Art Critic Index: A Proxy for Cultural Value in the Context of the South Africa Art Market

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Abstract
This study creates a proxy for cultural value by constructing an Art Critic Index (ACI). Cultural value is a distinct and alternative concept of value that is used to understand the art market. The ACI is formed by analysing survey books on South African art. Using a hedonic regression model a positive relationship is found between the ACI and art prices. Further, certain outliers in the ACI against price relation are in line with the understanding of the relationship between cultural and economic value. The paper concludes that the ACI is a suitable proxy for cultural value but it is not without significant criticisms. The lack of variability in the index between artists and between artworks by the same artist is the major area of concern.

Keywords: Cultural value, South African art market

1 Introduction

The market for consumer goods such as food or cars may be explained under standard concepts of neoclassical economics. The producers maximise profits given some production function of inputs and demand is formed through the individuals maximising their own utility. The art market is curious in that artworks are different to goods such as food or cars which may be understood using common models of neoclassical economics. In fact the market is irregular for a number of reasons.

Firstly, unlike most other goods the quantity of artwork supplied does not respond to price. There is zero elasticity of supply for deceased artists (Baumol, 1986: 10) and even living artists do not necessarily respond to price changes of their artwork. If artworks do not behave like normal consumer goods then perhaps their price changes could be likened to asset prices but artworks are

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different to financial assets too. Unlike stocks or bonds, artworks have few close substitutes; even two artworks by the same artist in a similar size and theme do not serve as perfect substitutes (Baumol, 1986: 11). Further, the owner of the artwork in the secondary market has a monopoly over the sale of the artwork. In the primary market, the artist or producer is unlikely to be a profit maximiser when profits are measured only in money or the purchasing power of other goods.

Throsby (2008) explains that an artist is different to other types of producers in that the artist does not only maximise economic value but also a second type of value, termed cultural value. An artistic good exists as a physical good, for example a painting of a beautiful landscape, but it also exists as an idea (Throsby, 2000: 29). “When a cultural good such as a painting or a novel is made available to the public, consumers absorb, interpret and evaluate the ideas contained in the work, discussing and exchanging their assessments with others” (Throsby, 2003: 281). The exchange and consumption of the ideas within an artwork give rise to its cultural value. The model to understand artistic production shows that artworks can give rise to both economic and cultural value.

Throsby (2008: 78) goes on to explain that different artists will attach different weights to the components of economic and cultural value. If they are willing to live frugally in pursuit of the production of new ideas or their artistic vision then they will give a high weighting to cultural value relative to economic value. Throsby (2000) defines cultural value in relation to a market for ideas but this concept can be difficult to digest. His more recent paper provides a succinct definition. Cultural value “reflects assessments of the significance or worth of the work judged against aesthetic and other artistic or cultural criteria that may transcend individual valuation and/or may not be expressible in financial terms” (Throsby, 2008: 76).

Economic value can be observed in the price of exchange of the artwork. For any particular artwork a buyer seeks to pay the minimum price for the artwork and the seller the maximum, reaching equilibrium at a level that may distribute a surplus to the consumer, producer or both. Cultural value, which helps us understand this irregular market, cannot be easily observed. In fact various authors have suggested that it will be difficult to find a single measure of cultural value (Throsby, 2008; Hutter & Shusterman, 2006). The purpose of this paper is to find a proxy for cultural value.

The proxy is an Art Critic Index (ACI), a ranking of artists according to the cultural value of their body of artwork. The form the ACI takes is the frequency in which an artist appears in notable survey books on South African art. The characteristics which will affect whether an artist is included in an art survey book are the very same characteristics which will contribute to cultural value. The assumption is that art historians and critics (the critics) will use their cultural valuations to form the survey book. An artist whom the critic believes exhibits high cultural value will be included in the book whereas one with low cultural value will not be. The ACI therefore pools the cultural valuations of the critics from a variety of survey books, compiled by different critics to provide a
proxy for cultural value of the market of South African artworks. Although this may not be a perfect attempt to find a proxy for cultural value, it may provide a basis for future work in the field of cultural economics.

The two concepts of economic value and cultural value, although distinct, are likely to be interrelated. A market participant may in fact pay a high price in order to acquire an artwork of high cultural value. Throsby (2000: 30) explains that the cultural value is likely to be a component of a buyer’s demand function for an artwork. Even though there is likely to be a strong correlation between economic and cultural value Throsby (2000) also clarifies that there will always be examples of artistic goods with high economic value and low cultural value and vice versa. For example a painting could be beautifully executed but not put forward any new idea or commentary. It would therefore have a high economic value but virtually no cultural value. It is with this relationship that the proxy for cultural value can be tested. If there is a strong positive relationship between the ACI and economic values of artworks, the ACI may serve as a suitable proxy. To establish a strong case for the use of the ACI as proxy, the persistent outliers of the relationship between the ACI and art prices should fall in line with the difference between economic and cultural value.

The next section of this paper gives a brief background on the South African art market. Section 3 follows with a literature review of South African studies of the art market as well as papers in the field of cultural economics which address cultural value or the measurement thereof. Details on the construction of the ACI are included in Section 4 and the methodology is explained in Section 5. The results, in Section 6, report the estimation of the model and deeper analysis of important outliers. Criticisms of the use of the ACI as a proxy for cultural value are discussed in Section 7 and finally, Section 8 concludes.

The ACI is shown to be suitable proxy for cultural value but there are a number of key criticisms related to its lack of variability and the lack of differentiation between artworks by the same artist. The Art Critic Index helps the understanding of the art market and cultural value and also provides a basis for future research on the measurement of cultural value.

2 Background

2.1 What is art?

Although all paintings, pictures and sculptures are associated with art, there is a differentiation between decorative practices and art. For the purpose of this study, art is separated from non-art under the definition of Moulin (1987). Non-art is generally agreed upon by “connoisseurs” to fall out of the domain of art (Moulin, 1987: 26). Examples of non-art include paintings for the purposes of decoration only or artworks by unrecognized artists.

For practical purposes goods which are sold in established galleries, through established auction houses or represented in respected art books will all fall under Moulin’s (1987) definition of art. Inclusion in such institutions is a suffi-
cient condition to fall under this definition of art. Further, there is unlikely to be many artworks which qualify under Moulin’s (1987) definition but have not reached the domain of the galleries, auction houses or art literature.

2.2 The South African Art Market

Art can be bought in one of three ways; at auction, from an art dealer or directly from the artist themselves. In South Africa, most established living artists are represented by a dealer or gallery which manages the sale of their body of work and sometimes also the career of the artist\(^1\). Dealers generally specialize in different types of art. For example, the Goodman Gallery (Cape Town and Johannesburg) specializes in contemporary art and Johans Borman Fine Art (Cape Town) in 20\(^{th}\) century South African art.

When a contemporary artist is represented by a dealer the dealer is averse to the artworks reaching the auction market. The dealers set the price of the artwork they sell and it is risky to let the work go to auction where it may be sold for a much lower price than the dealer sets. If the artwork sells below the dealer’s prices, the dealer’s clients may not consider the dealer prices to be fair and move to other dealers or purchase from auction. Collectors of contemporary art are encouraged to hold onto the work and invest deeply into the long term career of the artist. Collectors who sell works quickly after purchasing them are often shunned by the dealers. The majority of artwork available on auction is by 20\(^{th}\) century artists, most of whom are no longer living and are not represented by a single dealer.

Sale records from art dealers are not accessible because releasing such information would be damaging for the dealer’s business. The dealer has an incentive to give the impression that there is high demand for all his artists and artworks. If the clients had knowledge of the sale records they may be discouraged from purchasing the art. In this study auction sales were the only measure of economic prices in the art market.

However, there are some works by contemporary artists which are offered for sale by the auction houses. Since the dealers have an interest in the artwork reaching at least their own set price, the prices of contemporary artists at auction may be at least similar or higher than dealer prices. Auction prices are the only available price data on the South African art market and by the above reasoning, will be highly correlated with the art dealer’s prices for the same works.

Velthuis (2005) suggests that the prices of artworks set by galleries may be more homogenous than the prices realised at auction. Beckert & Rössel (2013) have tested and validated Velthuis’s proposition using price catalogues from German art dealers and auction price records for the same artists. It is important to note that the prices from gallery catalogues may indeed be more homogenous than auction prices but the prices in the catalogues are merely

\(^1\)Insights into the workings of South African art galleries are based on the knowledge of Michael Stevenson, co-author of this paper. Michael Stevenson is an expert on 20\(^{th}\) century and contemporary South African art and an experienced art dealer and curator. His doctoral dissertation focused on the history of art collecting in South Africa.
quotes and not final sales. Despite the difference proposed by Velthuis (2005), this paper still considers auction prices a satisfactory measure of economic value for South African artworks.

In South Africa there are two main auction houses, Stephan Welz & Co and Strauss & Co, which conduct auctions in both Cape Town and Johannesburg. Bonham’s which is a British auction house also has two major sales of South African artwork a year. The houses accept bids in an ascending format and a sale is only made if the hammer price (sale price) is above the reserve set. The auction house provides a high and low estimate of what the final sale will be. The estimate is related to past sales of similar artwork. The artwork is expected to sell somewhere between the estimates but artworks regularly exceed their high estimate or fail to meet the reserve price. If the sale price is below the reserve price, the artwork may be withdrawn from the auction. Information on the artists whose artworks fetch the highest prices at South African auction is shown in Table 1 to familiarise the reader with the South African art market. The data was sourced from AuctionVault’s online database of auction sale records. The median price for artwork at auction was just under R8 000 in 2011. The mean is much higher as it is skewed by extremely high prices for certain artworks, such as Irma Stern’s Arab Priest which sold for over R30 million in 2011. The monopoly which the seller has over a particular artwork and the lack of close substitutes pushes prices of certain artworks to high levels in comparison to other artworks. In 2011 the total sales of art at South African auctions was over 350 million rand. This does not include art gallery and private dealer sales.

3 Literature

The relevant literature can be broken into three groups. Firstly, there are a small number of papers written about the South African art market. Secondly, there is research which considers the concept of cultural value and lastly, there are studies which have used similar methods to the Art Critic Index.

Research on the art market and art values are a subset of the field of cultural economics and Blaug (2001) provides a broad overview of the different focus areas. Other areas covered by cultural economics include artist’s labour markets and public subsidies for the arts. Although there is a significant amount of literature in this field, the number of publications focusing on the South African art market is small.

Stevenson (1988) conducted the first quantitative study on the South African art market which looked at the prices of a select group of artists at auction. His Masters dissertation (1992) introduced the theory of “Components of Value”. In Stevenson’s terms the “Components of Value” are the characteristics which will inform a buyer and seller on a suitable price of an artwork. In essence they form the characteristics which affect the demand function for art on the secondary market. A selection of the components can be associated with cultural value such as the “Aesthetic Significance of the Art Work” and the “Quality and Coherency of the Artwork” (Stevenson, 1992: 168-171). Van Zyl (2011) built
on Stevenson’s work by considering the components of value in more detail. Van Zyl’s (2011) research took a sociological approach to studying the South African art market. More recently, Fedderke & Li (2014) studied the relationship between South Africa’s major fine art auction houses, Strauss & Co. and Stephan Welz & Co.

Fedderke & Li (2014) showed that Strauss & Co. is the dominant market leader between the competing auction houses and as a result Stephan Welz & Co tends to provide higher presale estimates to attract sellers. Their findings are drawn from a hand-coded dataset of auction price records from 2009 to 2013. Fedderke & Li’s (2014) dataset covers a shorter period than this paper (1996 to 2012) but shows greater detail about each artwork. Of greatest interest to the method of the ACI proxy, Fedderke & Li (2014) recorded if an individual artwork was discussed in relevant art literature or exhibited at an important show. These factors showed a statistically significant positive impact on the price of artwork in their hedonic regression (Fedderke & Li, 2014: 20), which is in line this paper’s findings that cultural value, as measured by the ACI, is positively correlated with the economic value of artwork. In addition to Stevenson’s (1988, 1992), Van Zyl’s (2011) and Fedderke & Li’s (2014) studies on the South African art market there have been studies by South African authors in other areas of cultural economics.

Snowball & Webb (2008) considered the same concept of cultural value but not in relation to artworks. Their paper details a method of assessing the cultural value of the Grahamstown Arts Festival. The method involved disaggregating the cultural value into different, more easily measurable characteristics. Snowball (2011) also contributed a chapter on cultural value in the Handbook of Cultural Economics but the chapter was grounded in the focus of her previous studies on the Grahamstown Arts Festival. Internationally, there is a greater body of literature on cultural value.

Throsby (1999) defined the concept of cultural capital which he argues should be added to existing concepts of physical capital, human capital and natural capital. Throsby (1999: 6) states, “we can de’ne an item of cultural capital as an asset that contributes to cultural value. More precisely, cultural capital is the stock of cultural value embodied in an asset.” This was not the first time the term “cultural capital” had been used but this paper clarifyed a specific meaning applicable to economics. Throsby’s (1999) introduction of cultural capital was followed by more focussed research on cultural value.

Throsby (2000) highlighted the interrelationship between cultural and economic value for creative artists. He introduced the notion that artworks supply a dual market. Firstly, there is the market for the physical good which is associated with the economic value of price and secondly, there is the market for idea embodied within the object which gives rise to its cultural value (Throsby, 2000: 29). He suggests that these values can be separated because they are formed in different ways. Throsby (2008) also used the concept of cultural value to better define artistic production. This is where the importance of the concept of cultural value is highlighted. The production function of the artist cannot be explained without a different notion of value.
In addition to Throsby’s contribution, McCain (2006) gives input by defining cultural and artistic goods. Hutter & Shusterman (2006) provide an overview of the history of the valuation of artistic goods. They identify broad areas which contribute to cultural value. This disaggregation of the concept of cultural value has also been suggested by Throsby (2000) and is similar to the approach of Stevenson (1992). Disaggregating makes the derivation of a single measure for cultural value largely impossible as there is no basis to weight different characteristics such as expressiveness, communicative power or experiential value (Hutter & Shusterman, 2006: 197-198). This study does not follow a method of disaggregation of cultural value but rather deduces a single measure from the judgement of art critics. There are examples of studies which have followed a similar approach.

Vermeylen et al (2008) used art encyclopaedias over a few centuries to evaluate how the canon of Dutch artists changed over time. Oxford Dictionary defines canon as a list of literary or artistic works considered to be permanently established as being of the highest quality, thus canon can be associated with a high cultural value. Rozenbaum (2007) used the Kunstkompass, a published ranking of 100 contemporary artists as a variable to explain art prices. Vermeylen et al (2008) is an example where the quality valuations of the art critics have been derived while Rozenbaum (2007) used already formed rankings. The 17th century art critic Roger de Piles has received significant attention in the literature for his use of numerical rankings to assess artists.

Graddy (2013) considered correlations between prices of art at auction and the quantitative rankings of the French art critic, de Piles, in order to test the robustness of his rankings. De Piles’s ranking method was conducted by decomposing the ability and style of artists into various areas and then rating the artist on a 20 point scale. Ginsburgh & Weyers (2008) use regression analysis to decompose the value of an artwork into De Piles’s categories. In order to run such a regression they needed the value of the artwork. Their paper uses two approaches to find the value of the artist or artwork. Firstly, the length of entry in a major encyclopedia and secondly, prices of the artwork at auction (Ginsburgh & Weyers, 2008: 6). The first measure is similar to the ACI and the authors use the encyclopaedia measure as an alternate measure of value but do not associate it directly with cultural value. The studies mentioned above did provide insight into cultural and economic value but did not consider the topics explicitly.

There is research which looks directly at the concept of cultural value and its relationship to economic value. Hutter & Frey (2010) present several cases of artworks where the cultural and economic value has changed. Their paper aimed to provide greater clarification on the difference between cultural and economic value and how a change in the cultural valuation may give rise to a change in the economic valuation. The use of case studies shall also be employed in this study. Instead of identifying specific paintings as in Hutter & Frey (2010) this paper focuses on artists whose work consistently sells for high prices and yet they have little cultural value as predicted by the ACI.

This paper makes a unique contribution to the literature in several respects.
 Firstly, there are only a handful of studies which have focussed on the South African art market. This may be due to the lack of available data on auction prices in the past. In addition, this paper suggests a proxy for cultural value which has been identified by Throsby (2008) and Hutter & Shusterman (2006) as difficult concept to measure.

4 Construction of the Art Critic Index

The formation of the ACI involved counting artists from 13 notable South African art survey books. An art survey book focuses on a specific selection of artists. The author determines the content of the book and therefore which artists are included, and thus reveals a preference for the selected artists. The author may also reveal stronger preferences for certain artists by putting more emphasis on the artist within the book. The authors are generally art historians, art scholars or critics in the art community. The survey books were chosen in consultation with Michael Stevenson, co-author of this paper, author of the previously mentioned thesis and currently, an art dealer at Stevenson, to ensure that the books were all written by credible authors. A key issue is whether such critics would make their selections on the basis of cultural value.

The artist pursues some artistic vision and the creation of cultural value will be a strong element of their production function (Throsby, 2008). For notable art critics their credibility will be based on their ability to assess the ideas within artwork and disregard market factors such as decorative quality, size or medium. Just as a committed artist is focussed on producing cultural value in their artworks so the critics will use this value as the central factor to guide their preferences. Cultural value is therefore likely to serve as the basis for selection of artists in most art survey books.

Table 2 shows details on the selected survey books. One artist produces many artworks over their lifetime and each new artwork builds on the ones before. Some artworks by the same artist will have higher cultural value than others but it is unlikely that an artist will produce a single spectacular artwork of high cultural value and the rest of their artworks are of a much lower standard.

There are several interesting characteristics of the list of publications. There is bunching at three different time periods, firstly the early to mid-1960’s, secondly in the early 1990’s just before the first democratic election and lastly in the late 2000’s.

The pair of Revisions books (2006, 2008) and the book by De Jager (1992) were considered to be survey books even though their area of focus was slightly narrower. Both titles highlighted black artists who had suffered exclusion from many South African art institutions under the Apartheid era. Revisions includes artists of all backgrounds but serves to expand the literature to previously excluded artists. Images of Man by De Jager (1992) includes only African artists.

The method of counting artists differed depending on the layout of the publication. For example, Alexander & Cohen’s (1990) anthology of paintings was counted by recording the number of times an artist had a painting included
in the book. For the Visual Century (2011), a recently published collection of essays, the method of counting was to record which artists had their work illustrated in the essays. Although the lack of standardisation may be considered as a challenge to combining these books into an index, the most suitable counting method was chosen for each book. The counting method is detailed in the table above.

The counts were then used to construct the Art Critic Index by adding together the frequency of selection of the artists into the art survey books. Different specifications of the ACI were used. The first of which (named ACI-1) weighted all the books evenly and weighted the artists within the books evenly too. There is little basis to weight the various survey books differently. As is shown in the above table there were certain artists who were counted more than once in a single survey book to take into account the increased emphasis on this artist within the book. In ACI-1 all counts greater than one in a single survey book were changed to one. The value an artist attains in ACI-1 has a practical meaning as the number of survey books out of the possible 13 they were included in.

A second specification (ACI-2) took into account the fact that certain artists were weighted more heavily in certain survey books. Other survey books placed equal emphasis on all artists included. The points in ACI-2 were allocated as follows, one point was allocated if the artist was included in a survey book and two points were allocated if there was extra emphasis on an artist within the book. The criticisms of the ACI will be dealt with in detail later in the paper but one criticism related to the construction of the ACI was the difficulty to extract suitable variance between the artists. Only a small number of survey books, many of which included the same artists, does not allow for great variability.

Wooldridge (2009: 307) explains that an important assumption for the use of a proxy is that it should not be correlated with the other variables in the model. It is unlikely that the Art Critic Index will be correlated with factors such as the medium and size of the artwork which are essential to explain art prices. In most models the proxy is included as a control to create unbiased estimates of the other variables in the model. The suitability of the ACI as a proxy for cultural value may depend on the model in which it is used.

In summary, the Art Critic Index proxies for cultural value by assigning points to artists for their inclusion in notable survey books on South African art. The ACI is at the artist level which means it assigns the same value to an artist’s entire body of work

5 Methodology

The proxy for cultural value will be evaluated in two steps. Firstly, a regression analysis is used to test whether the proxy (ACI) follows the result suggested by Throsby (2000) of a strong correlation between cultural and economic value but with cases of persistent outliers. These outliers are artists whose body of work has a low cultural value but high economic value and vice versa. The second
step is a case study on certain outliers to see if even the persistent outliers are well explained by the concept of cultural value.

The model in the regression analysis amounts to a hedonic model\(^2\); price is regressed on a set of characteristics which explain price. Hedonic models have been used extensively in literature on the art market to estimate art market returns (Higgs & Worthington, 2005) or to explain the determinants of art prices (Rengers & Veltuij, 2002). In this case it is used to test the relationship between economic value and the ACI. The model is shown below in the following regression form:

\[
\ln(\text{hammer price}) = \beta_1 \text{Artwork Controls} + \beta_2 \text{ACI} + \beta_3 \text{Time} + (\beta_4 U + \epsilon) \quad (1)
\]

The measure of economic value is the hammer prices of artworks at auction in South Africa. The artwork controls are included to make different artworks comparable. These include the size and medium of the artwork such as oils, acrylic or sculpture. Unfortunately, a control of the auction house could not be included with the given data. Higgs & Worthington (2005) observed higher prices for auctions by Sotheby’s and Christie’s in their study of Australian art prices. Time dummies are included to control for cyclical changes in demand. Economic conditions which benefit the wealthy are likely to lead to increases in the demand, and therefore prices, for artwork at auction irrespective of the artwork available. Due to the fact that the seller has monopoly over the supply of a single work when it is offered to the market the purchasing power of the buyers at that time can have a major effect on the final price of sale.

The unobservable variation \((U)\) in value relates to those factors which we expect to affect art prices but cannot be controlled due to the lack of availability of data or the difficulty of finding measures. Stevenson’s (1992) components provide suggestions on likely characteristics which would enter the model as unobservables. These include the condition of the artwork, the certainty of attribution, the pleasure gained from viewing the artwork and the holding cost of the artwork.

The next step in the analysis is to identify which artists do not fit the simple model above. The unit of observation in the model is artworks so in order to identify the artists of interest a method was used which highlighted artists whose artwork prices were consistently under predicted by the model above.

The measure used to identify the artists that were outliers in the model was the percentage of positive residuals for each artist. This percentage shows the number of artworks by a particular artist which has a sale price above that predicted by the simple model above. By controlling for the size and medium of the artwork this measure can identify persistent deviations from the relationship between economic and cultural value. These are artists who receive high prices for their work but do not have a high measure of cultural value in the ACI.

\(^2\)Rosen (1974) provides the details on hedonic models. Hedonic models are particularly relevant to markets of differentiated products.
Particular artists with a very high percentage of positive residuals are discussed in more detail to highlight the differences between cultural and economic value.

6 Results

6.1 Hedonic regression

The different specifications used to estimate the model are shown in Table 3. The base category for the different media was Other. Time was controlled for with year dummies in all the specifications. Specification 1 shows the model using ACI-1, and Specification 2 gives the results using ACI-2. Specification 3 and 4 add a control for the total works sold by each artist over the time period covered. Finally, specification 5 and 6 use clustered standard errors by artist and robust standard errors respectively.

The results show that there is strong positive relationship between ACI, the proxy for cultural value, and the price of artwork. This is in line with Throsby’s (2000) expectations that cultural value will be strongly related to cultural value. Both the size and medium serve as significant explanatory variables. By controlling for the size and medium these highly heterogeneous goods can be better compared.

The positive value on the size variable does not mean that bigger artworks are always better. At the first point of sale, at the gallery, it is pricing norm to set bigger artworks by the same artist at higher prices (Velthuis, 2003). In fact early sales of art where priced relative to the area of the canvas (Stevenson, 1992).

Certain mediums receive higher prices than others. This is due to the durability of certain mediums, what stage of production the medium is associated with and in some case the replacement value of the materials used. Oil paintings are known to be durable over time (Higgs & Worthington, 2005: 119). The positive coefficient on sculpture is likely to be a reflection of the high cost of the materials used, for example if the sculpture was cast in bronze. Traditionally, drawings receive low prices relative to other mediums as often drawings and sketches are produced as preparatory studies for a final artwork. Prints and photographs are often produced in numbered editions so the availability of a copy pushes down their price relative to other mediums. Other studies, such as Ursprung & Weirmann (2011) which used a far larger dataset than this study, confirm the significant effect of different mediums in explaining art prices.

The first four specifications assume that all observations are independent but the auction results include the sales of multiple artworks by the same artist. Due to the simple form of the model there are likely to be unobservable characteristics which are associated with the artists which will lead the error term of artworks by the same artist to be correlated. In Specification 5 the errors are clustered by the artist to test the effect this may have on the significance of the independent variables. As is shown clustering increases the standard error by a large amount for all the variables. Importantly, this decrease in precision does not affect the
significance of ACI. Specification 6 shows robust standard errors to create a
toolar comparison to Specification 5.

Another concern in this model is that simultaneity may be present. High
cultural values for artworks lead to higher economic values as cultural values
enter the demand function for the artwork. Simultaneity will be present if higher
prices also affect the ACI. Due to the fact that the ACI is constructed from the
survey books of notable art critics it is unlikely that simultaneity will be present.
If the critics pick the artists in the survey books based on the art prices their
credibility will come into question. In fact it is more likely that the art critic
will choose to ignore art prices when they form their preferences.

6.2 Case Study of Outliers

The residuals from Specification 3 in Table 3 were used to identify persistent
outliers. The percentage of positive residuals was calculated for each artist.
Those artists with prices above the prices predicted by the model will have
many positive residuals and display a high percentage. The artists were then
ranked by this measure. Artists who had sold less than 20 artworks over the
period from 1996 to 2012 and those whose record price was below R60 000 were
not included in the ranking. This adjustment was made in order to identify only
the persistent outliers whose artwork had received significant economic value.
The table below shows the top 10 artists using this ranking method.

One artist of interest in the table above is Dylan Lewis3. Lewis is a sculptor
and is known for creating large bronzes of African animals. He is an exceptional
case in that he has received no significant mention in any of the survey books
used to make up the ACI and yet his artwork has sold for high prices. Some of
the survey books were written before he had become an established artist but
other contemporary artists born at a similar time have still been included in the
ACI. If cultural value is a significant part of the consumers demand function
for art this raises the question of whether the ACI has inaccurately measured
Lewis’s cultural value or if the high prices stem from other reasons.

There are several reasons why Lewis’s artworks fetch high prices. The
medium is controlled for in the model but there is no control for the mate-
rial used to produce the sculpture. Lewis’s sculptures are often cast in bronze
which is an expensive material. Many of his sculptures are a large size but size
is also controlled for in the regression. It is likely that the materials and size
only explain a small part of the high prices. The determinants of demand for
his works will play a larger role.

It is assumed that a strong determinant of the demand for Lewis’s work
is the decorative nature of the artwork. In 1997 Lewis was commissioned to
produce 18 life size Leopard sculptures for the Leopard Creek Country Club.
These sculptures would serve little value in the marketplace for ideas associated
with cultural value but would be desirable decorative pieces in a country club

3The information on Dylan Lewis was sourced from his website and the Everard Read
gallery website.
setting. The fact that the high prices of these artworks can be explained through alternate factors is not a sufficient reason to conclude that the low cultural value attributed to Lewis is accurate.

Besides survey books another indicator of cultural value is the number of important museum exhibitions an artist has been included in. Dylan Lewis has not been included in any significant exhibitions in museums such as Tate Modern in London or the Museum of Modern Art in New York. Inclusion in an important curated museum exhibition or events such as the Venice Biennale may in fact be stronger indicators of cultural value than survey books. Therefore Lewis’s low ACI value is likely to be an accurate reflection of the cultural value of his artwork.

John Meyer’s paintings are similar to Lewis’s sculptures in that they have a strong decorative element and do not seem to put forward strong new ideas which may enhance their cultural value. Artists such as John Meyer and Dylan Lewis suggest that there is segment of the South African art market which places a high preference for the decorative value of an artwork even though the idea embodied in the artwork may not be a strong element. This supports the notion that there can be persistent deviations from the positive relationship between economic and cultural value.

Both Dylan Lewis and John Meyer are represented by the same gallery, Everard Read. As suggested above, some collectors of South African art may place a higher value on the decorative properties of art than cultural value. Everard Read cater for this type of collector, as the gallery is less concerned with curatorial debate and hence, less concerned with cultural value as indicated by their absence at international art fairs such as Art Basel and the presentation of their marketing material. Thompson (2012) highlights the ability of art market players such as art dealers to use branding and other marketing techniques to cultivate demand without focussing on critical judgement.

If artists such as Dylan Lewis and John Meyer could be motivated to show high cultural value, as defined in this paper, this would bring the use of the ACI as a proxy for cultural value into doubt. Due to the fact that it can be reasoned that their high prices stem from other factors and other indicators support a low cultural valuation for these artists, the case of the ACI as a proxy is made stronger.

At the top of Table 4, Frederick Timpson I’Ons also does not present a significant challenge to the use of the ACI as a proxy for cultural value. Timpson I’Ons is a 19th century artist and is not included in the survey books as they consider 20th century and contemporary South African art.

In contrast, Marlene Dumas is a contemporary artist and when some of the books were written, her career had not yet begun. Although Dumas was born and studied in South Africa, she has lived in Amsterdam for the majority of her professional career. Perhaps, with a greater number of survey books and a more international focus, Dumas would receive a higher ranking in the ACI. Dumas provides an example that the ACI would benefit from a wider variety of sources.

Each survey book provides a snapshot of the cultural valuations of the time.
If an artist is overlooked by the critics of the time, they will also be underweighted in the ACI. Stanley Pinker is an example of an artist who has been overlooked by South Africa's art critics yet his work has fetched high prices in the market. Proud (2004) explains that Pinker’s artworks "resist superficial or immediate consumption by a local art confraternity looking for a South African art that conveyed an immediately assimilable political message". Beckert & Rössel (2013: 183) explain that art buyers uncertainty of the quality of an artwork stems from the uncertainty of the accuracy of the critical judgements of the work. If the judgements of cultural value were initially inaccurate and later reassessed, the ACI will measure current cultural value inaccurately. The ideas contained in Pinker’s artworks are powerful but too subtle for the art world of his time. Similar to Dumas, the assessment of Pinker’s cultural value would benefit from other sources in addition to the survey books.

Artists such as Lewis and Meyer show the usefulness of the ACI as a proxy for cultural value. Although there are buyers willing to pay high prices for their works, the ACI highlights the lack of important ideas presented by their artwork. The ACI successfully separates artists of low and high cultural value. In contrast, Dumas and Pinker highlight that there are some significant shortcomings in the ACI. These shortcomings are addressed in the following section.

7 Criticisms

Creating a single measure for cultural value is a difficult task. There are several key criticisms for the use of the ACI as a proxy for cultural value. The use of survey books bares a relationship to critical exposure, there is a lack of variability between artists, the measure is at the level of the artist and not the artwork and those artists who are not included in the survey books receive a zero ACI value.

The first step of the methodology to analyse the ACI as a proxy was the regression of the ACI on price with various controls. The positive relationship was used to support the case of the ACI as a proxy for cultural value. This positive relationship may not be due to the fact that the critics select artists with high cultural value but due to the exposure the artists receive from being included in the book. Although the exposure is likely to have positive effect this paper argues that the selection of artists with high cultural value is the major driver.

There are 316 different artists in the ACI dataset and in any particular survey book the number of artists included average just fewer than 70 artists. Although some artists receive increased exposure within the survey book the focus is evenly distributed within the book. Artists receive much greater individual exposure from news articles, exhibition catalogues and monologues than they

\footnote{With the exception of Dylan Lewis, Stanley Pinker’s artwork has fetched the highest price of all the outliers mentioned in Table 4. This record price has since been broken in March 2014, when a Stanley Pinker painting titled “Love” sold for R 3.4 million.}
do from the survey books. Therefore, it is expected that inclusion into a survey books adds only a marginal contribution to the overall exposure of any particular artist. The basis on which the critics select the artists is of greater importance than the publicity an artist gains from the inclusion. The next area of concern is the lack of variability of the ACI.

Due to the fact that only 13 survey books were included there is a lack of variability in the index. This variability could be derived by counting the number of words on each artist (Ginsburgh & Weyers, 2008) but a better method would be to include a greater number of sources of information. Other sources should make selections in a similar manner. The established critics in the survey books have the incentive on maintaining their credibility to associate their selections with high cultural value. In a similar way, museums maintain their credibility by selecting artists to exhibit which bring forward influential ideas and high cultural value. Adding the selective decisions of museum curators will help add variability to the ACI.

In order to better analyse the relationship between economic value and cultural value the ACI would need to differentiate the cultural value of different artworks by the same artists. A regression analysis mitigates this problem to some degree by controlling for the size and medium of the artworks. A greater number of controls would help to address this issue. Lastly, there is the issue of how to measure the cultural value of artists which are not included in the ACI.

If an artist in not included in any of the survey books they will receive a zero value for the ACI. It is unlikely that all these artists have insignificant amounts of cultural value. The ACI is a count variable which also has bunching at zero. Wooldridge (2009: 597) suggests the Tobit models to adjust for bunching at zero and the Poisson regression models for count variables, but this is for the case where ACI is the dependant variable. This paper does not attempt to employ variations of such models and this is an avenue for future research. Although there are a large number of artists who receive a zero ACI value, there are a much smaller proportion of artworks with this value. Artists who are included in the ACI sell many more artworks on auction than those who receive a zero ACI value.

8 Conclusion

In order to understand the art market a second distinct concept of value is introduced by Throsby (2000) termed cultural value, a valuation of the idea embodied within an artwork. The production function of artists can only be fully understood when cultural value is used. The challenge is to find a measurement for this alternative concept of value. This paper provides a proxy for cultural value in the context of the South African art market.

The proxy is an Art Critic Index compiled from notable survey books on South African art. The proxy is a new contribution to this field and is not without its criticisms. Two major issues are the lack of variability in the ACI as well as the lack of different ACI levels for two artworks by the same artist.
A more complex index may address these issues.

The ACI was tested in a simple hedonic regression model. There was a strong positive relationship between the ACI and art prices. This relationship remained significant even when the standard errors were clustered by artist. The literature does not suggest that cultural and economic value are just a simple monotonic transformation despite the strong positive regression results. A case study of selected outliers was used to see if deviations from the positive relationship could be explained by the concepts of economic and cultural value.

The example of the artist Dylan Lewis showed that the deviations of the ACI from art prices could be explained to follow the intuition of economic and cultural value. The decorative nature of Lewis's work caused the economic and cultural value to deviate for this artist. In this case the ACI measure of cultural value is line with the understanding of the concept. The link between cultural and economic value is weaker when cultural value is not a major part of the consumers demand function for art.

This paper has provided a unique insight into the South African art market, an underrepresented area in South African economic literature. The difficulty of measuring cultural value has been highlighted in the international literature, bearing in mind that cultural value is multi-dimensional. This paper provided a simple proxy for cultural value which could enhance research on the art market. The paper did not hope to find a perfect measure for cultural value but the ACI does provide a starting point for future research.

References


### Table 1: Record Prices for South African artwork at auction, September 1996 - February 2012

<table>
<thead>
<tr>
<th>Artist Name</th>
<th>Record Price</th>
<th>Average Price</th>
<th>Number of works sold of 1894</th>
<th>Date of birth</th>
<th>Total Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stern, Irma</td>
<td>R 32 100 000</td>
<td>R 1 117 970</td>
<td>424</td>
<td>1894</td>
<td>R 474 000 000</td>
</tr>
<tr>
<td>Pieneef, JH</td>
<td>R 10 000 000</td>
<td>R 210 522</td>
<td>931</td>
<td>1886</td>
<td>R 196 000 000</td>
</tr>
<tr>
<td>Preller, Alexis</td>
<td>R 7 733 227</td>
<td>R 184 229</td>
<td>324</td>
<td>1911</td>
<td>R 59 700 000</td>
</tr>
<tr>
<td>Sekoto, Gerard</td>
<td>R 6 186 582</td>
<td>R 207 696</td>
<td>223</td>
<td>1913</td>
<td>R 46 300 000</td>
</tr>
<tr>
<td>Laubser, Maggie</td>
<td>R 5 902 031</td>
<td>R 255 587</td>
<td>413</td>
<td>1886</td>
<td>R 106 000 000</td>
</tr>
<tr>
<td>Lewis, Dylan</td>
<td>R 5 782 609</td>
<td>R 295 305</td>
<td>150</td>
<td>1964</td>
<td>R 44 300 000</td>
</tr>
<tr>
<td>Tretchikoff, Vladimir</td>
<td>R 4 199 000</td>
<td>R 222 237</td>
<td>91</td>
<td>1913</td>
<td>R 20 200 000</td>
</tr>
<tr>
<td>Sumner, Maud</td>
<td>R 2 432 408</td>
<td>R 84 171</td>
<td>424</td>
<td>1902</td>
<td>R 35 700 000</td>
</tr>
<tr>
<td>Pinker, Stanley</td>
<td>R 2 432 408</td>
<td>R 273 744</td>
<td>60</td>
<td>1924</td>
<td>R 16 400 000</td>
</tr>
<tr>
<td>van Wouw, Anton</td>
<td>R 2 211 280</td>
<td>R 246 499</td>
<td>88</td>
<td>1862</td>
<td>R 21 700 000</td>
</tr>
</tbody>
</table>

**Notes:** All figures are adjusted for inflation into constant 2012 prices.  
**Source:** AuctionVault (www.auctionvault.co.za)

### Table 2: Summary of the South African art survey books

<table>
<thead>
<tr>
<th>Name of Author</th>
<th>Year</th>
<th>Title</th>
<th>Counting Method</th>
<th>Number of Artists</th>
<th>Maximum count for one artist</th>
</tr>
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<tbody>
<tr>
<td>Bouman, Dr. A. C.</td>
<td>Circa 1960</td>
<td>Painters of South Africa</td>
<td>Section on artist</td>
<td>22</td>
<td>1</td>
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<tr>
<td>F.L. Alexander</td>
<td>1962</td>
<td>Art in South Africa since 1900</td>
<td>Headings</td>
<td>15</td>
<td>1</td>
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<tr>
<td>Various</td>
<td>1966</td>
<td>20th Century South African Art</td>
<td>Number illustrations</td>
<td>118</td>
<td>4</td>
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<tr>
<td>Alexander, L &amp; Cohen, Evelyn</td>
<td>1990</td>
<td>150 South African Paintings</td>
<td>This book included artworks rather</td>
<td>133</td>
<td>2</td>
</tr>
<tr>
<td>EJ De Jager</td>
<td>1992</td>
<td>Images of Man</td>
<td>Heading</td>
<td>51</td>
<td>1</td>
</tr>
<tr>
<td>Hayden Proud (Ed.)</td>
<td>2006</td>
<td>Revisions</td>
<td>Section</td>
<td>83</td>
<td>1</td>
</tr>
<tr>
<td>Hayden Proud</td>
<td>2008</td>
<td>Revisions+</td>
<td>As above</td>
<td>42</td>
<td>1</td>
</tr>
<tr>
<td>Sue Williamson</td>
<td>2009</td>
<td>South African Art Now</td>
<td>Featured.</td>
<td>84</td>
<td>3</td>
</tr>
<tr>
<td>Sophie Perryer Ed</td>
<td>2010</td>
<td>10 Years 100 Artists</td>
<td>Featured.</td>
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<td>1</td>
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<tr>
<td>Lize van Robbroek(Ed.)</td>
<td>2011</td>
<td>Visual Century 1945 - 1976 (Volume 2)</td>
<td>As above</td>
<td>50</td>
<td>4</td>
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<tr>
<td>Pissarra, Mario (Ed.)</td>
<td>2011</td>
<td>Visual Century 1973 - 1992 (Volume 3)</td>
<td>As above</td>
<td>72</td>
<td>3</td>
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Table 3: Estimated Hedonic Price Regression of Artworks

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<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
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<td>Size</td>
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<td>0.00826**</td>
<td>0.00841***</td>
<td>0.00847***</td>
<td>0.00841***</td>
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<td>(0.000215)</td>
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<td>(0.003)</td>
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<td></td>
<td>(0.0697)</td>
<td>(0.0690)</td>
<td>(0.0693)</td>
<td>(0.0688)</td>
<td>(0.2)</td>
<td>(0.099)</td>
</tr>
<tr>
<td>Drawing</td>
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<td>-0.959***</td>
<td>-0.944***</td>
<td>-0.969***</td>
<td>-0.944***</td>
<td>-0.944***</td>
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<tr>
<td></td>
<td>(0.0445)</td>
<td>(0.0441)</td>
<td>(0.0443)</td>
<td>(0.0440)</td>
<td>(0.17)</td>
<td>(0.049)</td>
</tr>
<tr>
<td>Mixed media</td>
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<td>-0.531***</td>
<td>-0.552***</td>
<td>-0.555***</td>
<td>-0.552***</td>
<td>-0.552***</td>
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<tr>
<td></td>
<td>(0.0424)</td>
<td>(0.0420)</td>
<td>(0.0422)</td>
<td>(0.0419)</td>
<td>(0.15)</td>
<td>(0.046)</td>
</tr>
<tr>
<td>Oil</td>
<td>0.523***</td>
<td>0.488***</td>
<td>0.489***</td>
<td>0.468***</td>
<td>0.489***</td>
<td>0.489***</td>
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<tr>
<td></td>
<td>(0.0381)</td>
<td>(0.0377)</td>
<td>(0.0379)</td>
<td>(0.0377)</td>
<td>(0.13)</td>
<td>(0.048)</td>
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<td>Photograph</td>
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<td>-0.511***</td>
<td>-0.452**</td>
<td>-0.482***</td>
<td>-0.452*</td>
<td>-0.452**</td>
</tr>
<tr>
<td></td>
<td>(0.188)</td>
<td>(0.187)</td>
<td>(0.187)</td>
<td>(0.186)</td>
<td>(0.24)</td>
<td>(0.2)</td>
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<tr>
<td>Print</td>
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<td>-1.278***</td>
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<td>-1.278***</td>
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<td>(0.17)</td>
<td>(0.046)</td>
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<td>0.815***</td>
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<td>0.880***</td>
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<td>(0.062)</td>
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<td></td>
<td>(0.0431)</td>
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<td>(0.0429)</td>
<td>(0.0426)</td>
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<tr>
<td>ACI-1</td>
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<td>0.313***</td>
<td>0.313***</td>
<td>0.313***</td>
<td>0.313***</td>
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<td>(0.00325)</td>
<td>(0.00381)</td>
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<td>(0.0034)</td>
<td>(0.0039)</td>
<td>(0.0039)</td>
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<tr>
<td>ACI-2</td>
<td>0.269***</td>
<td>0.249***</td>
<td>*</td>
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<td>0.0005***</td>
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<td>(0.00239)</td>
<td>(0.00291)</td>
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<td>(2.71e-05)</td>
<td>(0.00032)</td>
<td>(4.1e-05)</td>
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<td>Total works</td>
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<td>*</td>
<td>0.0005</td>
<td>0.0005***</td>
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<tr>
<td></td>
<td>(2.65e-05)</td>
<td>(2.71e-05)</td>
<td>(0.00032)</td>
<td>(4.1e-05)</td>
<td>(0.16)</td>
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<td>Constant</td>
<td>7.311***</td>
<td>7.354***</td>
<td>7.291***</td>
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<tr>
<td></td>
<td>(0.0708)</td>
<td>(0.0701)</td>
<td>(0.0705)</td>
<td>(0.0699)</td>
<td>(0.19)</td>
<td>(0.16)</td>
</tr>
<tr>
<td>Number of</td>
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<td>36,442</td>
<td>36,442</td>
<td>36,442</td>
<td>36442</td>
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<tr>
<td>observations</td>
<td>0.379</td>
<td>0.391</td>
<td>0.385</td>
<td>0.394</td>
<td>0.38</td>
<td>0.38</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.379</td>
<td>0.391</td>
<td>0.385</td>
<td>0.394</td>
<td>0.38</td>
<td>0.38</td>
</tr>
</tbody>
</table>

Notes: Standard errors in parentheses. The dependent variable is the log of the inflation adjusted hammer price. Time dummies are included for all specifications.

Source: AuctionVault auction price records, 1996-2012

*** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level.
<table>
<thead>
<tr>
<th>Name of Artist</th>
<th>Number of works sold</th>
<th>Record price at auction</th>
<th>ACI - 1</th>
<th>Percentage of positive residuals</th>
<th>Date of Birth</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timpson I'Ons, Frederick</td>
<td>28</td>
<td>R 385 507</td>
<td>0</td>
<td>100.00%</td>
<td>1802</td>
<td>Male</td>
</tr>
<tr>
<td>Meyer, John</td>
<td>41</td>
<td>R 421 142</td>
<td>0</td>
<td>100.00%</td>
<td>1942</td>
<td>Male</td>
</tr>
<tr>
<td>Lewis, Dylan</td>
<td>150</td>
<td>R 5 782 609</td>
<td>0</td>
<td>99.33%</td>
<td>1964</td>
<td>Male</td>
</tr>
<tr>
<td>van Heerden, Piet</td>
<td>273</td>
<td>R 230 626</td>
<td>0</td>
<td>97.44%</td>
<td>1917</td>
<td>Male</td>
</tr>
<tr>
<td>Dumas, Marlene</td>
<td>37</td>
<td>R 321 100</td>
<td>3</td>
<td>97.30%</td>
<td>1953</td>
<td>Female</td>
</tr>
<tr>
<td>Pinker, Stanley</td>
<td>60</td>
<td>R 2 432 408</td>
<td>2</td>
<td>96.67%</td>
<td>1924</td>
<td>Male</td>
</tr>
<tr>
<td>Boshoff, Adriaan Hendrik</td>
<td>409</td>
<td>R 1 173 250</td>
<td>0</td>
<td>96.33%</td>
<td>1935</td>
<td>Male</td>
</tr>
<tr>
<td>Rose-Innes, Alexander</td>
<td>235</td>
<td>R 315 857</td>
<td>1</td>
<td>96.17%</td>
<td>1915</td>
<td>Male</td>
</tr>
<tr>
<td>Boyley, Errol Stephen</td>
<td>311</td>
<td>R 247 826</td>
<td>0</td>
<td>95.18%</td>
<td>1918</td>
<td>Male</td>
</tr>
<tr>
<td>Niemann Jnr, Hennie</td>
<td>40</td>
<td>R 210 571</td>
<td>0</td>
<td>95.00%</td>
<td>1972</td>
<td>Male</td>
</tr>
</tbody>
</table>

*Source: AuctionVault.co.za*
Appendix

Auction Price Data

The online subscription service, AuctionVault, provided online tables of auction results in South Africa from 9 September 1996 onwards. The hammer price, as well as the medium, artist and size of the artwork are shown in these online tables. The data was downloaded from the website in March 2012 and converted into a usable format. The final auction included in the data downloaded was held on 27 February 2012. The entire database of auction price records was used in this study which included 36 455 artwork sales by 3 789 different artists.

Newspapers often highlight record prices of artworks at auction year after year, but these prices are nominal and not adjusted for inflation. CPI figures from Statistics South Africa were used to adjust the hammer prices. There was a minor adjustment in the CPI figures from 2009 onwards but this was not significant enough to affect the process of deflating the prices. The base year chosen was 2012 and the average CPI over a year was used to make the adjustment. As this data was collated during 2012 the CPI figure for June 2012 was assumed to be the average for 2012.

It is noted that the hammer price is not a perfect measure of the cost to the buyer and revenue to the seller. Different auction houses charge different rates and fees, sometimes on both the buyer and seller. On their website Strauss & Co. reported a 10% buyer’s premium on lots sold below R10,000 and 15% above whereas Bonhams showed premiums of as much as 25% during their March 2012 auction of South African art.