Does the Hand that Silences Only Fuel the Fire?

A Study of the Relationship between State Ownership of the Media and Quality of Governance

By

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ABSTRACT

A glance at the media today reveals a web of TV and radio stations, newspapers, and magazines that spans the globe. The media has flourished in the last half century, and as a result so has its influence. As its influence has grown, the media has experienced friction with governments worldwide. It is precisely the overlap between the government and the media, however, that my research focuses on. In this thesis, I study the relationship between state ownership of the media and quality of governance. I analyze some of the major changes taking place in the media industry globally, and go on to discuss the two main theories of state media ownership: the public interest theory and the public choice theory. Using data from 96 countries I find that both state ownership of newspapers and state ownership of television are significantly associated with poorer governance outcomes. States that own the media are more likely to have poorer rule of law, limited freedoms of expression, ineffective governments, more pervasive corruption, and poorer regulations.

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"Four hostile newspapers are more to be feared than a thousand bayonets"

- Napoleon Bonaparte

I - Introduction

History has proven information to be a great source of power. From the battlefields of the past to the corporate boardrooms of the 21st century, information as well as the lack of information have contributed to the triumphs and defeats that have shaped the very nature of the world we live in. Today, as the pace of life quickens, as the volume of business and trade increases, and as we become more globally interconnected, this continues to hold true.

Outside of the business realm, the information distributed through various forms of media constantly shapes a population's culture, convictions, and national sentiment. This is no new phenomenon. The advent of printed newspapers heralded the coming of a growing mass media, which has become the main source of information today for the masses worldwide. Technology has allowed newspapers, magazines, radio stations, and television broadcasters to disseminate information at a rate and quantity never before imagined. A quick glance at the worldwide media today reveals thousands of TV channels, tens of thousands of radio stations, and rising world daily newspaper circulations. [1] As a result of this growth, the media business has emerged as a blossoming global industry as consumers continue to demand and consume larger amounts of media content through various media channels. [2]

Technological enhancements, too, have helped the media become a powerful means of not only distributing information, but also of controlling what is broadcast. Governments worldwide own and control a significant portion of print and broadcast media, giving them considerable influence over the media content that their citizens consume. Recent incidents of social unrest in Myanmar and Georgia have resulted in more serious government censure of the

[1] Kilman, Larry. "World Press Trends: Newspaper Circulation and Advertising Up Worldwide." *World Association of Newspapers.*

[2] It should be noted, however, that U.S. newspapers are suffering from decreases in readership and advertising revenues.

media or outright media capture by their respective governments, drawing criticism from many western governments and media outlets. These and other similar incidents raise the question of whether government control of media, defined by ownership, is related to how well governed a country is.

In this paper, I examine the relationship between state ownership of TV and newspapers and seven measures of stable governance: rule of law, political stability, regulatory quality, control of corruption, voice and accountability, government effectiveness, and anti-autocracy. I hypothesize that higher levels of state media ownership will imply more negative governance outcomes, while accounting for the fact that poor governance itself may contribute to a government's controlling the media.

II – Background

The Importance of the Media

From a societal standpoint, the media serves to distribute information and news, as well as cultural and various other types of programming. The media is also said to keep the public informed and more educated. Yet, the media's most critical role involves the coverage of politics during elections, and in general acting as a check to government power, ensuring that the government is being held accountable.[3] By presenting different candidates' platforms as well as any developments involving the state, the media keeps the world abreast of news and well informed. The media is then in a position of power, as are those who own it.

While it is true that those who own or have a degree of control over the media are in a position of considerable power, contemporary western thought extols the merits of a free media

[3] Djankov et al., "Who Owns the Media?" *Journal of Law and Economics* XLVI (October 2003): 341-381.

as a reflection of a free society where transparency is valued. The United States has one of the freer media environments in the world, however, in many countries, governments own the majority of the media and, as a result, control the information and news that are distributed to their citizens. Though recent trends towards privatization and loosening of restrictions have reduced the percentage of the media controlled by governments, this figure still remains quite high. Critics decry the lack of access to a free journalistic pursuit as well as a lack of balanced content in countries where government is the primary player in the media industry. The argument can be made that this framework creates a guaranteed propaganda outlet for the government to release only news that is biased in its favor.

In the last few decades, the rapid expansion of the Internet, the spread of wireless telecommunications, and the emergence of personal devices and platforms allowing common citizens to generate and distribute their own content have radically altered the media landscape. Consumers who were once passive viewers of media content now have the ability to actively find other sources of information through the Internet as well as actively create content. As was seen last year in Myanmar, common citizens took pictures and videos of the protests against the military government and emailed them to bloggers and foreign broadcasters such as the BBC to distribute. [4] Vincent Brossel of Reporters Without Borders states that, "This time, compared to 1988, there are lots of new technologies to get the news out of Burma ... People are able to take pictures, videos to evidence what is going on. It is quite amazing for Burma, which is a very poor country … Technology is the most useful weapon you can use in such types of pacifist struggles." [5] While these developments do mitigate the lack of media freedom to an extent, these

[4] "Monks are Silenced, and for Now, Internet is, Too" *New York Times*. October 3, 2007.
[5] "Cell Phones, Web Spread News of Myanmar." *USA Today*. September 26, 2007.

governments likely also have the ability to control access to the basic infrastructure such as Internet and telephony, thereby further limiting free expression.

As shown in Myanmar and Georgia, governments dealing with periods of political or social instability often keep a tight rein on the media as a means of controlling and limiting press coverage of the turmoil. In Myanmar, only the military-owned television station was allowed to broadcast for the duration of the protests, and access to the Internet was also ultimately cut off. [6] Similarly, in Georgia, during protests against the current regime of President Mikhail Saakashvili, the offices of the main opposition TV station, Imedi, were raided and its studio equipment damaged, forcing the station to close indefinitely. [7] If governments restrict the media during periods of unrest, it raises the question of whether a relationship exists between the relative level of government control of the media and the quality of governance in such a country.

The Media Today

As mentioned, the worldwide media today consists thousands of TV channels distributed via cable, satellite, and digital, as well as traditional analog broadcasting. Tens of thousands of radio stations exist and world daily newspaper circulations continue to rise. [8] This growth is highly correlated with the rise of the Internet and wireless technology, which has provided a platform for the media to blossom and has greatly increased the rate of expansion for the transnational media business. According to Robert McChesney, a Professor of Communications at the University of Illinois Urbana-Champlain, "the rise of a global media market is encouraged

[6] "Monks are Silenced, and for Now, Internet is, Too" *New York Times*. October 3, 2007.
[7] "Georgia's opposition demands return of top independent TV station to air" *International Herald Tribune.* November 25, 2007.
[8] Kilman, Larry. "World Press Trends: Newspaper Circulation and Advertising Up Worldwide." *World Association of Newspapers.*

by new satellite and digital technologies that make global markets both cost effective and lucrative." [9]

While many channels and diverse programming do exist, the media business has become a highly concentrated one, even at the transnational level. This is clearly evident in that "the global media market has come to be dominated by the same eight transnational corporations that dominate U.S. media." [10] Much of this rapid concentration has been facilitated by "structural changes in communication and media markets, within countries and globally." [11] Technology is one such structural change; however, countries have also been relaxing rules against media concentration as well as foreign ownership. Within the industry itself, there has been a high degree of vertical and horizontal integration, to take advantage of economies of scale and scope.

While these changes have afforded many consumers an "unprecedented amount of choice in a '500 channel universe'" [12], the truth is that much of this choice is provided by a limited number of players. As these players have successfully entered markets across the globe, they have partnered with local producers to provide local content for their channels. McChesney calls this the "globalization of production," and thus, "what distinguishes the emerging global media system is not transnational control over exported media content, however, so much as increasing transnational corporation control over media distribution and content within nations." [13] With the developments in satellite and cable technology, media conglomerates have had the chance to

[9] Robert McChesney, Rich Media, Poor Democracy: Communication Politics in Dubious Times (Chicago: University of Illinois Press, 1999): p. 78.
[10] Robert McChesney, Rich Media, Poor Democracy: Communication Politics in Dubious Times (Chicago: University of Illinois Press, 1999): p. 86.
[11] Dwayne Winseck, "The State of Media Ownership and Media Markets: Competition or Concentration and Why Should We Care?" *Sociology Compass*: Vol. 2, Issue 1. (January 2008): 34- 37.
[12] Dwayne Winseck (2008).
[13] Robert McChesney, Rich Media, Poor Democracy: Communication Politics in Dubious Times (Chicago: University of Illinois Press, 1999): p. 80.

create global and local editions of channels, the best examples of which would be CNN and the BBC.

Simply being a media juggernaut, however, does not guarantee success in foreign markets. While economies of scale are a significant advantage, the "ability to mix production capacity with a solid distribution network," as well as, "having a strong base in the United States" is even more critical to being a serious player at the transnational level. Even then, "non-U.S. markets, especially markets where there are meddlesome governments, are risky and often require patience before they produce a profit." [14]

Profits aside, the media has the potential to create significant change in a country. As a result, it has played a strong cultural role across the world. Many countries have used government subsidies to protect their domestic media and cultural industries, so as to ensure their survival in an increasingly transnational-owned market. As the media business becomes more global, however, it has the potential to influence more than just culture, becoming "a progressive force, especially as it enters nations that had been tightly controlled by corrupt crony media systems." [15]

As the media business has emerged as a global industry in the 21st century, it has created a vast network of partnerships between large transnational media firms and smaller regional firms that are more familiar with local tastes and more adept at handling local politics. In the words of Rupert Murdoch, "The borderless world opened up to us by the digital information age will afford huge challenges and limitless opportunities."

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[14] Robert McChesney, Rich Media, Poor Democracy: Communication Politics in Dubious Times (Chicago: University of Illinois Press, 1999): p. 87.

[15] Robert McChesney, Rich Media, Poor Democracy: Communication Politics in Dubious Times (Chicago: University of Illinois Press, 1999): p. 100.

Theories of Media Ownership

Economists have espoused two main schools of thought on media ownership, articulated in the "public interest" and "public choice" theories. The public interest theory of media suggests that "governments maximize the welfare of consumers" [16] by owning the media. This theory sees information as a public good and government monopoly as the most effective method of distributing it. Due to the high up-front fixed costs of setting up a broadcast or print media franchise, they argue that the government would be the most effective owner and operator of the media They also believe that if the public is ignorant or poorly educated, a government media would provide, "less biased, more complete, and more accurate information than it could obtain with private ownership." [17] According to the public interest theory, a private media owner would only provide information that serves his or her own interests.

In contrast, the public choice theory holds that a "government owned media outlet would distort and manipulate information to entrench the incumbent politician, preclude voters and consumers from making informed decisions, and ultimately undermine both democracy and markets." [18] This system would limit the scope of information available to the public, serving only to extend the rule of the incumbent politician or party, leaving the population either inadequately informed or significantly misinformed. Public choice theory also stresses that, "competition among media firms ensures that voters, consumers, and investors obtain, on average, unbiased and accurate information." [19] Given the degree of competition in such media markets, media outlets would portray a competitor's misinformation as a weakness in order to try

[16] Djankov et al., "Who Owns the Media?" *Journal of Law and Economics* XLVI (October 2003): 341-381.
[17] Djankov et al. (2003).
[18] Djankov et al. (2003).
[19] Djankov et al. (2003).

to gain precious market share. As a result of competition, consumers are provided with more accurate information, and the media acts as a check on government's misuse of power.

World Media Ownership

In their paper, "Who Owns the Media?" Djankov et al. examine the patterns of media ownership across a set of 97 countries. [20] Their results show that, "two dominant forms of ownership of media firms around the world are ownership by the state and ownership by concentrated private owners, namely, controlling families." [21] These 97 countries were chosen based on availability of data, the final sample including "21 countries in Africa, 9 in the Americas, 17 in Asia and the Pacific, 7 in Central Asia and the Caucasus, 16 in Central and Eastern Europe, 11 in the Middle East and North Africa, and 16 in Western Europe." [22]

When looking at individual media outlets, Djankov determined ownership by voting rights in the company, with the largest single voting shareholder holding at least 20 percent considered as having controlling ownership. When constructing the individual proportions of government media ownership for each country, they used both a simple count of the number of media outlets controlled by the state as a fraction of the total number of media outlets, as well as another figure based on the "market share of the audience and provision of local news content" [23] for each outlet controlled by the state as a fraction of the total number of media outlets. Their data are as of 1999, but they state that ownership structure is stable over time for most firms.

[20] Djankov et al. present the portion of a country's media that is state owned, privately owned, and other; other referring to employee owned and widely held firms.
[21] Djankov et al., "Who Owns the Media?" *Journal of Law and Economics* XLVI (October 2003): 341-381.
[22] Djankov et al. (2003).
[23] Djankov et al. (2003).

Through their research, Djankov et al. find that "only 4% of media enterprises are widely held" [24] and that "on average, the state controls approximately 29 percent of newspapers and 60 percent of television stations." [25] Some interesting patterns that they notice include that state ownership of media is significantly larger in Africa, the Middle East, and North Africa. They find that 71% of African countries have government monopolies on TV broadcasting [26] and that in Western Europe, too, government owns the majority (55%) of TV broadcasting outlets. Given this high degree of government ownership, Djankov et al. draw the conclusion that, "governments extract value through control of information flows in the media." [27]

Djankov et al. go on to analyze how media ownership interacts with a variety of economic, political, press freedom, and health measures. In running these regressions, they control for "general levels of state ownership in the economy, primary school enrollment, autocracy, and gross national product per capita." [28]

Regarding economic outcomes, these regressions reveal that state ownership of newspapers is significantly lower in richer countries and that "state monopoly is largely a feature of poor countries – [with] … almost no incidence of state monopolies of newspapers, and relatively few of television, in the upper two quartiles of income distribution." [29] Furthermore, the paper finds that state ownership of TV is lower in countries that have low levels of state ownership overall and that in less autocratic countries, state ownership of the media is statistically significantly smaller [30], which directly contrasts with the claims of the public interest theory. "In particular, the fact that more autocratic regimes have higher levels of state ownership

[24] Djankov et al., "Who Owns the Media?" *Journal of Law and Economics* XLVI (October 2003): 341-381.
[25] Djankov et al. (2003).
[26] Djankov et al. (2003).
[27] Djankov et al. (2003).
[28] Djankov et al. (2003).
[29] Djankov et al. (2003).
[30] Djankov et al. (2003).

suggests that the unchecked and unlimited governments, rather than those constrained by the public, come to own the media." [31]

Djankov et al. also make important findings relating media ownership and the press: "greater state media ownership is associated with a greater number of journalists jailed and media outlets closed by the government." [32] Another crucial relationship between media ownership and press is that "countries with greater state media ownership censor the internet more heavily." [33] An instance of this was seen last year in Myanmar, as mentioned before.

In their final regressions, Djankov et al. analyze the relationship between media ownership and political freedom, finding that "government ownership of the press is associated with (statistically significantly) lower levels of political rights, civil liberties, security of property, and quality of regulation and higher levels of corruption and risk of confiscation." [34] They also found that political rights were worse when the state-owned both newspapers and TV than when it owned only one. [35]

Djankov et al. conclude that the "data reveal no real benefits of state ownership," given that, "countries that are poorer, more autocratic, with lower levels of primary school enrollment, and with higher levels of state intervention in the economy also have greater state ownership of the media. In addition, countries with greater state ownership of the media have less free press, fewer political rights for citizens, inferior governance, less developed capital markets, and inferior health outcomes (the last result being particularly important in light of the argument that state ownership of media serves the needs of the poor)." [36]

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[31] Djankov et al., "Who Owns the Media?" *Journal of Law and Economics* XLVI (October 2003): 341-381.
[32] Djankov et al. (2003).
[33] Djankov et al. (2003).
[34] Djankov et al. (2003).
[35] Djankov et al. (2003).
[36] Djankov et al. (2003).

III - Hypothesis

Given that a negative relationship exists between state ownership of media and the economic, political, press, and health outcomes presented above, it is conceivable that in a more modern world state control of media could be associated with a lower quality of governance in a country. This hypothesis acknowledges that state ownership of the media is often seen as a tool that governments use to control the flow of information to the population; however, it also holds that technological advancement, media consumers' increased ability to generate and distribute content of their own, as well as the availability of and access to transnational media sources, would frustrate this governmental goal. Citizens would be aware that their state-owned media was distorting or withholding information and would therefore turn to other sources to both consume and disseminate news. The result would be more negative governance outcomes as government's attempts to control this flow of information would continue to weaken. I also hypothesize, however, that poor governance itself may be a determinant of state media ownership, and factor this into my regressions. Here, I assume that if a state is poorly governed, then, by the nature of the regime, it is more likely that they will own the media as well.

IV – Data and Variables

State Media Ownership Data

The state media ownership data used in this study consist of data for 96 countries taken directly from Djanjkov et al.'s paper, "Who Owns the Media?", the only difference being the removal of North Korea from the data set due to the questionable validity of data.

In their paper, Djankov et al. construct an index ranging from 0 to 1 to reflect the level of government ownership of newspaper and television, separately. When looking at individual media outlets, Djankov et al. determine ownership by voting rights in the company, with the largest single voting shareholder holding at least 20 percent considered as having controlling ownership. I take the newspaper and TV ownership data based on the "market share of the audience and provision of local news content" [37] for each outlet controlled by the state out of the total, as it best reflects the extent of influence that the government-owned media firms have in the market in terms of customer reach. These data are as of 1999, but the authors state that ownership structure is stable over time for most firms. From this data set, I form two variables: State Ownership of Newspapers (SONP) and State Ownership of Television (SOTV), both on a 0 to 1 scale with higher numbers indicating greater government ownership. These data in their entirety appear in Appendix 1.

World Governance Data

The world governance data set used in this thesis is taken from the World Bank's World Governance Indicators (WGI) as well as the Polity IV Project. The World Bank data consist of six variables compiled from 33 data sources that include public institutions, non-governmental

[37] Djankov et al., "Who Owns the Media?" *Journal of Law and Economics* XLVI (October 2003): 341-381.

organizations (NGO's), and private sector firms. The Polity IV data consist of an autocracy index, which "is derived from … the competitiveness of political participation, the regulation of participation, the openness and competitiveness of executive recruitment, and constraints on the chief executive." [38] Together, these variables represent seven dimensions of governance, defined as: [39]

- **Rule of Law (GOV1)** – measuring the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence;
- **Voice and Accountability (GOV2)** – measuring the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media;
- **Political Stability and Absence of Violence (GOV3)** – measuring perceptions of the likelihood that the government will not be destabilized or overthrown by unconstitutional or violent means, including domestic violence and terrorism;
- **Government Effectiveness (GOV4)** – measuring the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies;
- **Control of Corruption** (**GOV5)** – measuring the extent to which public power is not exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests;

[38] Polity IV Project. "Polity IV Dataset: Political Regime Characteristics and Transitions, 1800–1999" (2005).
[39] Definitions taken from Kaufmann et al. , "Governance Matters VI: Aggregate and Individual Governance Indicators 1996 – 2006." *The World Bank* (2007).

- **Regulatory Quality (GOV6)** – measuring the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development; and
- **Anti-Autocracy (GOV7)** – measuring the extent to which a country refrains from autocratic governance. This measure is made up of five components: competitiveness of executive recruitment, openness of executive recruitment, constraints on chief executive, regulation of participation, and competitiveness of political participation

These disaggregated governance variables effectively capture several distinct aspects of fair governance that I wish to analyze in my study.

The sources of the World Bank data consist of surveys of firms and individuals, assessments of commercial risk rating agencies, NGO's, multilateral aid agencies, and other public sector organizations. [40] The original WGI variables fall on a -2.5 to 2.5 scale, normally distributed around 0, which I transformed to fit a 0 to 1 scale using the following calculation:

$$GOV = \frac{WGI + 2.5}{5}$$

The variables themselves were constructed following the unobserved components model. This model holds that each source provides an imperfect signal of a deeper nuance of governance that is harder to observe directly. By aggregating these sources into the six indicators, the six numbers are "more informative about unobserved governance than any individual data source."[41]

[40] Kaufmann et al. "Governance Matters VI: Aggregate and Individual Governance Indicators 1996 – 2006." *The World Bank* (2007).
[41] Kaufmann et al. (2007).

The actual procedure includes rescaling each source so that they are comparable, then taking a weighted average of their findings, with the weights depending on the precision of each source.

The anti-autocracy variable (GOV7) was constructed from the Autocracy Index (AI) taken from the Polity IV Project. The variable was originally measured on an eleven-point scale (with 11 indicating the most autocratic of states), so in order to keep the measurements comparable to the other six governance variables; I rescaled GOV7 to fit a 0 to 1 scale, where a higher number indicates a more favorable anti-autocratic outcome, with the following calculation:

$$GOV7 = -1 * \left(\left(\frac{AI}{11} \right) - 1 \right)$$

Control Variables

In setting up my model, I controlled for several economic and geographic variables described below:

- **1999 Real GDP Per Capita (GDPPC)** (in thousands of U.S. dollars) – Taken from the Economist Intelligence Unit (EIU).
- **5 Year Real GDP Compound Annual Growth Rate % (GDPCAGR)** – Calculated from the World Bank World Development Indicators real GDP data.
- **Total External Debt to Real GDP 1999 % (DEBTGDP)** – Ratio calculated using EIU data, with any missing data filled with CIA World Factbook (CIA) data. If data for 1999 were not available, the closest possible year was used.
- **Landlocked (LL)** – Dummy variable taken from Jeffrey Sachs' paper, "Geography and Economic Development." A one indicates that a country is landlocked, while a zero indicates that it is not landlocked.

- **Tropics (TROPIC)** – Dummy variable taken from Jeffrey Sachs' paper, "Geography and Economic Development." A one indicates that the majority of a country's landmass is located between the Tropic of Cancer and the Tropic of Capricorn, while a zero indicates that the majority of a country's landmass lies outside this area.

Other Variables Considered:

I considered several other variables when running my regressions; however, many had to be removed as they were too highly correlated with other variables, in order to avoid issues of multicollinearity. These variables include:

- **Life Expectancy** (in years) – Taken from the World Bank's World Development Indicators, these figures reflect the average life expectancy in a given country. This variable was removed because of its high correlation with other explanatory variables.
- **Net Primary School Enrollment % 2005** – Taken from the World Bank's World Development Indicators, this statistic measures the number of children enrolled in primary school that belong to the age group that officially corresponds to primary schooling, expressed as a percentage of the total population in the same age group. This variable was removed because of its high correlation with other explanatory variables
- **2007 Literacy Rate %** – Taken from the Central Intelligence Agency's World Factbook, this variable measures the percent of the population over the age of 15 who can read and write. This variable was excluded due to high correlation with other variables.
- **OECD –** A dummy variable taken from Jeffrey Sachs' paper "Geography and Economic Development", where one indicates that a country is a member of the Organization for Economic Co-Operation and Development (OECD), and a zero indicates that a country is

not a member. This variable was excluded as it was redundant and had poor explanatory value.

- **Daily Newspaper Circulation per 1000 →** A variable taken from the World Press Encyclopedia with any missing information taken from the Editor and Publisher International Yearbook. This variable measured the circulation of daily newspapers per 1000 people in a given country. This variable was omitted due to questionable validity as well as high correlation with other variables.
- **TV Sets per 1000 →** A variable taken from the World Press Encyclopedia with any missing information taken from the United Nations Statistics Division (UNSD). This variable measures the number of television sets per every 1000 people in a country. This variable was omitted due to high correlation with other variables.
- **Radio Receivers per 1000 →** A variable taken from the World Press Encyclopedia with and missing information taken from the United Nations Statistics Division (UNSD). This variable measures the number of radio receivers per every 1000 people in a country. This variable was omitted due to high correlation with other variables.
- **Computers per 1000 →** A variable taken from the World Press Encyclopedia with and missing information taken from the United Nations Statistics Division (UNSD). This variable measures the number of computers per every 1000 people in a country. This variable was omitted due to high correlation with other variables.
- **Internet Access per 1000 →** A variable taken from the World Press Encyclopedia with and missing information taken from the United Nations Statistics Division (UNSD). This variable measures the number of people with Internet access per 1000 people in a country. This variable was omitted due to high correlation with other variables.

Analysis of Variables Used in the Regressions

Table 1 shows the sample statistics for the variables used in my regressions. It is interesting to note that while State Ownership of Television has a high mean of 0.63 compared to 0.29 for State Ownership of Newspapers, the mode for State Ownership of TV is a 1, reflecting a high number of state monopolies on television broadcasting globally. Looking at the GDPPC variable, we can see that the countries in this study range from the very rich to the very poor (a GDP per capita of $33,215 versus $559 in 1999).

Table 2 shows the correlations between all of the variables used in the study. Without controlling for other factors, it is evident that both SONP and SOTV have a strong negative correlation with five of the seven measures of governance. The interesting exceptions to this are how both SONP and SOTV have weaker negative correlations with Political Stability (-0.45 and -0.19 respectively) and have weaker negative correlations with Anti-Autocracy (-0.64 and -0.56 respectively). Furthermore, five of the seven governance measures are all highly correlated with one another, while Political Stability and Anti-Autocracy remain far less correlated with the rest. Looking at Appendix 4, we can see that the Rule of Law, Voice and Accountability, Government Effectiveness, Regulatory Quality, and Control of Corruption are all based on information provided from a balanced and diverse set of sources. Political Stability, in comparison, is mostly crafted from responses by businesses and other private sector sources. This overweighting of one constituency may create perceptions of political stability or instability, which are heavily skewed and may not reflect the other five World Bank governance variables. However, it could be argued that a country could score poorly on issues such as Rule of Law, Voice and Accountability, Government Effectiveness, Regulatory Quality, and Control of Corruption and still be very stable politically, perhaps under a dictatorship or more totalitarian state where the

chance of any political upheaval would be minimal. As a result of these issues with the Political Stability (GOV3) variable, the results of the regressions should be interpreted with caution.

Anti-Autocracy, too, does not have a strong correlation with any of the six World Bank governance variables, though there is a positive relationship between Anti-Autocracy and all of the governance measures. It might be expected that an autocratic regime would score poorly on quality of governance; however, it could be that an autocratic government can maintain rule of law, control corruption, maintain a stable political regime, and so on, which would contribute to the weaker correlations in Table 2.

Table 1:
Table of Sample Statistics

	SONP	SOTV	GOV1	GOV2	GOV3	GOV4	GOV5	GOV6	GOV7	GDPPC	DEBTGDP	GDPCAGR	TROPIC	LL
Mean	0.2853	0.6328	0.5218	0.5075	0.5130	0.5425	0.5286	0.5357	0.8314	10.0625	0.5678	2.9681	0.3438	0.2396
Standard Error	0.0410	0.0347	0.0206	0.0209	0.0326	0.0212	0.0223	0.0203	0.0264	0.9766	0.0414	0.2028	0.0487	0.0438
Median	0.0000	0.6450	0.4900	0.5000	0.5030	0.4970	0.4510	0.5200	1.0000	5.9396	0.5079	3.1361	0.0000	0.0000
Mode	0	1	0.284	0.776	0.74	0.38	0.32	0.464	1	-	0	-	0	0
Standard Deviation	0.4013	0.3404	0.2021	0.2051	0.3197	0.2073	0.2186	0.1991	0.2591	9.5689	0.4055	1.9870	0.4775	0.4291
Sample Variance	0.1610	0.1159	0.0408	0.0421	0.1022	0.0430	0.0478	0.0397	0.0672	91.5630	0.1644	3.9481	0.2280	0.1841
Minimum	0	0	0.178	0.09	0.022	0.218	0.202	0.092	0.0909	0.5591	0	-2.3825	0	0
Maximum	1	1	0.89	0.834	0.796	0.956	0.968	0.906	1.000	33.2154	1.8712	8.3443	1	1
Count	96	96	96	96	96	96	96	96	96	96	96	96	96	96

Table 2:
Variable Correlation Matrix

	SONP	SOTV	GOV1	GOV2	GOV3	GOV4	GOV5	GOV6	GOV7	GDPPC	DEBTGDP	GDPCAGR	TROPIC	LL
SONP	1													
SOTV	0.6218	1												
GOV1	-0.5790	-0.2570	1											
GOV2	-0.7095	-0.4745	0.8688	1										
GOV3	-0.4565	-0.1944	0.8620	0.7938	1									
GOV4	-0.6303	-0.3168	0.9637	0.8668	0.8255	1								
GOV5	-0.5552	-0.2193	0.9721	0.8266	0.8315	0.9646	1							
GOV6	-0.7065	-0.4121	0.9037	0.8784	0.7647	0.9275	0.8858	1						
GOV7	-0.6369	-0.5634	0.4172	0.7336	0.3080	0.4431	0.3631	0.5828	1					
GDPPC	-0.5444	-0.2606	0.9105	0.7731	0.7762	0.9101	0.9299	0.8077	0.3315	1				
DEBTGDP	0.3678	0.2855	-0.4549	-0.3749	-0.4012	-0.5024	-0.4745	-0.3990	-0.0817	-0.5063	1			
GDPCAGR	-0.1400	-0.0919	0.2721	0.2742	0.3318	0.3349	0.2713	0.2628	0.0422	0.2530	-0.2801	1		
TROPIC	0.3310	0.0872	-0.5131	-0.4040	-0.4974	-0.4761	-0.4834	-0.3492	-0.0140	-0.5071	0.4661	-0.4630	1	
LL	0.3380	0.2389	-0.3089	-0.2630	-0.2008	-0.3222	-0.3002	-0.3523	-0.2182	-0.2855	0.3027	0.0676	0.1076	1

V - Study Design

For my study, I employed a simultaneous equation system of two non-linear logistic equations as shown below:

$$GOV = \frac{e^{b_0 + b_1 DEBTGDP + b_2 GDPCAGR + b_3 LL + b_4 SOM + b_5 TROPIC}}{1 + e^{b_0 + b_1 DEBTGDP + b_2 GDPCAGR + b_3 LL + b_4 SOM + b_5 TROPIC}} \quad [1]$$

$$SOM = \frac{e^{b_0 + b_1 GDPCAGR + b_2 GDPPC + b_3 GOV}}{1 + e^{b_0 + b_1 GDPCAGR + b_2 GDPPC + b_3 GOV}} \quad [2]$$

Where: SOM: State Ownership of the Media {SONP, SOTV}
GOV: Governance Data {GOV1, GOV2, GOV3, GOV4, GOV5, GOV6, GOV7}

I used a simultaneous system to reflect the belief that while state ownership of the media may be a determinant of governance, poorer governance itself may be a determinant of state ownership of the media. Since the experimental variables in both equations were bounded between zero and one with many instances of both zero and one, I used the non-linear logistic regression format to estimate their relationships, since ordinary least square (OLS) regressions are flawed in these circumstances.

Specific Procedure

I began by running linear regressions relating the variables, in order to find the starting coefficient values for the individual non-linear regressions above:

$$GOV = b_0 + b_1 DEBTGDP + b_2 GDPCAGR + b_3 LL + b_4 SOM + b_5 TROPIC \quad [3]$$

$$SOM = b_0 + b_1 GDPCAGR + b_2 GDPPC + b_3 GOV \quad [4]$$

Where: SOM: State Ownership of the Media {SONP, SOTV}
GOV: Governance Data {GOV1, GOV2, GOV3, GOV4, GOV5, GOV6, GOV7}

I stored the coefficients of these 28 regressions [42] as different vectors, and proceeded to run 28 non-linear logistic regressions, as shown below:

$$GOV_1 = \frac{e^{b_0 + b_1 DEBTGDP + b_2 GDPCAGR + b_3 LL + b_4 SOM + b_5 TROPIC}}{1 + e^{b_0 + b_1 DEBTGDP + b_2 GDPCAGR + b_3 LL + b_4 SOM + b_5 TROPIC}} \quad [5]$$

$$SOM_1 = \frac{e^{b_0 + b_1 GDPCAGR + b_2 GDPPC + b_3 GOV}}{1 + e^{b_0 + b_1 GDPCAGR + b_2 GDPPC + b_3 GOV}} \quad [6]$$

Where: SOM: State Ownership of the Media {SONP, SOTV}
GOV: Governance Data {GOV1, GOV2, GOV3, GOV4, GOV5, GOV6, GOV7}

The "1" subscripts in regressions 5 and 6 above serve only to reflect that they are not the final non-linear regressions. These regressions provided some insight into the relationship

[42] Note that for each of the seven regressions where GOV is the dependent variable, there are two alternative versions of the SOM variable; and similarly for the two regressions where SOM is the dependent variable, there are seven alternative versions of the GOV variable.

between state ownership of the press and quality of governance and vice versa; however, due to my hypothesis of circular causality with regards to these two variables, I proceeded to a simultaneous equation procedure.

Simultaneous Equation Regressions

After observing the relationships in regressions 5 and 6, I ran a simultaneous equation system in order to determine equations 1 and 2. I began by running the following linear regressions:

$$GOV = b_0 + b_1 DEBTGDP + b_2 GDPCAGR + b_3 LL + b_4 TROPIC + b_5 GDPPC \qquad [7]$$

$$SOM = b_0 + b_1 DEBTGDP + b_2 GDPCAGR + b_3 LL + b_4 TROPIC + b_5 GDPPC \qquad [8]$$

Where: SOM: State Ownership of the Media {SONP, SOTV}
GOV: Governance Data {GOV1, GOV2, GOV3, GOV4, GOV5, GOV6, GOV7}

From regression equations 7 and 8, I entered the fitted values $GOV^{\Diamond}$ and $SOM^{\Diamond}$ of the quality of governance variables as well as the state ownership of media variables. I then placed these fitted values back into the original non-linear logistic regression as follows to generate the final regression equations:

$$GOV = \frac{e^{b_0 + b_1 DEBTGDP + b_2 GDPCAGR + b_3 LL + b_4 SOM^{\Diamond} + b_5 TROPIC}}{1 + e^{b_0 + b_1 DEBTGDP + b_2 GDPCAGR + b_3 LL + b_4 SOM^{\Diamond} + b_5 TROPIC}} \qquad [9]$$

$$SOM = \frac{e^{b_0 + b_1 GDPCAGR + b_2 GDPPC + b_3 GOV^{\Diamond}}}{1 + e^{b_0 + b_1 GDPCAGR + b_2 GDPPC + b_3 GOV^{\Diamond}}} \quad [10]$$

Where: SOM: State Ownership of the Media {SONP, SOTV}
GOV: Governance Data {GOV1, GOV2, GOV3, GOV4, GOV5, GOV6, GOV7}
$SOM^{\Diamond}$: Fitted State Ownership of the Media {$SONP^{\Diamond}$, $SOTV^{\Diamond}$}
$GOV^{\Diamond}$: Fitted Governance Data {$GOV1^{\Diamond}$, $GOV2^{\Diamond}$, $GOV3^{\Diamond}$, $GOV4^{\Diamond}$, $GOV5^{\Diamond}$, $GOV6^{\Diamond}$, $GOV7^{\Diamond}$}

Notes on Methodology and Variable Choices

When studying quality of governance, two seemingly clear control variables to consider would be GDP per capita (GDPPC) or life expectancy (LIFE). Likewise, when studying state ownership of the media, a similarly clear control variable to consider would be the primary school enrollment rate (PRIMARY) as a proxy for the relative level of education in a country.

The following regression outputs reflect the results that my study would have produced if GDP per capita (GDPPC) and primary school enrollment rate (PRIMARY) were included as control variables. In these regressions, life expectancy (LIFE) is excluded as it too highly correlated with GDP per capita. The results of these regressions are shown in tables 3 through 5 below.

Table 3: Governance Measures Regressed on State Ownership of Newspapers and Controls (Including GDP per Capita)

Governance Measures Regressed on State Ownership of Newspapers and Controls (Including GDPPC)

	GOV1	GOV2	GOV3	GOV4	GOV5	GOV6	GOV7
CONSTANT	0.7045 (-2.900)**	-0.7391 (-1.953)$^{+}$	-2.7050 (-3.115)**	-0.5850 (-2.425)*	-1.0220 (-4.230)***	-0.6637 (-2.055)*	-2.0370 (-1.587)
DEBTGDP	0.1077 (0.848)	0.1162 (0.597)	0.0703 (0.163)	-0.0350 (-0.277)	-0.0160 (-0.124)	0.0767 (0.456)	0.7164 (1.258)
GDPCAGR	0.0156 (0.711)	0.0486 (1.420)	0.1078 (1.388)	0.0609 (2.788)**	0.0224 (1.016)	0.0556 (1.876)$^{+}$	0.0143 (0.159)
GDPPC	0.0824 (6.975)***	0.0669 (3.737)***	0.1385 (3.513)***	0.0783 (6.555)***	0.1060 (8.767)***	0.0711 (4.560)***	0.2763 (2.900)**
LL	-0.1155 (-0.849)	-0.0826 (-0.391)	-0.3841 (-0.829)	-0.0741 (-0.553)	-0.1691 (-1.243)	-0.2342 (-1.297)	-1.5250 (-2.365)*
SONP	-0.1279 (-0.232)	-0.3253 (-0.380)	3.9340 (2.101)*	-0.5611 (-1.030)	0.4231 (0.781)	-0.3649 (-0.501)	4.8670 (1.682)$^{+}$
TROPIC	-0.0954 (-0.908)	0.0842 (0.510)	-0.0497 (-0.134)	0.1447 (1.374)	0.0062 (0.059)	0.2635 (1.834)$^{+}$	0.6278 (1.262)

Significance: *** 0.001 ** 0.01 * 0.05 $^{+}$ 0.1

Table 3 shows that by including GDP per capita (GDPPC) as a control variable when regressing governance measures on state ownership of newspapers; none of the other variables, including state ownership of newspapers (SONP) have any statistical significance.

Table 4: Governance Measures Regressed on State Ownership of Television and Controls (Including GDP per Capita)

Governance Measures Regressed on State Ownership of Television and Controls (Including GDPPC)

	GOV1	GOV2	GOV3	GOV4	GOV5	GOV6	GOV7
CONSTANT	-0.6863 (-2.205)*	-0.6927 (-1.4129)	-3.2670 (-2.970)**	-0.5049 (-1.635)	-1.0820 (-3.509)***	-0.6117 (-1.481)	2.7320 (1.651)
DEBTGDP	0.1165 (0.812)	0.1388 (0.630)	-0.2029 (-0.421)	0.0040 (0.028)	-0.0454 (-0.312)	0.1020 (0.536)	-0.3784 (-0.591)
GDPCAGR	0.0143 (0.635)	0.0453 (1.289)	0.1468 (1.817)$^{+}$	0.0554 (2.462)*	0.0266 (1.172)	0.0520 (1.708)$^{+}$	-0.0626 (-0.663)
GDPPC	0.0841 (12.372)***	0.0711 (7.194)***	0.0874 (4.051)***	0.0856 (12.096)***	0.1005 (13.763)***	0.0758 (8.483)***	-0.2131 (-2.765)**
LL	-0.1262 (-1.159)	-0.1098 (-0.650)	-0.0556 (-0.151)	-0.1209 (-1.127)	-0.1338 (-1.226)	-0.2647 (1.828)$^{+}$	1.1180 (2.315)*
SOTV	-0.1015 (-0.232)	-0.2581 (-0.380)	3.1220 (2.101)*	-0.4452 (-1.030)	0.3357 (0.781)	-0.2895 (-0.501)	-3.8620 (-1.682)$^{+}$
TROPIC	-0.1127 (-0.997)	0.0402 (0.227)	0.4830 (1.250)	0.0688 (0.603)	0.0635 (0.558)	0.2141 (1.396)	-1.2870 (-2.196)*

Significance: *** 0.001 ** 0.01 * 0.05 $^{+}$ 0.1

Table 4 shows that by including GDP per capita (GDPPC) as a control variable when regressing governance measures on state ownership of television; none of the other variables, including state ownership of television (SOTV) have any statistical significance.

Table 5: State Ownership of the Media Regressed on Governance Measures and Controls (Including Primary School Enrollment)

State Ownership of Media Regressed on Governance Measures and Controls (Including Primary School Enrollment)

	SONP	SOTV
CONSTANT	4.0530	3.1478
	(1.199)	(0.986)
GDPCAGR	0.1004	0.0160
	(1.044)	(0.186)
GDPPC	-0.0881	-0.1586
	(-0.357)	(-0.845)
GOV1	-6.8970	7.8186
	(-0.594)	(0.773)
PRIMARY	-1.8010	-5.7129
	(-1.008)	(-2.197)*

	SONP	SOTV
CONSTANT	4.7860	6.7640
	(1.401)	(1.927)$^{+}$
GDPCAGR	0.1439	0.0979
	(1.224)	(0.833)
GDPPC	-0.0796	0.0877
	(-0.419)	(0.525)
GOV2	-9.0480	-6.5060
	(-0.838)	(-0.614)
PRIMARY	-1.7770	-4.5370
	(-1.038)	(-1.857)$^{+}$

	SONP	SOTV
CONSTANT	-6.9071	-4.6210
	(-1.170)	(-0.819)
GDPCAGR	-0.2407	-0.2653
	(-1.124)	(-1.380)
GDPPC	-0.3651	-0.1840
	(-3.078)**	(-1.890)$^{+}$
GOV3	9.8165	10.4100
	(1.565)	(1.796)$^{+}$
PRIMARY	5.1902	2.8710
	(1.053)	(0.587)

	SONP	SOTV
CONSTANT	5.4190	10.3200
	(2.079)*	(3.425)***
GDPCAGR	0.2070	0.3080
	(1.650)	(2.348)*
GDPPC	0.0506	0.4227
	(0.259)	(2.414)*
GOV4	-14.7500	-24.0300
	(-1.506)	(-2.501)*
PRIMARY	-0.3052	-2.0120
	(-0.152)	(-0.787)

	SONP	SOTV
CONSTANT	9.2640	9.0510
	(1.627)	(1.623)
GDPCAGR	0.1682	0.1042
	(1.515)	(0.949)
GDPPC	0.2569	0.2604
	(0.678)	(0.748)
GOV5	-22.0000	-13.0700
	(-1.297)	(-0.790)
PRIMARY	-2.6990	-5.0270
	(-1.541)	(-2.141)*

	SONP	SOTV
CONSTANT	4.0919	8.2490
	(1.934)$^{+}$	(3.145)**
GDPCAGR	0.0975	0.1184
	(1.094)	(1.331)
GDPPC	-0.1294	0.1431
	(-1.197)	(1.809)$^{+}$
GOV6	-5.8430	-9.9220
	(-1.220)	(-2.036)*
PRIMARY	-1.9212	-4.5860
	(-1.151)	(-1.979)$^{+}$

	SONP	SOTV
CONSTANT	4.4247	8.6540
	(1.578)	(2.778)**
GDPCAGR	0.0558	0.0356
	(0.625)	(0.433)
GDPPC	-0.2024	0.0261
	(-2.499)*	(0.838)
GOV7	-2.5609	-4.2290
	(-0.926)	(-1.560)
PRIMARY	-2.4864	-5.4960
	(-1.451)	(-2.341)*

Significance: *** 0.001 ** 0.01 * 0.05 $^{+}$ 0.1

Table 5 shows that by including primary school enrollment (PRIMARY) as a control variable when regressing state ownership of media on governance measures, only GDP per capita and primary enrollment have occasional significant at the 90 or 95 percent confidence level. None of the other variables, including state ownership of newspapers (SONP) or state ownership of television (SOTV) have any statistical significance.

As a result, in my final regressions, I chose to exclude all three of these variables, for the following reasons:

By removing GDP per capita and life expectancy from the regressions that determined quality of governance, I set up a study that would examine some of the more nuanced factors that both GDP per capita and life expectancy reflect and incorporate, without the "glare" present from actually including these variables. Similarly, by removing primary school enrollment from the regressions that determined state ownership of the media, I hoped to examine how governance and economic measures alone affect state ownership of the press without the interference present from including primary school enrollment.

In essence, these regressions purposefully exclude the much more powerful variables mentioned above, in order to look at some of the smaller underlying determinants of governance and state ownership of the media.

VI - Results and Findings

Quality of Governance as a Function of State Ownership of Newspapers

Overall, I found that there was a strong negative relationship between state ownership of newspapers and quality of governance, as outlined for the specific variable combinations in

Table 6. According to the regressions, state ownership of newspapers is strongly negatively (and statistically significantly) related to six of the seven measures of governance. However, the regression models relating Rule of Law (GOV1), Voice and Accountability (GOV2), Government Effectiveness (GOV4), Control of Corruption (GOV5), and Regulatory Quality (GOV6) to the control variables are far more robust as demonstrated by the significances of their individual variables. The weaker relationship between Political Stability (GOV3) and the control variables, as explained before, may be due to the sources of the political stability variable. The model shows that SONP has a strong negative relationship with higher levels of anti-autocracy (GOV7), as shown by the magnitude of the coefficient; however this is not as statistically significant as the other results.

Another interesting observation was that the model related both a country's being landlocked and a country's being located in the tropics as being slightly positively related to quality of governance, which seems counterintuitive as Sachs showed in his paper, "Geography and Economic Development," that "nearly all countries in the geographic tropics are poor." [43] Similarly, landlocked countries have less access to shipping lanes and "the cost of freight and insurance for landlocked developing countries [is], on average, 50% higher than for coastal countries," [44] putting increased strain on their economies. As a result, we would expect both TROPIC and LL to be negatively related to the governance measures.

[43] Sachs et al. "Geography and Economic Development." *International Regional Science Review* 22 (1999): 179 – 232.

[44] Radelet et al. "Shipping Costs, Manufactured Exports, and Economic Growth." *Harvard Institute for International Development.* (1998).

Table 6: Governance Measures Regressed on State Ownership of Newspapers and Controls

Governance Measures Regressed on State Ownership of Newspapers and Controls

	GOV1	GOV2	GOV3	GOV4	GOV5	GOV6	GOV7
CONSTANT	0.9837 (8.403)***	0.6324 (3.632)***	0.1067 (0.279)	1.0282 (8.562)***	1.1398 (9.33)***	0.7967 (5.171)***	2.9124 (3.060)**
DEBTGDP	0.4015 (3.153)**	0.3519 (1.803)$^{+}$	0.5733 (1.307)	0.2385 (1.880)$^{+}$	0.3694 (2.870)**	0.3273 (1.942)$^{+}$	1.2810 (2.042)*
GDPCAGR	0.0189 (0.866)	0.0514 (1.507)	0.1103 (1.433)	0.0642 (2.930)**	0.0265 (1.208)	0.0583 (1.975)$^{+}$	0.0307 (0.341)
LL	0.7081 (5.739)***	0.5883 (3.156)**	1.0331 (2.480)*	0.7138 (5.716)***	0.8833 (6.932)***	0.4791 (2.954)**	0.8826 (1.166)
SONP	-4.7622 (-13.917)***	-4.0889 (-8.267)***	-3.7805 (-3.509)***	-4.9866 (-13.793)***	-5.5129 (-14.897)***	-4.3702 (-9.683)***	-8.1542 (-2.545)*
TROPIC	0.1664 (1.529)	0.2989 (1.752)$^{+}$	0.4134 (1.083)	0.3990 (3.588)***	0.3351 (3.018)**	0.4911 (3.284)**	1.3086 (2.336)*

Significance: *** 0.001 ** 0.01 * 0.05 $^{+}$ 0.1

Quality of Governance as a Function of State Ownership of Television

Overall, I found that there was a strong negative relationship between State ownership of television and quality of governance, as outlined for the specific variable combinations in Table 7. According to the regressions, state ownership of television is strongly negatively (and statistically significantly) related to all six measures of governance. However, the regression models relating Rule of Law (GOV1), Voice and Accountability (GOV2), Government Effectiveness (GOV4), Control of Corruption (GOV5), and Regulatory Quality (GOV6) to SOTV are far more robust as demonstrated by the significances of their individual variables. The relationship between Political Stability (GOV3) and the control variables, as explained before, may be due to the sources of the political stability variable. Furthermore, the model shows that SOTV has a strong negative relationship with higher levels of anti-autocracy (GOV7), as shown by the magnitude of the coefficient; however this is not as statistically significant as the other results.

Again, this model related both a country's being landlocked and being located in the tropics as being positively related to quality of governance, which remains counterintuitive.

Table 7: Governance Measures Regressed on State Ownership of Television and Controls

Governance Measures Regressed on State Ownership of Television and Controls

	GOV1	GOV2	GOV3	GOV4	GOV5	GOV6	GOV7
CONSTANT	8.1833 (14.303)***	6.8141 (8.351)***	5.8222 (3.333)**	8.5671 (14.105)***	9.4743 (15.210)***	7.4036 (9.867)***	15.2402 (2.683)**
DEBTGDP	2.4456 (10.643)***	2.1070 (6.176)***	2.1960 (2.880)**	2.3789 (10.176)***	2.7356 (11.404)***	2.2031 (7.298)***	4.7809 (2.745)**
GDPCAGR	-0.1467 (-5.908)***	-0.0908 (-2.401)*	-0.0212 (-0.253)	-0.1092 (-4.405)***	-0.1652 (-6.539)***	-0.0936 (-2.840)**	-0.2528 (-1.815)$^{+}$
LL	1.5196 (9.104)***	1.2851 (5.190)***	1.6774 (3.034)**	1.5635 (9.095)***	1.8227 (10.360)***	1.2238 (5.598)***	2.2722 (1.802)$^{+}$
SOTV	-13.9844 (-13.917)***	-12.0072 (-8.267)***	-11.1017 (-3.509)***	-14.6435 (-13.793)***	-16.1888 (-14.897)***	-12.8333 (-9.683)***	-23.9453 (-2.545)*
TROPIC	-1.4969 (-12.600)***	-1.1292 (-6.409)***	-0.9070 (-2.329)*	-1.3427 (-11.220)***	-1.5903 (-12.933)***	-1.0352 (-6.686)***	-1.5394 (-1.684)$^{+}$

Significance: *** 0.001 ** 0.01 * 0.05 $^{+}$ 0.1

State Ownership of the Media as a Function of Governance

Compared to the robustness of governance measures regressed against state ownership of the media, I found that there was a weak relationship when looking at state ownership of the media as a function of governance, which can be seen in the specific variable combinations in Table 8.

None of the regressions proved statistically significant; however, there were some interesting patterns. Government Effectiveness (GOV4) was significantly negatively related to state ownership of both newspapers and television. This implies that a more effective government would be less likely to own the media. To a lesser degree, Rule of Law (GOV1), Voice and Accountability (GOV2), Control of Corruption (GOV5), and Regulatory Quality (GOV6) are also negatively related to state ownership of the media. This would imply that a country with more order, more freedom of expression, less corruption, and effective regulatory frameworks would be less likely to have a state-owned media system. The most interesting observation here, however, is that the relationship between Political Stability (GOV3) and state ownership of the media is positive. Part of this could, again, be due to the sources and

construction of the Political Stability variable. State ownership of newspapers and television is also not a strong determinant of anti-autocratic features (GOV7). This can be attributed to the large presence of state-owned television stations in unautocratic Western Europe.

The results of these regressions must be acknowledged as weak, however, given the lack of statistical significance. These interpretations aim solely to explain the patterns of the outcomes.

Table 8: State Ownership of Media Regressed on Governance Measures and Controls

State Ownership of Media Regressed on Governance Measures and Controls

	SONP	SOTV
CONSTANT	3.0552 (0.931)	1.2530 (0.429)
GDPCAGR	0.0929 (0.965)	-0.0201 (-0.224)
GDPPC	-0.1140 (-0.482)	-0.0206 (-0.119)
GOV1	-7.9488 (-0.756)	-0.8289 (-0.091)

	SONP	SOTV
CONSTANT	3.5342 (1.027)	2.8055 (0.853)
GDPCAGR	0.1339 (1.117)	0.0277 (0.230)
GDPPC	-0.1249 (-0.641)	0.0552 (0.336)
GOV2	-9.2303 (-0.864)	-5.6922 (-0.558)

	SONP	SOTV
CONSTANT	-1.4900 (-1.085)	-0.6465 (-0.577)
GDPCAGR	-0.0868 (-0.725)	-0.1240 (-1.144)
GDPPC	-0.3096 (-3.980)***	-0.0951 (-2.094)*
GOV3	5.9950 (1.571)	4.9320 (1.441)

	SONP	SOTV
CONSTANT	5.6870 (1.897)$^{+}$	7.9030 (2.496)*
GDPCAGR	0.2236 (1.703)$^{+}$	0.2504 (1.748)$^{+}$
GDPPC	0.0499 (0.249)	0.3785 (2.055)*
GOV4	-16.1400 (-1.718)$^{+}$	-21.8800 (-2.239)*

	SONP	SOTV
CONSTANT	7.856 (1.464)	7.142 (1.349)
GDPCAGR	0.1501 (1.388)	0.0698 (0.629)
GDPPC	0.249 (0.635)	0.3878 (1.075)
GOV5	-24.040 (-1.363)	-20.2200 (-1.173)

	SONP	SOTV
CONSTANT	2.6704297 (1.531)	3.758 (2.183)*
GDPCAGR	0.0839622 (0.952)	0.0374 (0.420)
GDPPC	-0.1781 (-1.610)	0.0921 (1.194)
GOV6	-5.8515612 (-1.225)	-7.896 (-1.676)$^{+}$

	SONP	SOTV
CONSTANT	2.0770 (0.985)	2.7720 (-0.587)
GDPCAGR	0.0420 (0.472)	-0.0342 (-0.413)
GDPPC	-0.2668 (3.275)**	-0.0146 (-0.524)
GOV7	-1.914 (-0.714)	-2.3690 (-0.919)

Significance: *** 0.001 ** 0.01 * 0.05 $^{+}$ 0.1

VII – Conclusions and Implications

In this paper, I examine the relationship between state ownership of the media and quality of governance. Comparing state television and newspaper ownership data from 96 countries with the World Bank's World Governance Indicators as well as Polity IV Project's Autocracy Index, I find that the state owning either press or broadcast media is significantly associated with a country's being poorly governed.

My analysis shows that for any given country where the state owns its newspapers, significantly lower rule of law, restrictions on free speech, government inefficiency, more corruption, and poorer regulations commonly exist. Similarly, for any given country where the state owns its television stations, lower rule of law, restrictions on free speech, government inefficiency, increased corruption, and poorer regulations also commonly exist.

While these findings are important, I also considered the possibility that quality of governance itself might be a determinant of state ownership of the media. Through the simultaneous equation regressions run, I found that controlling for economic factors, quality of governance is not significantly associated with state ownership of the media.

These outcomes show that after accounting for the potential circular effect of governance, a country's relative quality of governance doesn't necessarily determine whether or not its media is state-owned. However, if a country does have a state-owned media, it is highly likely that it is poorly governed.

My findings have many of the same implications as those of Djankov et al., whose study found negative relationships between state ownership of the media and economic, press freedom, and health outcome variables. The results of my study clearly support the "public choice" theory of media ownership. Where government owns the media, governance outcomes are significantly

more negative – an observation that would not occur if government ownership maximized the benefit for all citizens, as the "public interest" theory of the media holds.

In terms of government media policy, the frequent occurrence that a country with a state-owned media has poorer levels of governance, as shown in my paper, should be evidence enough to reconsider any decision to limit media freedom and expand state ownership of the industry. Naturally, a laissez faire system is far from ideal for the media industry given that broadcast spectrum on which TV and radio transmit signals is a scarce commodity. Fair government regulation of the media and ensuring fair competition are important and necessary; however, outright ownership of the press by the government should be avoided if better governance is desired.

Furthermore, the data and analysis in this paper also indicate that a government dealing with unrest or instability would not benefit greatly by capturing the media. This may reduce visible discord or dissent; however, the data indicate that such an attempt to limit or filter the stream of news and information to the public will ultimately fail to result in better governance outcomes, which in turn may spur even greater unrest. Part of my hypothesis stated that government ownership of media would not correspond with higher quality governance due partly to the growth of transnational media firms, as well as due to the advancement of personal mobile technology and user generated content. This seems to be reflected in the results; however, I suspect that conducting this study with data from prior decades, if available, would result in significantly different findings.

Freedom of the press from government control is far from a new concept and has been advocated for quite some time. My paper shows that a country with a press that is freer of government ownership is more likely to be better governed – an argument in support of those

who espouse a freer media system. Our world today is a reflection of the drastic progress made in the last half century: technologically and economically, as well as socially. The media has expanded with this progress, and has played a pivotal role in ensuring the efficient and timely distribution of news and information. As the availability and sophistication of media technology continue to expand, the trends of media globalization and the expansion of transnational media firms and brands into the neighborhoods of foreign countries will only accelerate.

In this rapidly changing environment, government ownership of the media in increasingly perceived as a hindrance to the world than a benefit. The stifling of free expression, the absence of political debate, and the related lack of government accountability that is often present when the government owns the media is reflected in the in the large number of poorly governed, unstable regimes with state-owned media systems. State ownership of the media in the 21st century likely serves to perpetuate poor governance, potentially fueling the inferno of instability instead of extinguishing it.

Appendix 1: State Media Ownership Data [45]

Country	State Ownership of Newspapers by Share	State Ownership of TV by Share
Algeria	0.57	1.00
Angola	1.00	1.00
Argentina	0.00	0.04
Armenia	0.27	0.53
Australia	0.00	0.17
Austria	0.00	0.78
Azerbaijan	0.10	0.31
Bahrain	0.00	1.00
Belarus	1.00	1.00
Belgium	0.00	0.41
Benin	0.31	0.71
Brazil	0.00	0.00
Bulgaria	0.00	0.75
Burundi	1.00	1.00
Cameroon	1.00	1.00
Canada	0.00	0.34
Chad	1.00	1.00
Chile	0.00	0.30
China	1.00	1.00
Colombia	0.00	0.27
Cote d'Ivoire	0.64	1.00
Croatia	0.26	0.97
Cyprus	0.00	0.23
Czech Republic	0.00	0.34
Denmark	0.00	0.80
Egypt, Arab Rep.	0.94	1.00
Estonia	0.00	0.29
Ethiopia	1.00	1.00
Finland	0.00	0.48
France	0.00	0.43
Gabon	1.00	1.00
Georgia	0.06	0.66
Germany	0.00	0.61
Ghana	1.00	0.55
Greece	0.00	0.08
Hungary	0.00	0.20
India	0.00	0.88
Indonesia	0.00	0.23
Iran, Islamic Rep.	1.00	1.00
Ireland	0.00	0.68
Israel	0.00	0.36
Italy	0.00	0.61
Japan	0.00	0.39
Jordan	0.83	1.00
Kazakhstan	1.00	1.00
Kenya	0.00	0.45
Korea, Rep.	0.00	0.77
Kuwait	0.00	1.00

Country	State Ownership of Newspapers by Share	State Ownership of TV by Share
Kyrgyz Republic	0.35	0.69
Lao PDR	1.00	1.00
Lithuania	0.00	0.23
Malawi	0.00	1.00
Malaysia	0.00	0.47
Mali	0.33	1.00
Mexico	0.00	0.00
Moldova	0.12	0.44
Morocco	0.41	1.00
Myanmar	1.00	1.00
Netherlands	0.00	0.57
New Zealand	0.00	0.71
Niger	1.00	1.00
Nigeria	0.00	0.25
Norway	0.00	0.47
Pakistan	0.00	1.00
Peru	0.00	0.00
Philippines	0.44	0.18
Poland	0.00	0.57
Portugal	0.00	0.38
Romania	0.00	0.37
Russian Federation	0.15	0.96
Saudi Arabia	0.51	1.00
Senegal	0.51	1.00
Singapore	0.00	1.00
Slovak Republic	0.00	0.35
Slovenia	0.00	0.54
South Africa	0.00	0.90
Spain	0.00	0.43
Sri Lanka	0.29	0.81
Sweden	0.00	0.51
Switzerland	0.00	0.89
Syrian Arab Republic	1.00	1.00
Taiwan	0.00	0.63
Tanzania	0.00	0.07
Thailand	0.00	0.60
Togo	1.00	1.00
Tunisia	0.23	1.00
Turkey	0.00	0.00
Turkmenistan	1.00	1.00
Uganda	0.58	0.61
Ukraine	0.15	0.14
United Kingdom	0.00	0.60
United States	0.00	0.00
Uzbekistan	1.00	0.73
Venezuela, RB	0.00	0.03
Zambia	0.74	1.00
Zimbabwe	0.60	1.00

[45] Data from Djankov et al., "Who Owns the Media?" *Journal of Law and Economics* XLVI (October 2003): 341-381.

Appendix 2: World Governance Data

Country	GOV1	GOV2	GOV3	GOV4	GOV5	GOV6	GOV7
Algeria	0.284	0.252	0.120	0.308	0.350	0.346	0.909
Angola	0.178	0.200	0.022	0.218	0.202	0.124	0.636
Argentina	0.492	0.560	0.510	0.512	0.424	0.568	1.000
Armenia	0.400	0.414	0.252	0.370	0.352	0.464	1.000
Australia	0.848	0.794	0.740	0.866	0.892	0.826	1.000
Austria	0.866	0.776	0.740	0.884	0.886	0.818	1.000
Azerbaijan	0.288	0.308	0.318	0.334	0.272	0.362	0.364
Bahrain	0.614	0.314	0.514	0.642	0.638	0.684	0.364
Belarus	0.298	0.230	0.472	0.320	0.384	0.092	0.364
Belgium	0.780	0.774	0.688	0.840	0.808	0.732	1.000
Benin	0.448	0.582	0.634	0.450	0.384	0.478	1.000
Brazil	0.444	0.558	0.522	0.506	0.518	0.582	1.000
Bulgaria	0.470	0.602	0.598	0.522	0.452	0.550	1.000
Burundi	0.210	0.174	0.056	0.220	0.274	0.268	0.818
Cameroon	0.262	0.276	0.392	0.352	0.282	0.410	0.545
Canada	0.846	0.822	0.710	0.882	0.904	0.798	1.000
Chad	0.318	0.310	0.226	0.380	0.326	0.336	0.727
Chile	0.742	0.660	0.624	0.740	0.778	0.778	1.000
China	0.412	0.224	0.480	0.494	0.428	0.444	0.364
Colombia	0.318	0.380	0.118	0.430	0.378	0.530	1.000
Cote d'Ivoire	0.302	0.236	0.328	0.344	0.396	0.420	0.455
Croatia	0.520	0.588	0.564	0.568	0.498	0.510	1.000
Cyprus	0.674	0.732	0.596	0.732	0.658	0.720	1.000
Czech Republic	0.636	0.664	0.618	0.654	0.552	0.636	1.000
Denmark	0.856	0.800	0.738	0.892	0.936	0.828	1.000
Egypt, Arab Rep.	0.492	0.324	0.430	0.452	0.426	0.444	0.455
Estonia	0.614	0.698	0.660	0.678	0.624	0.758	0.909
Ethiopia	0.338	0.296	0.252	0.306	0.404	0.266	0.818
Finland	0.878	0.816	0.796	0.902	0.968	0.876	1.000
France	0.770	0.724	0.668	0.820	0.800	0.690	1.000
Gabon	0.434	0.418	0.558	0.380	0.380	0.482	0.636
Georgia	0.284	0.452	0.208	0.388	0.320	0.406	1.000
Germany	0.838	0.772	0.740	0.882	0.900	0.808	1.000
Ghana	0.488	0.498	0.456	0.502	0.450	0.502	1.000
Greece	0.662	0.708	0.638	0.646	0.644	0.678	1.000
Hungary	0.662	0.750	0.652	0.688	0.638	0.688	1.000
India	0.538	0.556	0.368	0.472	0.434	0.474	1.000
Indonesia	0.336	0.418	0.148	0.400	0.298	0.434	1.000
Iran, Islamic Rep.	0.422	0.312	0.430	0.430	0.398	0.192	0.455
Ireland	0.818	0.778	0.762	0.856	0.818	0.856	1.000
Israel	0.698	0.632	0.352	0.712	0.696	0.728	1.000
Italy	0.672	0.710	0.644	0.672	0.696	0.672	1.000
Japan	0.786	0.678	0.714	0.710	0.748	0.648	1.000
Jordan	0.572	0.440	0.502	0.510	0.508	0.560	0.636
Kazakhstan	0.320	0.320	0.526	0.366	0.306	0.366	0.455
Kenya	0.304	0.338	0.280	0.368	0.306	0.436	1.000
Korea, Rep.	0.648	0.626	0.524	0.654	0.528	0.612	1.000
Kuwait	0.654	0.442	0.622	0.522	0.708	0.490	0.364
Kyrgyz Republic	0.324	0.264	0.404	0.402	0.322	0.434	0.636
Lao PDR	0.312	0.246	0.354	0.338	0.320	0.236	0.364
Lithuania	0.556	0.678	0.612	0.574	0.554	0.634	1.000
Malawi	0.392	0.472	0.388	0.428	0.410	0.452	0.909
Malaysia	0.570	0.436	0.540	0.662	0.578	0.580	0.909
Mali	0.406	0.536	0.538	0.342	0.374	0.464	1.000
Mexico	0.418	0.542	0.484	0.562	0.416	0.578	1.000
Moldova	0.380	0.510	0.456	0.380	0.354	0.416	1.000
Morocco	0.520	0.430	0.458	0.500	0.508	0.500	0.455
Myanmar	0.248	0.090	0.184	0.260	0.226	0.122	0.273
Netherlands	0.850	0.814	0.778	0.918	0.936	0.898	1.000
New Zealand	0.852	0.834	0.730	0.826	0.932	0.808	1.000
Niger	0.322	0.450	0.468	0.276	0.308	0.378	1.000
Nigeria	0.266	0.364	0.184	0.298	0.272	0.370	1.000
Norway	0.868	0.810	0.752	0.884	0.928	0.702	1.000
Pakistan	0.340	0.222	0.316	0.370	0.348	0.356	0.545
Peru	0.370	0.484	0.314	0.468	0.434	0.600	1.000
Philippines	0.392	0.544	0.346	0.462	0.400	0.532	1.000
Poland	0.618	0.722	0.586	0.618	0.596	0.630	1.000
Portugal	0.728	0.776	0.738	0.720	0.748	0.696	1.000
Romania	0.460	0.580	0.504	0.424	0.432	0.464	1.000
Russian Federation	0.292	0.396	0.356	0.378	0.312	0.340	1.000
Saudi Arabia	0.536	0.204	0.510	0.474	0.600	0.482	0.091
Senegal	0.482	0.502	0.396	0.492	0.444	0.488	1.000
Singapore	0.786	0.528	0.730	0.956	0.950	0.906	0.636
Slovak Republic	0.556	0.666	0.570	0.560	0.532	0.562	1.000
Slovenia	0.660	0.698	0.684	0.642	0.646	0.628	1.000
South Africa	0.524	0.660	0.422	0.628	0.614	0.594	1.000
Spain	0.772	0.750	0.650	0.850	0.786	0.766	1.000
Sri Lanka	0.500	0.438	0.184	0.440	0.464	0.538	0.909
Sweden	0.858	0.816	0.750	0.900	0.946	0.786	1.000
Switzerland	0.890	0.788	0.792	0.932	0.926	0.848	1.000
Syrian Arab Republic	0.436	0.188	0.370	0.304	0.378	0.276	0.364
Taiwan	0.672	0.646	0.612	0.682	0.658	0.714	1.000
Tanzania	0.408	0.416	0.408	0.416	0.286	0.456	0.909
Thailand	0.588	0.602	0.580	0.518	0.474	0.596	1.000
Togo	0.370	0.250	0.464	0.266	0.374	0.374	0.727
Tunisia	0.496	0.360	0.548	0.608	0.524	0.504	0.545
Turkey	0.488	0.398	0.300	0.488	0.462	0.544	0.909
Turkmenistan	0.274	0.166	0.498	0.240	0.294	0.096	0.182
Uganda	0.334	0.268	0.192	0.416	0.308	0.504	0.636
Ukraine	0.306	0.396	0.428	0.368	0.300	0.354	1.000
United Kingdom	0.844	0.762	0.704	0.880	0.926	0.840	1.000
United States	0.832	0.770	0.728	0.876	0.854	0.822	1.000
Uzbekistan	0.292	0.174	0.238	0.306	0.308	0.108	0.182
Venezuela, RB	0.334	0.446	0.392	0.356	0.382	0.414	1.000
Zambia	0.388	0.422	0.424	0.308	0.320	0.466	1.000
Zimbabwe	0.252	0.270	0.212	0.304	0.314	0.202	0.364

Appendix 3: Control Variables

Country	GDPPC	DEBTGDP	GDPCAGR	TROPIC	LL
Algeria	5238.20	0.58	2.43	0	0
Angola	2211.50	1.67	3.52	1	0
Argentina	12171.00	0.51	1.85	0	0
Armenia	2169.70	0.47	5.94	0	1
Australia	26999.78	0.04	3.48	0	0
Austria	25308.50	1.11	3.60	0	1
Azerbaijan	2549.30	0.24	7.37	0	1
Bahrain	17873.90	0.42	2.56	0	0
Belarus	4402.30	0.19	7.41	0	1
Belgium	24731.30	0.11	3.55	0	0
Benin	916.20	0.67	3.09	1	0
Brazil	7091.90	0.42	1.66	1	0
Bulgaria	5686.60	0.85	3.18	0	0
Burundi	604.80	1.39	0.65	1	1
Cameroon	2065.90	0.91	3.25	1	0
Canada	27131.00	0.00	4.38	0	0
Chad	808.80	0.65	0.90	1	1
Chile	8558.60	0.48	2.89	0	0
China	3564.10	0.14	7.15	0	0
Colombia	5976.70	0.40	0.42	1	0
Cote d'Ivoire	1739.90	1.05	0.99	1	0
Croatia	8650.50	0.57	3.47	0	0
Cyprus	16624.50	0.31	3.70	0	0
Czech Republic	13026.60	0.38	2.06	0	1
Denmark	27154.80	0.14	3.30	0	0
Egypt, Arab Rep.	3435.30	0.34	3.92	0	0
Estonia	8905.80	0.45	6.70	0	0
Ethiopia	559.10	0.73	1.50	1	1
Finland	24233.20	0.25	5.00	0	0
France	24985.30	0.08	3.58	0	0
Gabon	7404.00	0.85	-1.17	1	0
Georgia	2050.10	0.46	5.95	0	0
Germany	24390.20	1.29	3.03	0	0
Ghana	1934.90	0.83	2.84	1	0
Greece	17117.80	0.43	3.88	0	0
Hungary	11117.50	0.62	5.27	0	1
India	2340.30	0.22	4.20	0	0
Indonesia	2794.50	1.08	-0.58	1	0
Iran, Islamic Rep.	6396.00	0.09	2.67	0	0
Ireland	26389.80	0.12	8.34	0	0
Israel	21866.60	0.60	2.69	0	0
Italy	24159.50	0.55	3.03	0	0
Japan	24300.60	0.34	1.56	0	0
Jordan	3840.00	0.99	1.96	0	0
Kazakhstan	4112.20	0.36	4.64	0	1
Kenya	1155.80	0.50	0.71	1	0
Korea, Rep.	15046.50	0.31	3.62	0	0
Kuwait	23182.50	0.33	0.13	0	0
Kyrgyz Republic	1403.64	0.88	4.37	0	1
Lao PDR	1480.00	1.74	4.35	1	1
Lithuania	8052.40	0.40	5.18	0	0
Malawi	724.80	1.54	1.52	1	1
Malaysia	8009.60	0.53	2.15	1	0
Mali	765.90	1.17	3.53	1	1
Mexico	8259.10	0.35	4.55	1	0
Moldova	1404.20	0.87	0.92	0	1
Morocco	3573.90	0.65	1.32	0	0
Myanmar	854.00	0.11	-2.38	1	0
Netherlands	26469.70	0.00	3.89	0	0
New Zealand	19543.10	0.49	2.47	0	0
Niger	696.37	0.79	0.65	1	1
Nigeria	760.00	0.84	1.31	1	0
Norway	30305.50	0.00	3.34	0	0
Pakistan	1735.90	0.54	1.62	0	0
Peru	4563.00	0.57	1.90	1	0
Philippines	3797.72	0.68	2.40	1	0
Poland	9647.90	0.39	5.55	0	0
Portugal	17337.10	0.94	4.32	0	0
Romania	5424.30	0.25	-0.65	0	0
Russian Federation	6290.80	0.89	3.87	0	0
Saudi Arabia	10824.50	0.26	1.45	0	0
Senegal	1714.20	0.83	2.61	1	0
Singapore	24485.00	0.17	4.18	1	0
Slovak Republic	11035.60	0.61	3.32	0	1
Slovenia	16049.90	0.25	4.98	0	0
South Africa	8760.00	0.18	1.28	0	0
Spain	19877.70	0.59	4.52	0	0
Sri Lanka	2768.70	0.63	4.45	1	0
Sweden	25657.10	0.26	4.21	0	0
Switzerland	29170.70	0.00	2.90	0	1
Syrian Arab Republic	3190.00	1.41	0.59	0	0
Taiwan	21170.00	0.11	5.12	0	0
Tanzania	778.00	0.89	2.47	1	0
Thailand	5902.40	0.79	-0.24	1	0
Togo	1484.90	0.95	1.03	1	0
Tunisia	5679.90	0.57	4.44	0	0
Turkey	5999.24	0.57	2.42	0	0
Turkmenistan	3270.30	0.86	5.79	0	1
Uganda	1077.40	0.58	3.50	1	1
Ukraine	3730.80	0.44	2.16	0	0
United Kingdom	24130.20	0.00	3.51	0	0
United States	33215.40	0.09	3.73	0	0
Uzbekistan	1354.70	0.29	3.59	0	1
Venezuela, RB	5546.10	0.42	0.51	1	0
Zambia	861.80	1.87	0.92	1	1
Zimbabwe	2192.70	0.72	-0.95	1	1

Appendix 4: World Governance Data Sources [46]

Table 2: Distribution of Data Points by Type of Data in 2006 WGI

	Commercial Business Information Providers	Surveys of Firms or Households	Non-Governmental Organizations	Public Sector Organizations	*Total*
Number of Data Points					
Voice and Accountability	497	340	684	324	1845
Political Stability	1027	179	0	227	1433
Government Effectiveness	845	371	315	314	1845
Regulatory Quality	795	206	277	343	1621
Rule of Law	960	371	410	655	2396
Control of Corruption	959	439	133	314	1845
Total	5083	1906	1819	2177	10985
Shares of Total for Each Indicator					
Voice and Accountability	0.27	0.18	0.37	0.18	1.00
Political Stability	0.72	0.12	0.00	0.16	1.00
Government Effectiveness	0.46	0.20	0.17	0.17	1.00
Regulatory Quality	0.49	0.13	0.17	0.21	1.00
Rule of Law	0.40	0.15	0.17	0.27	1.00
Control of Corruption	0.52	0.24	0.07	0.17	1.00
Total	0.46	0.17	0.17	0.20	1.00
Weighted Shares of Total for Each Indicator					
Voice and Accountability	0.35	0.03	0.54	0.08	1.00
Political Stability	0.82	0.04	0.00	0.14	1.00
Government Effectiveness	0.65	0.12	0.09	0.14	1.00
Regulatory Quality	0.59	0.09	0.12	0.19	1.00
Rule of Law	0.59	0.12	0.13	0.15	1.00
Control of Corruption	0.59	0.20	0.06	0.16	1.00
Total	0.60	0.10	0.16	0.14	1.00

[46] Taken from Kaufmann et al. , "Governance Matters VI: Aggregate and Individual Governance Indicators 1996 – 2006." *The World Bank* (2007).

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