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ABSTRACT

We examine the patterns of media ownership in 97 countries around the world. We find that almost universally the largest media firms are owned by the government or by private families. Government ownership is more pervasive in broadcasting than in the printed media. Government ownership of the media is generally associated with less press freedom, fewer political and economic rights, and, most conspicuously, inferior social outcomes in the areas of education and health. It does not appear that adverse consequences of government ownership of the media are restricted solely to the instances of government monopoly.

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I. Introduction

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. The availability of information is a crucial determinant of the efficiency of political and economic markets (Simons 1948, Stigler 1961, Stiglitz 2000).

In most countries, citizens and consumers receive the information they need through the media, including newspapers, television, and radio. The media serve as the intermediaries that collect information and make it available to citizens and consumers. A crucial question, then, is how the media should be optimally organized. Should newspapers or television channels be state or privately owned? Should the media industry be organized as a monopoly, or competitively? While there is some theoretical discussion of these issues, our empirical knowledge of the possible forms of organization of the media industry, and their consequences for economic and political markets, remains extremely limited.

Consider some theoretical issues first. A Pigouvian economist, who believes that governments maximize the welfare of consumers, would conclude that information should be provided by a government-owned monopoly. First, information is a public good – once it is supplied to some consumers, it is costly to keep it away from others, even if they had not paid for it. Second, the provision as well as dissemination of information is subject to strong increasing returns: there are significant fixed costs of organizing information gathering and distribution facilities, but once these costs are incurred, the marginal costs of making the information available are relatively low. For both of these independent reasons, a strong welfare-theoretic case for

organizing the media as a government owned monopoly can be made. Indeed, these arguments were adduced by the management of the newly formed British Broadcasting Corporation (BBC) in support of maintaining a publicly subsidized monopoly on radio and television in Britain (Coase 1950), and subsequently repeated in many developing countries.

In the case of the media industry, one additional argument animates the advocates of public ownership, namely consumer ignorance. In the extreme form, this argument holds that private owners use the media to serve the governing classes (Lenin 1925). In the more subtle version, argued for many years by the BBC, state ownership protects the public from exposure to “extreme” views. In modern versions, state ownership of at least some media is supposed to expose the public to information, such as culture, which might not be otherwise provided by privately owned firms. This “Sesame Street” argument, in addition to the standard industrial organization ones, mediates in favor of state ownership of the media in the minds of many observers.

In contrast, those who believe in less than fully benevolent government are led to a different conclusion. In their view, a government monopoly in the media would distort and manipulate information to entrench the incumbent government, preclude voters and consumers from making informed decisions, and ultimately undermine both democracy and markets. Because private and independent media supply alternative views to the public, they enable voters and consumers to choose among political candidates, commodities, and securities – with less fear of abuse by unscrupulous politicians, producers, and promoters (Sen 1984, 1999, Besley and Burgess 2000). Moreover, competition among media firms assures that voters and consumers obtain, on average, unbiased and accurate information. The role of such private and competitive media is held to be so important for the checks-and-balances system of modern democracy, that they have come to be called “the fourth estate.” A cynical view of a government’s motives thus leads to a

very different prescription for the optimal organization of the media than does the benign view.

Interestingly, even the Pigouvian economists, who adopt the perspective of a benevolent government when considering other industries and advocate both heavy regulation and nationalization, avoid this position with respect to the media (Henry Simons 1948, W. Arthur Lewis 1955, Gunnar Myrdal 1953). Coase (1974) points to this hypocrisy of Pigouvian economists: in the very industry where the case for state ownership is theoretically attractive, they shy away from taking this case seriously. Thus, according to Coase: “It is hard to believe that the general public is in a better position to evaluate competing views on economic and social policy than to choose between different kinds of food (p. 389).” Nonetheless, the assumption of benevolent government often stops at the doorstep of the media, perhaps because economists want to protect their own right to supply information without being subject to regulation.²

These debates notwithstanding, there is precious little evidence on the organization of the media industries in different countries and its consequences. Our paper aims to fill this gap. We collect data on ownership patterns of media firms – newspapers, television, and radio – in 97 countries. Our paper provides a first systematic look at the extent of state and private ownership of media firms around the world, of the different kinds of private ownership, and of the prevalence of monopoly across countries and segments of the media industry. Our basic finding is that the two dominant forms of ownership of media firms around the world is that by the state and by concentrated private owners, i.e., controlling families.

Demsetz (1989) and Demsetz and Lehn (1985) hypothesize that the “amenity potential”, also known as “the private benefits of control” (Grossman and Hart 1988), arising from owning media outlets is extremely high. In other words, the non-financial benefits, such as fame and

² Much of the available discussion deals with the traditional industrial organization aspects of the media industry, such as product variety and market power, rather than on the broader social consequences of media ownership (Spence and

influence, obtained by controlling a newspaper or a television station must be considerably higher than those from controlling a firm of comparable size in, say, the bottling industry. Economic theory then predicts that private control of media firms should be highly concentrated: with no controllers to enjoy the amenity potential, widely held firms are not a stable institutional form. Put differently, the control of widely held firms with a high amenity potential is up-for-grabs (Bebchuk 1999). Our findings are broadly consistent with these predictions.

Having established the importance of state ownership of the media, we ask first: in which countries is government ownership of the media higher? We find that government ownership of the media is higher in countries that are poorer, have more autocratic regimes, and higher overall state ownership in the economy. These results cast doubt on the proposition that state ownership of the media serves benevolent ends.

We then consider the consequences of state ownership of the media, as measured by freedom of the press, development of economic and political markets, and social outcomes. To this end, we run regressions of a variety of outcomes across countries on state ownership of the media, holding constant the level of development, the degree of autocracy, and overall state ownership of the economy.

We find pervasive evidence of “bad” outcomes associated with state ownership of the media (especially the press), holding country characteristics constant. The evidence is inconsistent with the Pigouvian view of state ownership of the media. Still, since we only have a cross-section of countries, we cannot decisively interpret this evidence as causal, i.e., as showing that state ownership of the media rather than some omitted country characteristic is responsible for the bad outcomes. We note, however, that the omitted characteristic must be quite closely related to the inclination of the government to control information flows, since we are controlling for a number

of dimensions of “badness” in the regressions.

In addition to discussing media ownership patterns and their consequences, we examine the role of media monopolies. Recall that Lenin and the founders of the BBC insisted on monopoly, for reasons of technology and benevolent censorship. But even ignoring this particular argument, one can still wonder whether any government participation in the media is detrimental to freedom or just the state monopoly. Any government ownership may be bad because the government has the power to advantage the media firms that it owns. Alternatively, private competition may assure that alternative views are supplied to voters and consumers, and prevent government firms from distorting the information they supply too heavily. Only the data can resolve which one of these theoretically plausible views better describes reality.

Section II describes our data on ownership of the media. Section III examines the economic and political determinants of media ownership. Section IV then focuses on the consequences of state media ownership for freedom of the press, the efficiency of economic and political markets, and a range of social outcomes across countries. Section V addresses the question of whether the effects of government ownership stem from the very existence of such ownership, or from government monopoly. Section VI summarizes the findings and concludes.

II. Ownership Data

This section focuses on patterns of ownership in the media industry. Because ownership bestows control (Grossman and Hart 1986), it shapes the information provided to voters and consumers. Ownership, of course, is not the only determinant of media content. In many countries, even with private ownership, the government regulates the media industry, provides direct subsidies and advertising revenues to media outlets, restricts access to newsprint and

information collection, and harasses journalists. We discuss these modes of control as well.

Construction of the Database

We gather new data on media ownership in 97 countries. We focus on newspapers and television, since these are the primary sources of news on political, economic and social issues.

Data on radio ownership are limited. Radio reaches a high proportion of the population, even in the lowest income and literacy countries, but it largely delivers entertainment. The radio market is also highly regional, which precludes any single station from achieving a large market share. As a crude index, we gather ownership data on the top radio station as measured by peak adult audience, and on an “all-news” radio station when one exists in a country.

Our selection of sample countries is driven by data availability. First, we identify the countries for which we have information on control variables. Since we are interested in the consequences of state ownership of the media, we need to make sure that our results are not driven by differences in the levels of economic development, the level of political competition, or of broad state intervention in the economy. To this end, we control for general levels of state ownership in the economy, a measure of autocracy, and GNP per capita. We use the Fraser Institute (2000) index of the involvement of state owned enterprises (SOEs) in the economy, which is based upon the number of SOEs, their prevalence in particular sectors of the economy, and their share of gross domestic output.³ A total of 133 countries have the SOE index, GNP per capita, and autocracy data for 1999. Of those, we exclude 5 observations because a) the country is in civil war (Democratic Republic of Congo, Sierra Leone), or b) the entity cannot be classified as a country (Hong Kong), or c) no daily newspapers exist (Belize, Tajikistan). We also exclude 31 countries lacking sufficient data on media ownership. The final sample of 97 countries includes

21 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 Middle East and North Africa and 16 in Western Europe.

Within countries, we select media outlets on the basis of market share of the audience and provision of local news content for the year 1999. This approach focuses on who controls the majority of information flows on domestic issues to citizens. We exclude entertainment and sport media, as well as foreign media outlets, if they do not provide local news content. We include in our sample the five largest daily newspapers, as measured by share in the total circulation of all dailies, and the five largest television stations, as measured by share of viewing.⁴ We consult three primary data sources to selecting these outlets. First, we use *Zenith Media Market and Media Fact Book 2000* publications, which are organized by region, including Western Europe, Central and Eastern Europe, Asia Pacific, Middle East and Africa, and the Americas. Zenith Media's rankings of newspapers are checked with the World Association of Newspapers (WAN) *World Press Trends 2000* report. WAN data are also used as the source for total newspaper circulation, which is not reported by Zenith Media. Finally, we use the European Institute for the Media *Media in the CIS* report as a primary source for countries in the former Soviet Union. Alternative sources are sought in two cases: when there is an inconsistency in data reported by primary sources, or when none of the sources covers the country in question. When this occurs, we use local media survey firms, World Bank external affairs offices, U.S. Department of State information offices, and direct contact with the media outlets.

3 For 6 countries, we construct this index using World Bank's (2000) data on state enterprises.

4 Following the World Association of Newspapers definition, newspapers are considered dailies if they are published at least four times per week. In the initial phase of the data gathering (first 12 countries) we focused on the top 10 media enterprises in the daily newspaper and television markets. We subsequently reduced the sample to five firms per media, for two reasons. First, the difference in market coverage from increasing the sample of companies from five to 10 was marginal. In the first 12 countries, the top five newspapers account for an average of 62.4% of total circulation, and the top 10 for 74.1%. The correlation between the two is 94.2%. For the sample as a whole, the top five newspapers account for an average of 66.7% of total circulation. Television markets are even more concentrated – on average the top five firms cover 89.5% of total viewing. Second, 20 countries in our sample do not have more than five daily newspapers, and 42

Where possible, we rely on company annual reports and WorldScope database for information on ownership of media firms. Many of our sample companies are not covered by WorldScope, and operate in countries with limited disclosure requirements. Accordingly, we also use business news reports in Lexis Nexis and the Financial Times databases, country specific company handbooks, media surveys and internet information services (see Table 1 for a description of the variables and the main data sources). In all cases, we verify the ownership and other information externally by contacting World Bank External Affairs offices, Embassies in Washington DC, and regional or in-country media organizations.

Ownership data are for December 1999 or the closest date for which reliable data was available. For the majority of firms in the sample, ownership structures are stable over time. Timing is a significant issue only in the transition economies, where many media enterprises have been privatized or have increasing rates of foreign ownership. For these countries, we strictly enforce the December 1999 date of ownership information, even when we have more recent data.

We follow La Porta, Lopez-de-Silanes, and Shleifer (1999) in identifying the ultimate controlling shareholder of each media outlet. We focus explicitly on voting rights as opposed to cash flow rights ownership of firms. For each firm, we identify the legal entities and families who own significant voting stakes.⁵ This provides us with the first level of ownership. For each legal entity, then, we identify *its* ownership structure by determining all significant vote holders -- the second level of ownership. We continue to identify vote holders at each level of ownership until we reach an entity for which it is not possible to break down the ownership structure any further.

The entity that ultimately controls the highest number of voting rights, but no less than 20% at every link of the chain, is defined as the ultimate owner. Such control can be gained

countries do not have more than five television stations.

⁵ The cut-off level of voting stakes depends on the mandatory disclosure levels in the country. In no case, however, is

through direct ownership of more than 20% of voting rights of a media enterprise, or indirectly through a chain of intermediate owners. For example, an individual X may control newspapers Z when he holds over 20% of the voting rights in Company Y, which in turn owns over 20% of the voting rights in Z. With indirect holdings, we define the percentage of ultimate ownership as the minimum holding along the chain of control.

After identifying the ultimate owner, we classify each media outlet into one of the four main categories of owners: the state, families,⁶ widely held corporations, and “other.” Examples of other controlling entities are employee organizations, trade unions, political parties, the Church, not-for-profit foundations, and business associations. We define a corporation as widely held if there is no owner with 20% or more of the voting rights. We also keep track of whether the ultimate owner is a foreign family, entity or government.⁷

Examples of Media Ownership

The construction of the ownership variables is best illustrated through examples of ownership structures of individual firms. We start with a simple case of family ownership. In Argentina, the third largest newspaper, with a daily circulation of 177,000, is La Nacion. The owner of each share in La Nacion is entitled to one vote. There are two large shareholders in La Nacion (Figure 1): the Saguier family, with 72% of capital and votes, and Grupo Mitre, with 28% of capital and votes. Grupo Mitre is in turn 100% owned by the Mitre family. Although the Mitre family holds an indirect control of 28% in La Nacion, we follow the chain of control of the largest shareholder at each level of ownership. We therefore record the Saguier family as the ultimate

that threshold higher than 5%.

⁶ We use families as a unit of analysis and do not look within families.

⁷ In a few instances, the owner of voting rights in a media firm does not hold the broadcast license. In these cases, firm and not license ownership determines control. We do this because control of all broadcast licenses ultimately

owner, and classify La Nacion as family owned.

A more complex example of family ownership is the Norwegian television station TVN (Figure 2). TVN is the second largest television station with local content in Norway, as measured by share of viewing. It is 50.7% controlled by Scandinavian Broadcasting Systems (SBS), and 49.3% by the largest Norwegian television station, TV2. We follow the chain of control along SBS rather than TV2, since SBS holds the majority of votes in TVN. Although Mr Sloan (the Chairman and CEO of SBS) holds a 9.8% share of voting rights in SBS, the only voting interest above 20% is held by the Netherlands United Pan-Europe Communications (UPC), with 23.3% of the vote. The majority shareholder of UPC is UnitedGlobal Com (51%). UnitedGlobal Com is in turn controlled by the Schneider family, through a combination of 3 direct interests totaling 21.9%, as well as 50% control of a voting agreement with 69.2% control of votes. We classify TVN as family owned and the Schneider family as the ultimate owner.

State ownership takes different forms. The British Broadcasting Corporation (BBC) is classified as state owned. It is funded by government license fees and advertising. The Board of Governors is appointed by Royal Prerogative, in practice the Prime Minister, and is accountable to the government. The BBC Charter specifies a number of safeguards to ensure its independence from government interference. By comparison, the largest television station in Myanmar is controlled directly by the Ministry of Information and Culture, and the second largest station is controlled directly by the Myanmar Military. In both cases the state retains full powers to manage content and appoint and remove staff. Similarly, in Turkmenistan, the state maintains direct control over the press: President Niyazov is officially declared the founder and owner of all newspapers in the country.

In a number of cases, we need to distinguish between state and political party ownership.

In Kenya, the ruling party Kenyan African National Union (KANU) is the ultimate owner of the daily newspaper Kenya Times, the country's fourth largest daily. Yet we do not classify Kenya Times as state owned, because if there were a change of government the ownership would remain with KANU. In contrast, control of the Kenyan Broadcasting Corporation (KBC) would remain with the state regardless of the political party in power, so we classify KBC as state owned.

Ruling party ownership also occurs in Malaysia and Cote d'Ivoire. We place these firms in the 'other' category, along with more clear-cut cases of media owned by opposition political parties.

In several cases, family ownership is closely associated with the state. In Kazakhstan, President Nazarbayev's daughter and son-in-law between them control seven of the 12 media outlets in our country sample. In Saudi Arabia, members of the Royal Family are the ultimate owners of two of the five most popular dailies. In cases where there is a direct family relationship between the ultimate owner and the head of state, *and* the governing system is a single party state, we classify the media enterprise as state owned.

Other associations between families and state are prevalent throughout our sample. In Ukraine, the Deputy Prime Minister holds over 30% of the top television station, while in Malawi the owner of the Nation newspaper is the Minister of Agriculture and Vice-President of the ruling UDF party. Neither of these positions are head of state in single party governments and we therefore classify both media outlets as family owned. Other unofficial links to the state were documented in country files, but did not influence our classification of ultimate ownership. In Russia, the close associations between the owner of one of the main TV stations, Mr Berezovsky, and the then-President Yeltsin are well documented.⁸ In Indonesia, the daughter of ex-President Suharto still controls one of the main television stations. In an effort to be conservative in our

⁸ Mr Berezovsky wrote that "...we helped Yeltsin defeat the Communists at the polls, using privately owned TV stations." Washington Post, Oct. 26, 2000, p. A27.

measures of state control, in all these cases we classified the media outlets as family owned, since a change in government would sever the link between the politician and the media owner.

Media regulations and ownership

Throughout the world, governments regulate media using measures ranging from content restrictions in broadcasting licenses to Constitutional freedom of expression provisions. The types of regulations and their enforcement vary significantly within our sample countries.

In some cases, ownership is influenced directly by regulation. In Norway, for example, regulations restrict owners from holding more than one third of shares in media enterprises. Similar restrictions on ownership apply in Israel. Regulations of foreign ownership and cross media ownership are also prevalent. Of the 49 countries surveyed by the World Association of Newspapers, 14 have explicit restrictions on foreign ownership of newspapers. In Brazil, for example, foreign ownership of voting capital of media enterprises is prohibited, and foreign participation in non-voting capital is limited to 30%. Not surprisingly, foreign owners are absent from the Brazilian sample. A further 21 of WAN countries regulate cross media ownership. In Australia, proprietors of major metropolitan newspapers are not permitted to own controlling interests in free-to-air television stations in the same market. As a result, the ultimate owner of the Nine Network television station, the Packer family, is limited to a 14.99% ownership stake in the one of Australia's leading publishers, John Fairfax Holdings.

Our data do not account for regulations that can substitute for state ownership as a means to control content. Singapore Press Holdings (SPH) publishes all of the top 5 daily newspapers in Singapore (Figure 3). Shares of SPH are divided into two categories: ordinary shares, which carry one share per vote, and management shares, which carry 200 votes per share. The ownership

structure of SPH is characterized by complex cross holdings, with three major groups of shareholders evident in the data. First, the Lee family controls a total of 47.23% of votes through 4 companies. Second, the state holds a total of 27.23% of votes through various intermediary institutions. Third, there are a number of minority shareholdings held in nominee accounts at widely held financial institutions.⁹ Ownership of nominee accounts is not disclosed. It is possible that they are owned by families or the state, in which case our estimate of their control is conservative. We classify the Lee family as the ultimate owner of SPH. Yet by law, the government must approve the owners of management shares of SPH, and can require owners to sell shares. We say that SPH is family owned, and note that this is a conservative measure of the true influence of the state over SPH.

We use similar approaches in other cases of structural government influence of media firms. In Saudi Arabia, the government approves the appointment of editors-in-chief of newspapers, and also has the right to dismiss them. Although clearly this increases the influence of the state on press content, we apply a conservative definition of state ownership and classify these newspapers as family owned. In Malaysia, newspapers are required to renew their licenses annually. Editors of newspapers that publish critical views of government have been pressured to resign.¹⁰ In this environment, self-censorship becomes the norm. In all these instances, we nonetheless rely on ownership in constructing our measures, thus underestimating state influence.

State subsidies and state advertisement revenues enable governments to influence media content. Such subsidies are common in transition and African countries. In Cameroon, for

9 In particular, Raffles Nominees Pre Ltd holds 7.74% in SPH, 10.11% in Overseas Union Bank Ltd, and 19.44% in United Overseas Bank Ltd. GSBC Nominees Pte Ltd controls 3.98% of SPH, 5.88% of the Overseas-Chinese Banking Corporation, 3.42% of Overseas Union Bank, and 4.31% of United Overseas Bank. Finally, Citibank Nominees Ltd controls 1.63% of SPH, 3.82% of the Overseas-Chinese Banking Corporation, 4.08% of Overseas Union Bank, and 2.77% of United Overseas Bank.

10 Report of United Nations Special Rapporteur on the Promotion and the Protection of the Right to Freedom of Opinion and Expression, mission to Malaysia, 23 December 1998.

example, the state refused to advertise in privately owned press after critical coverage of government. Defamation laws also influence content by repressing investigative journalism.

Direct regulations of content may interact with ownership. The North Korean Constitution states that the role of the press is to “serve the aims of strengthening the dictatorship of the proletariat, bolstering the political unity and ideological conformity of the people and rallying them solidly behind the Party and the Great Leader in the cause of revolution.”¹¹ In the Netherlands, the content of public service programming must be at least 25% news, 20% culture, and 5% education. Italy requires that 50% of broadcasting be of European origin. Because of these extensive regulations, our ownership classification is a conservative estimate of the true influence of the state over content.

Variable Construction

We construct two ownership variables from these data. First, we compute the percentage of firms in each category – state or private. For example, two out of the top five newspaper enterprises in the Philippines are classified as state owned, as are three out of the top five television stations. We record Philippine newspaper market ownership as 40% state owned when measured by count, and television market ownership as 60% when measured by count. Second, we weight the ownership variable by market share. In the Philippines, the two state owned newspapers account for 22.2% and 21.3% of circulation for the top 5 newspapers respectively, so the newspapers are 43.5% state owned when measured by market share. In television, the three state owned Philippine stations account for only 17.5% of the share of viewing for the top 5 television stations, so the television market is 17.5% state owned as measured by market share.

The market share variables, while more precise as a metric of state control, have the

disadvantage that, in the countries with regional newspapers, such as the United States, the market share of any single firm is small. As a consequence, the variables we define are not properly compared to those in countries with national newspapers. This criticism, of course, is less compelling for television firms, which are typically national. The regressions presented below use market share variables, but our results are virtually identical using the counts.

For the radio market, we create a dummy equal to 1 if the top radio station is state owned, and 0 otherwise.

III. Patterns in Media Ownership

Descriptive Statistics

Table 2 presents descriptive statistics on the ownership of newspaper and television markets in 97 countries. Countries are organized first by region and then sorted in alphabetical order. Several patterns emerge from the data.

Our first significant finding is that families and the state own the media throughout the world (Figure 4). In the sample of 97 countries, only 4% of media enterprises are widely held. Less than 2% have other ownership structures, and a mere 2% are employee owned. 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. Based on these findings, for the remaining analysis we classify ownership into 3 categories: state, private (which is the sum of family, widely held and employee categories), and other.

The nearly total absence of firms with dispersed ownership in the media industry is

extreme, even by comparison with the La Porta et al. (1999) finding of high levels of ownership concentration in large firms around the world. This result is consistent with the Demsetz (1989) and Demsetz and Lehn (1985) insight that the large amenity potential of ownership media outlets creates competitive pressures toward ownership concentration. In a sense, both the governments and the controlling private shareholders get the same benefit from controlling media outlets: the ability to influence public opinion and the political process.

We say that the state has a monopoly in a media market if the share of state controlled firms exceeds 75%. As Table 2 shows, a total of 21 countries have government monopolies of daily newspapers, and 43 countries have state monopolies of television stations with local news. Table 2 also shows that families and the state control the media regardless of whether ownership is measured by count or weighted by market share.

Television has significantly higher levels of state ownership than newspapers.¹² To explain this finding, a Pigouvian would focus on public goods, and note that television broadcasts are at least in part non-excludable and non-rivalrous. Television also has higher fixed costs than publishing, and more significant economies of scale. The private sector might then under-provide broadcasting services, particularly in smaller markets serving remote areas, ethnic minorities or students. These theories are central to many of the laws on public broadcasters in Europe. Alternatively, from the political perspective, privately owned newspapers are easier to censor than privately owned TV. Because television can be broadcast live, control of content is more likely to require ownership. In this case, governments that want to censor news would own television.¹³

12 Only five countries (Ghana, Philippines, Uganda, Ukraine and Uzbekistan) have more state control of the top 5 newspapers than television stations.

13 A further argument is that the extent of required regulation of TV is higher because of difficulties in defining property rights for broadcasting frequencies. It may be optimal from an efficiency standpoint for the state to control television stations directly, as opposed to regulating the sector and spending resources in monitoring compliance. These arguments have been disputed by Coase (1959) and others, who do not see any need for government ownership and regulation arising from the peculiar technological features of broadcasting frequencies.

The simple statistics presented so far raise many questions. The evidence suggests that there are large private benefits of media ownership. Throughout the world, media are controlled by parties likely to value these private benefits: the families and the state. In particular, the extent of state ownership of the media (particularly in TV and radio) is striking, suggesting that governments extract value through control of information flows in the media. We cannot as yet tell from this evidence whether high government ownership derives from a benign attempt to cure market failures and protect consumers, or from a less benign attempt to control the flows of information. In the subsequent analysis, we attempt to distinguish these two hypotheses.

Determinants of Media Ownership

In this section, we examine how ownership patterns are associated with different characteristics of countries. We examine very basic determinants of media ownership, such as geography, the level of development, the government's proclivity to intervene in the economy, and political regime. For all of these characteristics, it is hard to argue that causality runs from media ownership to these very basic country characteristics rather than the other way around.

Table 2 shows that the data exhibit distinct regional patterns. State ownership of newspapers and television is significantly higher in African and Middle East and North African (MENA) countries. On average, governments in Africa control 61% of the top 5 daily newspaper circulation and reach 85% of the audience for the top 5 television stations. Two-thirds of African countries have state monopolies on television broadcasting. With the exception of Israel, all MENA countries have a state monopoly over television broadcasting. State ownership of newspapers – which averages 50% share of circulation – is also high in MENA countries.

By contrast, newspapers in Western Europe and the Americas are held predominately

privately. In Western Europe none of the top five daily newspapers are owned by the state. In the Americas, the majority of the newspapers have been owned and managed by single families for many decades. State ownership of television is also overwhelmingly lower in the Americas than in other regions. None of the top 5 stations in Brazil, Mexico, Peru and the United States are state owned; this occurs in only one other country (Turkey) in our sample. In Western Europe, in contrast, a substantial number of public broadcasters push the regional state ownership average to 48% by count and 55% by share.

Countries in the Asia-Pacific, Central and Eastern Europe, and the former Soviet Union have ownership patterns closer to the sample mean.¹⁴

Poorer countries have higher state ownership of newspapers and television (Table 3a). State ownership is reported after dividing the sample into quartiles of GNP per capita in 1999. The average state ownership of newspapers (by share) falls sharply from 49.7% for the lowest income quartile to 0.0% for the highest income quartile. In television, the lowest income quartile averages 78.0% state ownership (by share), compared with 52.7% for the highest income quartile.

Countries with higher state ownership in the economy as a whole also have higher ownership of the media (Table 3b). Countries in the lowest quartile of SOE index, which reflects high economy-wide state ownership, average 48.5% state newspaper ownership (by share) and 78.6% television ownership (by share). In contrast, countries in the highest quartile of SOE index (low economy-wide state ownership) average only 20.3% state ownership of newspapers (by share) and 60.4% state ownership of television (by share).¹⁵

14 Ownership within each of these regions varies dramatically. Indonesia and Thailand have low state ownership of the media, compared with full state monopolies in North Korea and Myanmar. The predominantly privately owned media in Estonia and Moldova contrasts with the full state control in Belarus and Turkmenistan.

15 We also considered how state ownership varies according to the origin of commercial law in a country. Legal origins are classified into 5 categories: English, French, German, Socialist, and Scandinavian. Two countries (Iran and Saudi Arabia) cannot be classified in any of these groups since they practice traditional Islamic law. Legal origin has been interpreted as a proxy for the strength of property rights and inclination of the government to intervene in an

Table 3c shows that autocratic governments are more likely to own media outlets. The relationship is monotonic over the autocracy quartiles.

In Table 3d, we consider whether per capita income, autocracy, and the SOE index have independent influences on state ownership of the media. Generally, all three variables have a significant effect in a regression. In the analysis of the consequences of state ownership of the media, we accordingly control for per capital income, the SOE index, and the autocracy measure.

Table 3e presents data on the incidence of state media monopolies – defined as a more than 75% market share – around the world (with the exception of Singapore there are no private media monopolies in our sample). Two interesting findings emerge from the table. First, state monopoly is considerably more common in the television than in the newspaper market. Second, state monopoly is largely a feature of poor countries – there are almost no incidents of state monopolies of newspapers, and relatively few of television, in the upper two quartiles of income distribution. These data themselves do not distinguish among theories - a Pigouvian can easily explain why television and low income levels call for state monopoly.

Still, the preliminary evidence presents considerable challenges to the benign (Pigouvian) view of government ownership of the media. The less developed, more interventionist, and more autocratic countries are the ones with higher state ownership of the media. The market failure argument for state ownership suggests the opposite: the richer, more democratic countries should cure market failures through state ownership. In the following analysis, we pursue the same issue by examining the consequences of state ownership of the media.

economy (La Porta et al., 1998, 1999). It could, therefore, be argued that legal origin influences the extent to which a state chooses to control media. We find that, in television, the average state ownership is remarkably similar across legal origins. State ownership of newspapers in countries of German and Scandinavian is significantly lower than French and Socialist origin countries. For every other combination, state ownership of television or newspapers does

IV. The Consequences of State Ownership of the Media

In this section, we consider some of the consequences of state ownership of the media for a number of social indicators, such as freedom of the press, the functioning of political and economic markets, and social outcomes such as infant mortality and education attainment.

In this analysis, it is important to us to be able – to the extent possible – to link the various outcomes to the state ownership of the media, rather than other characteristics of the society. We have shown that poor countries, with interventionist and non-democratic governments exhibit higher state ownership of the media. Accordingly, we control for GNP per capita, an index of the involvement of state owned enterprises (SOEs) in the economy, and the autocracy score in all regressions. Such controls do not assure us an unambiguous causal interpretation of the relationship between state ownership of the media and the various outcomes. It is still possible that state ownership of the media proxies for some unobserved aspect of “badness.” However, if state ownership helps predict bad outcomes holding constant our extensive controls, it must be closely related to the omitted “badness.” For example, the omitted characteristic of a country must reflect the state’s interest in controlling the information flows, or something close to that.

For ease of interpretation, we have coded all the outcome variables, as well as the controls, so that high is good. Thus a high value of the corruption or infant mortality variable corresponds to low corruption and low infant mortality, respectively.

Freedom of the Press

Perhaps the clearest way to compare alternative theories of state ownership of the media is by focusing on freedom of the press. After all, the main implication of the Pigouvian theories is that greater government ownership should if anything lead to greater press freedom, as media avoid being captured by individuals with extreme wealth or extreme views.

Table 4 presents the results from the regressions of “objective” measures of media freedom on state ownership of the media. We measure media freedom by actual cases of harassment of journalists and media outlets, compiled from Reporters Sans Frontieres (RSF) 1999 reports on journalists jailed and media outlets closed by governments. Another measure was constructed from the reports by the Committee to Protect Journalist (CPJ, 1997-1999) on actual numbers of journalists jailed. We also look at a measure of internet censorship.

Table 4 shows a negative impact of government ownership of the media on media freedom, holding per capita income, interventionism, and autocracy constant, with just under half of the coefficients being statistically significant. Media tend to be more independent, and journalists arrested and jailed less frequently, when media are privately owned. A closer look at the data reveals a complex picture. Journalist harassment is high in Turkey, Kenya, and Nigeria, where the media is predominately privately owned, perhaps because it substitutes for state control through ownership. But harassment is also high in some countries with high state ownership of the media, such as Angola, Belarus, Iran and China. Furthermore, some countries with state media monopolies – such as North Korea and Laos - exhibit a ‘Castro effect’: state control is so powerful that there is no need to further restrict freedom through journalist harassment.¹⁶

Table 4 also establishes that countries with higher state media ownership censor the internet more heavily, as measured by a dummy that equals to one if the government does not monopolize internet access and content (as measured by CPJ reports). This association can be interpreted to mean that state ownership distorts information flows.

16 We have also measured freedom of the press using subjective indicators from van Belle (1997) and Freedom House (2000). The effects of state ownership on these measures of freedom were also negative, but in general insignificant.

Political Markets

We examine the consequences of media ownership for two aspects of political development. First, we consider the effect of media ownership on civil, political, and human rights of a country's citizens. If information flows are essential for the exercise of citizens' rights, and if government ownership of the media influences information flows, we should see an association between government ownership and the rights. Second, information flows may facilitate public oversight of government, and increase the accountability of politicians for bad conduct. In this case, government ownership of the media would reduce the effectiveness of the government and increase corruption (Sen 1984, 1999, Besley and Burgess 2000, Staphenurst 2000). In this analysis, we again control for per capita income, government ownership of SOEs, and autocracy.

The results are reported in Table 5. Government ownership of the press typically has a negative effect on citizens' rights, government effectiveness, and corruption. The effect of government ownership of the press is in many instances statistically significant, that of government ownership of television and radio generally is not. These results are most naturally consistent with the view government ownership of the press restricts information flows to the public, diminishing the value of citizens rights and the effectiveness of government.¹⁷

Studies of election coverage illustrate the effect of state ownership of the media on the supply of political information. In Ukraine, election monitors from the Organization for Security and Cooperation in Europe recorded significant biases in media coverage related to ownership. Although all major television stations devoted more time to the incumbent than the opposition candidate, the state owned television was more unbalanced in coverage and biased in content (despite legal requirements for the state owned media to provide balanced and neutral coverage).

¹⁷ Our results are also unsurprising in a broader historical context. Dictators from Napoleon, to Lenin, to Hitler, to Marcos nationalized the press. The small independent press, with its "xerox and cassette journalism," helped

Of its total first round election related coverage, the state owned UT1 devoted 51% to the incumbent, and 75% of that coverage was positive. Each of the 6 opposition candidates received substantially less coverage (a maximum of 16.7%), and the vast majority of opposition coverage was negative. The television channel Inter displayed similar prejudice – 48.5% of coverage was allocated to the incumbent and 73% of that coverage was favorable. Although Inter is classified as privately owned, it has strong informal links to the state because one of the three shareholders is the First Deputy Speaker of Parliament.¹⁸ The channel 1+1 is 51% privately and foreign owned, with a 49% non-voting minority stake held by the State Property Company. 1+1 devoted 34% of coverage to the incumbent, and 50% of that coverage was positive. Finally, STB, which is privately owned, was the least biased of the four stations. STB dedicated 23% of their coverage to the incumbent, with 40% of that coverage recorded as favorable.

Experience in several countries also highlights the importance of media ownership in pressuring for better governance. In Mexico, privatization of broadcasting led to a dramatic increase in the coverage of government corruption scandals (Simon, 1998). Introduction of a new privately owned media in Ghana led to greater coverage of government activities as well as more criticism of government. In Kenya, privatized press exposed a public corruption case while government-owned press defended the accused government officials.

Our results are generally much stronger for the press than for television. For the latter, the effects of government ownership are generally insignificant. One reason might be that private press, which is more common, provides a check on state television, ensuring freer flows of information than would occur if both were in state hands. The data confirm that the outcomes are worse when the state owns both newspapers and television than when it owns only one of them.

overthrow the Marcos regime in 1986 (Maslog 2000).

¹⁸ The shareholdings are approximately equally distributed - 33%; 33% and 34% - between three individuals, with the

Economic System

The supply of information by the media can also improve the performance of the economic system, in two ways. The first is derivative of the improvements in political markets. When citizens are better informed, they may – through political action -- become more effective in limiting the ability of the government to hurt them economically, by for example confiscating property or over-regulating businesses. Economic governance indicators, such as the security of property rights from confiscation and intervention and the quality of regulation should therefore be higher in countries where media function more effectively. The second way in which media can contribute to economic performance is by supplying information that improves markets. One area where this channel is clear is financial markets, which are especially information-sensitive. A better information flow to these markets can facilitate better pricing of securities, reveal the abuse of power by corporate insiders, and thereby encourage financial development.¹⁹ In this spirit, we examine the relationship between patterns of media ownership and financial market indicators.

In Table 6, we find that higher state ownership of the media is associated with weaker security of property, as measured by Freedom House security of property rights index and the ICRG measure of confiscation risk. Countries with higher state ownership of the media also exhibit lower quality of regulation, as measured by the World Bank. The results are statistically stronger for the press than for television and radio.

We consider two indicators of financial development. The first is the number of companies listed on the national stock market, a measure introduced by La Porta et al. (1997). The results show that countries with higher state ownership of newspapers have fewer firms per capita

Deputy Speaker holding one of the 33% stakes.

¹⁹ At a conference in Neemrana, India, in 2000, Luigi Zingales has made this particular argument.

listed on their national markets. The second indicator is a measure of banking development from Beck, Demirguc-Kunt, and Levine (1999). Countries with higher state ownership of the newspapers have less developed banking systems. These results are suggestive of the possibility that state control of information flow might be detrimental to the development of markets.

The results for both the security of property and measures of financial market development again suggest that government ownership of the media hurts. Taken together with our earlier evidence on freedom of the press and political competition, this evidence is broadly supportive of the view that governments own the media – especially the press -- not to improve the performance of economic and political systems, but to improve their own chances to stay in power.

Social Outcomes

Lenin asked a fundamental question: whom is the free press for? Our analysis has focused on political and economic freedom, but a Pigouvian could presumably argue that the true benefits of state ownership of the press accrue to the disadvantaged members of society. Freed from the influence of the capitalist owners, state-controlled media can serve the social needs to the poor and disadvantaged, and thereby improve social outcomes. A skeptic would argue, in contrast, that the government would use its ownership of the media to muzzle the press, and to prevent the disadvantaged groups from having a mechanism for voicing their grievances. Government ownership should then be associated with inferior social outcomes.

The contrasting predictions of the two views can be evaluated empirically. Table 7 reports the relationships between state ownership of the media and education and health indicators, holding constant per capita income, government ownership of firms, and autocracy. In countries with higher state ownership of the media, we observe inferior school attainment, enrollment and

pupil to teacher ratios. Health outcomes, such as life expectancy, infant mortality and malnutrition are also worse in countries where the government owns more media outlets. In addition, measures of access to sanitation and responsiveness of the health system are significantly lower in countries with more state-owned media. Media ownership structures that are associated with better economic and political variables are also beneficial for social outcomes – in fact the results for social outcomes are generally stronger and hold for television as well as the press. These findings undermine Lenin’s objections to the effectiveness of private media.

Earlier studies reached a similar conclusion. Schramm (1964) argued that media plays a crucial role in national development. Thomas et al. (1991) found that maternal access to the media has a strong and positive effect on child health in Brazil. Sen (1984, 1999) argued that the lack of democracy, freedom of information, and an independent press contributed to almost 30 million deaths during China’s Great Leap Forward between 1958 – 1961. He contrasted this with India, which has not experienced a major famine since independence, and has stronger democratic processes and press freedom: “The Government (of India) cannot afford to fail to take prompt action when large scale starvation threatens. Newspapers play an important part in this, in making the facts known and forcing the challenge to be faced.” Besley and Burgess (2000) test Sen’s proposition empirically. Using data across Indian states, they demonstrate that higher newspaper circulation increases government responsiveness to natural shocks. Stromberg (2000) finds strong support for this hypothesis as well. Rather than focus on media penetration, our study points to a critical deterrent to the ability of the media to serve these social goals -- government ownership.

Robustness

We checked the robustness of our results in a number of ways. Although we do not present

these findings, we briefly summarize them. Our results are robust to alternative methods of controlling for the level of development, to inclusion of measures of media penetration (higher penetration rates of media indicate more information flows to citizens), and to exclusion of particular regions and small countries. The results also hold when we divide the sample into rich and poor countries (using median per capita income) and re-run the regressions for each subsample. Furthermore, alternative definitions of dependent variables yield similar conclusions.

We have also examined the hypothesis that government ownership of the media has a more adverse effect on outcomes in autocratic regimes, where other checks on the government are absent. To test this hypothesis, we included interaction terms of autocracy and media ownership in the regressions. The results confirm this hypothesis for economic and political development.

V. Ownership or Monopoly?

The results of the previous sections raise an important question: are the adverse effects of state ownership of the media driven solely by the instances of monopoly (or near-monopoly)? Alternatively, is more state ownership always worse, even at lower market shares? At the time of the creation of the BBC, the advocates of state ownership insisted on monopoly. In recent years, a softer argument prevailed, particularly in Western Europe, according to which some state ownership – particularly of television – is sufficient to provide the public with exposure to particular content that might be unavailable through private media. Since there are no countries in our sample with private monopolies of either newspapers or television, the monopoly question pertains solely to state ownership.

To address this argument, we divide our sample of countries into groups (of non-equal sizes), by the degree of state control of newspaper circulation as well as that of the television

audience. Thus, we create dummies for state control of newspaper circulation being between 0 and 25%, 25% and 50%, 50% and 75%, and above 75%. We create corresponding dummies for state control of television audiences. We refer to the countries with state control exceeding 75% as having state monopolies in the relevant market. We then rerun the regressions of Tables 4-7 with the dummies (for newspapers and television separately) rather than with the linear specification of the effects of state ownership of the media. The omitted dummy is always that corresponding to the second quartile (i.e., state control between 25% and 50%). We want to know how the various outcomes compare across quartiles.

The results for media freedom, political, and economic markets do not indicate that the adverse consequences of state ownership on the various outcomes are driven solely by state monopolies. In general, no clear pattern emerges from the data, as both third and fourth quartile state ownership often has large negative effects. However, most coefficients on quartile ownership dummies are statistically insignificant. For brevity, we do not present these results.

The results are clearer for social outcomes, as Table 8 shows. Typically (though not always), for both newspapers and television, the coefficients on the first quartile dummy are positive, while those on the third and fourth quartile dummies are negative. This evidence suggests that social outcomes deteriorate over the whole range of increases in government ownership of the media. The more competition in the media, the better are the outcomes. If the adverse outcomes were driven solely by monopoly, we would have seen, in contrast, zero coefficients on the first and third quartile dummies. This said, we also note that – especially in the case of television, the largest and most statistically significant adverse effects on social outcomes appear in the cases of state monopolies.

VI. Conclusion

In this paper, we have examined ownership patterns of newspapers and television (and to a lesser extent radio) in 97 countries around the world. We have found that media firms nearly universally have ownership structures with large controlling shareholders, and that these shareholders are either families or governments. This evidence is broadly consistent with the ideas developed by Demsetz (1989) and Demsetz and Lehn (1985) that there is large amenity potential (control benefits) associated with owning media – be it political influence or fame.

We then asked whether different patterns of media ownership are associated with different economic, political, and social outcomes. We found that countries with more prevalent state ownership of the media have less free press, fewer political rights for citizens, inferior governance, less developed markets, and strikingly inferior outcomes in the areas of education and health. The adverse effects of government ownership on political and economic freedom are stronger for newspapers than for television. Government media monopolies are associated with particularly poor outcomes, especially when we focus on social outcomes, but we also saw some evidence that various outcomes deteriorate more generally as state ownership increases. Finally, there is no detectable evidence of any benefits of higher state ownership of the media. Although none of this evidence can be unambiguously interpreted as causal, it obtains with extensive controls for the level of economic development, state ownership in the economy, and the degree of autocracy.

At some broad level, these results will not surprise many readers, since intellectuals since Milton in the 17th century have advocated free press and independent media. Nonetheless, we believe this analysis makes two contributions. At the theoretical level, it lends support for Coase's (1974) analysis of the media industry. The theoretical arguments in favor of government ownership of the media from the conventional perspective on industrial organization are very

strong. Yet the data reject these Pigouvian arguments, and reveal no benefits of state ownership. In this regard, the paper adds to the growing literature pointing the severe limitations of the welfarist approach to the analysis of state participation in the economy. More often than not, market failures pale by comparison with government failures.

The paper also presents a range of evidence on the adverse consequences of state ownership of the media, holding constant key country characteristics. Government ownership of the media is detrimental to economic, political, and – most strikingly -- social outcomes. The latter finding is particularly important in light of a commonly made argument justifying state ownership in a variety of sectors, including the media, by the appeal to the social needs of the disadvantaged. If correct, our findings thoroughly debunk this argument. The evidence shows, to the contrary, that increasing private ownership of the media – through privatization or the encouragement of entry – can advance a variety of political and economic goals, and especially the social needs of the poor.

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Table 1: Description of the Variables

Variable name	Description and source
<i>MEDIA OWNERSHIP</i>	
State ownership, press (by count)	The percentage state-owned newspapers out of the five largest daily newspapers (by circulation), 1999.
State ownership, press (by share)	The market share of state-owned newspapers out of the aggregate market share of the five largest daily newspapers (by circulation), 1999.
State ownership, TV (by count)	The percentage state-owned TV stations out of the five largest TV stations (by viewership), 1999.
State ownership, TV (by share)	The market share of state-owned TV stations out of the aggregate market share of the five largest TV stations (by viewership), 1999.
<i>CONTROLS</i>	
GNP per capita	GNP per capita, 1999, in thousand US\$. Source: World Development Indicators 2000.
SOE Index	An index from zero to ten based on the number, composition, and share of output supplied by State-owned Enterprises (SOEs) and government investment as a share of total investment. Countries with more SOEs and larger government investment received lower ratings. When there were few SOEs, and those are mainly in utility sectors, and government investment was less than 15 percent of total investment, countries were given a rating of 10. When there were few SOEs other than those involved in industries where economies of scale reduce the effectiveness of competition, e.g., power generation, and government investment was between 15 and 20 percent of the total, countries received a rating of 8. When there were, again, few SOEs other than those involved in utility industries and government investment was between 20 and 25 percent of the total, countries were rated at 7. When SOEs were dominant in utility sectors and government investment was 25 to 30 percent of the total, countries were assigned a rating of 6. When a substantial number of SOEs operated in many sectors, including manufacturing, and government investment was between 30 and 40 percent of the total, countries received a rating of 4. When a substantial number of SOEs operated in many sectors, and government investment was between 40 and 50 percent of the total, countries were rated at 2. A zero rating was assigned to countries where over 50 percent of the economy's output was produced by SOEs and government investment exceeded 50 percent of the total. Source: Fraser Institute (2000) for all countries except Armenia, Azerbaijan, Belarus, Ethiopia, Moldova, and Turkmenistan. Data for these 6 countries was constructed by the authors based on the World Bank's Enterprise Database (2000).
Autocracy	Index of authoritarian regimes, 1999. Based on an eleven point autocracy scale that is constructed additively from the codings of five component variables: competitiveness of executive recruitment, openness of executive recruitment, constraints on chief executive, regulation of participation, and competitiveness of political participation. Values were rescaled from 0 to 1 with 0 being high in autocracy and 1 being low in autocracy. Source: Polity IV Project 2000.
<i>MEDIA FREEDOM</i>	
Journalists Jailed (RSF)	The number of journalists held in police custody for any length of time in 1999, rescaled from 0 to 1, with higher values indicating less oppression. Source: Reporters Sans Frontieres, 2000.
Media Outlets Closed	The number of media outlets closed in 1999, rescaled from 0 to 1, with higher values indicating less oppression. Source: Reporters Sans Frontieres, 2000.
Journalists Jailed (CPJ)	The number of journalists held in police custody for any length of time per year, average over 1997-1999, rescaled from 0 to 1, with higher values indicating less oppression. Source: The Committee to Protect Journalists, 2000.
Internet Freedom	0 if the state has a monopoly on internet service provision 1999, 1 otherwise. Source: The Committee to Protect Journalists, 2000.
<i>POLITICAL MARKETS</i>	
Political rights	Index of political rights. Higher ratings indicate countries that come closer to the "ideals suggested by the checklist questions of: (1) free and fair elections; (2) those elected rule; (3) there are competitive parties or other competitive political groupings; (4) the opposition has an important role and power; (5) the entities have self-determination or an extremely high degree of autonomy". Rescaled from 0 to 1, with higher values indicating better political rights. Source: Freedom in the World 2000, Freedom House.
Civil liberties	Index of civil rights. Higher ratings indicate countries that enjoy "the freedoms to develop views, institutions, and personal autonomy apart from the state". The basic components of the index are: (1) freedom of expression and belief; (2) association and organizational rights; (3) rule of law and human rights; (4) personal autonomy and economic rights. Rescaled from 0 to 1, with higher values indicating better civil liberties. Source: Freedom in the World 2000, Freedom House.

Table 1: Description of the Variables

Variable name	Description and source
Human rights	A measure of 37 criteria (1990) based on the rights enumerated in the three major UN treaties: 1948 Universal Declaration of Human Rights, 1966 International Covenant on Civil and Political Rights, International Covenant on Economic, Social, and Cultural Rights. Ranges from 0 to 153, with higher scores indicating better human rights. The three media freedom variables from the original index are purged from the data. Source: Humana (1992).
Government effectiveness	A set of indicators combining "perceptions of the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government's commitment to policies". Higher values indicate greater government effectiveness. Source: Kaufmann, Kraay and Zoido-Lobaton (1999).
Corruption (ICRG)	Assessment of the corruption in government. Lower scores indicate "high government officials are likely to demand special payments" and "illegal payments are generally expected throughout lower levels of government" in the form of "bribes connected with import and export licenses, exchange controls, tax assessment, policy protection, or loans", 1997. Scale of 0 to 6. Source: Political Risk Services (2000) International Risk Guide.
Corruption (World Bank)	An aggregated measure of "perceptions of corruption", whose components range from "the frequency of additional payments to get things done to the effects of corruption on the business environment". Higher values indicate less corruption. Source: Kaufmann, Kraay and Zoido-Lobaton (1999).
<i>ECONOMIC MARKETS</i>	
Security of property	A rating of property rights in each country in 1997, assessing the issue of "Are property rights secure? Do citizens have the right to establish private businesses? Is private business activity unduly influenced by government officials, the security forces, or organized crime?". Rescaled from 0 to 1, with higher values indicating more secure property rights. Source: Freedom House (1997).
Risk of confiscation	Assessment of the legal security of private ownership rights, 1997. Ranges from 0 to 10, with higher values indicating lower risk. Source: Fraser Institute (2000).
Quality of regulation	An aggregated measure focused on national regulatory policies. "It includes measures of the incidence of market-unfriendly policies such as price controls or inadequate bank supervision, as well as perceptions of the burdens imposed by excessive regulation in areas such as foreign trade and business development." Source: Kaufmann, Kraay and Zoido-Lobaton (1999).
Number of listed firms	The number of domestically incorporated companies listed on the country's stock exchanges at the end of 1999, scaled by population. This indicator does not include investment companies, mutual funds, or other collective investment vehicles. Source: World Development Indicators 2000.
Bank assets	Deposit money bank assets, scaled by central bank assets, 1997. Source: Beck, Demirguc-Kunt, and Levine (1999).
<i>SOCIAL OUTCOMES</i>	
School attainment	A measure of the highest grade of primary education in which individuals are enrolled. The data reflect the attainment rates for the population that is over age 25, as of 1990. Source: Barro and Lee (1996).
Enrollment	Total enrollment at the primary educational level, regardless of age, divided by the population of the age group that typically corresponds to that level of education, as of 1995. The specification of age groups varies by country, based on different national systems of education and the duration of schooling at the primary level. Source: UNESCO Annual Statistical Yearbook 1999.
Pupil/teacher ratio	The number of pupils enrolled in primary school divided by the number of primary school teachers (regardless of their teaching assignment), an average over 1990-1999. Source: World Development Indicators 2000.
Life Expectancy	Life expectancy at birth (years), average over 1995-2000. Source: UNDP Human Development Report 2000.
Infant mortality	Infant mortality rate (per 1,000 live births) in 1998. Rescaled from 0 to 1, with higher values indicating lower mortality. Source: UNDP Human Development Report (2000).
Nutrition	Daily per capita supply of calories, 1997. Source: UNDP Human Development Report 2000.
Access to sanitation	Percent of population with access to adequate sanitation, average over 1990-1999. Source: World Development Indicators 2000.
Health System Responsiveness	Responsiveness of the health system, both its level and distribution in 1999. Higher values indicate greater responsiveness. Source: World Health Organization 2000.

TABLE 2: OWNERSHIP DISTRIBUTION
Panel A: Top 5 Daily Newspapers and Top 5 Television Stations

Country	Press, by count			Press, by share			TV, by count			TV, by share		
	State	Private	Other	State	Private	Other	State	Private	Other	State	Private	Other
Angola	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Benin	0.20	0.60	0.20	0.31	0.50	0.19	0.50	0.50	0.00	0.71	0.29	0.00
Burundi	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Cameroon	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Chad	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Cote d'Ivoire	0.40	0.20	0.40	0.64	0.11	0.24	1.00	0.00	0.00	1.00	0.00	0.00
Ethiopia	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Gabon	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Ghana	1.00	0.00	0.00	1.00	0.00	0.00	0.33	0.67	0.00			
Kenya	0.00	0.80	0.20	0.00	0.88	0.12	0.20	0.80	0.00	0.45	0.55	0.00
Malawi	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Mali	0.20	0.80	0.00	0.33	0.67	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Niger	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Nigeria	0.00	1.00	0.00	0.00	1.00	0.00	0.20	0.80	0.00	0.25	0.75	0.00
Senegal	0.33	0.67	0.00	0.51	0.49	0.00	1.00	0.00	0.00	1.00	0.00	0.00
South Africa	0.00	0.60	0.40	0.00	0.70	0.30	0.75	0.00	0.25	0.90	0.00	0.10
Tanzania	0.00	1.00	0.00	0.00	1.00	0.00	0.20	0.80	0.00	0.07	0.93	0.00
Togo	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uganda	0.50	0.50	0.00	0.58	0.42	0.00	0.25	0.50	0.25	0.61	0.39	0.00
Zambia	0.67	0.33	0.00	0.74	0.26	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Zimbabwe	0.67	0.33	0.00	0.60	0.40	0.00	1.00	0.00	0.00	1.00	0.00	0.00
<i>Average - Africa</i>	<i>0.57</i>	<i>0.37</i>	<i>0.06</i>	<i>0.61</i>	<i>0.35</i>	<i>0.04</i>	<i>0.78</i>	<i>0.19</i>	<i>0.02</i>	<i>0.85</i>	<i>0.15</i>	<i>0.00</i>
Argentina	0.00	1.00	0.00	0.00	1.00	0.00	0.20	0.80	0.00	0.04	0.96	0.00
Brazil	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.80	0.20	0.00	0.89	0.11
Canada	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.60	0.00	0.34	0.66	0.00
Chile	0.00	1.00	0.00	0.00	1.00	0.00	0.20	0.60	0.20	0.30	0.41	0.28
Colombia	0.00	1.00	0.00	0.00	1.00	0.00	0.50	0.50	0.00	0.27	0.73	0.00
Mexico	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Peru	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
United States	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Venezuela	0.00	1.00	0.00	0.00	1.00	0.00	0.25	0.75	0.00	0.03	0.97	0.00
<i>Average - Americas</i>	<i>0.00</i>	<i>1.00</i>	<i>0.00</i>	<i>0.00</i>	<i>1.00</i>	<i>0.00</i>	<i>0.17</i>	<i>0.78</i>	<i>0.04</i>	<i>0.11</i>	<i>0.85</i>	<i>0.04</i>
Australia	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.60	0.00	0.17	0.83	0.00
China	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
India	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.60	0.00	0.88	0.12	0.00
Indonesia	0.00	0.80	0.20	0.00	0.85	0.15	0.20	0.80	0.00	0.23	0.77	0.00
Japan	0.00	1.00	0.00	0.00	1.00	0.00	0.20	0.80	0.00	0.39	0.61	0.00
Korea, Dem. Rep.	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Korea, Rep.	0.00	1.00	0.00	0.00	1.00	0.00	0.80	0.20	0.00	0.77	0.23	0.00
Lao PDR	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Malaysia	0.00	0.60	0.40	0.00	0.60	0.40	0.40	0.60	0.00	0.47	0.53	0.00
Myanmar	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
New Zealand	0.00	1.00	0.00	0.00	1.00	0.00	0.50	0.50	0.00	0.71	0.29	0.00
Pakistan	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Philippines	0.40	0.60	0.00	0.44	0.56	0.00	0.60	0.40	0.00	0.18	0.83	0.00
Singapore	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Sri Lanka	0.40	0.60	0.00	0.29	0.71	0.00	0.40	0.60	0.00	0.81	0.19	0.00
Taiwan, China	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.40	0.20			
Thailand	0.00	1.00	0.00	0.00	1.00	0.00	0.80	0.20	0.00	0.60	0.40	0.00
<i>Average- Asia Pacific</i>	<i>0.28</i>	<i>0.68</i>	<i>0.04</i>	<i>0.28</i>	<i>0.69</i>	<i>0.03</i>	<i>0.65</i>	<i>0.34</i>	<i>0.01</i>	<i>0.70</i>	<i>0.30</i>	<i>0.00</i>
Algeria	0.40	0.60	0.00	0.57	0.43	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Bahrain	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Egypt	0.80	0.00	0.20	0.94	0.00	0.06	1.00	0.00	0.00	1.00	0.00	0.00
Iran, Islamic Rep.	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Israel	0.00	1.00	0.00	0.00	1.00	0.00	0.25	0.75	0.00	0.36	0.64	0.00
Jordan	0.60	0.40	0.00	0.83	0.17	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Kuwait	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Morocco	0.40	0.00	0.60	0.41	0.00	0.59	1.00	0.00	0.00	1.00	0.00	0.00
Saudi Arabia	0.40	0.60	0.00				1.00	0.00	0.00	1.00	0.00	0.00
Syrian Arab Republic	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Tunisia	0.20	0.40	0.40	0.23	0.50	0.27	1.00	0.00	0.00	1.00	0.00	0.00
<i>Average - Middle East</i>												
<i>North Africa (MENA)</i>	<i>0.44</i>	<i>0.45</i>	<i>0.11</i>	<i>0.50</i>	<i>0.41</i>	<i>0.09</i>	<i>0.93</i>	<i>0.07</i>	<i>0.00</i>	<i>0.94</i>	<i>0.06</i>	<i>0.00</i>

TABLE 2: OWNERSHIP DISTRIBUTION (CONT'D)

Country	Press, by count			Press, by share			TV, by count			TV, by share		
	State	Private	Other	State	Private	Other	State	Private	Other	State	Private	Other
Armenia	0.20	0.40	0.40	0.27	0.45	0.27	0.20	0.80	0.00	0.53	0.47	0.00
Azerbaijan	0.20	0.80	0.00	0.10	0.90	0.00	0.20	0.80	0.00	0.31	0.69	0.00
Belarus	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Bulgaria	0.00	1.00	0.00	0.00	1.00	0.00	0.50	0.50	0.00	0.75	0.25	0.00
Croatia	0.50	0.25	0.25	0.29	0.33	0.38	0.75	0.25	0.00	0.97	0.03	0.00
Cyprus	0.00	0.80	0.20	0.00	0.89	0.11	0.40	0.60	0.00	0.23	0.77	0.00
Czech Republic	0.00	1.00	0.00	0.00	1.00	0.00	0.50	0.50	0.00	0.34	0.66	0.00
Estonia	0.00	1.00	0.00	0.00	1.00	0.00	0.25	0.75	0.00	0.29	0.71	0.00
Georgia	0.20	0.80	0.00	0.06	0.94	0.00	0.40	0.60	0.00	0.66	0.34	0.00
Hungary	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.60	0.00	0.20	0.80	0.00
Kazakhstan	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Kyrgyz Republic	0.50	0.25	0.25	0.35	0.35	0.30	0.33	0.67	0.00	0.69	0.31	0.00
Lithuania	0.00	1.00	0.00	0.00	1.00	0.00	0.20	0.80	0.00	0.23	0.77	0.00
Moldova	0.20	0.80	0.00	0.12	0.88	0.00	0.20	0.80	0.00	0.44	0.56	0.00
Poland	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.60	0.00	0.57	0.43	0.00
Romania	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.60	0.00	0.37	0.63	0.00
Russian Federation	0.20	0.80	0.00	0.15	0.85	0.00	0.80	0.20	0.00	0.96	0.04	0.00
Slovak Republic	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.60	0.00	0.35	0.65	0.00
Slovenia	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.40	0.20	0.54	0.45	0.01
Turkey	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Turkmenistan	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Ukraine	0.40	0.40	0.20	0.15	0.77	0.07	0.40	0.60	0.00	0.14	0.86	0.00
Uzbekistan	1.00	0.00	0.00	1.00	0.00	0.00	0.80	0.20	0.00	0.73	0.27	0.00
<i>Average - Central/East. Europe and Transition</i>	<i>0.28</i>	<i>0.67</i>	<i>0.06</i>	<i>0.24</i>	<i>0.71</i>	<i>0.05</i>	<i>0.48</i>	<i>0.52</i>	<i>0.01</i>	<i>0.53</i>	<i>0.46</i>	<i>0.00</i>
Austria	0.00	0.80	0.20	0.00	0.86	0.14	0.40	0.60	0.00	0.78	0.22	0.00
Belgium	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.60	0.00	0.41	0.59	0.00
Denmark	0.00	0.40	0.60	0.00	0.37	0.63	0.60	0.40	0.00	0.80	0.20	0.00
Finland	0.00	1.00	0.00	0.00	1.00	0.00	0.50	0.50	0.00	0.48	0.52	0.00
France	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.60	0.00	0.43	0.57	0.00
Germany	0.00	1.00	0.00	0.00	1.00	0.00	0.60	0.40	0.00	0.61	0.39	0.00
Greece	0.00	0.60	0.40	0.00	0.68	0.32	0.20	0.80	0.00	0.08	0.92	0.00
Ireland	0.00	0.80	0.20	0.00	0.79	0.21	0.60	0.40	0.00	0.68	0.32	0.00
Italy	0.00	0.80	0.20	0.00	0.83	0.17	0.60	0.40	0.00	0.61	0.39	0.00
Netherlands	0.00	1.00	0.00	0.00	1.00	0.00	0.60	0.40	0.00	0.57	0.43	0.00
Norway	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.60	0.00	0.47	0.53	0.00
Portugal	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.60	0.00	0.38	0.62	0.00
Spain	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.60	0.00	0.43	0.57	0.00
Sweden	0.00	1.00	0.00	0.00	1.00	0.00	0.40	0.60	0.00	0.51	0.49	0.00
Switzerland	0.00	1.00	0.00	0.00	1.00	0.00	0.60	0.40	0.00	0.89	0.11	0.00
United Kingdom	0.00	1.00	0.00	0.00	1.00	0.00	0.60	0.40	0.00	0.60	0.40	0.00
<i>Average - West. Europe</i>	<i>0.00</i>	<i>0.90</i>	<i>0.10</i>	<i>0.00</i>	<i>0.91</i>	<i>0.09</i>	<i>0.48</i>	<i>0.52</i>	<i>0.00</i>	<i>0.55</i>	<i>0.45</i>	<i>0.00</i>
<i>Average - total sample</i>	<i>0.29</i>	<i>0.65</i>	<i>0.06</i>	<i>0.29</i>	<i>0.66</i>	<i>0.05</i>	<i>0.60</i>	<i>0.39</i>	<i>0.01</i>	<i>0.64</i>	<i>0.36</i>	<i>0.01</i>

Panel B: Test of State Ownership Means by Region: t-statistics

Region	Press, by count	Press, by share	TV, by count	TV, by share
Africa vs. Americas	3.950 ^a	4.348 ^a	4.941 ^a	7.362 ^a
Africa vs. Asia Pacific	2.053 ^b	2.383 ^b	1.228	1.581
Africa vs. MENA	0.870	0.766	-1.323	-0.960
Africa vs. CEE/Transition	2.351 ^b	3.016 ^a	3.296 ^a	3.470 ^a
Africa vs. West. Europe	5.302 ^a	5.836 ^a	3.417 ^a	3.660 ^a
Americas vs. Asia Pacific	-1.949 ^c	-1.922 ^c	-4.090 ^a	-5.342 ^a
Americas vs. MENA	-3.450 ^a	-3.592 ^a	-7.965 ^a	-10.670 ^a
Americas vs. CEE/Transition	-2.306 ^b	-2.019 ^b	-2.760 ^a	-3.929 ^a
Americas vs. West. Europe	0.000	0.000	-4.782 ^a	-5.829 ^a
Asia Pacific vs. MENA	-0.969	-1.290	-2.577 ^b	-2.354 ^b
Asia Pacific vs. CEE/Transition	-0.036	0.222	1.889 ^c	1.632
Asia Pacific vs. West. Europe	2.621 ^a	2.585 ^a	2.077 ^b	1.659 ^c
MENA vs. CEE/Transition	1.095	1.709 ^c	4.675 ^a	4.001 ^a
MENA vs. West. Europe	4.666 ^a	4.857 ^a	6.706 ^a	5.230 ^a
CEE/Transition vs. West. Europe	3.093 ^a	2.708 ^a	-0.078	-0.126

a=Significant at 1% level; b=Significant at 5% level; c=Significant at 10% level.

Table 3a : State Ownership of Media and GNP per Capita

The first panel shows the average of state ownership of media by GNP per capital quartile. The second panel shows the results of tests of means across quartiles.

<i>Means by GNPPC quartile</i>				
GNPPC Quartile	Media owned by the state (by count and share)			
	Press, by count	Press, by share	TV, by count	TV, by share
1 (Low)	0.486	0.497	0.667	0.780
2 (Mid-low)	0.550	0.565	0.792	0.781
3 (Mid-high)	0.129	0.106	0.463	0.473
4 (High)	0.000	0.000	0.474	0.527

Table 3b: State Ownership of Media and SOE Index

The first panel shows the average of state ownership of media by SOE index quartile. The second panel shows the results of tests of means across quartiles.

<i>Means by SOE quartile</i>				
SOE Quartile	Media owned by the state (by count and share)			
	Press, by count	Press, by share	TV, by count	TV, by share
1 (High)	0.488	0.485	0.768	0.786
2 (Mid-high)	0.444	0.459	0.702	0.786
3 (Mid-low)	0.339	0.338	0.622	0.672
4 (Low)	0.202	0.203	0.535	0.604

Table 3c : State Ownership of Media and Autocracy

The first panel shows the average of state ownership of media by autocracy quartile. The second panel shows the results of tests of means across quartiles.

<i>Means by autocracy quartile</i>				
Autocracy Quartile	Media owned by the state (by count and share)			
	Press, by count	Press, by share	TV, by count	TV, by share
1 (High)	0.717	0.737	0.917	0.920
2 (Mid-high)	0.529	0.576	0.900	0.907
3 (Mid-low)	0.460	0.454	0.524	0.655
4 (Low)	0.100	0.094	0.470	0.608

Table 3d: Determinants of State Ownership of the Media

Variable	GNP per capita	SOE index	Autocracy	Constant	R ²	N
State ownership press (by share)	-0.0084 ^a (0.0027)	-0.0185 ^c (0.0112)	-0.8345 ^a (0.1462)	1.0948 ^a (0.1075)	0.5574	97
State ownership TV (by share)	0.0043 (0.0035)	-0.0356 ^a (0.0133)	-0.5652 ^a (0.0908)	1.1879 ^a (0.0572)	0.3779	97
State ownership radio	-0.0037 (0.0061)	-0.0538 ^a (0.0185)	-0.3171 ^a (0.1037)	1.2035 ^a (0.0593)	0.2648	97

a=Significant at 1% level; b=Significant at 5% level; c=Significant at 10% level.

Table 3e : State Monopolies in the Media and GNP per Capita

The first panel shows the average of state monopolies of media by GNP per capital quartile. The second panel shows the results of tests of means across quartiles.

<i>Means by GNPPC quartile</i>				
state monopolies (by count and share)				
GNPPC Quartile	Press, by count	Press, by share	TV, by count	TV, by share
1 (Low)	0.348	0.348	0.565	0.636
2 (Mid-low)	0.417	0.458	0.667	0.667
3 (Mid-high)	0.083	0.087	0.250	0.333
4 (High)	0.000	0.000	0.080	0.200

<i>Test of means (t-statistics)</i>				
Quartile				
1st vs. 2nd	-0.476	-0.760	-0.704	-0.211
1st vs. 3rd	2.290 ^b	2.211 ^b	2.274 ^b	2.109 ^b
1st vs. 4th	3.575 ^a	3.575 ^a	4.161 ^a	3.321 ^a
2nd vs. 3rd	2.828 ^a	3.060 ^a	3.122 ^a	2.398 ^b
2nd vs. 4th	4.139 ^a	4.505 ^a	5.255 ^a	3.665 ^a
3rd vs. 4th	1.477	1.511	1.620	1.047

a=Significant at 1% level; b=Significant at 5% level; c=Significant at 10% level.

Table 4: Media Freedom

Variable	State ownership, press (by share)	State ownership, TV (by share)	State ownership, radio	GNP per capita	SOE index	Autocracy	Constant	R ²	N
Journalists jailed (RSF)	-0.0815 ^c (0.0487)			0.0013 (0.0011)	0.0014 (0.0044)	0.0412 (0.0536)	0.9223 ^a (0.0542)	0.1650	97
		-0.0247 (0.0423)		0.0022 ^a (0.0009)	0.0024 (0.0045)	0.0691 (0.0661)	0.8531 ^a (0.0825)	0.1355	97
			0.0141 (0.0241)	0.0021 ^b (0.0009)	0.0039 (0.0047)	0.1154 (0.0663)	0.8067 ^a (0.0788)	0.1342	97
Media outlets closed	-0.0514 (0.0547)			0.0018 (0.0018)	-0.0045 (0.0060)	0.0599 (0.0559)	0.9170 ^a (0.0567)	0.0771	97
		0.0622 (0.0730)		0.0020 (0.0013)	-0.0013 (0.0048)	0.1309 ^b (0.0606)	0.7930 ^a (0.0926)	0.0802	97
			0.0361 (0.0432)	0.0024 (0.0017)	-0.0015 (0.0049)	0.1061 ^b (0.0467)	0.8227 ^a (0.0661)	0.0747	97
Journalists jailed (CPJ)	-0.4136 ^a (0.1571)			0.0065 ^c (0.0037)	-0.0012 (0.0182)	-0.0841 (0.2128)	0.8726 ^a (0.2030)	0.1929	97
		-0.3753 ^b (0.1617)		0.0119 ^a (0.0040)	-0.0042 (0.0184)	-0.0277 (0.2213)	0.9395 ^a (0.2432)	0.1699	97
			-0.1184 (0.0811)	0.0101 ^a (0.0038)	0.0014 (0.0179)	0.1404 (0.1995)	0.6435 ^a (0.1866)	0.1253	97
Internet freedom	-0.3877 ^a (0.1480)			-0.0012 (0.0023)	0.0012 (0.0117)	0.3996 ^b (0.1947)	0.6343 ^a (0.1888)	0.4186	97
		-0.1179 (0.1215)		0.0029 (0.0030)	0.0059 (0.0119)	0.5900 ^a (0.1912)	0.3965 ^c (0.2081)	0.3322	97
			-0.0137 (0.0461)	0.0024 (0.0026)	0.0090 (0.0128)	0.6529 ^a (0.1587)	0.2739 ^c (0.1528)	0.3237	97

Note: 1. All dependent variables are rescaled so that larger values correspond to better outcomes.

2. Media freedom refers to press freedom index for newspapers and broadcast freedom index for TV and radio.

3. a Significant at 1%; b Significant at 5%; c Significant at 10%. Standard errors in parentheses.

Table 5: Political Markets

Variable	State ownership, press (by share)	State ownership, TV (by share)	State ownership, radio	GNP per capita	SOE index	Autocracy	Constant	R ²	N
Political rights	-0.1872 ^a (0.0613)			0.0107 ^a (0.0019)	-0.0011 (0.0071)	0.7772 ^a (0.0780)	-0.0511 (0.0779)	0.8112	97
		-0.1278 ^c (0.0682)		0.0130 ^a (0.0019)	-0.0011 (0.0079)	0.8275 ^a (0.0692)	-0.0816 (0.0852)	0.8132	97
			-0.0021 (0.0414)	0.0122 ^a (0.0020)	0.0031 (0.0076)	0.9090 ^a (0.0658)	-0.2336 ^a (0.0632)	0.8074	97
Civil liberties	-0.1531 ^a (0.0532)			0.0105 ^a (0.0017)	-0.0002 (0.0063)	0.5334 ^a (0.0748)	0.1145 ^c (0.0703)	0.7507	97
		-0.0804 (0.0659)		0.0122 ^a (0.0017)	0.0006 (0.0071)	0.5886 ^a (0.0685)	0.0608 (0.0875)	0.7529	97
			0.0093 (0.0394)	0.0118 ^a (0.0018)	0.0038 (0.0069)	0.6441 ^a (0.0597)	-0.0479 (0.0590)	0.7497	97
Human rights	-4.1669 (7.9535)			0.9762 ^a (0.1647)	0.2787 (0.7703)	36.4060 ^a (9.7790)	28.8489 ^a (9.1453)	0.6134	72
		-2.0386 (7.0686)		1.0178 ^a (0.1686)	0.2849 (0.7577)	37.9172 ^a (9.6671)	27.4799 ^a (10.1323)	0.6125	72
			-1.4090 (3.9745)	0.9978 ^a (0.1613)	0.2624 (0.7423)	39.0152 ^a (8.3422)	26.6388 ^a (7.5964)	0.6132	72
Government effectiveness	-0.2848 (0.1886)			0.0605 ^a (0.0058)	0.0507 ^b (0.0220)	0.3403 (0.2273)	-0.7101 ^a (0.2382)	0.7229	95
		0.0744 (0.1772)		0.0628 ^a (0.0062)	0.0584 ^a (0.0225)	0.5732 ^a (0.2122)	-1.0690 ^a (0.2512)	0.7217	95
			-0.0569 (0.1306)	0.0630 ^a (0.0060)	0.0530 ^b (0.0226)	0.5062 ^a (0.2010)	-0.9091 ^a (0.2307)	0.7217	95
Corruption (ICRG)	-0.6819 ^c (0.4174)			0.0661 ^a (0.0114)	-0.0289 (0.0450)	0.8072 ^c (0.4833)	2.5209 ^a (0.4524)	0.4863	79
		0.0193 (0.4455)		0.0728 ^a (0.0123)	-0.0174 (0.0457)	1.2313 ^b (0.5496)	1.8852 ^a (0.6688)	0.4863	79
			-0.1614 (0.2732)	0.0710 ^a (0.0116)	-0.0260 (0.0461)	1.1980 ^a (0.4499)	2.1004 ^a (0.4997)	0.4919	79
Corruption (World Bank)	-0.3152 ^c (0.1684)			0.0697 ^a (0.0070)	0.0372 (0.0256)	0.2906 (0.1963)	-0.6908 ^a (0.2086)	0.7609	95
		0.0452 (0.1867)		0.0725 ^a (0.0073)	0.0445 ^c (0.0266)	0.5262 ^a (0.1820)	-1.0439 ^a (0.2472)	0.7605	95
			-0.0239 (0.1370)	0.0722 ^a (0.0070)	0.0422 ^c (0.0259)	0.5018 ^a (0.1627)	-0.9646 ^a (0.2077)	0.7607	95

Note: 1. All dependent variables are rescaled so that larger values correspond to better outcomes.
 2. a Significant at 1%; b Significant at 5%; c Significant at 10%. Standard errors in parentheses.

Table 6: Economic Markets

Variable	State ownership, press (by share)	State ownership, TV (by share)	State ownership, radio	GNP per capita	SOE index	Autocracy	Constant	R ²	N
Security of property	-0.2415 ^a (0.0676)			0.0114 ^a (0.0019)	0.0295 ^a (0.0080)	-0.1035 (0.1106)	0.5720 ^a (0.1070)	0.5892	91
		-0.0088 (0.0611)		0.0135 ^a (0.0018)	0.0342 ^a (0.0081)	0.0429 (0.1230)	0.3611 ^a (0.1236)	0.5893	91
			0.0405 (0.0418)	0.0135 ^a (0.0018)	0.0369 ^a (0.0090)	0.0656 (0.1107)	0.2987 ^a (0.1091)	0.5920	91
Risk of confiscation	-2.8428 ^a (0.6998)			0.0650 ^a (0.0222)	0.1105 (0.1010)	-1.5156 (1.1106)	9.2214 ^a (0.9643)	0.3112	81
		-2.1013 ^b (1.0370)		0.1007 ^a (0.0272)	0.0975 (0.1144)	-1.2372 (1.4425)	9.3301 ^a (1.6183)	0.3084	81
			-1.1320 ^b (0.4878)	0.0870 ^a (0.0243)	0.0942 (0.1159)	-0.1278 (1.2474)	8.0464 ^a (1.2283)	0.2859	81
Quality of regulation	-0.5496 ^a (0.1748)			0.0204 ^a (0.0046)	0.0627 ^a (0.0178)	0.5395 ^b (0.2427)	-0.5032 ^b (0.2412)	0.6046	97
		-0.1458 (0.1593)		0.0261 ^a (0.0048)	0.0701 ^a (0.0197)	0.8219 ^a (0.2643)	-0.8656 ^a (0.2834)	0.6062	97
			-0.0682 (0.1002)	0.0253 ^a (0.0047)	0.0712 ^a (0.0207)	0.8803 ^a (0.2361)	-0.9535 ^a (0.2448)	0.6044	97
Number of listed firms	-0.0273 ^a (0.0108)			0.0010 ^a (0.0003)	-0.0032 (0.0025)	0.0062 (0.0130)	0.0273 ^a (0.0110)	0.1234	97
		-0.0151 (0.0118)		0.0013 ^a (0.0003)	-0.0031 (0.0026)	0.0156 (0.0137)	0.0187 (0.0124)	0.1319	97
			0.0070 (0.0070)	0.0013 ^a (0.0003)	-0.0023 (0.0022)	0.0275 (0.0191)	-0.0081 (0.0101)	0.1245	97
Bank assets	-0.2147 ^b (0.1018)			0.0033 (0.0028)	-0.0049 (0.0131)	0.3033 ^c (0.1821)	0.5409 ^a (0.1666)	0.2265	92
		-0.1504 (0.1011)		0.0059 ^b (0.0026)	-0.0046 (0.0143)	0.3410 ^b (0.1580)	0.5243 ^a (0.1725)	0.2191	92
			-0.1985 ^a (0.0723)	0.0047 ^c (0.0028)	-0.0110 (0.0151)	0.3552 ^b (0.1596)	0.5936 ^a (0.1654)	0.2547	92

Note: 1. All dependent variables are rescaled so that larger values correspond to better outcomes.

2. a Significant at 1%; b Significant at 5%; c Significant at 10%. Standard errors in parentheses.

Table 7: Social Outcomes

Variable	State ownership, press (by share)	State ownership, TV (by share)	State ownership, radio	GNP per capita	SOE index	Autocracy	Constant	R ²	N
School attainment	-12.4252 ^c (6.8314)			-0.2927 (0.1882)	0.6594 (0.6836)	11.2771 (10.9235)	31.1315 ^a (10.8036)	0.1791	67
		-18.6429 ^a (7.1035)		-0.0990 (0.2068)	0.2327 (0.6922)	5.8109 (9.4805)	44.3819 ^a (10.8167)	0.2221	67
			-9.7677 ^b (4.2261)	-0.1789 (0.1862)	0.4205 (0.6466)	12.8217 (8.4014)	33.2949 ^a (8.4477)	0.1815	67
Enrollment	-17.6477 ^b (9.0161)			0.1021 (0.1762)	0.5956 (0.7532)	-10.0709 (10.9333)	106.0125 ^a (10.9157)	0.1137	92
		-15.5171 ^c (9.4133)		0.3166 (0.1983)	0.5261 (0.7678)	-7.6437 (10.8303)	107.4779 ^a (12.8582)	0.1155	92
			-12.6303 ^a (4.3244)	0.2317 (0.1907)	0.2066 (0.8306)	-3.5497 (7.5747)	105.1682 ^a (7.8261)	0.1265	92
Pupil/teacher ratio	-0.1909 ^a (0.0627)			0.0076 ^a (0.0017)	0.0004 (0.0079)	-0.1646 ^a (0.0641)	0.8529 ^a (0.0562)	0.3976	89
		-0.2537 ^a (0.0651)		0.0107 ^a (0.0019)	-0.0042 (0.0077)	-0.1904 ^a (0.0758)	0.9724 ^a (0.0834)	0.3879	89
			-0.0730 ^b (0.0357)	0.0094 ^a (0.0018)	-0.0003 (0.0090)	-0.0674 (0.0721)	0.7619 ^a (0.0661)	0.2686	89
Life expectancy	-11.1692 ^a (3.1662)			0.4709 ^a (0.0694)	0.3563 (0.3664)	-5.7165 ^c (3.5440)	69.7560 ^a (3.6037)	0.4680	95
		-10.8742 ^a (3.3970)		0.6196 ^a (0.0726)	0.2580 (0.3609)	-4.9429 (3.8853)	72.0350 ^a (4.7135)	0.4741	95
			-5.2631 ^a (1.5117)	0.5653 ^a (0.0753)	0.3021 (0.4020)	-0.5103 (3.5597)	65.6561 ^a (3.1979)	0.4350	95
Infant mortality	-0.2692 ^a (0.0833)			0.0086 ^a (0.0015)	0.0007 (0.0082)	-0.1184 (0.0891)	0.9052 ^a (0.0944)	0.4142	95
		-0.2548 ^a (0.0835)		0.0122 ^a (0.0020)	-0.0015 (0.0086)	-0.0953 (0.0936)	0.9514 ^a (0.1133)	0.4170	95
			-0.0985 ^a (0.0370) ^a	0.0109 (0.0019)	0.0010 (0.0087)	0.0181 (0.0835)	0.7705 ^a (0.0733)	0.3503	95
Nutrition	-332.0943 ^b (159.8358)			26.9430 ^a (4.8200)	4.7406 (16.2370)	-155.0844 (205.9862)	2841.2880 ^a (214.3279)	0.4102	93
		-327.5296 ^b (167.5104)		30.8943 ^a (4.5334)	0.0288 (17.5395)	-96.7649 (197.5197)	2889.1050 ^a (254.9896)	0.4265	93
			-69.9647 (104.5659)	29.3347 ^a (4.8416)	6.9868 (18.3053)	74.0443 (172.3610)	2584.5420 ^a (195.0220)	0.3968	93
Access to sanitation	-0.3032 ^a (0.0862)			0.0137 ^a (0.0024)	0.0084 (0.0099)	-0.0864 (0.1024)	0.6954 ^a (0.1069)	0.4899	81
		-0.1879 ^b (0.0866)		0.0181 ^a (0.0024)	0.0079 (0.0104)	-0.0185 (0.1249)	0.6407 ^a (0.1347)	0.5051	81
			0.0017 (0.0517)	0.0172 ^a (0.0025)	0.0142 (0.0101)	0.0871 (0.1071)	0.4175 ^a (0.1043)	0.4802	81
Health system responsiveness	-0.4595 ^a (0.1599)			0.0712 ^a (0.0062)	0.0365 (0.0231)	-0.2186 (0.1874)	5.1291 ^a (0.1836)	0.7780	96
		-0.4607 ^b (0.1946)		0.0774 ^a (0.0062)	0.0323 (0.0238)	-0.1848 (0.2002)	5.2292 ^a (0.2608)	0.7899	96
			-0.0724 (0.1272)	0.0754 ^a (0.0064)	0.0427 ^c (0.0244)	0.0561 (0.1690)	4.7732 ^a (0.1967)	0.7737	96

Note: 1. All dependent variables are rescaled so that larger values correspond to better outcomes.

2. a Significant at 1%; b Significant at 5%; c Significant at 10%. Standard errors in parentheses.

Table 8: Social Outcomes (ownership quartiles)

Variable	State Ownership, Press (by share)			State Ownership, TV (by share)			GNP per capita	SOE index	Autocracy	Constant	R ²	N
	Q1	Q3	Q4	Q1	Q3	Q4						
School attainment	16.2055 (10.4101)	16.5124 (12.0328)	3.3544 (11.9074)				-0.3526 ^c (0.1908)	0.8317 (0.7237)	14.3843 (10.5532)	12.2900 (14.6843)	0.2237	67
				2.7149 (6.9479)	-2.8935 (6.2498)	-12.5599 ^a (5.1926)	-0.1292 (0.2301)	0.2724 (0.8235)	6.4016 (8.9221)	37.9469 ^a (8.5661)	0.2291	67
Enrollment	16.3807 ^c (8.8846)	0.2426 (11.4329)	-0.9339 (10.3342)				0.0181 (0.1599)	0.6958 (0.7435)	-10.2035 (10.4217)	91.1163 ^a (10.0248)	0.1733	92
				2.8707 (4.6627)	-6.0414 (3.7764)	-7.2821 (6.2149)	0.3126 (0.2052)	0.7150 (0.8234)	-4.4184 (10.6505)	98.2317 ^a (9.4730)	0.1022	92
Pupil/teacher ratio	0.0814 (0.0747)	-0.1382 (0.0880)	-0.0942 (0.0785)				0.0073 ^a (0.0015)	0.0003 (0.0077)	-0.1678 ^a (0.0623)	0.7803 ^a (0.0603)	0.3567	89
				0.0010 (0.0331)	0.0146 (0.0362)	-0.1853 ^a (0.0457)	0.0104 ^a (0.0018)	-0.0037 (0.0074)	-0.1900 ^a (0.0789)	0.8933 ^a (0.0660)	0.4208	89
Life expectancy	1.1319 (2.7574)	-17.5172 ^a (4.7371)	-8.2684 ^a (3.1368)				0.4691 ^a (0.0674)	0.3125 (0.3537)	-5.6406 ^c (3.1145)	68.7890 ^a (2.7733)	0.5695	95
				-1.1521 (2.2781)	-2.0159 (2.4027)	-8.0319 ^a (2.3842)	0.5813 ^a (0.0749)	0.3675 (0.3818)	-4.3074 (3.9400)	68.6441 ^a (3.7316)	0.4727	95
Infant mortality	0.0963 (0.0863)	-0.1374 (0.0931)	-0.1526 (0.0954)				0.0086 ^a (0.0015)	0.0008 (0.0082)	-0.1118 (0.0873)	0.8021 ^a (0.0878)	0.4495	95
				-0.0233 (0.0500)	-0.0410 (0.0426)	-0.1831 ^a (0.0564)	0.0113 ^a (0.0020)	0.0011 (0.0090)	-0.0785 (0.0962)	0.8664 ^a (0.0872)	0.4119	95
Nutrition	347.1896 ^a (116.2601)	-116.7366 (156.3776)	50.5126 (150.7429)				24.8996 ^a (4.9142)	6.5256 (16.3139)	-158.7225 (210.0136)	2534.9590 ^a (193.2870)	0.4620	93
				126.7518 (132.5104)	-53.2697 (115.5565)	-161.6041 (122.2571)	31.3928 ^a (4.6147)	-0.2207 (18.0633)	-67.9467 (190.3904)	2714.6080 ^a (206.7376)	0.4270	93
Access to sanitation	0.1655 ^b (0.0852)	0.0188 (0.0915)	-0.1205 (0.0907)				0.0137 ^a (0.0026)	0.0092 (0.0102)	-0.0739 (0.1071)	0.5143 ^a (0.0968)	0.5699	81
				0.0243 (0.0702)	0.0068 (0.0844)	-0.1028 (0.0700)	0.0175 ^a (0.0026)	0.0097 (0.0109)	0.0043 (0.1324)	0.5441 ^a (0.1221)	0.5000	81
Health system responsiveness	0.3280 ^c (0.2029)	-0.1181 (0.2617)	-0.0899 (0.2037)				0.0700 ^a (0.0063)	0.0383 (0.0238)	-0.2032 (0.1853)	4.8062 ^a (0.1896)	0.7962	96
				-0.0260 (0.1416)	-0.1447 (0.1626)	-0.3603 ^a (0.1346)	0.0761 ^a (0.0064)	0.0360 (0.0234)	-0.1737 (0.1870)	5.1136 ^a (0.1990)	0.7919	96

Note: 1. All dependent variables are rescaled so that larger values correspond to better outcomes.

2.: a Significant at 1%; b Significant at 5%; c Significant at 10%. Standard errors are in parentheses.

Q1 = state ownership of 0-25%; Q3 = state ownership of 50-75%; Q4 = state ownership of 75-100%

Figure 1: La Nacion (Argentina)

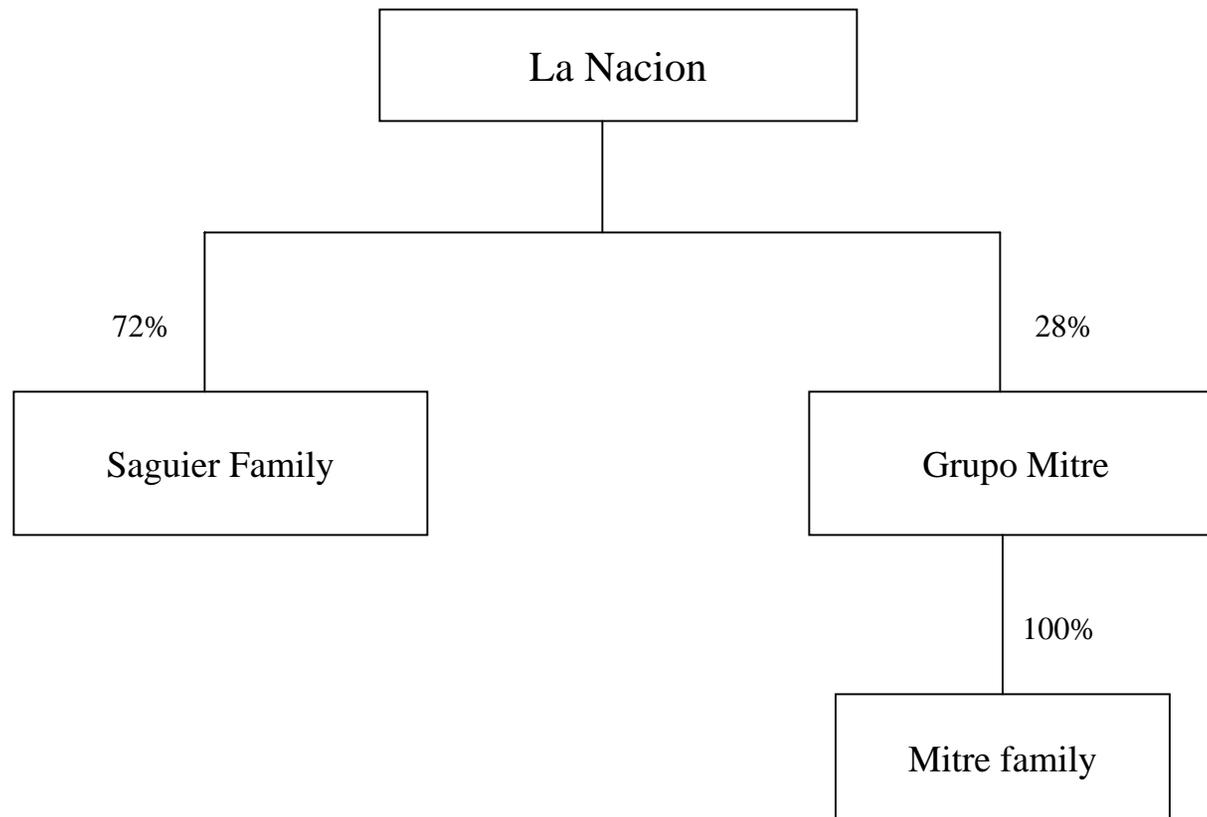


Figure 2: TVN (Norway)

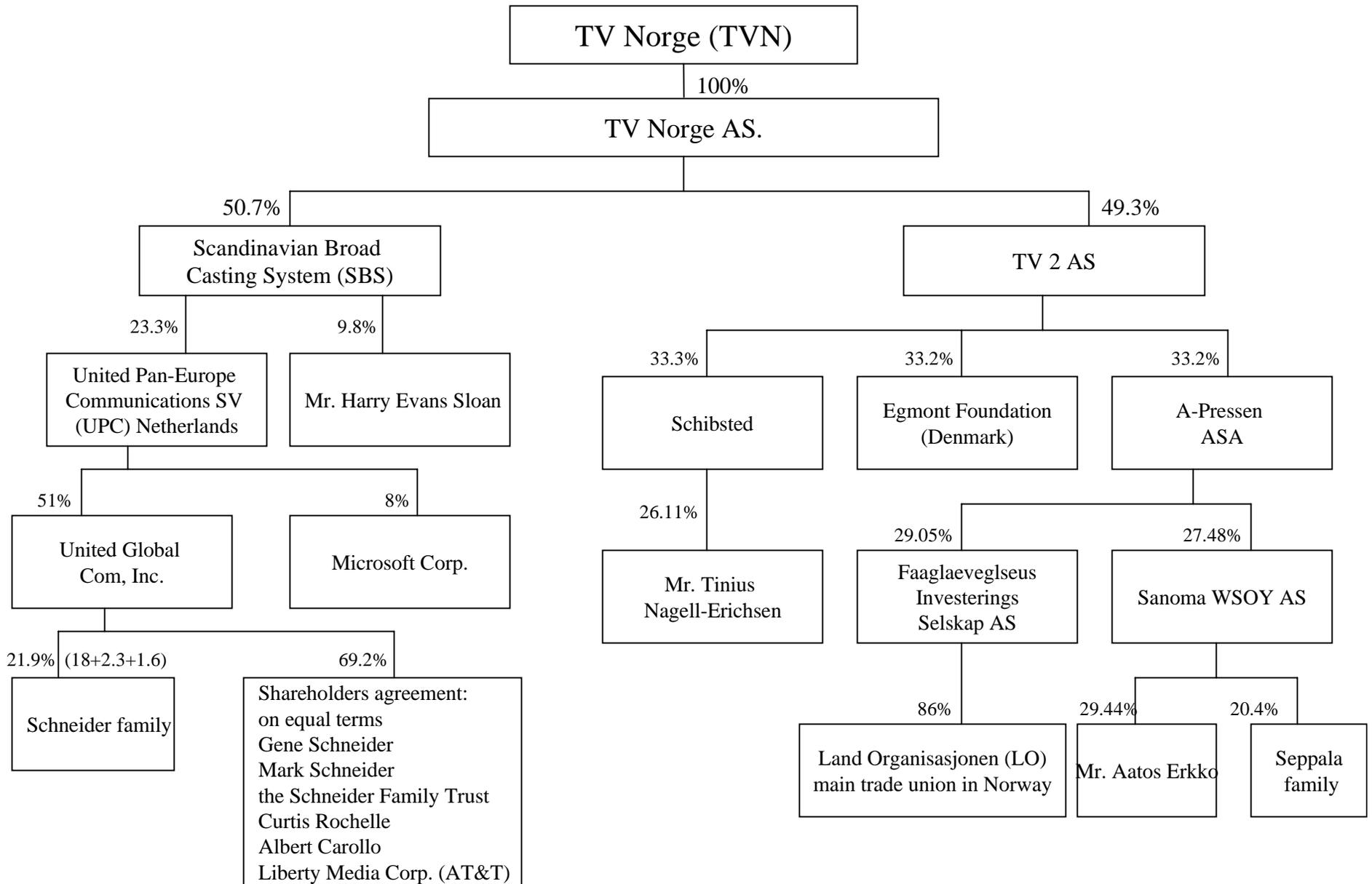


Figure 3: SPH (Singapore)

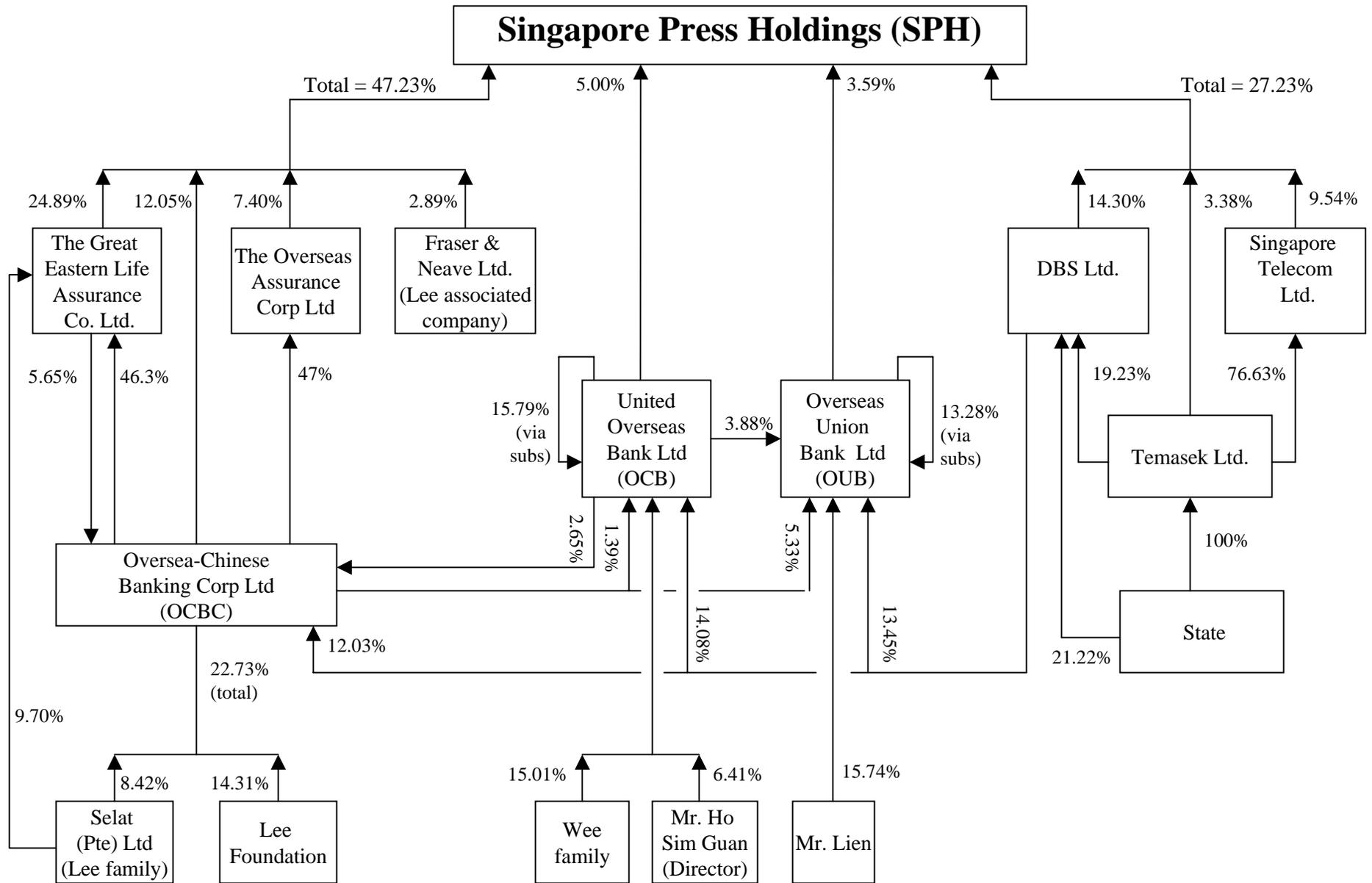
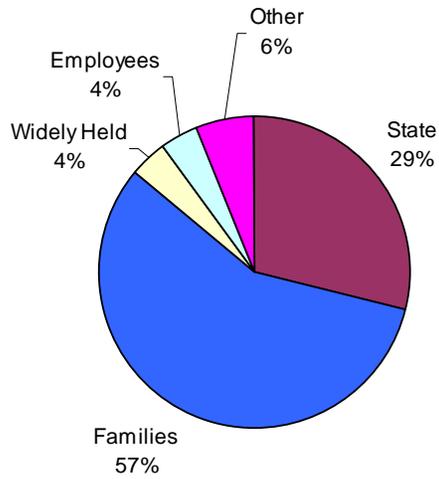
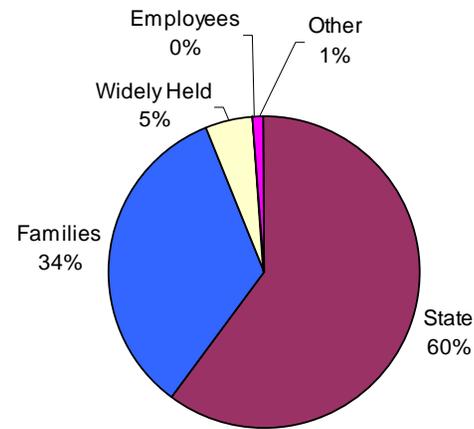


Figure 4: Newspaper and TV Ownership

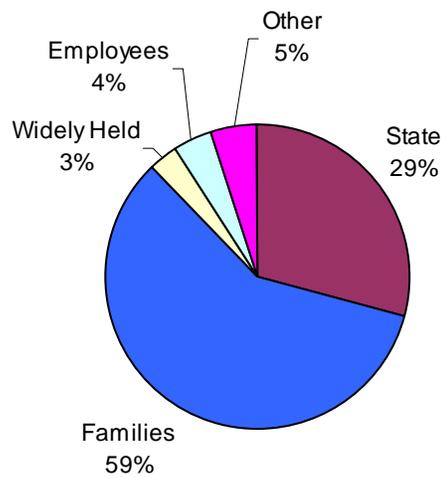
Press Ownership, by Count



TV Ownership, by Count



Press Ownership, by Share



TV Ownership, by Share

