of these indicators should be positively correlated with the dependent variable since they could all be taken as quality signals by potential art buyers. However, according to hypothesis 2, career length should have a stronger impact on gallery prices than on auction prices. The artists’ gender was also taken into consideration. In order to incorporate the possible influence of macroeconomic investment and consumption climates, we included the inflation-corrected performance yield of fixed-rate securities in the United States (30-year treasury bonds) and the percentage growth of GDP per capita in the OECD as part of the auction price data. For art investors the inclination to buy art and pay high prices should vary inversely

5. A table with the complete set of variables used can be obtained from the authors. Price per square centimeter was chosen as a variable instead of price per work because galleries price the works they sell according to size (see Velthuis 2005).
with the development of alternative investment returns. Furthermore, the general willingness to buy and pay for art should vary positively with the macroeconomic climate measured by GDP per capita growth.

The datasets used in our analyses have a hierarchical structure. Art works in our sample are not independent cases in a statistical sense, since usually several of them were affiliated with one artist in the sample. Not taking this clustering into consideration would lead us to underestimate the standard errors for the parameters (Snijders and Bosker 1999: 22–4). We have therefore estimated the models with the help of multilevel statistical analysis, which allows for a complex modeling of the hierarchical structure of the data. This has the further advantage of enabling us to find evidence relating to hypothesis 2, which predicts a greater homogeneity of prices for each artist in the primary art market, and a stronger differentiation of prices for different art works from the same artist in the secondary art market.

4. Results: The Determinants for Price Formation in the Market for Contemporary Art

To test the first hypothesis we analyzed the connections between the indicators of artistic reputation we collected, the prices requested by galleries, and those prices reached at auction. Table 1 shows the results of the regression models for both datasets. As expected, we have to estimate hierarchical linear models for both cases, with art works being the cases at the first level that were clustered on the second level around individual artists. The use of hierarchical linear analysis allows us to partition the total dispersion of the dependent variables between the two levels, i.e., into art works (first level) and artists (second level). When we look at the models without explanatory variables (empty model), it becomes apparent that for the auction price data, there is only a relatively small fraction of variation (6%) on the second level, while this value is clearly higher for the gallery data (39%). When the explanatory variables are entered into the analysis of the auction price data using a random intercept model, we can no longer even observe a variance percentage ($\tau^2$) different from zero on the second level. This means that auction prices are determined on a case by case basis so that paintings of different quality by the same artist

6. There is an extended literature on the relationship between art markets and stock markets (see for example Worthington and Higgs 2004). The returns on alternative investments are included only as a control variable in this paper.

7. Because of extremely high collinearity between some of the reputation indicators in the auction price model we had to leave out the variable ‘number of solo exhibitions’.
are treated differently, whereas gallery price lists reflect to a lesser extent differences between works by a same artist. This confirms our second hypothesis, that prices on the primary market are much more homogeneous than on the secondary art market.

The multivariate analysis of the gallery data yields statistically significant results for only two variables. It is apparent that price per square centimeter drops as the size of the art work increases, and prices rise when the artist has enjoyed a longer career. The relevance of the materials used and the reputation of a given artist were recognizable price determinants in the multivariate analysis. However, only the relatively unspecific indicator of career length is statistically significant, whereas the more informative indicators are not. The correlation between career length and price reflects the pricing strategy by galleries according to the pricing scripts found in Velthuis’ study: the empirical results substantiate our second hypothesis. The galleries’ strategy is to follow a continuous policy of raising prices that particularly strives to avoid prices falling. In so doing, art buyers feel secure in their investment, which acts as a signal for further acquisitions while stabilizing the market at the same time (Velthuis 2005). Since our gallery data also includes some artists at the start of their careers, this could indicate a cautious pricing policy by gallery owners. In view of the as-yet uncertain reputation of their artists, gallery owners may focus more on the artists’ artistic age than their factual reputation in order

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**TABLE 1. Multivariate analysis of the determinants for price formation**

<table>
<thead>
<tr>
<th></th>
<th>List prices</th>
<th>Auction prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.64 (0.21)**</td>
<td>11.43 (4.96)*</td>
</tr>
<tr>
<td>Photograph</td>
<td>−0.14 (0.35)</td>
<td>−0.48 (2.02)</td>
</tr>
<tr>
<td>Print</td>
<td>−0.36 (0.28)</td>
<td>−12.24 (1.76)**</td>
</tr>
<tr>
<td>Drawing</td>
<td>0.23 (0.20)</td>
<td>−3.88 (1.79)*</td>
</tr>
<tr>
<td>Size</td>
<td>−0.37 (0.08)**</td>
<td>−0.18 (0.03)**</td>
</tr>
<tr>
<td>Length of career</td>
<td>0.06 (0.02)**</td>
<td>−0.16 (0.12)</td>
</tr>
<tr>
<td>Professorship</td>
<td>−0.04 (0.40)</td>
<td>0.74 (1.96)</td>
</tr>
<tr>
<td>Solo exhibitions</td>
<td>0.01 (0.01)</td>
<td></td>
</tr>
<tr>
<td>Gallery reputation</td>
<td>−0.01 (0.05)</td>
<td>−0.12 (0.11)</td>
</tr>
<tr>
<td>Media awareness</td>
<td>0.22 (0.14)</td>
<td>0.33 (0.13)**</td>
</tr>
<tr>
<td>Awards</td>
<td>0.02 (0.14)</td>
<td>0.83 (0.14)**</td>
</tr>
<tr>
<td>Gender</td>
<td>0.30 (0.36)</td>
<td>−3.36 (2.22)</td>
</tr>
<tr>
<td>Securities performance</td>
<td></td>
<td>−0.20 (0.78)</td>
</tr>
<tr>
<td>Economic growth</td>
<td></td>
<td>1.14 (0.79)</td>
</tr>
<tr>
<td>−2 Log-Likelihood</td>
<td>1497.80</td>
<td>9593.69</td>
</tr>
<tr>
<td>(\sigma^2)</td>
<td>1.54</td>
<td>376.716**</td>
</tr>
<tr>
<td>(\tau^2)</td>
<td>0.36***</td>
<td>0.0</td>
</tr>
<tr>
<td>N</td>
<td>446</td>
<td>1094</td>
</tr>
</tbody>
</table>

The unstandardized regression parameters and the \(t\)-test values are given in parentheses.

* \(p < 0.05\); ** \(p < 0.01\).
to be able to maintain the gallery price-setting scripts demonstrated by Velthuis (2005).

An evaluation of auction price data shows that the materials used in the various types of art have a statistically significant influence on price. This is not only true about the size of the works, but also as regards the specific methods of artistic production. It is mostly prints and drawings that prove to be cheaper in comparison to paintings. Photographs, by contrast, do not vary statistically from paintings. Moreover, our multivariate analysis of auction price data showed statistically significant influences in reputation indices. Both the awards received by artists and the arts media’s awareness of the artists have a positive influence on the prices paid for their art works. Hence there are two indicators in the foreground that not only describe the perception and evaluation of artists in the art field itself, but also partly represent the visibility of this reputation among the general public. This supports our premise that artistic evaluations in the art world are perceived as signals of quality by potential art buyers, and confirms the importance and influence of the on the construction of reputation in the art field (Bourdieu 1999; Zahner 2006). Art consumers are usually not informed about the details of discourse in the art world and therefore have to rely on the most visible signals of artistic quality, which are usually communicated via mass media (Plattner 1998; Campos and Leite Barbosa 2009).

Taken together, the statistical analyses substantiate, for one, the influence of the respective materials on the price formation of art works. The different prices paid for oil paintings, drawings, prints, and photographs are explained less by different production costs than by a hierarchy constructed in the artistic field around the value of different art forms and the uniqueness of the pieces being sold. The significance of size, a straight quantitative determinant of price, can in turn be understood as a norm to stabilize the market. If gallery owners were to sell pictures by an artist that were all the same size at different prices, these prices would implicitly signal differences in the quality of the pieces. ‘[This] would create a sense of disorder in a market where uncertainty already reigns’ (Velthuis 2005: 161). This is also a further explanation of why prices for pictures from the same artist in the primary market (gallery data) have less variation than in the secondary market (auction data), where the suppliers have less influence on prices, as became clear from the decomposition of variance in our multilevel analysis. This revealed that auction prices varied, especially among artworks and less so among artists. In contrast, galleries’ price lists showed a relatively higher variance percentage at the level of artists, and a smaller variance at the level of the individual artworks. This clearly reflects attempts by gallery owners to reduce uncertainty by shaping prices through norms in the artistic field. Our study is the first to establish this important difference.
5. Summary and Discussion

In this study, we have started from the assumption that the problem of uncertainty is a dominant structural property of the market for contemporary art. A stable market can only develop if this uncertainty is reduced. Our preliminary thesis was that uncertainty is reduced in the art field itself, indeed through institutions that evaluate the aesthetic importance of artists and art works and therefore emit signals of quality relevant to potential art buyers. The price formation of contemporary works of art depends on the reputation of the artist and the art works, respectively, which is established by actors participating in the artistic field of production, especially the field-specific arts media. We created two databases, containing various indicators for the reputation of the artists in the sample and prices for their work, in order to test our hypothesis.

We were able to use both of these databases to systematically test our hypotheses and they confirmed that, in the art world, reputation plays an important role in determining price. However, the two databases enabled us to test for differences in the relationship between artistic reputation and price formation in the primary and secondary art market. Based on the data we collected from galleries, we were able to show that an artist’s accumulated reputation over the course of his or her career is of central importance. This result is explained by the specific scripts that gallery owners follow in their pricing strategies. Auction price data, however, revealed that among the more specific reputation indicators, the most meaningful is the recognition that comes through awards and media awareness of the artist. This result is decidedly convincing from the point of view of our theoretical framework. For potential art purchasers, media attention given to an artist is a very accessible signal of artistic quality that reduces the uncertainty associated with purchasing a contemporary work of art. The representation of works and career of an artist in the media lends legitimacy to individual works of art. This gives prospective buyers reassurance about the alleged quality of past and future works by the same artist. This public awareness does not arise independently from the artistic field, but rather originates on the basis of assessments and activities inside the art world that create and promote an artist’s reputation and image.

Of course, the physical qualities of art works also play an important role in price determination. Our statistical evaluations proved the relevance of both the size and material of an artwork. These factors must obviously also
be considered alongside the artistic reputation in a model of price formation for contemporary art works, although this phenomenon can also be explained by the reduction of uncertainty that occurs on the basis of the socially constructed conventions of stabilizing the market.

Taken together, the results of the study can be evaluated as clear support for its preliminary hypotheses. Our data sets cover only artists from the German-speaking countries (Germany, Austria, and Switzerland). However, they are all selling on an international art market and the empirical results are consistent with research on other countries (e.g. Zahner 2006). This is further emphasized by the fact that we tested our hypotheses against two different datasets, one with auction prices as a dependent variable, and the other built from price lists from galleries. We were able to show that the institutional differences between the primary and the secondary art market lead to differing pricing mechanisms. Whereas gallery prices for art works by the same artist do not take quality differences into account, auction prices vary much more for works of different quality by a certain artist. However, in both cases the most important determinants of prices were material costs and the quality signals emerging from the art field. The market for contemporary art has structural properties that make it dependent upon an artistic field that operates relatively autonomously. It is precisely that symbolically reproduced separation between artistic reputation and economic spheres that makes possible the establishment of those prerequisites that first allow the market to arise. The study of the interplay among various actors and authorities of artistic assessment stands out from our results as a central task of future research.

References


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8. Price lists differ from real prices because galleries frequently give discounts to their customers. The amount of these discounts depends on the demand for the artist and the importance of the buyer for the gallery. As a rule of thumb, we can assume discounts of 10%. Higher discounts are rather infrequent (cf. Velthuis 2005).


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