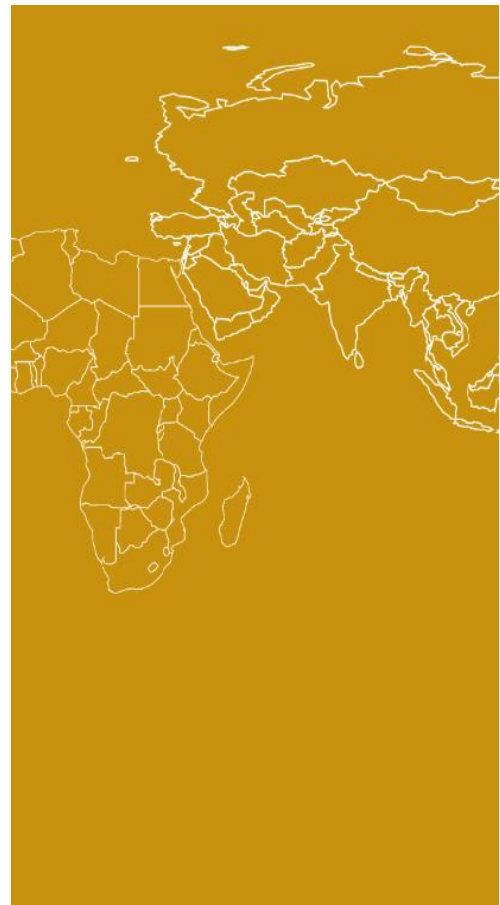


**MEDIA AS A TOOL  
FOR  
INSTITUTIONAL  
CHANGE IN  
DEVELOPMENT\***

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## ABSTRACT

This paper reviews the channels through which the media can be a tool of institutional development, building the argument in two parts. First I focus on the media as a tool for accountability: by providing information on candidates ex ante, and on politicians' performance ex post, an independent media can allow the system of checks and balances embedded in a democracy to work, ensure that electoral threat incentivize governments, and ultimately improve the functioning of institutions. I analyze how media content of the media is determined, focusing in particular on media bias. The issue of media bias is particularly salient in weak institutional contexts, where the media may be captured by powerful interests or by the ruling elite. Second, I discuss how the media can be used to change citizens' preferences and values, as an intermediate step to changing institutions. After reviewing the psychological theories underlying the role of media in this setting, I analyze the policy implications, with special reference to educational entertainment (edutainment) solutions. This includes an analysis of the potential for these types of programs as a tool for conveying information on government and institutional features of society, as well as for shaping individual beliefs and expectations.

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# 1 Introduction

One of the most striking phenomena that have affected developing countries in recent years is the rapid spread of mass media and information and communications technologies (ICT), from radio to television to mobile phones. Data from the Demographic and Health Surveys for Sub-Saharan Africa, for example, show that between 1990 and 2010 TV ownership rates in many countries have increased by a factor of four or more. In addition to having profound effects on social and economic variables (see, e.g., DellaVigna and La Ferrara, 2015; La Ferrara, 2016) this generates new opportunities for using the media as a vehicle for institutional change. The goal of this paper is to assess what we know about the effectiveness of the media in playing such a role, and what gaps in knowledge need to be filled.

For the purpose of the present analysis, institutions will be defined as rules and structures that formally or informally constrain the behavior of individuals in society, aggregate preferences and coordinate beliefs. As such, the impact of the media on institutions will include both impact on formal political institutions (electoral accountability, policy choice, etc.) and the effect on social norms (e.g., mediated by change in individual preferences and values).

I develop the argument in two parts. In the first part I analyze the political economy of the media in developing contexts. I start by covering the literature on media as a tool for accountability: by providing information on candidates *ex ante*, and on politicians' performance *ex post*, an independent media can allow the system of checks and balances embedded in a democracy to work, ensure that electoral threat incentivize governments, and ultimately improve the functioning of institutions. I then analyze how the content of the media is determined, focusing in particular on media bias. The issue of media bias is particularly salient in weak institutional contexts, where the media may be captured by powerful interests or by the ruling *élite*. After briefly reviewing the theory of media bias, I discuss how to operationalize the concept in light of recent advances in the measurement of media bias across different outlets. I then survey the existing evidence on media bias, including capture by politicians as well as by other groups, and the evidence on the impact of biased media on individual behavior, including effects on voting, conflict, etc.

In the second part of the paper I stress a different angle that has been relatively less explored, at least in the economics literature: the media can be used to change citizens' preferences and values, as an intermediate step to changing institutions. In fact "manipulating" institutions in the short run may not have long term effects if individuals do not change their way of thinking, what they demand of their peers, their families and their policymakers. While changing values is intrinsically a complex process, often marked by historical transitions, recent research suggests that the rapid spread of mass media in developing countries can be a powerful tool to change poor people's preferences.

I start by reviewing the psychological basis for the role that mass media (and in partic-

ular television) can play in changing attitudes and behavior. I then summarize the existing empirical studies, with a focus on rigorously identified ones. These comprise studies on the effects of commercial media on socioeconomic outcomes, such as fertility preferences, gender norms, social capital and trust. Finally, I discuss policy implications, with special reference to educational entertainment (edutainment) solutions. This includes an analysis of the potential for these types of programs as a tool for conveying information on government and institutional features of society, as well as for shaping individual beliefs and expectations.

Before turning to the analysis, a methodological premise is in order. If one were to examine the correlation between the extent of information that citizens derive from the media (e.g., whether they read the newspaper, how many news channels they watch and for how long, etc.) and their political views or institutional outcomes in the locations where these individuals live, this would not allow us to draw a causal link from media to preferences or institutions. The reason is that there may be unobserved factors that affect both individuals' propensity to read or watch the news, and the outcomes of interest (omitted variable bias). Also, there may be feedback mechanisms whereby citizens' political preferences or engagement induce changes in the supply of information and in media behavior in general (reverse causation).

To address these endogeneity problems, the existing literature has relied on three types of variation. The first is variation in access to media (and indirectly media consumption) generated by exogenous factors, e.g., staggered entry of media across locations or geographical features that affect signal reception. The second is variation in media content (or coverage) generated by programming strategies that are orthogonal to the outcome of interest, e.g., by the overlap of media markets and electoral districts. The third and last type of variation is directly generated by the researcher through experiments, e.g., randomized controlled trials. Depending on the context and the phenomenon under study, these strategies have generated empirical evidence that can shed light on how access to media and media content can shape political preferences and ultimately the functioning of institutions.

The remainder of the paper is organized as follows. Section 2 ...

## **2 Media, accountability and political change**

Voters need information about policies and who is responsible for them, in order to reward high performing politicians and punish low performing ones. Information collection and transmission is an activity with high fixed costs and relatively low marginal costs, and for this reason it is efficient for the media – as opposed to individuals– to collect and distribute information, thus lowering frictions. The extent to which the media succeed in this task depends on factors such as the degree of media competition, the size of the market, the demand for advertising, and delivery costs.

## 2.1 The accountability channel

Information provision is the main channel through which media affects political accountability: this information can be provided to the public *before* elections (e.g., information on candidates' platforms) as well as *after* a politicians' performance is realized (e.g., compliance with electoral promises). Political information should increase voters' responsiveness to the performance of politicians, and in turn impact on policy choice.

### 2.1.1 Theoretical framework

The literature on media coverage and accountability, carefully summarized by Strömberg (2015), features different models of the above mentioned process, where the differences are mainly related to the type of information that the media provide. In Strömberg (1999) the media carry information on who proposes and is responsible for a given policy; in Besley and Burgess (2002) and Besley and Prat (2006) the information concerns the incumbent's type with respect to altruism and to quality, respectively.

Strömberg (2015) embeds various contributions from the literature into a comprehensive model of the effects of media coverage on different outcomes. His model includes three types of actors: voters, politicians and the media itself. Each of them defends their own interests, respectively: utility from policy, re-election with political rents, and profits from audience. An increase in the share of media consumers as well as higher media coverage of politics induces an increase in the share of informed voters, in the responsiveness of voters to perceived competence, in the expected competence of political actors, in spending levels and in the responsiveness of spending to need, and a decrease in political rents.

Another component of the model regards the market provision of news. Here the provision of public news is increasing in the market size. Politically, this implies that larger countries and larger political jurisdictions within countries will have higher-quality political reporting, thus leading to better informed voters and better political selection and incentives. Also, news provision becomes less expensive the lower is the cost of delivering news. Third, the higher the private value of news, the higher their provision. While the private value is exogenous in this model, in Strömberg (2004a) it is made endogenous and it is higher for policies for which the variance in needs is larger. The model in Strömberg (2004a) predicts also that politicians attempt to distort policies so to manage publicity in their favour: spending will be devoted to newsworthy projects financed from cuts to minor activities, which typically do not attract the attention of media.

Finally, in a world where a politician has many tasks and duties to pay attention to, information may induce distortion in incentives. Voters' level of information is not necessarily increasing in the importance of a task: the media may choose to inform voters about tasks that are not the most important from a social point of view. The politician, internalizing the higher

level of information about the tasks covered by the media, may decide to devote more effort to them and this induce a deviation from the welfare maximizing outcome. This problem, which is an application of Holmström and Milgrom’s (1991) “multitasking problem”, is analyzed in Strömberg (2004a, 2004b).

### **2.1.2 Empirical evidence**

The existing empirical evidence seems to corroborate the mechanism of influence highlighted above: informed voters are more likely to participate in elections and to select politicians based on their platform; informed voters punish or reward politicians for their actions; and politicians change the policies they implement in response. I now briefly summarize this evidence.

#### **A. Informed citizens vote more and differently**

Participating in elections is the main vehicle that citizens have to hold their politicians accountable. A first order question is thus whether the media affect voter turnout, e.g. by providing information that induces voters to go to the polls to voice their opinion, or by increasing people’s interest in politics more generally.

In an influential study, Strömberg (2004a) studies how radio penetration across US counties during 1920-1940 affected electoral outcomes and public spending. In order to circumvent the endogeneity of radio ownership, the author exploits variation in the quality of radio signals generated by geographic characteristics such as ground conductivity and share of woodland, etc.. He finds that people living in municipalities with more radio ownership had higher voter turnout. This was especially true in rural areas, where newspaper circulation was lower and radio constitute a primary vehicle for learning about politics.

A different conclusion is reached by Gentzkow (2006), who focuses on television instead of radio and finds that turnout decreases instead of increasing in response to TV penetration. This different conclusion can be rationalized by considering the relative informational content of the media that is crowded out. In Strömberg (2004a), radio was not crowding out widely available sources of political information, especially in rural areas. In the case of television, instead, newspaper readership was affected and because television programs were less rich in political content compared to newspapers, this may have reduced citizens’ propensity to vote.

Banerjee, Kumar, Pande and Su (2011) find encouraging results for the case of India. In a random sample of slums in a large Indian city, residents received free newspapers containing report cards with information on the performance and qualifications of the incumbent legislator and on the qualifications of the two of main opponents. In particular, the report cards contained the following performance measure for the incumbent: legislative activity, committee attendance and spending of discretionary jurisdiction development funds; and it contained on wealth, education and past criminal record for both incumbent and challengers. Compared to the control group, treated slums were found to have a higher turnout, lower vote-buying and

higher vote share for incumbents that had performed well and were relatively qualified.

Not only information *ex post* on politicians' performance matters, but also *ex ante* information on their policy platforms. In an original policy experiment in Benin, Fujiwara and Wantchekon (2013) worked with policy experts to develop programmatic platforms for the candidates and subsequently persuaded political candidates to run with these platforms (as opposed to the usual clientelistic messages) in a random subset of villages. The "experimental" campaigns involved town hall meetings and discussions, during which villagers could learn about the policy positions of the candidates. The authors found that in treated villages voters were less likely to report vote buying, but were as likely to turn out to vote as in control villages. This is noteworthy because it is often argued that in poor countries vote buying is used to mobilize turnout. While on average no effect was found on vote shares of the "experimental candidate" (i.e., the candidate who was running with the programmatic platform and town hall meetings), heterogeneous effects emerged. In treated villages the vote share of the "dominant" candidate (i.e., the candidate who got most votes) decreased compared to control villages. Because dominant candidates were likely better able to engage in clientelistic practices, this result suggests that information on programmatic platforms can benefit challengers and reduce the advantages of clientelistic schemes adopted by incumbents.

In a related experiment, Bidwell, Casey and Glennerster (2015) study the effects of debates among candidates. In principle, these debates can serve multiple functions. First, they can convey information about the characteristics (e.g., competence) of the candidates and about their specific policy positions. Second, they can serve as a commitment device: to the extent that these debates are a public record of electoral promises, they may enhance the *ex post* accountability of elected officials. The authors set up a randomized controlled trial of public screenings of debates among candidates for the 2012 parliamentary elections in rural areas of Sierra Leone. They found that voters from villages that received the screenings were significantly more knowledgeable about candidates (they know which candidates had been MP's) and more likely to identify the candidate's top spending priorities. Interestingly, "policy alignment" also improved, as measured by a match between the policy position of a voter and that of the candidate they report having voted for. Voters in treated villages were also more likely to switch across ethnic-party lines and to vote for the candidate who had performed better in the debate.

## **B. Informed voters hold politicians accountable**

Other studies have focused not so much on turnout, but on vote choices for specific candidates or parties in response to information about misuse of funds and irregular conduct. In their seminal paper on corruption in Brazil, Ferraz and Finan (2008) exploited a program of random audits of municipal governments and found that voters responded to the outcome of the audit by casting their vote in the next election. In particular, the reaction was mediated by

the media, and specifically by exposure to radio in the municipality. Voters in municipalities that had a local radio station decreased their support for mayors who were more corrupt than average and increased their support for mayors who were less corrupt than average.

In a similar way, Larreguy, Marshall and Snyder (2014) studied the impact of municipal audit reports in Mexico and the role played by the media. They compare corrupt mayors whose behavior is exposed during the year before the election to corrupt mayors whose behavior is exposed after the election. They also rely on within-municipality variation in the electoral districts covered by radio and TV stations: the underlying idea is that if the media station is located within the municipality, its coverage deals more with the relevant audit reports. The authors find that voters punish mayors with worse performance, but they do so only in the districts that have local media.

Overall, the above evidence suggests that access to information, through newspapers, radios or other means, allows voters to exercise a credible threat vis a vis their representatives. How do politicians react in response?

### **C. Politicians choose policies in response to informed voters**

A first piece of evidence shows that when politicians know that they are being “monitored” by citizens, they increase their effort. Snyder and Strömberg (2010) analyze data on US congressmen during 1982-2004 where ideology and effort are measured by roll-call voting, committee assignments and witness appearances. They find that in US districts where media coverage of politics is higher, congressmen are less ideologically extreme, they vote more frequently against their party leaders, they are more likely to stand as witness before congressional hearings and more likely to serve on committees that can directly benefit their constituencies.<sup>1</sup> The authors separately identify the effect of selection and of incentives: moderation is found to stem from selection, whereas the increase in witness appearance is driven by incentives.

Other evidence has shown a direct link from media penetration to policy choice. Besley and Burgess (2002) study the distribution of food and calamity relief in a panel of Indian states between 1958 and 1992. They find that, controlling for local food production and flood damage, states with higher newspaper circulation receive more food subsidies and calamity relief spending, respectively.<sup>2</sup> They also find that media consumption affects the responsiveness of policy to need: the coefficient on the interaction term between newspaper circulation and proxies for need is positive and significant. In other words, spending is more linked to actual need in localities where newspapers circulation was higher. This effect is driven by newspapers in

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<sup>1</sup>See below for a description of the identification strategy used to isolate the exogenous component of news content.

<sup>2</sup>In order to address the endogeneity problem, the authors use an instrumental variables approach, instrumenting newspaper circulation with variables that represent ownership by parties, private associations, etc. The underlying rationale is that in states where newspapers are owned by the parties, for example, voters will anticipate that the content is likely to be biased and will have a lower demand for newspapers.



local languages, as opposed to English or Hindi, corroborating the interpretation that people’s access to local information was the key driver of politicians’ response.

In his study of radio’s impact in the US, Strömberg (2004a) finds that counties with higher radio ownership rates received more unemployment relief funds through the New Deal’s program. This effect was particularly pronounced in rural areas, that had less access to alternative sources of information, and where radio accounted for about 20 percent more public spending than in urban counties.

In their study of electoral debates in Sierra Leone, Bidwell et al. (2015) find that communities that had (randomly) received the debate screenings saw an increase in campaign spending by candidates, more visits and more gifts by the candidates. Ex post accountability also seems to have worked: once elected, MP’s who had participated in the debates spent more than twice as much on verifiable development expenditures for their constituencies.

Naturally, the accountability channel of voters’ information may not always work in a benign way. In particular, it may distort funds or policies away from communities that are particularly needy yet have poor access to information (hence constitute less of an electoral threat). Reinikka and Svensson (2005) provide a direct evidence of such a mechanism, as they find that schools that were located closer to newspaper outlets received more government funds; the bias in this case penalized more remote and isolated localities.

While the availability of media outlets is crucial to create accountability, it may not per se be enough. What issues are covered in the media? If the press or other media are not reporting –or not reporting objectively– on political issues, this may have severe consequences, even in well functioning democracies. The next step is thus to understand what determines media coverage and media bias.

## 2.2 Media coverage and bias

Understanding how media coverage impacts political institutions and policy choices is a non-trivial task. In fact more severe problems are both more likely to receive policy attention and to attract media coverage. Moreover, a reverse causality problem may arise since political agendas can drive policy but also influence media coverage.

An early attempt to circumvent these obstacles was done by Eisensee and Strömberg (2007), who analyzed the effect of media coverage of natural disasters on foreign aid allocation. The authors exploit the occurrence of newsworthy events (e.g., sport events) in the same days of a disaster as a source of exogenous variation in media coverage. They find that disasters that are covered less by the media receive less attention by US policymakers, in the form of less emergency relief spending.

In a different setting, Snyder and Strömberg (2010) examine how the incentives to cover local politics in the US depend on the “congruence” of the media and of the political audience.

The main idea is the following. Boundaries of media markets are typically determined by the “economic geography” of a locality, while the boundaries of US congressional districts are generally depend on the “political geography” of an area. When the overlap (“congruence”) between these two is significant, the media are more likely to cover local political news: they know that by doing so they will not “alienate” a large fraction of their audience, because most of the people buying the local newspaper or watching the local TV vote in the same district and are therefore interested in coverage of the same news. On the other hand, media in district that have low “congruence” will be less likely to cover local politics because their audience for such news is limited. Applying this approach to 161 US newspapers over the period 1991-2002, Snyder and Strömberg (2010) show that higher congruence resulted in a greater number of news stories that contained the name of a representative from the district and the word “Congress”.

This approach, which is applicable outside the US to the extent that media markets are separated from electoral districts but at the same there is some overlap, is very effective at predicting whether local political news will be covered in the media. But *how* are they covered? Which news are selected to be transmitted to the general public? In the above contributions, coverage choices were driven by market forces, not so much by political strategy. However, the process of filtering and summarizing information necessarily entails discretionary choices, which may not be politically neutral. When this happens in a systematic way, and one outlet repeatedly favors one viewpoint over others, the media outlet is said to be “biased”. Gentzkow, Shapiro and Stone (2015) offer a formal definition of bias according to which media bias occurs when there are systematic differences across outlets in mapping facts into news reports, and these differences sway the target audience to the right or to the left. Media bias is especially relevant in weak institutional settings, where interest groups or elites have the power to bias media outlets in their favor, and therefore to induce people’s behavior to diverge from their own best interest.

### 2.2.1 Measuring bias

A substantial literature has grown upon researchers’ attempts to identify, classify and analyze the ideological positions of media outlets. Media bias can come in many different shades: in favour of a particular political party, the incumbent, an industry or a group of companies, etc. While the possibility of such a bias is not hard to conceptualize, it is challenging to measure it: claiming partiality per se entails a reference to another term, which can be non-trivial to define (a “neutral” outlet? the average preference of voters?). In some cases, the most straightforward object of measurement is the variation among media outlets, i.e. a notion of *relative* bias.

Two main approaches have been used to measure media bias. The first can be labeled as the *comparison approach*, and consists in comparing media outlets with political or non-

political actors whose ideological position is known. The second, which we can label as *agenda approach*, focuses on the amount of coverage devoted to different policy issues (agenda setting) or on the way in which issues are covered (framing and priming). I now briefly describe the main contributions in the two approaches.

### **The comparison approach**

The comparison approach owes much to a subfield of automated analysis, the “author identification” or “stylometry”. As the name suggests, the purpose of such a technique is to identify the author of a text by comparing the frequency of some characteristic words and trying to retrieve a similar mixture in other texts whose authorship is known.

Groseclose and Milyo (2005) assess the magnitude of bias via the similarities between the think tanks quoted by media and those cited by congressmen. They first assign to each think tank a score for their relative ideological bias, based on the propensity of lined-up politicians to positively quote some think tanks and negatively cite others. In a second step, the authors check how often newspapers back up the ideas of different think tanks. Finally, they attribute the same ideological bias to congressmen and journals that repeatedly cite the same think tank. The advantage of this approach is that it does not require classifying a given think tank as left or right: it is enough to consider which congressmen cite it. Groseclose and Milyo’s results suggest that all but two of the sampled newspapers are located to the left of the average Congress member.

Gentzkow and Shapiro (2010) build on the above idea but analyze a larger sample of newspapers and analyze the *language* used by newspapers. In particular, they assess the magnitude of media bias exploiting the similarities between media language and congressmen’s words. The authors identify the words and expressions whose frequency in use is most different between Democrats and Republicans: for example, Republicans would use the phrase “death tax” when Democrats would use “estate tax”, etc. Then, they measure how often those phrases are included in articles of 433 newspapers in 2005. With this method, they find that partisanship (or “slant”) of news outlets is positively correlated with the targeted audience’s ideological leaning: newspapers expressing a more conservative viewpoint sold more copies in ZIP codes where the individuals were more prone to donate to Republican candidates, and vice versa for the liberal journals and districts. The work by Gentzkow and Shapiro (2010) therefore constitutes an example of media bias generated by demand-side factors (e.g., consumers’ taste).

In a different vein, Puglisi and Snyder (2015) measure bias by analyzing ballot propositions. Their reasoning goes as follows: all interest groups take a position on propositions, and citizens vote these pieces of law; therefore, within each state different groups (parties, interest groups but also voters) can be arranged on a scale, given the expression of their opinion. The authors find that newspapers are distributed about evenly around each state’s median voter, and that they tend to be centrist also with respect to interest groups. They also find that newspapers appear to be more liberal than voters on many social and cultural issues (e.g. gay marriage),

while being more conservative than voters on economic subject matters (e.g. minimum wage).<sup>3</sup>

### **The agenda approach**

The agenda approach rests on the idea that the choice of covering an issue, and the amount of coverage devoted to it, affects viewers' or readers' tendency to judge politicians on the basis of the issues covered. Larcinese, Puglisi and Snyder (2011) apply this idea to the coverage of economic topics in US newspapers between 1996 and 2005, and study the variation in coverage of bad economic news as a function of the political affiliation of the incumbent President. Their intuition is the following: when an outlet endorses a candidate it will highlight his achievements and attempt to hide his mistakes. Newspapers endorsing Republicans will attempt to weaken the popularity of a Democratic incumbent and thus cover the news concerning failures of the economic policy during that presidency. Symmetrically, pro-Republican newspapers would give more coverage to the president's successes when he is a Republican. By employing this method, the authors find a considerable variation in the bias across their sample of newspapers; they also find a significant correlation for the issue of unemployment between the explicit bias of newspapers and the implicit endorsement detected with the above mentioned technique.

Puglisi and Snyder (2011) adopt a similar framework in analyzing the coverage of 32 political scandals occurred in the US between 1997 and 2007. They find that newspapers endorsing Democratic candidates were likely to cover scandals implicating Democrats, while providing extensive coverage of Republicans' scandals. The same mechanism, with inverted parties, was found to hold true for newspapers with pro-Republican bias. These results were robust to controlling for a number of factors such as partisan readership.

One aspect which is evident from the above list of contributions is that the literature on *measuring* media bias has almost exclusively focused on the United States. This seems a serious shortcoming if we want to implement serious empirical studies of media bias in developing countries. While some of the methodologies may in principle be applied to low income countries' settings, there may be other specificities that need to be taken into account. The ability of politicians or interest groups to directly control the media, for example, may be highly sensitive to the level of institutional development of the country. The phenomenon of "media capture" is revealing in this respect.

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<sup>3</sup>Yet another example is given by Ho and Quinn (2008), who analysed the editorials in 25 U.S. newspapers covering about 495 Supreme Court cases between 1994 and 2004. For each journal, they observed whether it supported the minority or majority position for all the different cases. By making use of the actual votes cast by the Supreme Court justices on the same cases, the authors managed to profile the relative partisanship of journals and justices. As for the newspapers, they find a majority of centrist relative to the distribution estimated for justices.

## 2.3 Media capture

Media capture is a condition in which politicians or other interest groups manage to control (partially or totally) the content of media outlets. In order to document media capture and its effects it is not sufficient to show media bias, since the latter can also be driven by demand-side factors (e.g., outlets adjust to the tastes of their audience). I start by examining the available evidence on media capture and the factors that favor it, and then move to discussing the effects of media capture on individual behavior.

### 2.3.1 How media capture occurs, and why

Governments can realize media capture through different channels, ranging from direct ownership to provision of funding, regulation, and so on. An example of direct payments (through bribes) is presented in McMillan and Zoido (2004). They studied Fujimori's Peru, where Vladimir Montesinos (the head of the secret police) kept track of all the bribes paid by the government. The authors show that directors of TV channels were offered up to 100 times more money than politicians or judges: in exchange the bribed media outlets allowed Montesinos to review the daily news before broadcasting, and they agreed to only convey information he had explicitly given consent to. The fact that buying the media was worth so much can be rationalized through the hold-up problem: it is enough for a single TV channel or newspaper to leak information that the whole regime will suffer from it. Indeed, a typical priority of rulers after a coup d'état is to gain control of the media. Political influence over the media is systematic, and more common in autocracies. In their study of 97 countries, Djankov et al. (2003) find that 29 percent of the press and 64 percent of television are owned by the State.

A different example of direct provision of funds by the government (through government-sponsored advertising) is described in Di Tella and Franceschelli (2012): the authors study the frequency of reporting on corruption stories in newspapers that receive funding from the government. The setting of their research is 1990s-2000s Argentina, where the authors find that newspapers that were more dependent on government advertising were less likely to report on government corruption.

Media regulation is another channel in the hands of government for controlling media content. Stanig (2015) shows that defamation regulations are crucial determinants of news reporting for corruption stories in Mexico. Local newspapers reported less corruption in Mexico in 2001 in states whose defamation regulation was stricter. Similar findings were reported in Starr (2004), who provides a cross-country historical overview of media development, regulation and capture.

Interestingly, some heterogeneity is attained in media content even in countries whose governments have full control of press and media in general. For instance, Qin et al. (2014) show that the set of issues appearing in Chinese newspapers depends on the strength of the

link between the outlets and the Communist party. They find that the most controlled outlets were more likely to write about low-level corruption as compared to commercial media; these results support the idea by Egorov et al. (2009) that autocratic governments exploit mass media to monitor their lower-level public officials.

Gentzkow and Shapiro (2008) show that, even in countries with relatively high freedom of media, governments influence outlets via regulations or restricted access to information. Qian and Yanagizawa-Drott (2015) show that during the cold war some interests in U.S. foreign policy managed to shape the coverage of human rights violation in newspapers.

However, governments are not the only actors who can manipulate media: media owners, advertisers, journalists, private companies, single politicians also have the incentives to distort information and coverage. For instance when in 1979 Mother Jones, a leading independent news organization, published a critical article on the addictive effects of cigarettes, tobacco companies reacted by withdrawing their advertising from the journal. Reuter and Zitzewitz (2006) highlight that all but one of the sampled financial magazines are biased toward advertisers in their recommendations for mutual funds investments.

Media capture in recent years is taking new forms, due to the advancements in technology and the broader reach of information: governments cannot perfectly control all pieces of information (think of all existing blogs, sites, etc.); they do, however, engage in selective removal of content. This is especially the case in China, as described in King et al. (2013): the authors attempt to disentangle the reasons leading to the deletion of certain content. They do so by photographing the Chinese blogosphere every 20 minutes and ex-post identifying deleted content. Their results suggest that the government tends to delete appeals for coordination and forms of collective action, even more than explicit criticism against Communism or against the incumbent regime. These results are also confirmed in King et al. (2014).

Other work has explored the factors favoring media capture, distinguishing between “demand for capture” and “supply of capture”, where the former includes the incentives of interest groups to control the media, whereas the latter entails the willingness of media outlets to adjust their content. More in general, Djankov et al. (2003) maintain that the lack of political competition and direct government ownership are crucial factors driving media capture by government. However, the ability of outlets to raise independent revenues can safeguard the media from capture, as suggested by Petrova (2011), who presents empirical evidence that in 19th century the increase in advertising made U.S. newspapers more independent.

### **2.3.2 Effects of media capture**

While there is a generally shared notion that media capture is undesirable, pinning down its negative effects in a credible way is challenging. The main difficulty lies in the fact that individuals’ decisions on which media product they want to consume is endogenous. In a

perfectly Bayesian setting, captured media would not exert any impact, since consumers would detect the bias and discount information accordingly. However, there are reasons to doubt that full discounting takes place in reality: a signal of this can be the fact that countries with the highest media censorship are not always those where people have less trust in media. In fact, the Global Trust Barometer suggests that Chinese people are the most likely to trust their media (Enikolopov and Petrova, 2015).

Several empirical studies document the effect that captured media can exert on individual behavior. Yanagizawa-Drott (2014) studies the impact on violence: exploiting geographical variation in the reach of the radio signal of RTLM (a Rwandan transmitter inciting violence against the Tutsi minority), he finds that the radio was responsible for 10 percent of anti-Tutsi actions occurred during genocide in 1994.

Other work shows that the media have an effect also when they are targeting foreigners. For instance, DellaVigna et al. (2014) study the case of a Serbian radio whose content was managed by the Serbian government but whose signal reached Croatia so that many Croatians listened to this radio, even though its programs were explicitly hostile to their ethnicity. The authors find that exposure to this radio increased adherence to the extreme Croatian nationalist party. Participants in lab-experiments also revealed a more marked anti-Serbian sentiment after listening to 10 minutes of radio.

In the range of possible relevant effects exerted by captured media, changes in voting behavior can be especially important. A number of studies have attempted to determine whether controlled media can affect political attitudes and decision-making. Gerber et al. (2006) ran a randomized control trial prior to the 2005 gubernatorial elections in Virginia: two treatment groups received a free subscription, each to a different newspaper, and a third group constituted the control. The newspapers assigned were the Washington Post (relatively liberal) and the Washington Times (relatively conservative). The authors find that readers of the Post were 8 percentage points more likely to vote for Democrats in 2005 elections, whereas readers of the Times preferred the Democratic candidate by only 4 percentage points.

DellaVigna and Kaplan (2007) exploited the staggered introduction of the Fox News channel across cable markets in the US and estimated its impact on voting behavior during the 1996 and 2000 presidential elections. They find that in localities where Fox News started to broadcast before 2000, Republicans registered a gain between 0.4 and 0.7 percentage points compared to localities where the same channel was introduced later.

The effect of media capture on voting and political outcomes is particularly worrisome, as it reduces the effectiveness of the system of checks and balances required for the well functioning of democratic institutions. For example, Brunetti and Weder (2003) show that the political longevity of the prime minister of the President across countries is positively correlated with the share of media outlets owned by the government. This is a source of concern if such longevity is not driven by satisfactory performance in delivering public goods and services.

So what mechanisms exist to mitigate the negative effects of media capture? The two main mechanisms available are rationality or discounting on behalf of the citizens, and increased competition.

### **Discounting**

As predicted by the theory, there is evidence that the public is able to discount information when they expect the source to be biased. Chiang and Knight (2011) study the impact that newspapers endorsements exert on readers' voting behavior and find that "unexpected endorsements" have an effect, whereas expected ones are discounted by readers. In other words: when a Democratic-leaning journal endorses the Republican candidate (unexpected) this has an impact on votes, whereas the support by pro-Democratic outlets towards Democrats (expected) has negligible effects.

Bai et al. (2014) study how people update their beliefs on air-pollution in China after receiving information from the government or receiving it from independent sources. They find that people do not fully discount government-biased information, while they have problems in interpreting conflicting indications from independent sources. This is plausibly related to what was mentioned above, i.e., that Chinese people tend to trust their media.

Adena et al. (2015) take into account the beliefs of audiences and study the effects of propaganda in settings where people hold very different beliefs *ex ante*. They observe that the impact of radio propaganda in Nazi Germany strongly depended on the *ex ante* beliefs of the audience: although in general exposition to radio increased denunciation of Jews and anti-Semitic violence, in historically tolerant localities the effect was even opposite.

### **Competition**

An important tool to counteract media capture is competition among media outlets. Theoretically, when the bias originates from the supply side, e.g., in the bias of those who produce information (media editors, journalists, etc.), then higher competition can lead to lower bias. But stronger competition may have opposite effects if newspapers fear to lose readers and decide to cover certain issues using an attention-grabbing extreme tone. Empirical evidence on the benefits of competition in reducing media bias is provided by Fonseca-Galvis et al. (2014), who find that partisan newspapers devoted more coverage to scandals involving their preferred party in localities where there was at least one newspaper affiliated to the opposing party.

In addition, competition gives to the audiences the option to switch from one media outlet to another. Durante and Knight (2012) show that Italian viewers responded to changes in TV channels by switching to other news sources: when Berlusconi was the prime minister, the news content in public TV channels shifted to the right. As a consequence, public television attracted relatively more right-wing voters, and left-wing viewers turned to other channels. Also, while the right-wing viewers increased their trust in media, left wing viewers saw it decrease.

A separate but related question is whether, in a context where most media outlets are



captured, an independent one can make a difference. Enikolopov, Petrova, and Zhuravskaya (2011) test the effects of an independent TV channel on votes cast for Vladimir Putin in 1999. They exploit geographical variation in the access to this independent TV channel and show that such exposure increased the vote share of opposition parties by 6.3 percentage points, while decreasing the votes pro-Putin by 8.9 percentage points.

Despite the above evidence, it is not always true that in captured contexts independent outlets are successful in improving accountability. Malesky, Schuler and Tran (2012) study the effect of increasing information on legislative performance of the politicians in Vietnam. They find that information provision did not improve the performance of delegates, but deputies of regions with higher Internet diffusion began avoiding initiatives that could shed a negative light on regime leaders. At the same time, increased availability of information on some politicians made them less likely to be reappointed by the regime.

## 2.4 Open questions

From the above discussion on media coverage and media bias it emerges clearly that a large share of the evidence that we have available on these topics comes from high-income countries. When thinking about the possibility to translate that evidence to low income settings, a number of questions emerge.

What are the incentives to provide accurate information in low-income settings? Is the mitigating force of information discounting equally at play? The fact that individuals rationally anticipate that information is biased in a certain direction requires some degree of awareness of the bias and of the manipulation of information, and if there are no other sources of knowledge than the official ones, this awareness may be difficult to achieve.

How do the incentives to provide accurate information work in settings where advertising is not the driving force? Commercial television and the printed press in advanced democracies typically get most of their revenues from advertising. While this may create bias towards certain businesses (e.g., Reuter and Zitzewitz, 2006) it does impose a constraint that the content provided must be appealing enough that viewers or readers want to “consume” this content. In settings where news outlets are financed by the government or by a few powerful interest groups, what incentives remain to provide reliable information?

More generally, a systematic understanding of media ownership patterns in low income countries and of how ownership patterns affect media content in these settings is needed. Very little rigorous empirical evidence exists on this front.

Also, the theoretical framework linking media content and accountability has been largely developed for democracies. We know a lot less about how these mechanisms work in autocracies – something that is highly relevant for a number of developing countries.

An important gap in the literature relates to the possibility of using new media (e.g., social

networks and online platforms) to improve accountability. Enikolopov, Makarin and Petrova (2016) test if social media can help reduce collective action problems by studying the penetration of VK, the Russian equivalent of Facebook, across cities. they show that VK penetration increased protest activities in 2011 and that this was not due to the network spreading information that was critical of the incumbent government (if anything, network penetration increased support for the government), but rather to the reduced costs of coordination that the network allowed. More work is needed to understand the potential of social media for political accountability.

Providing credible answers to the above questions is crucial and has important policy implications, ranging from regulation to legal reform. In terms of regulation, platform-specific regulation may involve limits on ownership by single companies/platforms and limits on cross-platform ownership. Also, competition policy cannot be limited to ensuring low concentration (as measured by a low Herfindal index): there is a specific need for media plurality, i.e., it is crucial that different viewpoints and ideologies are represented, not just that market shares do not exceed certain values. The role of direct provision of news content is also a sensitive one. While there exist excellent examples of public service broadcasting (e.g., the BBC), the risk of capture and propaganda in settings with bad governance is high.

### 3 Media and social change

The above discussion has analyzed under what circumstances the media contributes to accountability and to the well functioning of political institutions. But what makes citizens *demand* accountable governments? One of the greatest puzzles in the political economy of development is why voters keep electing politicians that do not deliver good policies. Even if a country had the right legal and political infrastructure in place, if citizens maintain low expectations about their leaders or if they do not deem institutional change as possible, changing the rules of the game will not be enough. It is therefore crucial to understand the formation of citizens' beliefs and preferences, and how the media contributes to shaping beliefs and preferences.

Mass media have the potential to induce important changes in people's preferences and beliefs by providing information on the economics environment and available opportunities and by influencing aspirations through role modelling.<sup>4</sup> Evidence on this point has been offered focusing on outcomes that are particularly related to social norms (e.g., gender norms) and for which the presence of "new" content on TV or radio may offer alternative models and lead to changes in social norms.

For example, La Ferrara, Chong and Duryea (2012) study the effect of Brazilian soap operas (*novelas*) on fertility patterns from the mid-1960s to the mid-1990s. While population control

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<sup>4</sup>See DellaVigna and La Ferrara (2015) and La Ferrara (2016) for a review of contributions on these topics.

was not a goal of the producers of these *novelas*, reasons related to the development of the plot implied that for many years the main female characters in these soap operas had very few children, if any. The authors exploit the staggered entry of Rede Globo, the main novela producer in the country, across municipalities to test if locations exposed to these programs see a reduction in fertility. They find a significant reduction in fertility, equivalent to the one that would be achieved through an increase of 1.6 years in women’s education. The effect is stronger for families of low socioeconomic status and for women closer in age to the main *novela* character in any given year, consistent with greater identification with such characters. Chong and La Ferrara (2009) confirm that these commercial TV programs were capable of inducing changes in other social norms, as municipalities exposed to Rede Globo saw an increase in divorce and separation rates compared to other municipalities.

Jensen and Oster (2009) study a different setting, India, and explore how the introduction of cable TV across rural villages exposed the local population to values and behavior typical of western societies. They find that after the introduction of cable TV villagers were less likely to tolerate domestic violence, they expressed less son preference, and reported greater autonomy in decision making for women.

While the above media content was not designed to change individual attitudes in a certain direction (the change in behavior and norms was a by-product of a commercial strategy), there is scope for explicitly designing media content in order to achieved the desired social and behavioral change. This is what the so called “educational entertainment” does.

### 3.1 Educational Entertainment

Educational entertainment (EE, or *edutainment*) is “the process of purposely designing and implementing a media message to both entertain and educate, in order to increase audience members’ knowledge about an issue, create favorable attitudes, shift social norms, and change the overt behavior of individuals and communities” (Singhal and Rogers, 2004, p. 5). Underlying this notion some pillars from social psychology that can be reconducted to the work of Albert Bandura.

The first is Bandura’s (1976) *social learning theory*. This theory postulates that individuals learn not only through their own experience, but also through the experience of others, so that media programs constitute an opportunity to learn from characters’ successes and failures without personally incurring the costs. The second building block is the concept of *self-efficacy*, that is, the “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p.3). Here the idea is that the media can offer role models who successfully pursue certain goals, make those goal seem attainable and induce the viewers to act to pursue those objectives. Role modeling, identification and exemplification are thus crucial features of edutainment productions, since the early days of Miguel Sabido’s

(1981) edutainment soap operas.

While these ideas have been popular among practitioners for many years, only recently they have been rigorously evaluated from an empirical point of view. These evaluations point to two main roles that edutainment productions can perform.

First, edutainment seems effective in providing information. For example, Berg and Zia (2013) introduced a plot on over-borrowing and financial education into a mainstream soap opera in South Africa and found significant improvements in financial knowledge of viewers who were (exogenously) incentivized to watch this soap. Ravallion, van de Walle, Dutta and Murgai (2015) study the National Rural Employment Guarantee Scheme (NREGS) in Bihar, India. In order to increase the take-up of the program among poor rural households, the authors produced a short movie telling the story of a migrant who is able to stay in his village, close to his family, thanks to the availability of work through the public works scheme. The movie shows how the scheme works and provides some pieces of information related to eligibility, contractual conditions, etc. Evaluating this movie through a randomized controlled trial, Ravallion et al. find that knowledge of NREGS and perceptions about its usefulness were significantly improved, while actual usage of the program was not. On a different topic (health instead of public policy) Banerjee, Barnhardt and Duflo (2015) show that a short movie is more effective in increasing consumption of double-fortified salt (used against anemia) than a traditional information campaign done through flyers.

A second objective for edutainment productions, after information provision, is that of changing people's preferences in a way that is conducive to positive behavior, through role modeling. This function is particularly relevant when thinking of institutional change, as it may be hypothesized that the persistence of dysfunctional institutions or norms may be linked to "aspiration failures" (e.g., Genicot and Ray, 2015; Dalton, Ghosal and Mani, 2016). Two recent studies suggest that edutainment can be successful in raising the aspirations of the poor. Bernard, Dercon, Orkin and Taffesse (2014) show that short documentaries telling success stories of young Ethiopians improved viewers' aspirations and locus of control, also leading parents to invest more in their children's education. Bjorvatn, Cappelen, Helgesson Sekeiz, Sørensen and Tungodden (2015) evaluate an edutainment show in Tanzania aimed at fostering entrepreneurship among high school students. They find positive effects both on aspirations and on actual decisions to start a business, although this is at the expense of academic achievement (as the program did not trace a link from schooling to entrepreneurial success).

Particularly relevant for institutional change are the contributions of Paluck (2009) and Paluck and Green (2009). These authors study post-genocide reconciliation in Rwanda, and in particular assess whether a radio soap opera containing messages on the importance of independent judgement and on the origins of violence is able to change beliefs about the source of violence and norms of trust and cooperation. The authors find a positive effect on

‘prescriptive’ social norms (i.e., norms prescribing how people should behave) but no impact on ‘descriptive’ social norms (i.e., how people actually behave). The lack of an effect on the latter variable points to the importance of coordinating beliefs when using edutainment to change deeply rooted norms.

Trujillo and Paluck (2011) experiment with using a Mexican soap opera to change political attitudes of the Latino population in relation to perceived threats from immigration legislation. During the 2010 US Census there was concern among Latino communities for the possibility that immigration officials would use the Census to target immigration raids. This led some members of the Latino population to boycott the Census. Trujillo and Paluck’s study is set in Arizona, Texas and New Jersey, where the authors randomly assigned Latino study participants to watch scenes that encouraged participation in the Census. They found improved attitudes towards the US government among treated individuals, as well as support for the Census (as proxied by wearing Census stickers). However, they did not find improved attitudes in Arizona, where the recent passage of the immigration bill SB 1070 made the local Latinos perceive a direct threat from the US government. These findings point to a potential (albeit limited) role for edutainment in changing civic attitudes and trust in government.

### **Caveats**

While overall the existing evidence leaves room for optimism regarding the possibility of using mass media to transmit information and affect preferences and beliefs in a way that is conducive to institutional development, some caveats are in order. The first relates to time use. When people spend time in front of television or listening to the radio, they allocate that time away from other activities. The net effect of the exposure thus depends on the activities that are “crowded out” by media consumption. In a famous book, Putnam (2000) argues that the spread of television in the US has increased people’s isolation and decreased social capital. Olken (2009) tests this hypothesis in Indonesia, relying on variation in the number of TV channels available across different villages. This in turn depends on variation in the quality of the signal, which is a function of topography and other terrain characteristics. His results suggest that an increase in the number of available TV channels leads to fewer social groups and less participation in group meetings, especially for non-religious groups such as rotating savings and credit associations. It is thus important to assess the appropriateness of different strategies to use mass media for institutional change, privileging the ones that do not discourage social interaction.

A second important caveat relates to ethical aspects. When using mass media for public policy, there is a risk that content may be strategically manipulated for propaganda purposes. This is especially worrisome from the point of view of institutional change because such manipulation is generally more likely in weak institutional settings. A well known case in point is that of North Korea, where Kim Jong-Il heavily used entertainment movies to promote his

image as a leader and discredit western countries (Fischer, 2015). While content manipulation is an intrinsic risk for all media outlets (see the discussion above on media capture and bias), it takes a new light in the case of edutainment because the possibility to justify state intervention in programming on the grounds of educational goals may provide an easy excuse for opportunistic distortion of information. When viewers are aware of content manipulation and have a choice among many outlets, the possibility to switch to less distorted outlets constitutes a safeguard, but in countries with limited supply of media outlets or where very few independent sources exist, this mechanism is not in place.

### **3.2 Open questions and concluding remarks**

A large part of the existing evidence on the effect of edutainment relates to educational or family outcomes, and only a small number of studies directly targeted political attitudes or civic norms. An important gap in the literature is thus to understand if and how entertainment media can be used to foster “civic values” and build awareness about political and institutional participation.

Another important issue is the interplay between media content and deeply rooted social norms. Is it possible for entertainment programs to change preferences and beliefs to the point that they induce a shift in deeply rooted social norms? Here the issue of coordination and of social effects becomes central. While viewers may be able to identify a desirable behavior as transmitted by positive role model in the program, they may not act correspondingly if they do not anticipate other people to do the same. For example, if an edutainment program warns against corruption and discourages from paying bribes to obtain public services, viewers may still decide to pay bribes if they expect everyone else to do it and they do not want to be cut out of public service provision. In ongoing work, Banerjee, La Ferrara and Orozco (2015) address similar issues in evaluating the impact of a TV series produced by MTV in Nigeria to reduce risky sexual behavior and domestic violence. Their experimental design creates exogenous variation in the beliefs about other people’s behavior, thus allowing to understand the interplay between edutainment content and social effects.

A third question that is important for the edutainment agenda in dealing with institutional change relates to the optimal degree of challenging the status quo in promoting new norms. A message that is too mild may not induce the desired change, but a message that is too far away from the existing norm may discourage behavioral change if the new behavior is perceived as too threatening. Little, if any, evidence exists on this point.

Finally, in an increasingly globalized world it is too limiting to think of media content as being only locally generated. People are exposed to information and values that come from different countries and very different cultures. Whether this leads to institutional convergence or not is an open question for future research.

Overall, the existing evidence suggests that mass media have the potential to convey political information but also values and models that can lead to behavioral change in developing countries. Contextualizing this behavioral change in the case of different institutions is something that has not been done systematically, and that promises to yield important payoffs. Also, with the rapid spread of new social media that partly substitute traditional ones, an opportunity opens up to reach new segments of the population (Singhal, 2013). How to accomplish this goal is something that future policy interventions and research should determine.

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