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## Who Collects Art? An International Empirical Assessment

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Center for Research in Economics, Management and the Arts

# Who Collects Art? An International Empirical Assessment

Working Paper No. 2014-03

# ***WHO COLLECTS ART? AN INTERNATIONAL EMPIRICAL ASSESSMENT***

by

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## *Abstract*

A unique recent data set covering around 3,000 private art collections and collectors is used to identify their location and composition. The largest number of private collections is located in Europe, followed by North America and Asia. The largest number of private art collections is located in the United States. The United Kingdom, Germany and Spain have more collections per capita of population. Private collectors above all assemble works by artists from North America, followed by Asian, and only then European artists. The three artists most assembled by private collectors are Warhol, Picasso and Hirst. A considerable part of the differences in the number of private collections per head between countries can be attributed to per capita income. The collection of art is mainly undertaken by persons who can afford to build up wealth also in the form of collections of art.

*JEL Classification:* Z11, F14, G15

*Keywords:* Art, collections, home bias, investment, international finance.

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## 1. INTRODUCTION

Private collections of art play an important role for the support and conservation of paintings, sculptures and other forms of art. In many cases, private collectors are the first to buy art from still unknown artists and therewith help them to survive in this activity and to become known. Museums, especially public ones, tend to be restricted both financially and by their institutional structure to buy works from little, or unknown, artists.

The attention in the research on art has often been directed to museums. The International Council of Museums ICOM (2012) estimates that there are more than 55,000 museums in 202 countries. According to the European Group of Museum Statistics EGMUS (2011) there are no less than 6,200 museums in Germany, 1,900 in the UK, 1,500 in Spain, 1,200 in France and 1,100 in Switzerland. However, such numbers do not only include art museums but also museums devoted to technology, history, transport, and many other collectibles. It is difficult, and sometimes impossible, to attribute a particular museum to a specific field. Moreover, many museums are newly opened while others disappear. It is easier to count the number of visitors to museums. In 2012, there are no less than six museums with more than 5 million visitors. On top is the Louvre, followed by the Metropolitan Museum of Art, the British Museum, Tate Modern, the National Gallery in London, and the Vatican Museums.<sup>4</sup>

There is also considerable literature on the monetary aspects of collecting art. Art can be considered a form of investment. Frey and Eichenberger (1995) and Goetzmann et al. (Goetzmann et al., 2011) provide surveys on the return of such investment. Ashenfelter and Graddy (2003), Spaenjers (2010) and Ursprung and Wiermann (2011) analyze art auctions and the formation of art prices in general. The development of markets for art is the subject of e.g. Kraeussl and Logher (2010) and De Marchi and Miegroet (2006).

There are some studies looking at the psychological underpinnings of collecting art (e.g. Zorloni, 2013, Formanek, 2002, Belk, 1995, Baekeland, 1981). Private collections are the subject of the works by Moist and Banash (2013), Clifford (2008), Pearce (1998) and Ostrower (1998). Museums as collectors in history and today are analyzed Squire (2013), Pachucki (2012), Hiesinger (2011) and Alexander (1996).

On the whole, there is a rather small literature on private art collections from the point of view of the social sciences, and in particular of economics. This article seeks to close some of the gaps existing in this regard. We focus on *private collections of art* based on a unique recent data set of the whole world. It covers the characteristics of around 3,000 private art collections and collectors. We are able to show that the largest number of private collections is located in Europe, followed by North America and Asia. While the absolute number of private art collections is largest in the United States, the United Kingdom, Germany and Spain have more collections per capita of population.

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<sup>4</sup> <http://www.theartnewspaper.com/attfig/attfig12.pdf>, accessed 23.12.2013

Private collectors above all assemble works by artists from North American, followed by Asian, and only then European artists. The data reveal a clear home bias. This applies in particular to South American, Arabian and Asian collectors who strongly favor artists from their own continents. The three artists most assembled by private collectors are Andy Warhol, Pablo Picasso and Damian Hirst.

The analysis also inquires into possible determinants of the number of private art collections in a country. It turns out that a considerable part of the differences between countries can be attributed to per capita income. The collection of art, not surprisingly, is mainly undertaken by persons who can afford to build up some wealth also in the form of art.

The next section analyzes the distribution of private collectors. In section 3 we look at the composition of the art collected. The importance of private art collection according to a specific ranking is studied in section 4. Section 5 econometrically estimates the factors explaining the differences in the number of collections between countries. Section 6 concludes.

## **2. DISTRIBUTION OF PRIVATE COLLECTIONS**

Our analysis employs a unique dataset obtained from “Larry’s List”, the world’s leading guide on international private art collectors.<sup>5</sup> 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 private collections over cultural areas is highly skewed. Figure 1 depicts the number of art collections, which are located in a certain cultural area. 38% or 1.014 of the 2.679 collections are located in Europe, 25 % in Northern America (USA and Canada) and 24% in Asia (including Pacific Region and Australia). 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.<sup>6</sup>

FIGURE 1

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<sup>5</sup> <http://www.larryslist.com>

<sup>6</sup> Table A.1. of the appendix contains the classification of countries to continents

The distribution of private art collections over countries is also highly skewed. Table 1 contains the 10 countries with the most art collections. As expected, the United States host by far the most art collections. 23% of all collections worldwide can be found there. Germany is ranked second with 8% of all art collections. Somewhat surprisingly Germany ranks higher than Spain, Italy or France and holds more than twice as much art collections the mentioned countries. Japan and Canada are not ranked in the Top 10, and Russia is placed only on rank 22 with 31 collections.

TABLE 1

Table 1 shows the countries with the highest number of art collections. As can be seen in Table 1 China<sup>7</sup>, Brazil and India are among the countries with the largest number of private art collections. If the population size is considered they only host between 0.1 and 0.7 art collections per one million residents, much less than the US, Germany or the UK with more than 2 collections per one million residents.

Table 2 takes a countries' population size into account. It depicts the 10 countries with the largest number of collections per one million residents. As expected the picture changes drastically, as this measure is in favor of small country. Mini-states such as Monaco or Liechtenstein with only one collection lead the ranking by far. Israel, Singapore, Ireland and Switzerland perform well in both dimensions: total number of collections and collections per capita.

TABLE 2

### 3. COMPOSITION OF PRIVATE ART COLLECTIONS

The distribution of collections over continents (Figure 1) shows that the largest number of private art collections is located in Europe. The picture changes when asking where the collected artworks originate from. Figure 2 depicts the distribution of the origin of artworks, whereas one collection can have works from different cultural areas. It can be seen collectors value Northern American art much more than artworks from other areas of the world. Somewhat surprisingly Asian artists rank second in this regard. Even though the biggest group of art collections is located in Europe, European art is only the third most favored origin. As can be deduced from Figure 2 the origins of artworks are as follows: North America 36%, Asia 24%, Europe 18%, South America 12%, Arabia 9% and Africa 0.7%.

FIGURE 2

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<sup>7</sup> Mainland China, without Hong Kong and Taiwan

Next we discuss potential *home biases* (for a detailed discussion see Steiner et al., 2013). Private collectors may favor art from their own country, region or continent due to differences in taste or trade regulations (Renneboog and Spaenjers, 2012, Goodwin, 2008, Schulze, 1999).

Table 3 shows a cross-tabulation of the origin of artworks and the location of the collection. The collections of European collectors contain 43% of artworks with European origin, while only 18% of all artworks in all private collections originate from Europe. In this case the deviation from the average is 25 percentage points. The highest deviations in percentage points in favor of their home continents exhibit collectors from South America, Arabia and Asia, with 77, 77 and 69 respectively. Concerning *negative* deviations it is striking that art from Northern America is strongly underrepresented in collections located in South America and the Arabic countries. In both regions on average 30 percentage points fewer northern American Art is collected than on average. To investigate which collectors deviate the most from the average global taste of art, we sum the absolute deviations. The sum is the higher the more collectors from one cultural area deviate from the origin of art collected on average. It turns out that collectors from South America (Sum 155), Arabia (153) and Africa (137) deviate the most from the average global taste. This seems to be driven by their strong home bias and also the strong dislike for the prevailing northern American art. Private collectors from Europe obtain the smallest home bias (49) and the most “representative” collections, i.e. the closest to the global average.

TABLE 3

The strength of the home biases can similarly be analyzed for single countries. For that purpose, the ten countries holding the most private collections are selected. 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 with the largest number of private collections. In most of these countries between 80% and 100% of the collections contain at least one piece of art from their home country. Collecting 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, private 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%. Within Europe, Italian and German collectors tend to collect more art from their home countries compared to collectors from the UK, France or Spain. Previous studies relate this home bias either to trade restrictions or heterogeneous tastes across countries. Most countries impose certain restrictions on art exports or tariffs on imports. Transport costs and the mere distance from the seller matter as well, since it is harder to assess a work without inspecting it (Steiner et al., 2013, Renneboog and

Spaenjers, 2012, Goodwin, 2008). The market for art is partially segmented, since art is a heterogeneous good and the preferences for art vary between countries. According to Spaenjers and Renneboog (2011) this has been particularly obvious in emerging markets such as China, India, and Russia, where the new rich are eager to buy back their heritage.

TABLE 4

The ranking of the 10 most collected artists indicates the popularity of an artist among private collectors. Works of Andy Warhol are present in 218 collections, 139 collections contain at least one work of Pablo Picasso. Some artists in the Top 10, such as Warhol, Picasso, Hirst, Koons or Lichtenstein might have been expected to be collected by many. Especially Warhol seems to profit from his mass-production style of art; he even named his New York City studio “the Factory”. Several important artists are not ranked in the top 10, but follow closely. Among them are Francis Bacon, Henri Matisse, Jasper Johns, Robert Rauschenberg, Salvador Dalí and Willem de Kooning. It is noticeable that there are no old masters or “classical” artists in the Top 10 or in the following ranks.

TABLE 5

#### **4. IMPORTANCE OF PRIVATE COLLECTIONS**

Larry’s List, the company collecting the data, provides a second measure of the importance of a collection. To determine the importance of a collector they created a ranking, which includes 1) the number of Google Hits on Art Blogs, 2) the number of art fairs a collector has visited, 3) the existence of websites and publications on the collection, 4) the number of privately owned museums, 5) the number of positions held at museums, and: 6) the number of artworks. Rank 1 is the best. Often several collectors hold the same ranking position, so the minimum ranking position is 865.

Running a private art collection seems to be a predominantly male activity. The vast majority, namely 71%, of all 3.117 collectors are males. As mentioned above there are more collectors than collections, since 438 collections have two collectors. The second collector is usually the spouse, but in some cases also business partners. Two interesting facts can be shown: Even though most collectors are male, they do not perform better than their female counterparts. Male and female collectors are ranked almost equally. Gender does not seem to determine ranking success. On the other hand age, measured by the year a collector is born, is correlated with the ranking success. Older collectors rank on average better than younger ones.

Table 6 shows the average ranking success of the different cultural areas. Since “1” is the best rank achievable a lower average reflects a higher success. Collectors from



Northern America perform best in terms of ranking scores, with an average score of 547. Somewhat surprisingly collectors from Arabic countries are on average ranked slightly higher than their European counterparts. Collectors from Southern America achieve on average the lowest rank in the external ranking.

TABLE 6

## 5. MACRO DETERMINANTS OF PRIVATE ART COLLECTING

Another question about the success of collectors is if there are country specific factors which determine the number of private collections per capita in a country. The information on art collectors is derived from macro data collected in the World Development Indicators (WDI) database. We seek to explain the number of private collections per capita by a country's GDP per capita, GDP per capita growth, the rate of inflation and the share of tertiary education. Starting a private art collection or obtaining more artworks is not a decision influenced by short-term macro-economic shocks. To account for the volatility of this factors over time we take ten-year averages from the years 2002-2012.

Columns 1 to 4 in Table 7 shows the coefficients of univariate cross-section estimates on the country level. A countries' GDP per capita is significantly and positively related to the number of collections per capita (column 1). As expected, individuals in wealthier countries can afford more collections per capita. GDP per capita growth is negatively related to collections per head (column 2), indicating that the – on average – faster growing developing countries have fewer collections per head. This is consistent with the positive correlation of higher GDP per capita and collections per head. Surprisingly a higher rate of inflation is negatively correlated with the number of collections per head (column 3). We expected that individuals in countries with higher inflation would try to secure their wealth by collecting art. On the other hand is inflation strongly negatively correlated with GDP per capita. The share of individuals with a tertiary education is not related to the collections per head (column 4).

TABLE 7

Column 5 exhibits multivariate regressions considering all factors simultaneously. While the signs of the coefficients remain the same, only GDP per capita turns out to be statistically significant. Thus the wealth of country, as proxied by GDP per capita, seems to be the major macro-economic driver for a higher number of collections per country.

## 6. CONCLUSIONS

The analysis undertaken reveals that the largest number of private collections is located in Europe, followed by North America and Asia. Considering individual countries, it turns out that the United States leads the number of private art collections. In contrast, considering collections per capita of population, the United Kingdom, Germany and Spain are in front.

Our study also reveals information on the composition of private art collections. Private collectors above all assemble works by artists from North America, followed by Asian, and only then European artists. We can also show that the artists most often hosted by private collectors are contemporary. This might be attributed to less familiarity of today's American and Asian collectors with modern European art. Another constraint may be the even higher prices for masterpieces of classical art.

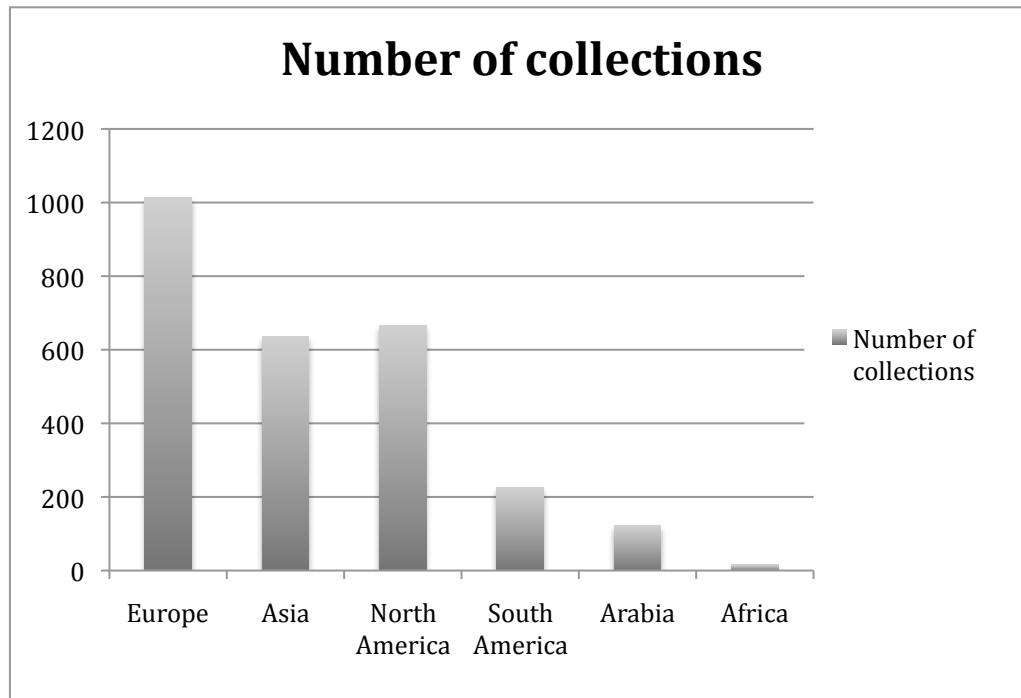
Among the top ten privately collected artists, American artists fill place one (Andy Warhol), four to six (Sol LeWitt, Jeff Koons, Roy Liechtenstein) and nine (Richard Prince). Two Spaniards (Pablo Picasso and Joan Miró) and two Germans (Joseph Beuys, Sigmar Polke) occupy the remaining places. The strong position of European artists in the top ten is not reflected in the overall list covering all continents. Asian artists have not (yet) reached the top ten but they are well represented when considering the composition of all private collections.

The data reveal a clear home bias (see also Steiner et al., 2013). Private collectors have a noted preference for artists of their continent and country. This may be due to familiarity but also to the higher cost of acquiring works by foreign artists. The home bias applies in particular to South American, Arabian and Asian collectors who strongly favor artists from their own continents. This home bias may partly reflect that private collectors in these continents form part of the international art scene than collectors from North America or Europe.

Our analysis also inquires into possible determinants of the number of private art collections in a country. The higher a country's per capita income the larger is the number of private art collections per capita. Only persons with some level of wealth can invest in expensive art and build up a notable collection.

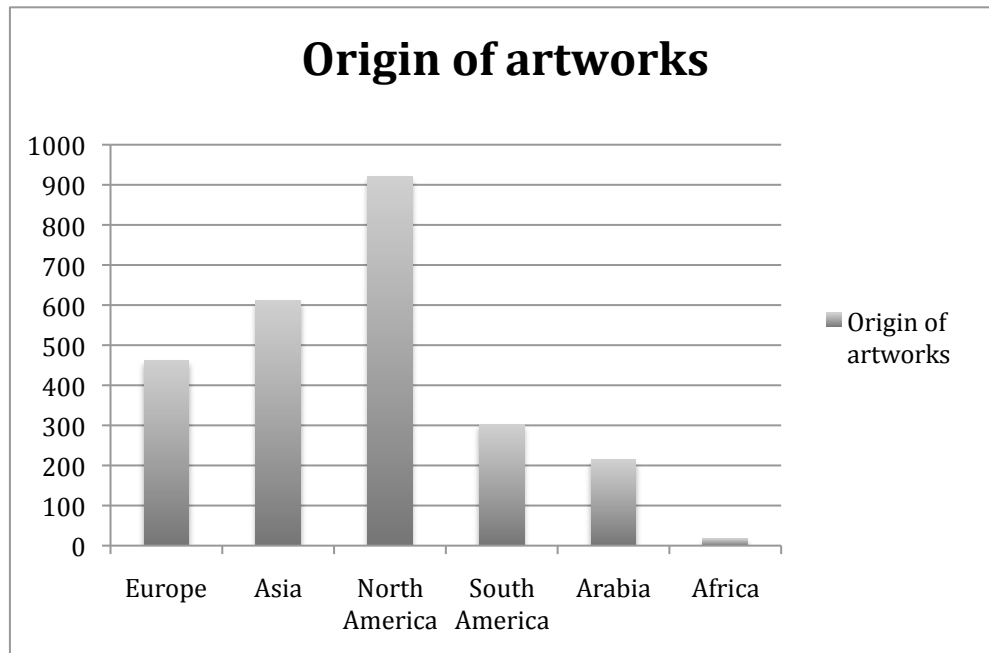
Our paper is only a first exploration into the existence and composition of private art collections all over the world. Our data are necessarily incomplete. Major reasons are that there may be private collectors who do not want to publicly reveal that they possess a collection because they fear break-ins. Perhaps they do not want to attract the attention of the taxing authorities. Other private collections may escape our data because the owners do not consider them to qualify as a (worthwhile) "collection". A more extensive study may gather better data and explore more fully the micro and macro determinants of collecting.

**Figure 1: Distribution of private art collections over cultural areas**



*Source:* [www.larryslist.com](http://www.larryslist.com), accessed 30.7.2013

**Figure 2: Distribution of artwork according to continent of origin**



Source: [www.larryslist.com](http://www.larryslist.com), accessed 30.7.2013

**Table 1: Top-10 countries with the most private art collections**

	Percent of collections	Number of collections	Collections per capita (1 million)
United States	23 %	607	2.1
Germany	8 %	207	2.5
United Kingdom	7 %	187	3.1
China	5 %	137	0.1
Brazil	5 %	128	0.7
South Korea	3 %	89	1.9
Spain	3 %	89	2.1
Italy	3 %	79	1.4
France	3 %	78	1.2
India	3 %	75	0.1

*Source:* [www.larryslist.com](http://www.larryslist.com), accessed 30.7.2013

**Table 2: Top-10 countries with the most private art collections per capita**

Country	Collections per capita (1 million)	Number of collections
Monaco	29	1
Liechtenstein	29	1
Bermuda	16	1
Israel	9	61
Singapore	9	38
Luxembourg	9	4
Ireland	7	61
Switzerland	6	46
Bahamas	6	2
New Zealand	6	24
Lebanon	5	21

*Source:* [www.larryslist.com](http://www.larryslist.com), accessed 30.7.2013

**Table 3: Distribution of origins of artworks by location of private collection**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Location</b>	<b>% origin: Europe</b>	<b>% origin: Asia</b>	<b>% origin: North America</b>	<b>% origin: South America</b>	<b>% origin: Arabia</b>	<b>% origin: Africa</b>	<b>Sum</b>
<b>Europe</b>	43	7	36	7	7	1	100
<b>Asia</b>	1	82	13	1	2	0	100
<b>North America</b>	7	4	76	7	6	0	100
<b>South America</b>	1	0	7	89	1	0	100
<b>Arabia</b>	4	5	6	1	85	0	100
<b>Africa</b>	0	8	23	0	0	69	100
<b>Total</b>	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. *Source:* [www.larryslist.com](http://www.larryslist.com), accessed 30.7.2013 and Steiner et al. (2013)

**Table 4: Home bias of top 10 countries with respect to private art collections**

Location & Origin	Share of collections containing art from home country
United States	78 %
Germany	91 %
United Kingdom	72 %
China	100%
Brazil	98 %
South Korea	94 %
Spain	79 %
Italy	86 %
France	78 %
India	97 %
<i>Notes:</i> Column (1) depicts the share of collections from a country, which contain at least one piece of art from the respective country. <i>Source:</i> <a href="http://www.larryslist.com">www.larryslist.com</a> , accessed 30.7.2013 and Steiner et al. (2013)	



**Table 5: Top 10 of  
most collected  
artists**

	Artist	Country	Number of collections containing artist
1	Andy Warhol	US	218
2	Pablo Picasso	ESP	139
3	Damien Hirst	UK	121
4	Sol LeWitt	US	74
5	Jeff Koons	US	71
6	Roy Lichtenstein	US	69
7	Joseph Beuys	DE	65
8	Joan Mirô	ESP	64
9	Richard Prince	US	63
10	Sigmar Polke	DE	61
<i>Source:</i> www.larryslist.com, accessed 30.7.2013			

**Table 6: Ranking by cultural area**

	Average collector ranking
North America	547
Arabia	596
Europe	607
Asia	638
Africa	663
South America	729

*Source:* [www.larryslist.com](http://www.larryslist.com), accessed 30.7.2013

**Table 7: Macro determinants of private art collections per capita**

	(1)	(2)	(3)	(4)	(5)
GDP per capita (average 2002-2012)	0.000169*** (11.66)				5.36e-05*** (3.134)
GDP per capita growth (average 2002-2012)		-0.479* (-1.706)			-0.113 (-0.769)
Inflation (average 2002-2012)			-0.219*** (-3.388)		-0.0662 (-1.074)
Share tertiary education (average 2002-2012)				-0.000684 (-0.0293)	0.000557 (0.0527)
Constant	-1.095** (-2.194)	3.941*** (4.434)	2.903*** (7.301)	2.373* (1.897)	1.240 (1.371)
Observations	71	71	66	64	60
R-squared	0.663	0.040	0.152	0.000	0.373
<i>Notes:</i> The dependent variable is the number of collections per capita per country. The table shows the coefficients of OLS regressions. To account for the volatility of the independent variables over time we take ten-year averages from the years 2002-2012. <i>Source:</i> www.larryslist.com, accessed 30.7.2013					

## APPENDIX

**Table A.1: Classification of Continents / Cultural Areas**

<b>Continents / Cultural Areas</b>	<b>Countries included</b>
Europe	Austria, Belgium, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Switzerland, Ukraine, United Kingdom
Asia	Australia, China, Hong Kong, India, Indonesia, Japan, Malaysia, New Zealand, Pakistan, Philippines, Singapore, South Korea, Taiwan, Thailand, Vietnam
North America	Canada, United States
South America	Argentina, Bahamas, Bermuda, Brazil, Chile, Colombia, Cuba, Dominican Republic, El Salvador, Mexico, Panama, Peru, Puerto Rico, Uruguay, Venezuela
Arabia	Bahrain, Egypt, Israel, Kuwait, Lebanon, Qatar, Saudi Arabia, Turkey, United Arab Emirates
Africa	Botswana, Morocco, Nigeria, South Africa

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