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Artist Names as Human Brands: Brand Determinants, Creation and co-Creation Mechanisms

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Artist names as human brands:

Brand determinants, creation and co-creation mechanisms

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Abstract

Considering all transactions related to modern and contemporary visual artists mediated by galleries in Italy between 2007 and 2012, we propose an empirical measure of artist brand and explore its relationship with artist-specific characteristics, such as talent, fame, and popularity, through a structural model. We find that artist brand depends positively on talent, fame, and popularity. Moreover, we find that a co-creation mechanism is at work in the Italian art market, where galleries choose their specialization strategies in picking their artist portfolios. We interpret our findings in light of a novel conceptual framework of human branding and co-creation in the visual art market.

Keywords: art gallery, art market, Artist brand, value, brand co-creation

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Introduction

The concept of brand, borrowed from the marketing and management literature, is crucial in understanding the dynamics behind market behavior. The brand of a product is linked to its perceived quality. The brand provides information about the quality, especially in the case of imperfect information and highly complex goods. In these cases, providing cues about the quality of the product is particularly important for a consumer to evaluate the product itself. These cues can be intrinsic, referring to physical product characteristics, or extrinsic, such as price and brand, which are not part of the physical product itself (Olson and Jacoby, 1972; Richardson et al., 1994).

In recent years, the study of product brand in marketing research has been juxtaposed with the analysis of the human brand. The human brand can be defined as the "intangible asset linked to a person, which generates economic and social value through its visibility as a result of a personal branding process" (Scheidt et al., 2020). Alternative definitions of the human brand are those by Thomson (2006). The author states that human brand "refers to any well-known persona who is the subject of marketing communications efforts." Thomson (2006) adds that the human brand "may be viewed as one of several operationalizations of the broader concept of a brand." Similarly, Close et al. (2011) state that "human brands refer to the persona, well-known or emerging, who are the subject of marketing, interpersonal or inter-organizational communications." Finally, Hodge and Walker (2015) state that the personal brand is the "public persona of an individual [...] who has established their own symbolic meaning and value using their name, face, or other brand elements in the market." Other definitions are reported in the

supplementary material in Gorbatov et al. (2018). The human brand of several types of agents has been studied in the literature, such as the human brand of soccer players (Hofmann et al., 2021; Parmentier and Fischer, 2012), athletes (Carlson and Donavan, 2013; Hodge and Walker, 2015; Su et al., 2020), politicians (Speed et al., 2015), journalists (López-Meri and Casero-Ripollés, 2017), CEOs (Bendisich et al., 2013; Cottan-Nir and Lehman-Wilzig, 2018), television celebrities (Lunardo et al., 2015), fashion models (Parmentier et al., 2013), and marketing PhD candidates (Close et al., 2011). Like a product brand, a human brand also works as an extrinsic cue, signaling the quality of the product linked to it, especially in cases where the human brand is the creator's brand. This clearly applies to artists, whose name that appears in the signature on artworks facilitates quality assessment, since the artist brand conveys information about the artist herself, her artistic merit, and the historical importance of her artwork (Grampp, 1989; Marshall and Forrest, 2011; Moulard et al., 2014). Investigating the role of the artist name, Cleeremans et al. (2016) explore its influence on aesthetic judgments by people both trained and untrained in the visual arts, finding that the presence of a name can indicate value for the untrained eye. Additionally, Mastandrea and Crano (2019) find that the works attributed to famous artists are more highly appreciated than identical works attributed to non-famous artists. Schroeder (2005) and Zorloni (2005) explicitly note that an artist name itself can be considered a brand that affects the price of the artwork. Analyses by Hernando and Campo (2017) and Oosterlinck and Radermecker (2019) find a brand effect influencing the perceived value of an artist production in the visual art market. This influence of the brand is particularly significant in contemporary artworks, given the great variety and heterogeneity of experts' opinions (Moulin, 1995).

Artist human brands have been studied mainly in theoretical frameworks (Marshall and Forrest, 2011; Preece and Kerrigan, 2015; Angelini and Castellani, 2021), with the only exception

of the empirical work by Kucharska and Mikołajczak (2018), and through artist case studies, such as the analysis of the brand of Pablo Picasso (Muñiz Jr. et al., 2014), Andy Warhol (Kerrigan et al., 2011), Ai Weiwei (Preece, 2015), Marina Abramović (Marcus, 2015), Thomas Kinkade (Fillis, 2015), and Ernst Ludwig Kirchner (Weikop, 2012). A cultural economics approach to this information issue has only recently been developed, focusing on the Flemish old masters (Oosterlinck and Radermecker, 2019; Radermecker, 2019, 2020).

The determinants of the artist brand are still under-analyzed in the literature. So investigating which artist characteristics influence their brand the most and how the segmentation of the market affects the branding processes contribute to an improved understanding of the overall art market dynamics. Due to its complex dynamics, the art market can be seen as an ecosystem of agents whose actions and strategies have reciprocal influence, especially in forming the value of an artist brand. An artist brand is related to the strategy implemented by the artist and the strategy of all other stakeholders acting in the market. Therefore, an artist brand is co-created by the art market stakeholders (Schroeder, 2010; Preece and Kerrigan, 2015; Angelini and Castellani, 2021). Galleries play an essential role (Marshall and Forrest, 2011), acting as gatekeepers in the art market and sharing information about the artists they trade with the "language" of price (Velthuis, 2003). Choosing their portfolio of artists, galleries generate network effects (Giuffre, 1999) that can influence the artist brands. Yet this kind of analysis is still lacking in the literature.

This work uses a conceptual framework to understand the human brand in the art market and address two specific research questions. First, how is an artist brand related to talent, fame, and "popularity" (i.e., the perceived importance of an artist)? Second, do gallery specialization strategies on specific artist characteristics and market power affect the artist brand through a co-

creation mechanism? Compared to the previous studies we mentioned above, we study the brand of all artists traded on a secondary national market through galleries, rather than focusing on case studies, using only a theoretical approach, or looking at the auction house market. We assume that all artists have a brand, whether more or less valuable. Moreover, thanks to the digitization of the market and the communication mechanisms, all agents in the market can create and develop their own brand (Scheidt et al., 2020).

We respond to these research questions by proposing and estimating a structural model of artist brand. To do so, we analyze a unique dataset that includes information on all transactions concerning modern and contemporary visual artists whose artworks were traded by galleries in Italy between 2007 and 2012. After obtaining measures of artist brand, talent, fame, and popularity through measurement models, we estimate a structural model to check their structural relationship. We find that fame, talent, and popularity do impact the value of the brand. Finally, we find evidence of a co-creation effect: the artist brand depends on the gallery specialization strategy and market power.

Introducing an empirical measure of artist brand and studying its relationship with artist-specific characteristics, our paper contributes to the literature that analyses the art market using an agent-based perspective. We consider both widely studied features (i.e., fame, and talent) and a less-studied trait (i.e., popularity), more closely linked to using digital tools to obtain information about the artists.

The remainder of the paper is organized as follows. The section "Artist characteristics and brand: a conceptual framework" reviews the artist characteristics, outlining their definitions, and presents our framework. The "Exploratory analysis" section describes our data source and measurement models to obtain empirical measures of artist characteristics and brand. The

section "Empirical analysis" presents our empirical analysis and results. The section "Discussion and conclusions" discusses our results and draws some conclusions.

Artist characteristics and brand: a conceptual framework

While the artist name is key in affecting the perceived value of an artwork (Hernando and Campo, 2017), further study is needed to understand which artist characteristics are the main antecedents of the brand. Previous studies offer a starting point for investigating these characteristics. Angelini and Castellani (2019) develop a theoretical framework where the artist fame directly impacts the economic value of her artworks (i.e., their market value), while the artist talent effect on the economic value of the artwork is mediated by its cultural value. So, fame and talent are natural candidates when it comes to brand determinants. On the other hand, Hernando and Campo (2017) suggest that the artist name influences the perceived value of her artworks. Given the presence of a recognizable brand, this effect is related to the information about the artist career that can be linked to the artworks.

In what follows, we describe and define the artist characteristics suggested by previous empirical and theoretical studies. Then present a conceptual framework to be used as a reference for our empirical tests and analyses. Talent and fame were the initial artist characteristics studied in cultural economics, starting from the theories on superstars by Rosen (1981) and Adler (1985). More recently, these two characteristics have been studied in different cultural markets, such as the visual art market (Candela et al., 2016), the music industry (Filimon et al., 2011), the motion picture and theatre markets (Hofmann and Opitz, 2019; Han and Ravid, 2020). Popularity is also a critical variable, mainly investigated in the context of the motion picture industry (Bagella and Becchetti, 1999; Xu and Fu, 2014; Carrillat et al., 2018), singing contests (Atsu Amegashie, 2009;

Cho et al., 2019), and the music market (Gayer and Shy, 2006; Ordanini et al., 2018; McKenzie et al., 2021).

Fame has been widely studied in the cultural economics literature following both theoretical and empirical approaches, focusing on how fame is formed and distributed among agents and the market and non-market events influencing it. This variable mainly pertains to an artist life and career and to her presence in the market. So, the longevity of an artist in the art market is likely to be positively linked with her fame. That is because the passage of time likely leads to greater production and more time to be noticed, recognized, and accepted. When an artist becomes famous, and her fame crosses national borders, such as in the Andy Warhol case, she becomes an internationally recognized artist. However, a home bias effect could still exist, making an artist more important in her nation of origin than abroad (Steiner et al., 2013; Vosilov, 2015). Clearly, an artist fame can also be influenced by other market player actions and strategies, but fame remains mainly an artist characteristic since all artists have their own fame. Based on these arguments and the definitions of fame reported in Table 1a, we define artist fame as her reputation among the art market agents. This reputation is strongly linked to her presence in the international art market and her life and career duration.

Talent is at the center of a long debate in the economics literature for its definition and measure and its relationship to human capital. The concept of talent is related to both "innate ability" and "acquired ability": the former is a natural time-invariant aptitude. At the same time, the latter relates to the time-variant process of improving one's skills through experience (Towse, 2006). Menger (2014) defines the artist talent as "the expression of abilities that seem to originate in the genetic lottery (especially if they manifest themselves early in the artist life) as well as in the interaction between this genetic capital and a family and social environment that

can bring it to fruition." Several definitions presented in the literature about talent reflect this conceptualization (see Table 1b). We follow the definitions reported in Table 1b (most of which come from Table 1 in Gallardo-Gallardo et al. (2013)), particularly the definition by Menger (2014). Specifically, we define artist talent as that complex of abilities that are mostly innate but may also be influenced by the environment in which an artist was raised (such as the art schools) and eclectic art groups where artists cultivate their innate creativity.

Table 1
Definitions of fame and talent

1a. Definitions of fame	
Source	Definition
Giles (2000)	"Fame [...] is best regarded as the process by which people become well-known. What constitutes well-known-ness? It must surely be defined as a degree of public knowledge above what would be expected of an individual, given his or her social status and the type of relationship network s/he would be expected to have. This definition does not, by itself, account for the fact that, for whatever reason, some individuals are simply more popular than others. But fame is a level of well-known-ness beyond what can be achieved through mere popularity, and so it requires either a specific deed or achievement to generate publicity, or a vehicle for the spread of news"
Currid-Halkett (2010)	"[P]ure renown—literally the sum of all people who have heard a person’s name [...] [It is] fundamentally about sheer numbers of people who know one’s name [...] measured by quantity of recognition."
van de Rijt et al. (2013)	" [F]ame is defined as indicating a position on a continuum anywhere between being known only by family, friends, and colleagues and being world-renowned"
Ramirez and Hagen (2018)	"[...] his/her degree of renown, or state of being well known, to a population"

Merriam-Webster dictionary	"[R]eputation' and 'renown', which are respectively defined as 'recognition by others of some characteristic or ability or overall quality or character as seen or judged by people in general', and 'a state of being widely acclaimed and highly honored"
1b. Definitions of talent	
Buckingham and Vosburgh (2001)	"Talent should refer to a person's recurring patterns of thought, feeling, or behavior that can be productively applied"
Jericó (2001)	"The implemented capacity of a committed professional or group of professionals that achieve superior results in a particular environment and organization"
Michaels et al. (2001)	"[T]he sum of a person's abilities - his or her intrinsic gifts, skills, knowledge, experience, intelligence, judgment, attitude, character and drive: it also includes his or her ability to learn and grow"
Cheese et al. (2008)	"Essentially, talent means the total of all the experience, knowledge, skills, and behaviours that a person has and brings to work"
González-Cruz et al. (2009)	"A set of competencies that, being developed and applied, allow the person to perform a certain role in an excellent way"
Ulrich and Smallwood (2012)	"Talent = competence [knowledge, skills and values required for today's and tomorrows' job; right skills, right place, right job, right time] X contribution [finding meaning and purpose in their job]"
Menger (2014)	"The expression of abilities that seem to originate in the genetic lottery (especially if they manifest themselves early in the artist's life) as well as in the interaction between this genetic capital and a family and social environment that can bring it to fruition"
Merriam-Webster dictionary	"[A] special often athletic, creative, or artistic aptitude" and "the natural endowments of a person"

The concept of popularity is borrowed from sociology. In this literature, popularity is defined as the extent to which someone is appreciated or recognized by other people, with a clear link to acceptance in a group and the preference toward a certain individual (Cillessen and

Marks, 2011). Giroux (2019) reports the three ways in which popularity is conceptualized in the literature: popularity as a collective choice, popularity as a genre, and popularity as ownership. In the first case, popularity is "a matter of prevalence and frequency resulting from collective choice." In the second case, popularity is intended as "an intrinsic characteristic of an object, person, or idea," as in "popular music." In the third case, popularity refers to something coming from or belonging to the people, as in "popular culture." To avoid potentially using a label with multiple meanings, we define artist popularity as a social preference. So, the immediate perception of an artist importance emerges through a collective choice process. This exposure is also related to how the public and the experts discuss the importance of an artist. Simply put, popularity can be linked to media and Internet exposure. Examples of this exposure are how many pages on the web or news articles mention an artist. These mentions can be either positive or negative. As a matter of fact, negative mentions can also contribute to the popularity of an artist, as shown by several cases in the art world, where the reactions triggered by the artist works increased the news coverage about their exhibitions and artworks. Examples include Damien Hirst, Hermann Nitsch, Maurizio Cattelan, Gino De Dominicis, Andres Serrano, and Gunther Von Hagens. Our definition of popularity is also consistent with the point raised by Giles (2000), that popularity and fame refer to different levels of 'well-known-ness' (see Table 1a). Still, there can be a popular person who is not famous and a famous person who is not popular, in the sense of our definitions. So, while a relationship might exist between the two measures, they possibly do not measure the same underlying concept. Our definition also allows for the possibility that popularity consolidates over time. For example, in the 1980s Warhol had an explosion of popularity that consolidated and made him one of the most well-known artists today.

Fame, talent, and popularity are the main artist characteristics studied in the literature, and they are also key factors driving the way galleries form their portfolios. Each gallery chooses a portfolio of artists to invest in. The selection process is likely to be based on artist characteristics and their (past, current, and/or potential) performance in the art market. We can observe more or less specialized galleries operating in the market, with "specialization" meaning the level of concentration of a gallery portfolio of artists, with the term "diversification" on the opposite end of the spectrum. In particular, the more a gallery focuses on artists with a specific combination of characteristics, the more specialized/concentrated its strategy is. This strategic choice is, in fact, more critical for galleries than for other art market intermediaries since galleries invest directly in the artist brand, buying their artworks and promoting their name, unlike auction houses that do not own the artworks that are auctioned. A specialized gallery that only sells works by a specific category of artists may find it easier, compared to a diversified gallery, to increase the brand of the artists in its portfolio since specialization should allow for better development of the brand narrative. This effect could be due to successful investment in branding when a gallery is only focused on a category of artists, by increasing returns on brand investment and the potential spillovers between artists in the same group. This intuition is consistent with the results of Braden and Teekens (2019). They find that when artists are associated with peers with a similar status by a museum, a positive network effect, which the authors call 'confirmation effect,' is at work on their reputations. So, we could expect the existence of a confirmation effect also in the gallery market. Examples of specialized galleries in Italy that supported the brand of their artists are La Tartaruga gallery in Rome (which hosted and sold works by Mario Schifano, Giosetta Fioroni, Renato Mambor, and all the other artists who were part of the 'Scuola Romana' (Sassi,

2019)), and the Galleria Contini in Venice and Cortina d'Ampezzo (that represents Igor Mitoraj and Zoran Antonio Mušič, among others (Artsy, 2019)).

With the gallery specialization strategy, market power is also important in influencing an artist brand, since greater power allows for better sales management and better exploitation of the marketing strategies implemented.

So, in our conceptual framework, the artist brand is created by artist choices and characteristics and co-created by gallery choices in their portfolios. To make these concepts operational in an empirical framework, where artist brand is an unobservable variable conveying information about the artist and her characteristics, namely talent, fame, and popularity, we first propose a structural model to identify the functional relationship between these artist characteristics and the brand to be tested. Then we use measurement models to extract these latent variables from a set of observable variables. Specifically, we assume a multiplicative model as the Cobb-Douglas function, to model the artist brand as a function of talent, fame, and popularity, and the co-creation effect galleries have on the brand of the artists in their portfolios, as well as other artist and gallery characteristics and strategies:

$$B_{ij} = A_i G_j T_i^t F_i^f P_i^p \quad (1)$$

where B_{ij} is the brand of artist i in the portfolio of gallery j , the factors T_i , F_i , and P_i are, respectively, artist talent, fame, and popularity, $A_i G_j$ is the total factor productivity that captures artist and gallery heterogeneity, t , f , and p are the Cobb-Douglas elasticities of each factor. This multiplicative model is particularly suitable for calculating factor productivity, total factor productivity in terms of output elasticities (which give an idea of how responsive the brand is to a change of all the artist characteristics), and Solow residual (possibly capturing the heterogeneity

due to different galleries and artists operating in the market). Furthermore, the Cobb–Douglas function in logarithmic form can be easily estimated as a linear relationship between outputs and inputs, where output elasticities are the estimated coefficients obtained from an OLS regression. Assuming that all variables are positive, the logarithmic form of Equation (1) is

$$b_{ij} = \alpha_i + g_j + t\theta_i + f\varphi_i + p\pi_i \quad (2)$$

where we define $b_{ij} = \ln(B_{ij})$, $\alpha_i = \ln(A_i)$, $g_j = \ln(G_j)$, $\theta_i = \ln(T_i)$, $\varphi_i = \ln(F_i)$, and $\pi_i = \ln(P_i)$.

We can decompose α_i and g_j in Equation (2) as

$$\alpha_i = a + \mathbf{K}'\mathbf{k} + \varepsilon_i^A \quad (3)$$

$$g_j = g + \mathbf{H}'\boldsymbol{\gamma} + \varepsilon_j^G \quad (4)$$

where a and g are the constant terms, \mathbf{K} and \mathbf{H} are the vectors of control variables that influence artist and gallery heterogeneity, \mathbf{k} and $\boldsymbol{\gamma}$ are the vectors of coefficients, and ε_i^A and ε_j^G are the independent error terms with zero conditional means. Substituting Equation (3) and (4) in (2), we find the following linear model that can be estimated on our data

$$b_{ij} = c + t\theta_i + f\varphi_i + p\pi_i + \mathbf{K}'\mathbf{k} + \mathbf{H}'\boldsymbol{\gamma} + \varepsilon_{ij} \quad (5)$$

where $c = a + g$, $\varepsilon_{ij} = \varepsilon_i^A + \varepsilon_j^G$, and all coefficients can be estimated using Ordinary Least Squares (OLS).

Exploratory analysis

The following describes our dataset and reports the estimation results of several measurement models we estimate to retrieve measures of the latent variables: artist brand, talent, fame, and popularity.

Data source and description

We use a unique hand-collected dataset of artist-specific information on all modern and contemporary visual artists whose artworks were traded by galleries in Italy between 2007 and 2012. Our empirical analysis focuses on the secondary Italian art market, intended as the market where existing works of art are exchanged, instead of the primary market where original works of art are sold first (Candela and Scorcu, 2004; Zorloni, 2005). This is an ideal institutional setting to study both the artist and gallery role in the branding process due to the great number of galleries and heterogeneity of artists.

According to the TEFAF and NOMISMA Reports on the art market in 2013 (Candela, 2013; McAndrew, 2013), the Italian art market accounted for 1% of the worldwide turnover in the art market and galleries accounted for 73% of the Italian market turnover. Statistics on the average prices of trades in Italy show that 75% of the galleries sold artworks under €20,000. Our dataset includes Italian galleries: Galleria d'arte Contini, Arte moderna Orler, Galleria Tega, Galleria d'arte Mazzoleni, Galleria dello Scudo Arte Moderna e Contemporanea, Tornabuoni Arte, Galleria Continua, Fama Gallery, Poleschi Arte, and Galleria Massimo de Carlo.

Our information comes from the Artist Re-sale Rights (ARR) archives of the *Società Italiana degli Autori ed Editori* (SIAE), the Italian Public Body, which handles royalties for artists, and from art information providers available on the web (artprice.com, artnet.com, arsvalue.com, and artifacts.net). In Italy, when artworks are resold in the secondary art market by auction houses, art galleries, or other art market dealers, the SIAE is entitled to collect and distribute royalties to the artists or their descendants. The SIAE has the authority to levy the ARR on behalf of all artists, even if they are not members. However, only registered artists or descendants can collect royalties. Living artists who decide to become members then manifest their willingness to receive

the ARR for the resales of their works, recognizing that their artworks are also market goods and that their name might be a brand. From the ARR archives of the SIAE, we collect all available information about sales involving galleries that occurred in Italy in the 2007-2012 period. The choice of the beginning date is due to the entry into effect of the law that introduced the Artist Resale Right in Italy in 2006 (d. lgs n. 118, 13/02/2006, implementing the EU Directive 2001/84/CE). The choice of the ending date reflects an update of the SIAE website for what concerns ARR information that happened at the beginning of 2013. We exclude trades mediated by auction houses in order to focus on gallery co-branding strategies, given that galleries are more likely to form a portfolio of artists (Prinz et al., 2015). Since investigations on the gallery market are sparse (mainly due to lack of data), our analysis makes a specific contribution to this branch of the literature on art markets.

Our dataset has some essential features. First, we consider only artworks with a minimum sale price of €3,000, as the ARR applies only over this price. All artworks are made by Italian artists that were alive at the time of the sale. In fact, following Candela and Scorcu (2010), the Italian art market is divided into three segments: "the ARR-free market, for artworks of artists deceased by more than 70 years, the market of living masters, for which ARR is due, and the heirs' market, for artworks of deceased artists where the heirs may still exercise the right." Our dataset then covers the market of living masters only.

Second, the artists whose artworks are in our dataset were exchanged either only in Italy or in Italy and international auction sales. In particular, the auction sales hosted in London that presented a selection of artworks by the most famous modern and contemporary Italian artists, i.e., the Sotheby dedicated sales of 20th-century Italian Art, started in 1999, and "Thinking Italian" by Christie's, started in 2000, with the name of "The Italian Sale." The artists in our dataset include

artists such as Mimmo Paladino, Enrico Castellani, Agostino Bonalumi, and Michelangelo Pistoletto. Table A1 in Appendix A reports all the artists and indicates who participated in an Italian Sale in the considered period.

Finally, our dataset only includes artists who sold at least 6 artworks in our 6-year period. We have a total of 4,022 transactions, 120 artists, and 270 galleries.

The first variable of interest in our analysis is an artwork price. The average value is €23,494.94, with a standard deviation of €45,001.86. Prices range from €3,000 to €1,200,000. Yearly average artwork prices tend to vary over time, with the highest average observed in 2011. In the same year, we also observe the highest price in our dataset (€1,200,000, for a work by Arnaldo Pomodoro). To take this price variability into account, we follow similar studies in the literature (Candela et al., 2016) and log-transform this variable. We indicate log-transformed prices to be used in empirical models as *Price*.

In our analysis, we define a set of dummy variables indicating the medium of the artwork: *Drawing*, *Print*, *Painting*, *Photography*, and *Sculpture*. The dummy variables for each medium are meant to capture that different media are likely to have different average prices and take this heterogeneity into account when estimating regressions (Hodgson and Vorkink, 2004; Etro and Pagani, 2013). Most transactions in our dataset involve paintings (about 76%), while *Print* is the least represented category in terms of transactions (about 1.1%). This may be because, on average, prints sell at a lower price than other types of artworks. So, the majority of graphic artworks sold would not be included in our dataset.

We also consider several artist-specific variables (Kozbelt, 2004; Candela et al., 2016). The variable *ItalianSale* is a dummy variable equal to 1 if at least an artwork was sold in an Italian Sale in London during the considered period. Transactions involving artists sold at Italian Sales

are about 32% of the total. *Eclectic* is a dummy variable indicating artists who adopt multiple art techniques (76% of the observations). *ArtStudies* marks artists who studied at art schools (about 74%). *Longevity* is the logarithm of the difference between the year of the transaction and the year an artist was born. Before the logarithmic transformation, the average value of this difference is about 65 years, ranging from 28 to 95 years. Finally, as a control variable for artist heterogeneity, we define *Member* as a dummy equal to 1 if an artist registered to collect the ARR from the SIAE. Table 2 shows descriptive statistics for artwork- and artist-specific variables in our dataset.

Table 2

Descriptive statistics

Variable	N	Mean	SD	Min	Max
<i>Price</i>	4,022	9.49	0.95	8.01	14.00
<i>Longevity</i>	4,022	4.15	0.23	3.33	4.55
	N	%			
<i>Drawing</i>	4,022	2.71			
<i>Print</i>	4,022	1.12			
<i>Painting</i>	4,022	76.11			
<i>Photography</i>	4,022	4.05			
<i>Sculpture</i>	4,022	16.01			
<i>Eclectic</i>	4,022	75.71			
<i>ArtStudies</i>	4,022	74.22			
<i>ItalianSale</i>	4,022	31.58			
<i>Member</i>	4,022	94.33			

The table reports number of observations (N), means, standard deviations (SD), minima (Min) and maxima (Max) for continuous variables and relative frequencies (%) for dummy variables.

Measurement models

One of the main objectives of our analysis is to measure latent variables such as artist brand, talent, fame, and popularity, which are crucial to understanding the agent behavior in the contemporary art market.

As for our definition, artist popularity is the immediate perception of her importance. Given the widespread usage of the Internet as an information source and host, we measure an artist popularity with a variable that considers the Internet exposure and the artist presence in Google search results. In particular, the variable *Popularity* is the logarithm of relevant results for the query "name of the artist" and "artist" in Italian on Google (Simkin and Roychowdhury, 2006; Garcia-del-Barrio and Pujol, 2007; Candela et al., 2016), standardized to the 1-101 interval before the logarithm transform, to facilitate comparisons with other variables in the empirical analysis. We collected the data once, at the end of the considered period (i.e., 2012). *Popularity* has an average of about 1.76.

Another potential good measure for media exposure could come from the tool Google Trends. However, this tool presents two critical limitations to building a measure of popularity in our context. First, the Google Trends metric is only available if the number of searches exceeds a specific threshold in a given period. Unfortunately, several artists in our dataset do not reach this threshold, which would leave us with a missing observation problem. Second, the number of searches for each artist is standardized to the 1-100 interval, which would hinder comparisons if the number of searches for each artist is significantly different. Although it could be considered a noisy measure, the Google indicator we use does not suffer from these problems. If we assume, as it is likely, that the effect of this potential distortion is the same for all artists, meaningful comparisons between all artists can be made. At the same time, using this indicator allows us to

have an ordinal ranking about how much an artist is talked about and, consequently, is likely to receive more attention from the public.

Other studies that used popularity measure(s) are Candela et al. (2016), and Hoffmann et al. (2021), both using the Google hits measure. Indeed, Hoffmann et al. (2021) also use alternative measures for popularity, such as traditional media presence (e.g., TV presence), social media presence (such as Facebook or Instagram), celebrity endorsements, and the potential for causing scandals of the individual. Considering these additional measures, one could argue that it is unlikely that artists are hosted in TV shows (and in Italy, there are not many TV shows about contemporary art.). Furthermore, most of the contemporary artists in our dataset do not manage a social media account. So a potential measure of these two types of media exposition would only cover a few artists. About the endorsements, while soccer players, studied by Hoffmann et al. (2021), are likely to obtain endorsement contracts from product brands, we are not aware of any such endorsements for the artists in our dataset. This may be because soccer players have a human brand that is represented by themselves while playing. While artists have a human brand that is also transferred to their artworks. Hence, an artist with a relevant human brand might potentially not be recognized in public. Finally, concerning scandals, these are usually covered by online articles and newspapers. So the importance of scandals is already part of our Google hits measure.

The next two artist characteristics we want to measure are fame and talent. As an initial approximation and following Candela et al. (2016), we estimate a linear factor model to find common factors for talent and fame. The variables we use in the model are related to the important features that emerge from our definitions of fame and talent, that is, *Longevity*, *ItalianSale*, *Eclectic*, and *ArtStudies*. Notice that we might, in principle, also use other

variables related to our definitions. Still, the availability of data on other measures of recognition and ability limited the number of variables we can use. Excluding *Longevity*, the other variables are dummy variables, so we base our factor analysis on a polychoric correlation matrix, using an oblique rotation to allow for possible correlation between latent variables, that we report in Table 3. The two strongest positive correlations are between *Longevity* and *ItalianSale*, and between *Eclectic* and *ArtStudies*.

Table 3

Polychoric correlation matrix

Variable	<i>Longevity</i>	<i>ItalianSale</i>	<i>Eclectic</i>	<i>ArtStudies</i>
<i>Longevity</i>	1			
<i>ItalianSale</i>	0.40	1		
<i>Eclectic</i>	0.15	0.19	1	
<i>ArtStudies</i>	-0.04	0.29	0.32	1

Table 4 shows the factors loading. Following the Kaiser rule, we retain only two factors. Since we perform our factor analysis to isolate the contribution of artist talent and fame, the resulting number of factors is consistent with our expectations. Table 4 shows that *Eclectic* and *ArtStudies* are positively associated with the first factor, while *Longevity* and *ItalianSale* are positively associated with the second factor. Given that the other associations are negligible (as per custom, we report blank cells), we interpret the first factor as artistic talent and the second factor as artist fame. This finding is consistent with our definitions of talent and fame. Talent is related to the actual environment in which artists were raised (art schools) and their capacity and willingness to use multiple media, which might come from innate temper and the environment. Fame is instead related to how much artists lingered in the art market and how much they are

recognized by other market agents, such as renowned international auction houses. In fact, "Italian sales" were unique outlets for the most important Italian artists. Participating in these events can be seen as a recognition of fame *per se*, in contrast with other types of international presence, which are not necessarily a signal of fame.

Table 4

Factor analysis

Variable	Factor 1	Factor 2	Uniqueness
<i>Longevity</i>		0.93	0.18
<i>ItalianSale</i>		0.71	0.33
<i>Eclectic</i>	0.71		0.46
<i>ArtStudies</i>	0.89		0.25

The table shows factors loading (pattern matrix) and unique variances. Factors loading indicate how each variable is weighted in each factor and are blank if their absolute value is ≤ 0.2 .

After calculating the standardized scores for the first and second factors, we log-transformed our measures of talent and fame after scaling them in the 1-101 range to have only positive values, to obtain *Fame* and *Talent*.

As an initial description of the different categories of the artists in our sample, we divide artists into categories based on their average levels (high or low, if the level is respectively higher or lower than average) of *Talent*, *Fame*, and *Popularity*. We end up with a total of eight categories of artists resulting from the combination of the two levels (high and low) of these three characteristics. While we acknowledge that the dichotomous high-low classification is far from exhaustive, we deem it a good compromise. Using a more fine-grained classification would soon result in the potential number of strategies (i.e., possible combinations of types of artists) being greater than the number of actual observations in the dataset. In fact, with the current classification, the total number of potential strategies is $\sum_{k=1}^8 \frac{8!}{k!(8-k)!} = 255$. Moreover,

using the entire distribution of the values of the three variables would not allow us to build the diversification index we will introduce in the following section with a straightforward interpretation. At the same time, galleries likely make their choices based on these three variables without knowing precisely their entire distribution. Table 5 presents the distribution of the observations by artist category. Most transactions involve artists with high talent, fame, and popularity (HHH artists).

Table 5

Observations by artist categories

<i>Artist category</i>	<i>Talent</i>	<i>Fame</i>	<i>Popularity</i>	<i>N</i>	<i>%</i>
HHH	High	High	High	853	21.21
HHL	High	High	Low	702	17.45
HLH	High	Low	High	289	7.19
HLL	High	Low	Low	753	18.72
LHH	Low	High	High	329	8.18
LHL	Low	High	Low	288	7.16
LLH	Low	Low	High	299	7.43
LLL	Low	Low	Low	509	12.66

The table reports number of observations (N) and relative frequencies (%) for each category of artists.

Finally, we create a measure for the artist brand, using a regression model with artist-specific fixed effects to create a brand-effect index. As documented in the literature, we can capture the artist effect on price by including artist-specific fixed effects in our regression model (Chanel et al., 1996; Hodgson and Vorkink, 2004; Etro and Pagani, 2013; Georges and Seçkin, 2013; Renneboog and Spaenjers, 2013; Oosterlinck, 2017). Our approach is similar to the hedonic regression one used in several cultural economics papers since we isolate the impact of artwork characteristics on its price. However, we only include the main artwork-specific variables and exclude artist-specific variables. Otherwise, we could not extract the artist fixed effects to create our brand index. Formally, we estimate the following model

$$v_{ijt} = \boldsymbol{\beta}' \mathbf{x}_{ijt} + \mu_j + \tau_t + \epsilon_{ijt} \quad (6)$$

where v_{ijt} is the price of the artwork traded in transaction i , created by the artist j at time t , and $Price_{ijt}$ is its empirical counterpart. In Equation (6), x is a vector of covariates including medium variables, $\boldsymbol{\beta}$ is a vector of coefficients to be estimated, and ϵ_{ijt} is a zero-mean stochastic error term. The parameters μ_s and τ_s indicate artist and year fixed effects.

OLS estimates of the model in Equation (6) are presented in Table 6. Since we estimate this model to create our brand-effect index, the model is kept as simple as possible, and inference is not our main concern. That said, we note that all medium dummy variables have a positive and significant effect, except for *Print* (note that the excluded category for reference is *Drawing*). These results imply that, on average, sculptures are more expensive.

The estimated artist fixed effects, not reported in the table, are jointly significant, suggesting an artist-brand effect. These artist effects constitute our artist-brand index, $Brand$. By construction, the variable *Brand* captures all the artist-specific characteristics. The ranking of the artists in our dataset as for our brand index is reported in appendix A. One should recall that all sales in our dataset are mediated by galleries, so artist fixed effects are 'nested' within gallery fixed effects. This is the main reason that we cannot add gallery fixed effects to equation (6). Adding them would make the artist fixed effects redundant and impossible to estimate, leaving us without a brand measure. Moreover, adding a gallery fixed effect to the estimation would capture the effect of the gallery specialization strategy on prices. This does not mean that a gallery brand name is not important. Instead, it means that taking it into account would prevent us from answering our research questions.

Table 6

Regression model

Variable	Price
<i>Photography</i>	0.50** [0.13]
<i>Print</i>	-0.13 [0.19]
<i>Painting</i>	0.64*** [0.14]
<i>Sculpture</i>	1.06*** [0.15]
constant	8.67*** [0.14]
Artist fixed effects	yes
Year fixed effects	yes
N	4,022
Adjusted R^2	0.417

The table reports OLS estimates of Equation (6). The model includes artist and year fixed effects. Inference is based on cluster robust standard errors reported in brackets. The null hypothesis tested for each coefficient is that it is equal to 0, against the alternative hypothesis of it being different from zero, the p-value are as follows: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Measuring the gallery specialization strategies

As noted earlier, galleries can follow different strategies when building their portfolio of artists. A vital distinction falls between galleries that specialize only in one category of artists, for example, those with high talent, fame, and popularity (HHH artists), and galleries that adopt a more diversified portfolio (e.g., they offer HHH, HHL, and LHL artists). In the Italian art market, we observe that galleries adopt 94 distinct strategies out of a potential total of 255 strategies. About 60.7% of the galleries (164) diversify by investing in at least two categories of artists. The remaining 39.3% of the galleries (106) specialize in a single class of artists.

Table 7 provides some details on the strategies adopted by the galleries, showing how many galleries in the dataset focus exclusively on one category of artists (galleries trading only) and how many galleries include a particular category of artists among others (galleries trading also).

Table 7

Gallery strategies

Artist category	<i>Talent</i>	<i>Fame</i>	<i>Popularity</i>	Galleries Trading only	Galleries Trading also
HHH	High	High	High	20	121
HHL	High	High	Low	13	105
HLH	High	Low	High	12	78
HLL	High	Low	Low	16	103
LHH	Low	High	High	8	80
LHL	Low	High	Low	5	43
LLH	Low	Low	High	12	65
LLL	Low	Low	Low	20	85

The table reports the number of galleries focusing (either exclusively or not) on specific category of artists.

Clearly, the more artist categories a gallery trades, the less it is specialized. To measure this specialization feature, we introduce a diversity index SI , a version of the Simpson index standardized between 0 and 1, that is equal to 1 when the diversity is at its minimum (and hence the specialization is at its maximum) and 0 when the diversity is maximum (vice versa). This index is based on the relative frequencies of the transactions of a certain category of artists made by a gallery. Denoting the set of all 8 possible relative frequencies by S , i.e., $S = \{Re_{HHH}, Re_{HHL}, Re_{HLH}, Re_{HLL}, Re_{LHH}, Re_{LHL}, Re_{LLH}, Re_{LLL}\}$, so that, for example, Re_{HHH} is the ratio between the number of transactions of artworks from artists with high talent, fame, and popularity made by a certain gallery and the total number of transactions of the same gallery,

our diversity index SI is defined as $SI = \frac{\sum_{s \in S} s^2 - 1/8}{7/8}$. This conceptualization clearly simplifies a gallery potentially complex choice scheme in choosing the artists to trade. In fact, a diversification strategy on the technique and/or on the artwork style may also exist. However, since we want to focus on the gallery strategy impact on co-creation, an index such as SI allows us to proxy the gallery choice for what concerns the portfolio of artists it wants to present to its buyers in one measure. In our sample, the average SI is equal to 0.359, ranging from 0.056 to 1.

To measure the gallery market power, we use the variable $MktShare$, the average market share of the gallery that sold a specific artwork. The market share is computed as the fraction of the total market turnover earned by one gallery. This is a good proxy of the market power. The idea is the greater the turnover of a gallery, the stronger its influence and importance in the market. The variable has an average value of 0.029, with a standard deviation equal to 0.045.

Empirical analysis

To estimate the empirical model in the Equation (5) and check our data for the relationships between artist characteristics and the brand, as well as the potential influence of the gallery strategies on the artist brand, we estimate the following regression model:

$$Brand_{ij} = c + t Talent_i + f Fame_i + p Popularity_i + \gamma_1 SI_j + \gamma_2 MktShare_j + \gamma_3 SI_j \times MktShare_j + \kappa Member_i + \epsilon_{ij} \quad (7)$$

where $Brand_{ij}$, $Talent_i$, $Fame_i$, and $Popularity_i$ are the empirical counterparts of b_{ij} , θ_i , φ_i , and π_i , respectively, while $Member_i$ is the artist-specific variable contained in \mathbf{K} , and $MktShare_j$, SI_j and their interaction ($SI_j \times MktShare_j$) are the gallery-specific variables contained in \mathbf{H} . The coefficients to be estimated are c , t , f , p , γ_1 , γ_2 , γ_3 , and k . Note that the

models in Equation (6) and (7) have two different levels of analysis. The model in Equation (6) is estimated over transactions and has the price as the dependent variable. The model in Equation (7) is estimated over artists and has the brand index on the left-hand side, including gallery-specific variables such as the market share and *SI*. Having the market share on the right-hand side does not create any redundancy issue, given that each artist is exchanged by more than one gallery and each gallery trades more than one artist. To consider that some artists are represented more than others, we perform a weighted estimation of Equation (7), where the number of transactions per artist is used as a weight. This weighted estimation allows for a more efficient use of all the available information in the dataset in our specific context.

The model we estimate includes all the artist characteristic variables, *Talent*, *Fame*, and *Popularity*. Since the brand is a way to convey information, and all the characteristics we are considering are positive characteristics (i.e., the more, the better), we expect the coefficients of the three artist characteristics to have a positive sign in our regression.

Turning to the effect of gallery specialization on the artist brands in its portfolio, we expect this effect to be positive. A gallery greater ability to focus on the marketing aspects of a specific kind of artist could positively influence its effectiveness. If so, we should observe that a higher specialization index *SI* of a gallery translates into a higher level of artist brand. Furthermore, we could expect that the average market share of galleries has a positive effect on artist brand, since galleries with a larger market share have a larger audience than those with a smaller share. For similar reasons, the interaction between two variables should also positively affect the artist brand since a gallery with greater market power has a greater ability to take advantage of specialization strategies.

Table 8 shows our estimates of Equation (7). The first column reports the full model estimates. In contrast, the second column reports the model without the co-creation variables (*SI*, *MktShare*, and their interaction). All estimated coefficients for artist characteristics are positive and significant, suggesting a positive relationship between the artist characteristics and her brand. This result is robust to the presence of the gallery co-creation effect. The main factor affecting artist brand seems to be fame, with a magnitude around 2.5 times that of popularity and over 3 times that of talent. Note that artist popularity has the same effect in the two models. In contrast, artist talent appears to be more effective in the model with co-creation variables, while artist fame seems less effective. However, all the coefficients related to the artist characteristics are not statistically different in the two models.

As shown in (5), the estimated coefficients of the elasticities allow us to calculate the returns to scale of artist talent, fame, and popularity on brand, a set of measures that suggest if the brand responds more (or less) than proportionally to changes in fame, talent, and popularity, in the long run. Since the sum of the estimated coefficients is less than 1, the artist factors have decreasing returns to scale. In the long run, the deterministic process of brand formation does not allow artists to increase their brand in a more than proportional way, when increasing these factors. However, it is possible to observe phenomena of artists whose brands grow more than proportionally due to stochastic factors in the short run.

Table 8 suggests that a branding co-creation mechanism is at work in the Italian art market for artist human brands. This mechanism depends on the specialization strategies chosen by the galleries, where a more specialized gallery is more effective in co-creating its artist brand. Moreover, the impact of the gallery market power is positive both by itself and as a multiplier of the specialization-strategy effect. Notice that the sum of the returns to scale of artist factors is

less than 1 even when the impact of gallery strategies in the co-creation process is taken into account, meaning that the returns to scale of artist characteristics are decreasing despite the inclusion of co-creation effects. This result suggests that a higher investment by galleries in famous artists rather than in talented/popular artists should lead to a higher increase for the artist brand in its portfolio. It is interesting to note that the variable related to the SIAE membership has a positive impact. This result suggests that our intuition about the artist choice to become a member when she recognizes that her artworks are also market goods and that her name is a brand is plausible.

Table 8

Regression model for Brand

	(a)	(b)
Variable	<i>Brand</i>	<i>Brand</i>
<i>Talent</i>	0.03*** [0.00]	0.02*** [0.00]
<i>Fame</i>	0.10*** [0.01]	0.13*** [0.01]
<i>Popularity</i>	0.04*** [0.00]	0.04*** [0.00]
<i>SI</i>	0.06* [0.02]	
<i>MktShare</i>	2.25*** [0.22]	
<i>SI × MktShare</i>	2.03* [1.15]	
<i>Member</i>	0.11*** [0.01]	0.15*** [0.01]
constant	-0.30*** [0.03]	-0.31*** [0.03]

N	4,022	4,022
Adjusted R^2	0.302	0.230

The table reports OLS estimates of Equation (7). Column (a) reports the coefficients for the full model, column (b) reports those of the model without the gallery co-creation variables. Coefficients are obtained by a weighted estimation, using the number of transactions per artist as a weight. Inference is based on robust standard errors reported in brackets. The null hypothesis tested for each coefficient is that it is equal to 0, against the alternative hypothesis of it being different from zero, the p-value are as follows: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Discussion and conclusions

In the contemporary art market, where artistic quality is not always easily recognized, artist names play an important role when evaluating artworks. Thus, it is crucial to measure the artist human brand and analyze its determinants and creation and co-creation mechanisms.

In this paper, we present a standard measure of artist brand using a unique dataset containing all transactions of modern and contemporary visual artist artworks traded by galleries in Italy between 2007 and 2012. We also present an original measure of artist talent and fame, use a measure of artist popularity, estimate the relationship between these artist characteristics and an artist brand, and estimate the gallery co-creation effect on the artist brand. All our measures of artist characteristics are based on definitions from the theoretical and empirical literature on fame, talent, and popularity.

We find evidence supporting a positive relationship between talent, fame, and popularity and the artist brand in the Italian art market. Our structural models allow us to estimate the elasticity of artist brand with respect to each of its determinants and compare them. The artist characteristics have decreasing returns to scale and do not allow artists to increase their brand over the long run by increasing these factors.

Our findings contribute to the previous literature on artist brand and artwork value. In particular, they are consistent with the theoretical prediction by Angelini and Castellani (2019)

for the art market, where fame and talent affect cultural and economic value. They are also consistent with the empirical conclusion by Hernando and Campo (2017) that an artist name influences the perceived value of her artworks based on the artist career and presence in the market. Furthermore, our results support the results by Hofmann et al. (2021) for soccer player human brands, where talent and popularity drive human brands.

In addition to an artist direct actions to create her human brand, other direct and indirect actions of art market stakeholders may influence and co-create the artist brand. One of the most prominent roles is played by art galleries. A gallery market power and strategy for creating its portfolio of artists affect the brands of the artists the gallery trades. In particular, we find that galleries with greater market power (proxied by market share) and specialization (measured through a diversity index of their portfolio of artists to their level of talent, fame, and popularity) significantly contribute to increasing the level of artist brand. This is likely due to the investment effectiveness in branding made by a gallery with high market power, when it is focused on fewer categories of artists, given the potential spillovers between the artists in the same group. For example, a gallery that only trades emergent artists (with low fame, low popularity, and high talent) will use a similar narrative for all the artists in its portfolio. These strategies will be increasingly effective with decreasing gallery competition. On the other hand, a gallery with artists presenting very different characteristics will find it more difficult to support the brand of all the artists that it trades. In both these cases, a higher market power would increase the effectiveness of the strategy. Our results also suggest that a gallery should consider artist characteristics *per se* when building its own portfolio of artist brands, since some artist characteristics (such as fame) have a higher impact than others (such as talent and popularity). In doing so, also the variables influencing these characteristics should be taken into account: for

example, when selecting the level of fame, that we operationalized as a factor of artist persistence in the market and artist sales in renowned international auctions, a gallery should take into account these dimensions, focusing, for example, on an artist with a more extended presence in the market and/or who has been presented in international auctions (or who has the potential to be presented soon at these types of sale).

Although the approach we use to extract the brand effect is not new to the cultural economics literature, to the best of our knowledge this analysis is the first attempt to empirically explain the brand in terms of latent determinants and to empirically study the link between the artist brand and the strategies of the art galleries. We acknowledge that our artist talent, fame, and popularity measures only account for some of the features of these latent characteristics. A future extension of this work could consider other measures for artist talent, fame, and popularity, since our measures are merely a first attempt to operationalize these latent variables. Our analysis could also be extended by considering artist-specific latent constructs and the characteristics of other agents who operate in the art market, such as collectors and art experts. Compared to our findings for galleries, different results could be expected for auction house strategies since their pricing strategies likely differ from galleries. Our framework could also be extended to study how other art market stakeholders (e.g., critics, museum curators, academics, etc.) participate in the brand co-creation mechanism (Preece and Kerrigan, 2015). Furthermore, our study of gallery strategies is limited to analyzing their portfolio compositions and artist brand since we have no information on how much galleries gain from their strategies. Unfortunately, without access to either the buying price or the gallery financial statements, we cannot investigate whether the strategies we identify are profit-driven. Future research could fill this gap also through questionnaires and surveys submitted to galleries and artists. Another potential

extension of our work would be studying the interaction between art value and artist brand, following and extending the experimental approach developed by Hernando and Campo (2017). In fact, a link likely exists between artistic merit and the artist brand, but this link is still to be explained. However, the contemporary art market might not be the optimal field to tackle this issue because of its high uncertainty about value and merit (Heinich, 2019).

References

- Adler, M. (1985). Stardom and talent. *American Economic Review*, 75(1), 208–212.
- Angelini, F., and Castellani, M. (2019). Cultural and economic value: A critical review. *Journal of Cultural Economics*, 43(2), 173–188.
- Angelini, F., and Castellani, M. (2021). Art market stakeholders' actions and strategies for the co-creation of artist brand. In E. Lazzaro, N. Moureau, and A. Turpin (Eds.), *Tools for the future: Researching art market practices from past to present*. London: Routledge.
- Artsy. (2019). *Galleria Contini* (Retrieved at: <https://www.artsy.net/contini-art-gallery>, October 07, 2019).
- Atsu Amegashie, J. (2009). American Idol: Should it be a singing contest or a popularity contest? *Journal of Cultural Economics*, 33, 265–277.
- Bagella, M., and Becchetti, L. (1999). The determinants of motion picture box office performance: Evidence from movies produced in Italy. *Journal of Cultural Economics*, 23, 237–256.
- Bendisch, F., Larsen, G., and Trueman, M. (2013). Fame and fortune: A conceptual model of CEO brands. *European Journal of Marketing*, 47(3/4), 596–614.
- Braden, L. E. A., and Teekens, T. (2019). Reputation, status networks, and the art market. *Arts*, 8(3), 81.

- Buckingham, M., and Vosburgh, R. M. (2001). The 21st century human resources function: It's the talent, stupid! *Human Resource Planning*, 24(4), 17–23.
- Candela, G. (2013). *Rapporto sul mercato dei beni artistici 2013*. Bologna: Osservatorio sul mercato dei beni artistici (NOMISMA).
- Candela, G., Castellani, M., Pattitoni, P., and Di Lascio, F. M. (2016). On Rosen's and Adler's hypotheses in the modern and contemporary visual art market. *Empirical Economics*, 451(1), 415–437.
- Candela, G., and Scorcu, A. E. (2004). *Economia delle Arti*. Bologna: Zanichelli.
- Candela, G., and Scorcu, A. E. (2010). The economics of the artist's resale right. In G. Candela and A. E. Scorcu (Eds.), *Artist's resale right. old issues and new problems* (pp. 36–63). Torino: Allemandi.
- Carlson, B. D., and Donovan, D. T. (2013). Human brands in sport: Athlete brand personality and identification. *Journal of Sport Management*, 27(3), 193–206.
- Carrillat, F. A., Legoux, R., and Hadida, A. L. (2018). Debates and assumptions about motion picture performance: A meta-analysis. *Journal of the Academy of Marketing Science*, 46, 273–299.
- Chanel, O., Gérard-Varet, L.-A., and Ginsburgh, V. A. (1996). The relevance of hedonic price indices: The case of paintings. *Journal of Cultural Economics*, 20, 1–24.
- Cheese, P., Thomas, R. T., and Craig, E. (2008). *The talent powered organization: Strategies for globalization, talent management and high performance*. London: Kogan Page.
- Cho, D., Lee, S. H., Yoo, Y., and Chu, H. (2019). Television singing competitions create stars? Empirical evidence from the digital music chart in South Korea. *Journal of Cultural Economics*, 43, 1–20.

- Cillessen, A. H. N., and Marks, P. E. L. (2011). Conceptualizing and measuring popularity. In A. H. N. Cillessen, D. Schwartz, and L. Mayeux (Eds.), *Popularity in the peer system* (pp. 25–56). New York, NY: The Guilford Press.
- Cleeremans, A., Ginsburgh, V. A., Klein, O., and Noury, A. (2016). What's in a name? The effect of an artist's name on aesthetic judgments. *Empirical Studies of the Arts*, 34(1), 126–139.
- Close, A. G., Moulard, J. G., and Monroe, K. B. (2011). Establishing human brands: Determinants of placement success for first faculty positions in marketing. *Journal of the Academy of Marketing Science*, 39, 922–941.
- Cottan-Nir, O., and Lehman-Wilzig, S. (2018). CEO branding: Between theory and practice — case studies of Israeli corporate founders. *International Journal of Strategic Communication*, 12(2), 87–106.
- Currid-Halkett, E. (2010). *Starstruck: The business of celebrity*. New York: Faber & Faber.
- Etro, F., and Pagani, L. (2013). The market for paintings in the Venetian Republic from Renaissance to Rococò. *Journal of Cultural Economics*, 37(4), 391–415.
- Filimon, N., López-Sintas, J., and Padrós-Reig, C. (2011). A test of Rosen's and Adler's theories of superstars. *Journal of Cultural Economics*, 35(2), 137–161.
- Fillis, I. (2015). The production and consumption activities relating to the celebrity artist. *Journal of Marketing Management*, 31, 646–664.
- Gallardo-Gallardo, E., Dries, N., and González-Cruz, T. F. (2013). What is the meaning of 'talent' in the world of work? *Human Resource Management Review*, 23, 290–300.
- Garcia-del-Barrio, P., and Pujol, F. (2007). Hidden monopsony rents in winner-take-all markets — Sport and economic contribution of Spanish soccer players. *Managerial and Decision Economics*, 28(1), 57–70.

- Gayer, A., and Shy, O. (2006). Publishers, artists, and copyright enforcement. *Information Economics and Policy*, 18(4), 374–384.
- Georges, P., and Seçkin, A. (2013). Black notes and white noise: A hedonic approach to auction prices of classical music manuscripts. *Journal of Cultural Economics*, 37(1), 33–60.
- Giles, D. (2000). *Illusions of immortality. a psychology of fame and celebrity*. London: Palgrave.
- Giroux, H. (2019). Popular management ideas. In A. Sturdy, S. Heusinkveld, T. Reay, and D. Strang (Eds.), *The oxford handbook of management ideas* (pp. 302–319). Oxford: Oxford University Press.
- Giuffrè, K. (1999). Sandpiles of opportunity: Success in the art world. *Social Forces*, 77(3), 815–832.
- González-Cruz, T., Martínez-Fuentes, C., and Pardo-del-Val, M. (2009). La gestión del talento en la empresa industrial española. *Economía Industrial*, 374, 21–35.
- Gorbatov, S., Khapova, S. N., and Lysova, E. I. (2018). Personal branding: Interdisciplinary systematic review and research agenda. *Frontiers in Psychology*, 9, 2238.
- Grampp, W. D. (1989). *Pricing the priceless. Art, artists and economics*. New York, NY: Basic Books.
- Han, S., and Ravid, S. A. (2020). Star turnover and the value of human capital — Evidence from Broadway shows. *Management Science*, 66(2), 958–978.
- Heinich, N. (2019). Les valeurs contre les prix. L’art contemporain à l’épreuve du marché. *Regards croisés sur l’économie*, 24(1), 53–63.
- Hernando, E., and Campo, S. (2017). Does the artist's name influence the perceived value of an art work? *International Journal of Arts Management*, 19(2), 46–58.

- Hodge, C., and Walker, M. (2015). Personal branding: A perspective from the professional athlete-level-of-analysis. *International Journal of Sport Management and Marketing*, 16(1/2), 112–131.
- Hodgson, D. J., and Vorkink, K. P. (2004). Asset pricing theory and the valuation of Canadian paintings. *Canadian Journal of Economics*, 37(3), 629–655.
- Hofmann, J., Schnittka, O., Johnen, M., and Kottemann, P. (2021). Talent or popularity: What drives market value and brand image for human brands? *Journal of Business Research*, 124, 748–758.
- Hofmann, K. H., and Opitz, C. (2019). Talent and publicity as determinants of superstar incomes: Empirical evidence from the motion picture industry. *Applied Economics*, 51(13), 1383–1395.
- Jericó, P. (2001). La gestión del talento: Enfoque conceptual y empírico. *Boletín de Estudios Económicos*, 56(174), 423–441.
- Kerrigan, F., Brownlie, D., Hower, P., and Daza-LeTouze, C. (2011). 'Spinning' Warhol: Celebrity brand theoretics and the logic of the celebrity brand. *Journal of Marketing Management*, 27(13–14), 1504–1524.
- Kozbelt, A. (2004). Originality and technical skill as components of artistic quality. *Empirical Studies of the Arts*, 22, 157–170.
- Kucharska, W., and Mikołajczak, P. (2018). Personal branding of artists and art-designers: Necessity or desire? *Journal of Product & Brand Management*, 27(3), 249–261.
- López-Meri, A., and Casero-Ripollés, A. (2017). Journalists' strategies to build personal brand on Twitter: Positioning, content curation, personalization and specialisation. *Revista Mediterránea de Comunicación/Mediterranean Journal of Communication*, 8(1), 59–73.

- Lunardo, R., Gergaud, O., and Livat, F. (2015). Celebrities as human brands: An investigation of the effects of personality and time on celebrities' appeal. *Journal of Marketing Management, 31*(5–6), 685–712.
- Marcus, S. (2015). Celebrity 2.0: The case of Marina Abramović. *Public Culture, 27*(1), 21–52.
- Marshall, K. P., and Forrest, P. (2011). A framework for identifying factors that influence fine art valuations from artist to consumers. *Marketing Management Journal, 21*(1), 111–123.
- Mastandrea, S., and Crano, W. D. (2019). Peripheral factors affecting the evaluation of artworks. *Empirical Studies of the Arts, 37*(1), 82–91.
- McAndrew, C. (2013). *The TEFAF art market report 2013. Global art market, with a focus on China and Brazil*. Maastricht: European Fine Art Foundation (TEFAF).
- McKenzie, J., Crosby, P., & Lenten, L. J. A. (2021). It takes two, baby! Feature artist collaborations and streaming demand for music. *Journal of Cultural Economics, 45*, 385–408
- Menger, P.-M. (2014). *The economics of creativity. art and achievement under uncertainty*. Cambridge, MA; London: Harvard University Press.
- Michaels, E., Handfield-Jones, H., Axelrod, B. (2001). *The War for Talent*. Boston: Harvard Business School Press.
- Moulard, J. G., Rice, D. H., Garrity, C. P., and Mangus, S. M. (2014). Artist authenticity: How artists' passion and commitment shape consumers' perceptions and behavioral intentions across genders. *Psychology & Marketing, 31*(8), 576–590.
- Moulin, R. (1995). The museum and the marketplace. *International Journal of Political Economy, 25*(2), 33–62.

- Muñiz Jr., A. M., Norris, T., and Fine, G. A. (2014). Marketing artistic careers: Pablo Picasso as brand manager. *European Journal of Marketing*, 48(1/2), 68–88.
- Olson, J. C., and Jacoby, J. (1972). Cue utilization in the quality perception process. In M. Venkatesan (Ed.), *Proceedings of the third annual conference of the association for consumer research* (pp. 167–179). Chicago, IL: Association for Consumer Research.
- Oosterlinck, K. (2017). Art as a wartime investment: Conspicuous consumption and discretion. *Economic Journal*, 127(607), 2665–2701.
- Oosterlinck, K., and Radermecker, A.-S. (2019). "The Master of ...": creating names for art history and the art market. *Journal of Cultural Economics*, 43(1), 57–95.
- Ordanini, A., Nunes, J. C., and Nanni, A. (2018). The featuring phenomenon in music: How combining artists of different genres increases a song's popularity. *Marketing Letters*, 29, 485–499.
- Parmentier, M.-A., and Fischer, E. (2012). How athletes build their brands. *International Journal of Sport Management and Marketing*, 11(1/2), 106–124.
- Parmentier, M.-A., Fischer, E., and Reuber, A. R. (2013). Positioning person brands in established organizational fields. *Journal of the Academy of Marketing Science*, 41, 373–387.
- Preece, C. (2015). The authentic celebrity brand: Unpacking Ai Weiwei's celebritised selves. *Journal of Marketing Management*, 31, 616–645.
- Preece, C., and Kerrigan, F. (2015). Multi-stakeholder brand narratives: An analysis of the construction of artistic brands. *Journal of Marketing Management*, 31(11-12), 1207–1230.

- Prinz, A., Piening, J., and Ehrmann, T. (2015). The success of art galleries: A dynamic model with competition and information effects. *Journal of Cultural Economics*, 39(2), 153–176.
- Radermecker, A.-S. V. E. (2019). Artworks without names: An insight into the market for anonymous paintings. *Journal of Cultural Economics*, 43(3), 443–483.
- Radermecker, A.-S. V. E. (2020). Buy one painting, get two names. On the valuation of artist collaborations in the art market. *Arts and the Market*, 10(2), 99–121.
- Ramirez, E. D., and Hagen, S. J. (2018). The quantitative measure and statistical distribution of fame. *PLoS ONE*, 13(7), e0200196.
- Renneboog, L., and Spaenjers, C. (2013). Buying beauty: On prices and returns in the art market. *Management Science*, 59(1), 36–53.
- Richardson, P. S., Dick, A. S., and Jain, A. K. (1994). Extrinsic and intrinsic cue effects on perceptions of store brand quality. *Journal of Marketing*, 58(4), 28–36.
- Rosen, S. (1981). The economics of superstars. *American Economic Review*, 71(5), 845–858.
- Sassi, E. (2019). *Da Schifano a Twombly, all'asta la storia della galleria La Tartaruga* (Retrieved at: https://roma.corriere.it/notizie/cultura_e_spettacoli/19_maggio_12/daschifanotwombly-all-asta-storia-galleria-tartaruga-6402ad54-7415-11e9-a46f-84c039eb72db.shtml, October 07, 2019). Il Corriere della Sera.
- Scheidt, S., Gelhard, C., and Henseler, J. (2020). Old practice, but young research field: A systematic bibliographic review of personal branding. *Frontiers in Psychology*, 11, 1809.
- Schroeder, J. E. (2005). The artist and the brand. *European Journal of Marketing*, 39(11/12), 1291–1305.
- Schroeder, J. E. (2010). The artist in brand culture. In D. O'Reilly and F. Kerrigan (Eds.), *Marketing the arts* (pp. 38–50). London: Routledge.

- Simkin, M. V., and Roychowdhury, V. (2006). Theory of Aces: Fame by chance or merit? *Journal of Mathematical Psychology*, 30(1), 33–42.
- Speed, R., Butler, P., and Collins, N. (2015). Human branding in political marketing: Applying contemporary branding thought to political parties and their leaders. *Journal of Political Marketing*, 14, 129–151.
- Steiner, L., Frey, B. S., and Resch, M. (2013). Home is where your art is: The home bias of art collectors. University of Zurich Working Paper no. 35.
- Su, Y., Baker, B., Doyle, J., and Kunkel, T. (2020). The rise of an athlete brand: Factors influencing the social media following of athletes. *Sport Marketing Quarterly*, 29(1), 33–46.
- Thomson, M. (2006). Human brands: Investigating antecedents to consumers' strong attachments to celebrities. *Journal of Marketing*, 70(3), 104–119.
- Towse, R. (2006). Human capital and artists' labour market. In V. A. Ginsburgh and D. Throsby (Eds.), *Handbook of the economics of art and culture* (pp. 865–894). Amsterdam: Elsevier.
- Ulrich, D., and Smallwood, N. (2012). What is talent? *Leader to Leader*, 2012(63), 55–61.
- van de Rijt, A., Shor, E., Ward, C., and Skiena, S. (2013). Only 15 minutes? The social stratification of fame in printed media. *American Sociological Review*, 78(2), 266–289.
- Velthuis, O. (2003). Symbolic meanings of prices: Constructing the value of contemporary art in Amsterdam and New York galleries. *Theory and Society*, 32(2), 181–215.
- Vosilov, R. (2015). Art auction prices: Home bias, familiarity and patriotism.
<https://ssrn.com/abstract=2686527>

Weikop, C. (2012). Ernst Ludwig Kirchner as his own critic: The artist's statements as stratagems of self-promotion. *Forum for Modern Language Studies*, 48(4), 406–420.

Xu, X., and Fu, W. W. (2014). Aggregate bandwagon effects of popularity information on audiences' movie selections. *Journal of Media Economics*, 27(4), 215–233.

Zorloni, A. (2005). Structure of the contemporary art market and the profile of Italian artists. *International Journal of Arts Management*, 8(1), 61–71.

Appendix A

Artists ranking by *Brand*

Table A1

Artists ranking by *Brand*

Artist	Rank	Artist	Rank
Enrico Castellani*	1	Marco Tirelli	61
Michelangelo Pistoletto*	2	Marco Cingolani	62
Giuliano Vangi	3	Salvatore Mangione	63
Ettore Spalletti*	4	Valerio Berruti	64
Giuseppe Penone*	5	Giovanni Frangi	65
Giulio Paolini*	6	Antonio Nunziante	66
Mimmo Paladino*	7	Roberto Barni	67
Fabrizio Plessi	8	Domenico Bianchi	68
Arnaldo Pomodoro*	9	Enrico Tommaso De Paris	69
Nicola De Maria*	10	Robert Pan	70
Paola Pivi*	11	Arturo Carmassi	71
Massimo Bartolini	12	Omar Galliani	72
Massimo Vitali	13	Michele Zaza	73
Gilberto Zorio*	14	Bruno Ceccobelli	74
Agostino Bonalumi*	15	Davide Nido	75
Enrico Ghinato	16	Riccardo Licata	76
Claudio Parmiggiani	17	Ugo Nespolo	77
Valerio Adami	18	Maurizio Roasio	78
Giuseppe Spagnulo	19	Paola Epifani	79
Luciano Ventrone	20	Federico Severino	80
Velasco Vitali	21	Renato Mambor	81
Sandro Chia	22	Emilio Isgrò	82
Loris Cecchini	23	Giorgio Celiberti	83

Luigi Ontani	24	Sandro Martini	84
Olivo Barbieri	25	Sergio Fermariello	85
Francesco Clemente	26	Riccardo Gusmaroli	86
Walter Niedermayr	27	Piero Gilardi	87
Luca Pancrazzi	28	Gianmarco Montesano	88
Piero Guccione	29	Claudio Olivieri	89
Carla Accardi*	30	Gastone Biggi	90
Luigi Mainolfi	31	Paolo Maggis	91
Alessandro Papetti	32	Romano Lotto	92
Marco Perego	33	Elvio Marchionni	93
Pier Paolo Calzolari*	34	Turi Simeți*	94
Gianni Piacentino*	35	Giampaolo Talani	95
Vanessa Beecroft	36	Maurizio Galimberti	96
Stefano Arienti	37	Giorgio Griffa	97
Diego Perrone	38	Antonio Possenti	98
Enzo Cucchi	39	Omar Ronda	99
Mario Ceroli	40	Lucio Del Pezzo	100
Nicola Samorì	41	Manfredo Massironi	101
Getulio Alviani*	42	Valentino Vago	102
Davide Bramante	43	Gianfranco Asveri	103
Luigi Carboni	44	Concetto Pozzati	104
Ugo Riva	45	Trento Longaretti	105
Francesca Galliani	46	Eugenio Carmi	106
Alberto Biasi	47	Cesare Berlingeri	107
Marco Gastini	48	Gioietta Fioroni*	108
Fabio Viale	49	Edoardo Landi	109
Piero Pizzi Cannella	50	Bruno Caruso	110
Vasco Bendini	51	Germano Sartelli	111
Ludovico De Luigi	52	Girolamo Ciulla	112
Roberto Coda Zabetta	53	Sergio Dangelo	113
Fabio Aguzzi	54	Fabio Calveti	114
Mauro Staccioli	55	Ennio Finzi	115
Nunzio Di Stefano	56	Francesco Musante	116
Achille Perilli	57	Pino Pinelli	117
Gehard Demetz	58	Athos Faccincani	118
Aldo Damioli	59	Tino Stefanoni	119
Giuseppe Maraniello	60	Marco Lodola	120

The table lists the artist name and its ranking with respect to our human brand measure *Brand*. The asterisk (*) indicates that the artist artworks were part of an Italian Sale at least once in the considered period.