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Home Is Where Your Art Is: The Home Bias of Art Collectors

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Abstract

This paper analysis the global distribution of art collections and collectors' biases with respect to the origin of artworks. Employing a unique dataset we find that the greatest number of private art collections are located in Europe, North America and Asia. There are relatively few collections in Latin America and Africa. The artists whose oeuvres dominate the markets for collected art come from North America, followed by Asian and European artists. The home bias in private art collections turns out to be strong in all continents and countries. It is highest for Asian and African collections and smaller for European and North American collections. The home bias can partly be accounted for by high export and import restrictions. (118 Words)

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1. Introduction: Home Bias

In finance the home bias describes a well-known phenomenon. Financial investors tend to invest a large share of their assets into corporations located in their own country even if they have to accept a lower rate of return (Amonlirdviman and Carvalho, 2010, Van Nieuwerburgh and Veldkamp, 2009). This behavior is consistent with maximizing expected returns if the investors believe that they are better able to evaluate the future risk of local firms than they are of firms located in other countries. Such superior knowledge cannot be excluded, but in view of the well-developed international capital markets it is unlikely to be the major explanation for existing home biases. Indeed, empirical research provides convincing evidence for a strong home bias in finance (Garcia-Herrero and Vasquez, 2013, Karolyi and Stulz, 2003, Tesar and Werner, 1995, French and Poterba, 1991).

A home bias may also be observed in other markets (Obstfeld and Rogoff, 2001). It has been shown to exist for trade relations (Coval and Moskowitz, 2001) as well as for consumption (Lewis, 1999). It has often been claimed that a home bias also exists in the arts (Schulze, 1999, Goodwin, 2008, Renneboog and Spaenjers, 2012). Collectors are said to have a tendency to acquire art objects related to their own country. This can refer to the objects shown in a piece of art, such as local landscapes or persons dressed according to local custom. Most importantly, many collectors focus on the art produced by a national, regional or local artist. It is argued that the collectors feel a special attachment to, or a special taste for, artists sharing the same culture, history and nationality and whom they sometimes know personally. This preference for art created by compatriots (in the broad sense) seems to be particularly strong in emerging markets such as Russia, China and India. The class of the newly rich seek to buy back their art heritage (Spaenjers and Renneboog, 2011).

A second important reason for a home bias in art is the great number of legal barriers restricting international transactions (see, in general Frey and Pommerehne, 1989). Many if not most countries impose export restrictions on the trade in art. This applies for instance to Italy where the export of paintings by Old Masters is prohibited (Onofri, 2009). Such restrictions and prohibitions induce an international black market in art in the form of illicit exports. The international trade in art is also hindered by the high transport costs of art works and the tariffs imposed on their import. Moreover, the distance and restricted accessibility by flights also tend to reduce the demand for art from foreign continents and countries because buyers often want to physically inspect an artwork before purchasing it in order to assess its quality (Renneboog and Spaenjers, 2012).

This paper analyzes whether a home bias does indeed exist in the arts, how accentuated it is, and what continents and nations are especially prone to it. We use a new, unique data source of private art collectors located all over the world. Section 2 describes the employed dataset and provides descriptive statistics on the distribution of art collections around the world and the origin of the collected art works. It is shown that art collectors have a pronounced tendency to collect art from their own cultural

area. Section 3 shows the results of multivariate regressions at the level of continents and individual countries. As possible determinants of art collectors' home bias, we test the degree of a country's development, its size, and the degree of openness with respect to trade. Section 4 concludes.

2. Data and descriptive statistics

Our analysis employs a unique dataset obtained from “Larry’s List”, the world’s leading guide on international art collectors. This dataset contains the most comprehensive global information on private art collections, comprising collections from 71 countries. All data are based on publicly accessible data manually gathered by researchers using search engines, archives, publications and databases with over 27.000 sources in over 20 languages. The dataset contains 3119 of the world’s most prominent and also lesser-known art collectors. 440 collections have two collectors, usually a married couple, but in some cases also business partners. Since our research deals with the distribution of collections along various dimensions, we focus on the main collector. This leaves us with 2.679 unique collections. The data are cross-sectional and were collected in 2013.

The distribution of art collections over cultural areas is highly skewed. 38% or 1.014 of the 2.679 collections are located in Europe, 25 % in North America (USA and Canada) and 24% in Asia. Only 8% of the most important art collections are located in Latin America, 5% in the Arabic countries and merely 0.6%, or 16 collections, in Africa.

The picture changes when looking at the regions from where the collected artworks originate. Collectors value - or at least collect - North American art much more than artworks from other areas of the world. 36% of the collections contain at least one artwork from North America. Somewhat surprisingly, Asian artists rank second in this regard, with 24%. Even though the biggest group of art collections is located in Europe, European art is only the third most favored origin with 18% of the collections containing art from this cultural area.

This paper focuses on the potential home bias in the arts. Collectors might favor art from their own country, region or continent due to differences in taste, or due to trade restrictions with respect to exports and imports.

Table 1 shows a cross-tabulation of the origin of artworks and the location of the collections according to six continents (defined here to cover areas of the world with a particular major culture⁴). The holdings of European collectors contain 43% of artworks with European origin. 89% of the art works in South American collections are from their own continent. A similarly high focus on art collected from one’s own continent is visible for Arabia (85%), and Asia (82%). North American collectors are more open in this regard. Only 76% of the collections in North America are composed of art created by North Americans.

⁴ Our definition closely resembles the one of “cultural regions” by Andrew Clem, see <http://www.andrewclem.com/Academics/GlobalPolitics.shtml#Maps>.

To consider “home bias” just to be a concentration on art produced in one’s own continent is questionable because it may be that the total art assembled by collectors is not uniformly distributed over the six continents we distinguish. The bottom row of Table 1 reveals that this is indeed the case. Taking the collections from all continents together, the unequal distribution is striking. The world’s art collectors focus on art created in North America (36% of all collections) and Asia (24%). The latter is rather surprising as it is larger than the share of European art collected. With 18% of the total the share of European art is not dramatically larger than the share of art produced in South America (12%). Art created in Arabia (8%) is clearly less popular. Surprising again is the minute share of African art put together by the world’s collectors.

Table 1: Distribution of origins of artworks by location of collection

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Location	% origin: Europe	% origin: Asia	% origin: North America	% origin: South America	% origin: Arabia	% origin: Africa	Sum
Europe	43	7	36	7	7	1	100
Asia	1	82	13	1	2	0	100
North America	7	4	76	7	6	0	100
South America	1	0	7	89	1	0	100
Arabia	4	5	6	1	85	0	100
Africa	0	8	23	0	0	69	100
Total	18	24	36	12	8	1	100

Notes: The columns present the share of art a collection holds from a certain region. The rows present the location where a collection is based. The highlighted cells indicate the absolute “home-bias”, for example the share of European art a collector from Europe possesses.

Table 2 takes this strongly unequal distribution in the world’s collections into account in order to determine the home bias. Collectors located in a particular continent are considered to be subject to a home bias if they assemble a higher share of their continent’s art compared to the share of the worldwide collections made up by artists from their continent. 18% of all artworks in all collections originate from Europe (Table 1, first column bottom row), but European collectors' holdings consist to 43% of European art (first row in Table 1). In this case the deviation is 25 percentage points, as shown in the top row of Table 2. European collectors thus are subject to a home bias. However, this home bias is considerably stronger for South America and for Arabia (77 percentage points each), for Africa (69 percentage points), as well as for Asia (58 percent points). According to this concept of “home bias”, North American collectors (with a deviation of 40 percentage points) have a lower home bias than the collectors from South America, Arabia and Africa, but a more pronounced one than the European collectors.

The negative signs in Table 2 indicate that collectors in all continents assemble less art from a foreign continent compared to their own. As seen in column (1) there is little

distinction between collectors in the various continents with respect to the “neglect” of European art (between -12 and -18 percentage points). In contrast, consider the art produced by North American artists (column 3). These artists are only slightly underrepresented in private European collections (-1 percentage point) but much more so in Asian, South American and Arabian collections (with a deviation between -13 and -31 percentage points).

Table 2: Deviations from average shares of origin depending on location of collection

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Location		Origin: Europe	Origin: Asia	Origin: North America	Origin: South America	Origin: Arabia	Origin: Africa	Abs. Sum
Europe	abs. dev.	25	-17	-1	-5	-2	0	49
Asia	abs. dev.	-17	58	-23	-11	-6	-1	116
North America	abs. dev.	-12	-20	39	-5	-2	-0	79
South America	abs. dev.	-17	-24	-29	77	-7	-1	155
Arabia	abs. dev.	-15	-20	-31	-11	77	-1	153
Africa	abs. dev.	-18	-17	-13	-12	-8	69	137

Notes: The columns present the origin of art a collection contains. The rows present the location where a collection is based. The values in the cells show deviations of a certain collector's location from the global average of art from a certain origin in percentage points. The highlighted cells indicate the “home-bias”, for example by how many percentage points a European collector deviates from the above global average of collectors of European art.

3. Estimations

a. Continents

The home bias can also be analyzed by using multivariate regressions. Table 3 shows estimation results for the propensity to collect art from five different continents – Asia, North America, South America, Arabia, and Africa⁵.

As the dependent variables are dummy variables for continents we use logit regressions. Table 3 shows the odds-ratios of the location dummies. They represent the odds of “Art Origin: x” = 1 when a given independent variable increases by 1 unit. If the odds ratios are larger than 1, the odds of “Art Origin: x” = 1 is higher. If the odds ratios are smaller than 1, the odds of “Art Origin: x” = 1 is lower.

⁵ As reference category we omit Europe, as the previous section has shown that European collectors have the lowest home bias and the most “equal” art portfolios in their collections. Since we exclude Europe as reference category, we also abstain from using the “Art Origin: Europe” as dependent variable (as we would have to choose a different reference category as in the other regressions, thus making them incomparable).

Each regression seeks to explain the share of art collected from a particular continent. All regressions include five dummy variables relating to the cultural area in which a collection is based. This approach allows us to test whether the probability of collecting art from a specific continent is higher depending on the location of the collection. Column 1 of Table 3, for example, tests the correlation of collecting art created in Asia with the location of the collection being in Asia, North America, South America, Arabia, or Africa. The coefficient of “Location: Asia” reflects the probability of Asian Art collectors to assemble art created in Asia. Column 1 shows that the likelihood to collect art from Asia is by far the highest when the art collectors are also located in Asia (the coefficient of 94.82 by far exceeds 1). This very high Asian odds ratio indicates that the odds of collecting Asian art increases by a factor of 94 if the collection is based in Asia compared to the odds of a Europe-based collection to contain Asian art. All other location dummies have odds ratios smaller than 1. This indicates that, compared to Europe, all other continents have a smaller likelihood to collect art from Asia. For example, the odds of “Location: South America” are 0.337. This means that for South American collectors the probability of collecting art from Asia is only one third (0.337) of the probability of the reference category Europe.

In Column 2 of Table 3 this estimation is repeated for art from North America. The coefficient of “Location: North America” reflects the probability of North American art collectors to collect art from North America. The odds ratio is 5.573, i.e. the fact that an art collection is located in North America results in a higher share of North American art being assembled by private collectors compared to the reference continent Europe. All other odds ratios are smaller than one, indicating a statistically significant home bias for Northern American collectors.

Table 3: Propensity of collecting art from different origins

	(1)	(2)	(3)	(4)	(5)
	Art Origin: Asia	Art Origin: North Amer.	Art Origin: South Amer.	Art Origin: Arabia	Art Origin: Africa
Reference: Europe	-	-	-	-	-
Location: Asia	94.82***	0.24***	0.20***	0.35***	0.18***
	(20.85)	(-11.25)	(-5.12)	(-3.58)	(-2.80)
Location: North Amer.	0.88	5.57***	0.80	0.91	0.94
	(-1.02)	(14.71)	(-1.19)	(-0.46)	(-0.20)
Location: South Amer.	0.34***	0.30***	50.24***	0.20***	-
	(-4.22)	(-6.56)	(18.79)	(-2.73)	-
Location: Arabia	0.46**	0.40***	0.94	44.82***	0.63
	(-2.54)	(-4.10)	(-0.18)	(15.44)	(-0.62)
Location: Africa	0.26	0.31*	-	-	83.68***
	(-1.31)	(-1.83)	-	-	(7.70)
Constant	0.26	0.75	0.095	0.068	0.026
	(-17.44)	(-4.60)	(-21.11)	(-20.92)	(-18.31)
Observations	2,680	2,680	2,664	2,664	2,455
<i>Notes:</i> Dependent dummy variables = 1 if the collection contains at least one piece of art from Asia (1), North America (2), Latin America (3), Arabia (4) or Africa (5); 0 else. The table shows the odds-ratios of logit regressions, z-statistics in parentheses.					

The odds ratios in Table 3 may be compared across columns. The coefficient of 94.82 for “Location: Asia” (Column 1) is far larger than the coefficient of 5.57 for “Location: North America” (Column 2), suggesting that the home bias of Asian art collectors is far more pronounced than that of North Americans, always compared to European collectors. This also holds for South America (50.24), Arabia (44.28) and Africa (83.68).

South American and Arabian art collectors thus also strongly prefer art from their cultural area. European and American art collectors have the smallest home bias regarding the collection of art works from their cultural area.

b. Country results

The strength of the home biases can similarly be analyzed for single countries. For that purpose, the ten countries holding the most collections are selected: United States, Germany, United Kingdom, China, Brazil, South Korea, Spain, Italy, France, India. Japan and Canada are not among the top 10, and Russia only occupies rank 22. Table 4 shows the share of art from a respective home country for the 10 countries mentioned above. In most of these countries between 80% and 100% of the collections contain at least one piece of art from their home country. Containing art from different countries is not mutually exclusive. For example, it is possible that 97% of the Indian collections contain at least one piece of art from India, but that at the same time even 98% of the Indian collections contain at least one piece of art from e.g. Germany.

It can be seen that in Europe and the US, collections contain on average less art from their respective home country (UK 72%, France 78%, US 78%, Spain 79%, Italy 86%, Germany 91%), than collections in the emerging markets in Brazil (98%), India 97% or China 100%. Although 4 Chinese artists (Zhang Daqian, QI Baishi, XU Beihong, LI Keran, FU Baoshi) can be found in an auction turnover top 10 list⁶, only 14% of collections worldwide hold Chinese art. This low position ranking is explainable by the high prices for contemporary Chinese artists and a small Chinese share of the value of global art exports of only 4%.⁷ Most of collectors who are collecting Chinese art are also situated there. In contrast the US have a share of global exports of 35% and the UK of 27%.⁸

⁶ TEFAF, Art Market Report 2013

⁷ Artprice, Contemporary Art Market 2011/2012

⁸ TEFAF, Art Market Report 2013.

Table 4: Home bias of top 10 collecting countries

Location & Origin	Share of collections containing art from home country	Logit Coefficient
United States	78 %	10.7***
Germany	91 %	49.7***
United Kingdom	72 %	14.1***
China	100%	-
Brazil	98 %	1153.6***
South Korea	94 %	1188.0***
Spain	79 %	39.8***
Italy	86 %	65.9***
France	78 %	16.2***
India	97 %	1074.0***

Notes: Column (1) depicts the share of collections from a country, which contain at least one piece of art from the respective country. The estimations in column (2) are conducted according to the same principle as in Table 3. Dependent dummy variables = 1 if the collection contains at least one piece of art from the respective country; 0 else. The table shows the odds-ratios of logit regressions.

Table 4, Column (2) also presents multivariate regressions to control for other origins of art and to estimate, *ceteris paribus*, the marginal probability of collecting art from the home country. As was the case in the previous estimates, logit regressions are used with the origin of the artworks from one of the top ten collecting countries serving as independent variables. In each regression dummy variables are included for all 10 countries in which the collections are located. Column 2 only presents the odds ratio of the “home bias” coefficient of each regression. A higher odds ratio implies a higher probability for a collector of a certain country to include art from this country. The estimations confirm the above results. The European countries (Germany, UK, Italy, Spain and France) and the US have a relatively small home bias. Collectors from countries in South America (Brazil) or Asia (South Korea, India) have by far higher probabilities of collecting art from their home country⁹. Within Europe, Italian, German and Spanish collectors tend to collect more art from their home countries compared to collectors from the UK or France.

c. Determinants of home bias

As mentioned in the introduction, home biases in different spheres of society tend to be attributed to two factors: restrictions that discourage the exchange between countries, and preferences for local artists. Table 5 tests the effect of a country's openness on the type of art collected. As dependent variable we use a country's share of collectors who have at least one piece of art from their home country in their collections. A perfect

⁹ The odds ratio of China cannot be estimated as not all cells contain enough values to perform a logit regression.

measure would be to know the exact amount of home country art in any collection. Since this measure is not available, we employ the share of collectors as a proxy. Using only one dependent variable facilitates the interpretation of possible determinants. Three hypotheses relating to the determinants of the size of the home bias are empirically tested.

The first hypothesis proposes that the size of a country's population has a positive effect on the share of national art collected (as measured by the share of collections containing at least one piece of national art). The larger a country is, the larger is the number of artists and the less need there is to trade with foreign countries. However, Table 5 shows that the size of a country's population has no statistically significant effect on the share of art collections holding art from the same country.

The second hypothesis proposes that the greater the wealth of a country (measured by GDP per capita) the smaller is the home bias. The rationale is that wealthier countries can afford more trade in art with foreign countries. A positive relationship between GDP per capita and the share of national art is expected. Column 2 of Table 5 indicates that this hypothesis is to be rejected, as there is no statistically significant correlation.

The third hypothesis holds that the more open a country is the lower is the home bias. Openness to trade is measured by the sum of exports and imports divided by GDP (see Leamer, 1988). The more open a country is the easier it should be to import foreign art and therefore the lower the share of national art should be. A negative relationship is expected. Column 3 indeed shows a negative and statistically significant correlation between a country's openness and the share of art from the home country. This result also holds when controlling for GDP per capita and population (column 4).

Table 5: Determinants of the share of collections containing home country art

Dependent Variable: Share of collections per country containing art from home country				
	(1)	(2)	(3)	(4)
POP2010_million	0.000174			0.000111
	(1.243)			(0.771)
GDPPC2012		-1.35e-06		-2.89e-07
		(-0.705)		(-0.150)
OPEN2012			-0.113**	-0.103**
			(-2.308)	(-2.023)
Constant	0.796***	0.838***	0.906***	0.894***
	(23.24)	(17.27)	(17.76)	(13.72)
Observations	55	55	55	55
R-squared	0.028	0.009	0.091	0.104
<i>Notes:</i> The dependent variable is the share of collections per country containing art from the home country. The table shows the coefficients of OLS regressions.				

These estimates suggest that the home bias in private art collections cannot simply be explained by the size of the population producing a higher number of home artists. Nor can it be explained by a country's level of economic development. In contrast, export and import restrictions, captured by the openness to international trade, seem to promote a home bias in collecting art.

4. Conclusions

The empirical analysis of the best available information on private art collections over the world reveals that by far the greatest number of collections are located in Europe, North America and Asia. There are relatively few private art collections in Latin America and especially in Africa. Nevertheless, the most prominent type of art collected has been produced by North American artists, followed by Asian artists. European artists are only in third place.

With a number of different methods the home bias in the private art collections is identified. It turns out to be strong in all continents and countries. The home bias is highest for Asian and African collections. It is also well visible for South American and Arabian collections. It is somewhat smaller – though certainly not absent – for European and North American collections.

The home bias in private art collections cannot simply be explained by a larger size of the population producing a higher number of home artists. Nor can the level of economic development of a country account for it. In contrast, export and import restrictions, captured by the openness to international trade, seem to be an important determinant of a marked home bias.

The analysis performed can be extended in various directions. In particular, the reasons for a home bias should be further explored. It would also be interesting to compare the home bias in private collections with those in public collections.

One restriction derives from the different degree of maturity in the art markets. While the US and most countries in Europe show a mature art collector base, in Asia it isn't the case. For example, while in the US, 54% started their collections before 1991, in China it's only 7%. 55% started between 2001 and 2010, compared to only 20% in the US. This different maturity in collection must therefore be considered when analyzing the data.

The greatest restriction of the present analysis relates to the data. While the data used are, to our knowledge, the best presently available, they are far from ideal. Many private persons hold art collections but do not reveal them to outsiders, and do not indicate them on the Internet. Major reasons may be that the collectors fear that they attract thieves, or they may not want to reveal this part of their wealth to the tax authorities. Nevertheless, it is to be hoped that over time the quality of the data improves, allowing researchers to undertake more thorough analyses.

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