

More concentration of Media ownership means less democracy? Testing association between variables

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Abstract

The literature in Political Science suggests that the access to alternative sources of information is essential in democracies. In theory, we expect that democratic countries have decentralized Media ownership. Therefore, we ask: is it possible to check – empirically – the existence of a negative correlation between concentrated Media ownership and democracy index? To answer this question, we used statistical methods, specially descriptive statistics and correlation test. The experiment confirmed the theoretical prediction: decentralized Media ownership is strongly associated with democratic countries.

Keywords: Media. Democracy. Economy. Concentration. Regulation.

Introduction

This article aims to test the hypothesis that democratic countries would also be those with lower concentration of ownership of media. We analyze the association between

variables related to economic influence over media pluralism, political participation and democratic values. This article does not aim to observe possible causal relationships, but possible correlations.

Technically, we use descriptive statistics and correlation tests to analyze the data compiled by the *Quality of Government Institute: dataset codebook* (TEORELL *et al.*, 2011), which were examined from the Statistical Package for Social Sciences (SPSS) version 20 and STATA, version 8. Based on the systematic variables available in the database consulted, the working hypothesis was split into three statements in order to validate our analysis. They are the following ones: (Ha1) there is a negative correlation between democracy index and economic influence over the media; (Ha2) there is a correlation of negative variance between political pluralism as well as participation and economic influence over the media; (Ha3) there is a correlation of negative variance between democratic political culture and economic influence over the media. It was expected to confirm the working hypotheses, from checking a strong correlation magnitude, i.e. between 0.7 and 1, $p < 0.001$.

Then, in the Codebook, we are able to identify four variables that empirically approached the theoretical debate. They are: economic influence over the media, democracy index, political pluralism and participation, and democratic political culture. After the descriptive examination of each of the variables, we analyzed the association and came to the conclusion that there is a negative correlation between the level of economic influence over media and the degree of democratization.

Theoretical aspects

The media occupy a prominent position in various fields of social sciences research. This is mainly due to their potential to undertake what may be called the construction of reality through the production and dissemination of symbolic goods (THOMPSON, 2013; MIGUEL, 2002; BERGER; LUCKMANN, 2012).

Control over the flow of information, therefore, would be an important variable in the power relations, since the availability or not of information could interfere with the formation of preferences and thus, the strategic behavior of individuals and institutions (TSEBELIS, 1998; FIANI, 2009; ELSTER, 1994; WARD, 2002; SHEPSLE; BONCHEK, 1997). For Djankov (2001),

in modern economies and societies, the availability of information is central to better decision making by citizens and consumers. In political markets, citizens require information about candidates to make intelligent voting choices. In economic markets, including financial markets, consumers and investors require information to select products and securities (DJANKOV *et al.*, 2001, p.1).

Not surprisingly, the media is an object of state control in different countries, to a greater or lesser degree, being those authoritarian or not. This occurs through direct intervention through monopoly of the means of Communication, or implementation – or even, in some cases, intentional absence – of regulatory devices (COLETIVO INTERVOZES, 2009; DOMINGUES-DA-SILVA, 2011; LIMA, 2011; 2012). This debate takes place, therefore, in the point of intersection between media and democracy (TIRONI; SUNKEL, 2004; SUKOSD, 2004; ROCKWELL, 2007; MUGHAN; GUNTER, 2004; BECERRA; MASTRINI, 2009; BAKER, 2007).

One of the most celebrated authors to establish that dialogue between the two issues was Dahl (2009; 2012), for whom alternative sources of information would be one of the necessary conditions for democracy. Countries in the process of democratization illustrate this scenario very well (MUGHAN; GUNTER, 2004; BLANKSON; MURPHY, 2007). The cases of Spain have already been studied (GUNTER; MONTERO; WERT, 2004), as well as Russia (MICKIEWICZ, 2004), Hungary (SÜKÖSD, 2004) and Chile (TIRONI; SUNKEL, 2004). The relationship between media pluralism and democracy is also under investigation in Africa (BLANKSON, 2007), Central America (ROCKWELL, 2007) and Eastern Europe (MARIN; LENGEL, 2007).

However, the lack of alternative sources of information is not only a characteristic of those called authoritarian countries: the ownership concentration of the means of mass Communication is also observed in democratic regimes –in those cases, however, the concentration occurs in the private sphere (DJANKOVet *al.* 2001; BECERRA; MASTRINI, 2009). Extensive study conducted in 97 countries by Djankovet *al.* (2001) found that state and family share the ownership of the Media around the world:

On average, family controlled newspapers account for 57% of the total, and family controlled television stations for 34% of the total. State ownership is also vast. On average, the state controls approximately 29% of newspapers and 60% of television stations. The state owns a huge share – 72% - of the top radio stations (DJANKOVet *al.*, 2001, p.15).

The control of information through private institutions in democratic countries was also object of study carried out by Sociedad y Press Institute (IPYS). In 12 countries researched – Spain was the only non-Hispanic –, there is a high level of concentration of Media ownership in the continent (BECERRA; MASTRINI, 2009). This concentration would mean a dysfunction in democratic regimes, since, in practice, represents the removal of the possibility of institutionalization of alternative sources of information, necessary requirement for democracy, according to Dahl (2009; 2012).

So, arguments arise against the free market when it comes to the Media industry, since this economic logic would encourage the formation of oligopolies and hence the potential suppression mentioned above (BUCKLEY, 2007). That is, normatively, the regulation of production and dissemination of symbolic goods could not receive the same treatment to products consumed in shopping centers, for example, precisely because of its potential to shape the choices of those who consume them.

Democratic countries tend to be those with lower concentration of Media ownership. Theoretically, the concentration of this potential in the hands of few owners, government or businessmen, would prejudice the public interest and, therefore, the democracy (BAKER, 2007; BUCKLEY, 2007).

The basic standard for democracy would then be a very wide and fair dispersal of power and ubiquitous opportunities to present preferences, views, visions. This is a democratic distribution principle for communicative power – a claim that democracy implies as wide as practical a dispersal of power within public discourse (BAKER, 2007, p.7).

Thus, the dispersion of control over the Media by regulatory processes would be understood as a reflection of basic values to the establishment of rules on regulation of Media ownership in democracies – an incentive to the existence of alternative sources of information.

Variables and Hypotheses

The literature reviewed suggests, therefore, the following association: the more democratic a country, would be the less concentrated Media ownership. At the same time, more pluralistic and developer of democratic values would be the same country. Therefore, its citizens would be more participative. This article proposes to test through statistical tools evidence of these associations but without venturing to point out the existence of possible causal relationships between variables. The intention is, in exploratory way, identify the possibility of verify such associations provided in the literature.

In order to investigate patterns of association between the variables of interest in this context, we use the database provided by The Quality of Government Institute, which provides elements that allow us to test our working hypotheses:

- **(V1) Economic influence over the Media** (TEORELL *et al.*, 2011): discrete variable that proposes to examine the economic context related to the Media, which are: the structure of Media ownership, transparency and focus on the property; selective subsidies as advertising provided by the state or other actors; impact of political corruption on the posted content, and the impact of economic situation in the development of the Media. The scale ranges from

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0-20, between 1993 and 1995, and between 0-30, from 1996. The higher the value, the less democratic is the country.

- **(V2) Democracy Index** (TEORELL *et al.*, 2011): discrete variable that purports to point democratic gradation on a scale of 0 (least democratic) to 10 (most democratic).
- **(V3) Political Pluralism and Participation** (Freedom House): discrete variable that proposes to examine the right to freedom of organization among political parties, the existence of opposition with real chances to garner support, the ability of people to make choices free from military coercion, totalitarian parties or other power group; existence of minority political rights. The index ranges from 0 (least plural) to 16 (most plural).
- **(V3) Political Pluralism and Participation** (TEORELL *et al.*, 2011): discrete variable that proposes to examine the right to freedom of organization among political parties, the existence of opposition with real chances to garner support, the ability of people to make choices free from military coercion, totalitarian parties or other power group; existence of minority political rights. The index ranges from 0 (least plural) to 16 (most plural).
- **(V4) Democratic political culture** (TEORELL *et al.*, 2011): index that aims to measure the extent to which there is a social consensus in support of democratic principles. The index also varies between 0 (least democratic) to 10 (most democratic).

In an ideal situation, we would have a variable V1 split into several variables in order to specifically test the variable “concentration on the property”. However, given the lack of quantitative data on this particular point in the database adopted, we turn to the variables of aggregate entitled “economic influence on the Media”, since this index includes the topic addressed here. The variables listed above were deliberately chosen to make possible the testing of the following cases:

- **(Ha1)** there is a negative correlation between democracy index and economic influence over the Media – i.e., the lower the economic influence over the Media, the more democratic is a country;
- **(Ha2)** there is a negative correlation between political pluralism as well as participation and economic influence over the Media – i.e., the lower the economic influence over the Media, the greater political pluralism and participation degree;
- **(Ha3)** there is a negative correlation variance between democratic political culture and economic influence over the Media – i.e., the lower the economic influence over the Media, the greater the democratic political culture degree.

The hypothesis test listed above occurred from the next junction of variables: (Ha1) $V1 \times V2$; (Ha2) $V3 \times V1$; and finally (Ha3) $V1 \times V4$. First, however, we present a descriptive data analysis.

Descriptive statistics data

By observing economic influence over Media, we find that $n = 194$. It is known that the possibility to check some degree of sampling error is inherent in the use of samples (DANCEY; REIDY, 2008). However, it is worth mentioning that, taking into account the research field, a relevant sample is found. That helps to avoid the high degree risk of errors of that nature, which are typical of small samples. The standard deviation of 6.40 indicates that this is the most heterogeneous sample (asymmetric) among those addressed here, as one can notice according to the following information.

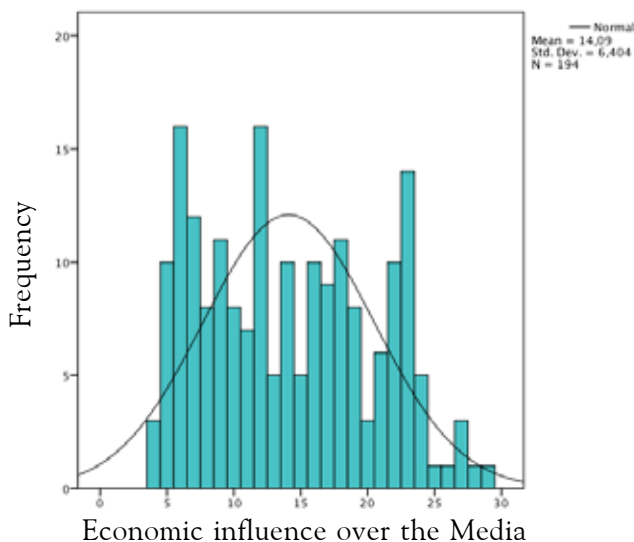
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Table 1 – Descriptive statistics – economic influence over the Media

n	minimum	Maximum	mean	standard deviation
194	4	29	14,09	6,40

Chart 1 illustrates the representation of data on the economic influence over the Media. One should be cautious about data that does not show normal distribution, since such feature may be due to sampling errors.

Chart 1 – Histogram on the data distribution of the variable economic influence over the Media



As for the democracy index, we find that $n = 194$ is the same as discussed in the previous section. Accordingly, the observations above also apply to that sample. It appears, moreover, that average is 6.54 on a scale whose values vary between 0 and 10. The standard deviation of 3.16, which indicates how far the sample values vary around the mean is the second smallest when compared to the other variables - it is, therefore, a fairly

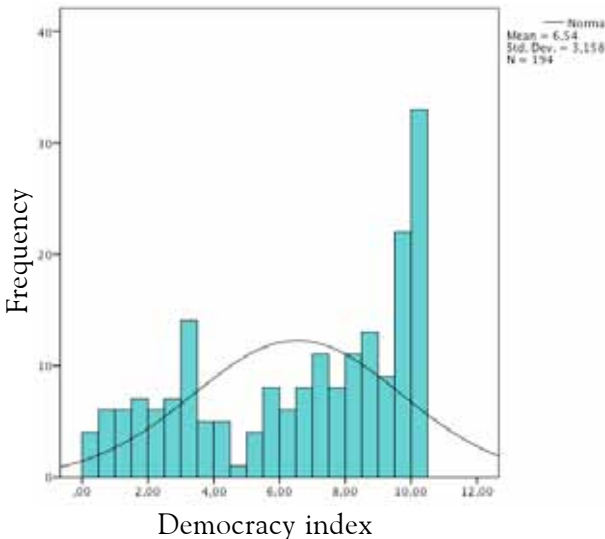
symmetrical distribution. This means that most of the sample values are 3.16 units above or below average - about 70% of the values are in the range located between 3.38 and 9.7 units. There is also a breadth of 10.

Table 2 – Descriptive statistics – democracy Index

n	minimum	maximum	mean	standard deviation
194	.0	10	6,54	3,16

The histogram illustrated in Chart 2, however, shows a non-normal distribution. It can be argued that the data indicate a bimodal distribution, but with a larger tail to the right, i.e. positively skewed. That distribution suggests caution regarding the use of the mean as a measure of central tendency. One should also be cautious about the application of techniques that departs from the assumption that the analyzed data are normally distributed.

Chart 2 – Histogram for the data distribution of the Democracy index variable



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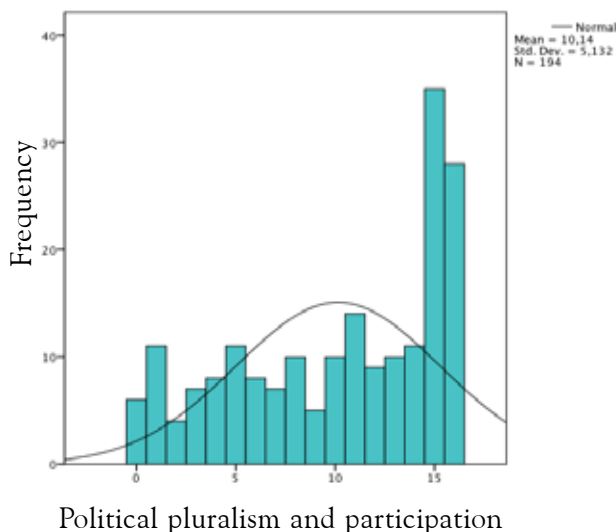
Regarding political pluralism and participation, we find $n = 194$, the same was observed in the previous cases. The amplitude is 16 and the average is 10.4 on a scale ranging from 0 to 16. The standard deviation of 5.13 indicates that the data are located within a range between the values 5.01 and 15.27. It is the second largest standard deviation among those listed in this article. That is, one senses a certain asymmetry of the data distribution when compared to the others.

Table 3 – Descriptive statistics - political pluralism and participation

N	minimum	maximum	mean	standard deviation
194	.0	16	10.14	5.13

The histogram below (Chart 3) illustrates a non-normal distribution. The tail abruptly raised to the right, close to the value of 15, suggesting a negative asymmetrical distribution. In cases of pronounced asymmetry, one should be cautious about the use of the mean as a measure of central tendency, since, in such circumstances, it is more susceptible to distortions caused by the values of the tail.

Chart 3 – Histogram of the distribution data on the political pluralism and participation variable



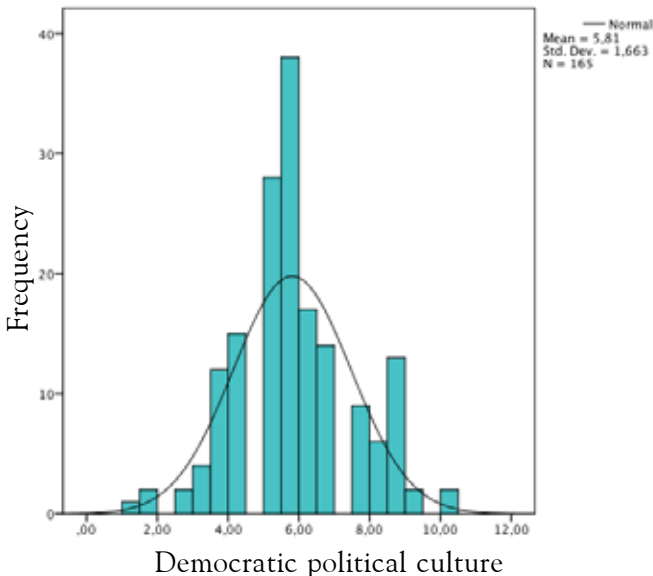
As for the democratic culture variable, there is a $n = 165$, that is, a smaller number of countries regarding the variables above - but not less representative of the population. The maximum and minimum values indicate the total variation of the values (amplitude) of 8.75. The standard deviation of 1.66 suggests that the data are located within a range between the values 4.15 and 7.47 - indicating a concentration around the mean regarding the data distribution.

Table 4 – Descriptive statistics – democratic political culture

n	minimum	maximum	mean	standard deviation
165	1,25	10	5,81	1,66

The histogram below (Chart 4) illustrates such characteristic of the variable V4. A distribution which has a feature that allows us to classify it as a normal type is seen: a population-shaped bell appears to be symmetric around the mean and the tails are the “X” axis at infinity.

Chart 4 – Histogram for the data distribution of the democratic political culture variable



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We will proceed now to an examination of whether there is a correlation between the variables listed. As noted when describing the data, we find a distribution apparently normal only in relation to V4. Because of this, the testing of hypotheses on topic 3 were analyzed by the Spearman ρ , used in those cases in which the data do not satisfy the conditions of parametric tests (DANCEY; REIDY, 2008).

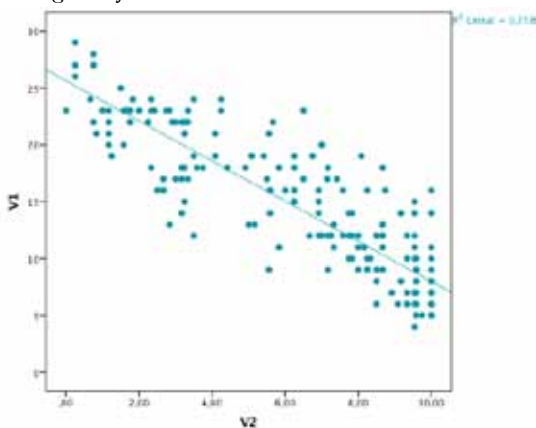
The data (Table V) indicate a significant negative correlation of strong magnitude ($p < 0.001$, $\rho 0.87$) between V1 and V2. It can be concluded that the HA1 is true.

Table 5 – Bivariate correlation matrix V1 and V2 by nonparametric test (Spearman ρ)

		V1	V2
V1	ρ Spearman's correlation	1	,87
	Sig. (2-tailed)	.	,001
	N	194	194
V2	ρ Spearman's correlation	-,87	1
	Sig. (2-tailed)	,001	.
	N	194	194

It can be seen (Chart 5) a negative imperfect relationship between the variables. It would be possible, therefore, for the following association: the less economic influence over Media, the more democratic country.

Chart 5 – Scatter diagram from the correlation test between V1 and V2



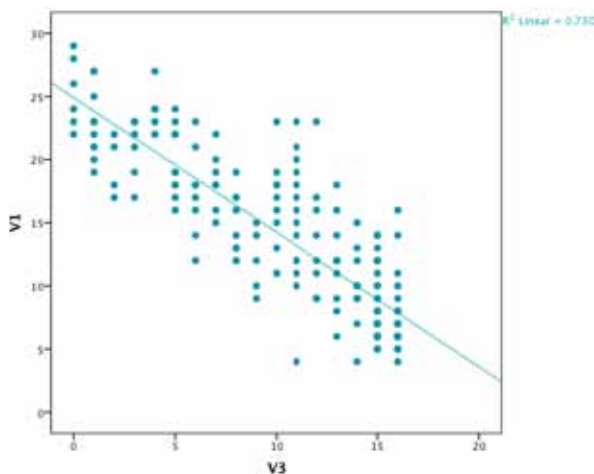
The data (Table VI) show a significant negative correlation of strong magnitude ($p < 0.001$, $\rho 0.85$) between V1 and V3. Thus, we accept the hypothesis Ha2.

Table 6 – Bivariate correlation matrix V1 and V3 verified by a nonparametric test (Spearman ρ)

		V1	V3
V1	ρ Spearman's correlation	1	-.85
	Sig. (2-tailed)	.	,001
	N	194	194
V3	ρ Spearman's correlation	-.85	1
	Sig. (2-tailed)	,001	.
	N	194	194

The scatter diagram (Chart 6) suggests an imperfect linear relationship. This behavior confirms the acceptance of Ha2.

Chart 6 – Scatter diagram from the correlation test between V1 and V3



In this sense, one can say: the smaller the economic influence over the Media, the greater political pluralism and participation.

Table VII indicates a significant negative correlation of moderate magnitude ($p < 0.001$, $\rho 0.54$) between V1 and V4.

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The magnitude Ha3 presupposed a strong or perfect magnitude, not confirmed by the data.

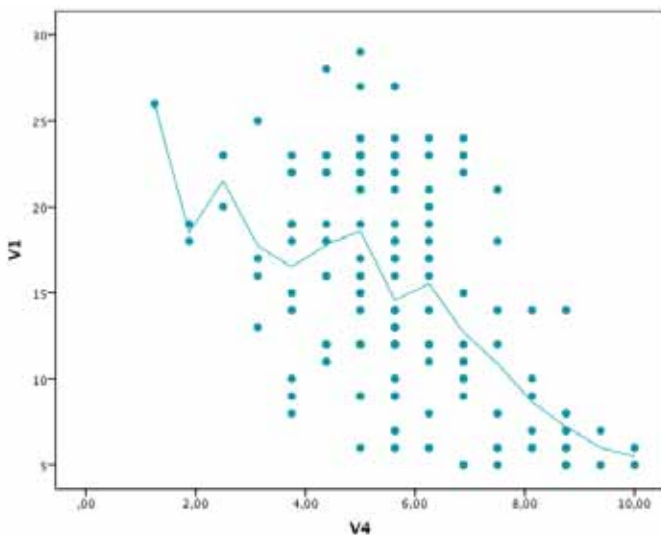
Table 7 – Bivariate correlation matrix V1 and V4 verified by means of a nonparametric test (Spearman ρ)

		V1	V4
V1	ρ Spearman's correlation	1	-,54**
	Sig. (2-tailed)	.	,001
	N	194	165
V4	ρ Spearman's correlation	-,54**	1
	Sig. (2-tailed)	,001	.
	N	165	165

** Correlation is significant at the 0.01 level (2-tailed).

The scatter diagram below, Chart 7, visually represents the absence of a correlation between V1 and V4. Only from the values 15 (V1) and 6 (V4) is that one can check any possible association between the two variables.

Chart 7 – Scatter diagram from the correlation test between V1 and V4



Thus, given the data, it can be stated that there is no relationship between economic influence over the Media and democratic political culture.

Final considerations

Through the technique of bivariate correlation ρ Spearman, we came to the following conclusions:

1. the less economic influence over the Media, the more democratic is a country, since in this case there was a strong negative correlation magnitude between variables;
2. the lower the economic influence over the Media, the greater political pluralism and participation, as in this case, we also found a strong magnitude negative correlation between variables, as expected when the formulation of the alternative hypothesis;
3. there was no relationship between economic influence over the Media and democratic political culture, to the extent that the data showed a negative correlation, while a moderate magnitude between the variables.

The tests undertaken throughout the article suggest, therefore, the confirmation of our hypothesis: the most democratic countries would also be more likely to have lower concentration of Media ownership. Such a scenario, checked by an exploratory mean suggests paths for thorough investigations on the possible association between Media regulation, pluralism and political participation.

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