

Domesticated Publishers, Silenced Journalists: The Political Economy of Press Freedom and Press Subjugation*

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In this paper, I provide a general theoretical framework that can be used to understand when the media are able and willing to provide readers with information regarding potential political malfeasance of the incumbent politician(s). I model competition among a generic number of publishers and newspapers. Politicians, that prefer newspapers to not report negative information regarding their behavior, can sue newspaper editors. If a politician sues a journalist, the case is decided by a court that might be more or less independent from the politician. Furthermore, the preferences of publishers might be influenced by political concerns, namely loyalty towards the incumbent administration, a factor that has been identified by the literature (e.g., Fox 1998; Waisbord 1998, 2000; Lawson 2002; Hughes and Lawson 2005, forthcoming) as a hindrance to

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the ability of privately-owned media to provide the information needed by citizens of democracies in order to hold politicians accountable. Publishers vary in the relative weights they assign to market profits and to rewards derived from loyalty to the politician: some are more profit-minded, while some are driven mainly by political loyalty.

More specifically, in the model there are N newspapers, and each newspaper has an editor and a publisher. I analyze the strategic interaction that takes place inside the newspaper. The preferences of the editor and the publisher might be disaligned for two reasons: (i) editors that work for profit-minded publishers might want to censor themselves out of fear of a lawsuit initiated by the politician whose malfeasance they report; (ii) politically loyal publishers might want the newspaper not to disclose information which could harm the politician, even if the editor has a story worth publishing. On the other hand, the preferences of publisher and editor might be aligned if the publisher is profit-oriented and the editor has a story worth publishing, or if the editor does not want to write a story and the publisher is politically loyal.

N pairs of editors and publishers solve their strategic problem; moreover, both categories of players take into account the sanctions and rewards that the politician can provide them. In turn, the market aggregates their decisions -that affect the content of the newspaper- and allocates revenues to each newspaper according to its informative content, and the number of competitors that a newspaper faces. Each publisher-editor interaction is in turn affected by the expectations regarding market revenues, and therefore the expectations regarding the behavior of the $N - 1$ other newspapers.

As a preview of the results, some of the predictions of the model are intuitive and in line

with the conventional wisdom: market competition, larger potential market revenues, and legal protection of freedom of speech increase the amount of information that the public receives. Moreover, it is more difficult for the incumbent politicians to buy the silence of the press when the market is more competitive. Yet, neither market competition nor legal protection are one-size-fits-all solutions to the problem of lack of quality information regarding the behavior of politicians. Indeed, if the restrictions to freedom of the press are due to the political loyalty of publishers, then changes in the legal (i.e. freedom of expression) environment might be fruitless, while improving competition might break a “domesticated” equilibrium. If the restrictions are due to the legal harassment of journalists, policies that try to enhance the quality of the information available to readers by improving competition might have no effect. It is therefore important to focus on these two different reasons why the press is limited when analyzing real-world cases. If the origin of the imperfect functioning of the press is not understood, general policy advice cannot be provided.

Some more pessimistic conclusions can be drawn too. The most general is that a well-functioning press, defined as a press that provides readers with *reliable* information, requires very specific condition to be sustained, and it is (in an informal sense) unstable: markets that are too profitable might, under certain conditions, create incentives to resort to sensationalism (i.e. publish unreliable information in order to attract readers); markets that are too crowded (in other words, newspapers that are very small) might be silenced more easily using legal means (e.g., defamation lawsuits).

Finally, rewards to the political loyalty of publisher usually work in the direction one intuitively

expects them to work: they allow politicians to buy the silence of newspapers. Yet, in some given conditions, they might have a perverse effect: they eliminate some competitors from the market for informative newspapers, and indirectly create incentives for sensationalism in those newspapers that do not value loyalty rewards very much.

This model contributes to the recent thread of formal theory on the media. The main focus in many of the contributions (e.g., Baron 2004; Gentzkow and Shapiro 2006; Mullainathan and Shleifer 2005; Petrova 2006; Strömberg 2004) is ideological bias in news coverage. This is not the focus of the present paper. Some contributions (Besley and Prat 2006; Gentzkow et al. 2006; Supachalasai 2005) on the other hand, analyze the relationship between accountability-oriented information and economic and political incentives of media outlets. Supachalasai (2005) focuses on how the media can help monitor bureaucratic corruption, while Besley and Prat (2006) analyze the media in the context of an accountability model of elections and Gentzkow et al. (2006) present a model in the context of the historical analysis of the emergence of an independent press in the United States. The model presented here is similar in focus to, and complements the findings of the one presented in the additional material for Besley and Prat (2006). Some of the main differences are the following. They do not take into account the conflict between journalists and owners of the newspapers. They model censorship as an all-of-nothing probabilistic event (i.e., with some probability the politician can censor *all* the newspapers) while I model lawsuits and parametrize court independence. In their model, the politician observes the quality of the signal received by the newspaper, while in mine he is not aware of it; there, the politician bribes the newspapers on an individual basis, conditioning on the signal received by the newspaper, while here the loyalty rewards are selectively withdrawn based on the content of the newspaper. More

substantively, I highlight the effects of legal protection (and curtailment) of freedom of expression on media market outcomes, and analyze the incentives for self-censorship, while in their analysis censorship is modeled in reduced form. Moreover, I highlight three families of equilibria of the news market and the consequences of different kinds of regimes of legal protection of freedom of expression.

The plan of the paper is the following. Section 1 introduces the players, the actions that they can take, and their preferences. Section 2 characterizes the equilibria of the model. Section 3 derives some comparative statics results and links them to empirically observable implications. Section 4 concludes.

1 The model

1.1 Players

The market To keep the model focused on the main issues, that are the legal and ownership environments in which newspapers operate, in the body of the paper I provide a very simple characterization of the market for newspapers: an oligopoly model with a linear demand (price) function. In the appendix, I provide an alternative characterization of the market, that resonates with the claims of some of the qualitative literature cited above. I show that the results presented in the main part of the paper obtain also with the alternative market model, and I also provide a formalization of an intuition derived from the historical evidence of some Latin American cases.

In the simple formalization, newspapers can either be **informative** if they feature a corruption story, or **uninformative** otherwise. The demand for informative newspapers is represented by a price $p = V_0 - \beta X$ where X is the total quantity supplied. The revenues for non-informative newspapers (newspapers with no corruption story) are normalized to 0. Moreover, I assume that $V_0 - \beta N \geq 0$ where N is the number of *potential* competitors on the market for informative newspapers.

Editors Editors (female in the following) control the content of newspapers, and decide whether to write a story or not. At the beginning of the game, they are provided a lead, that links the politician to one specific corruption event. The lead can be thought of as a piece of information reported by someone who has special access to the politician or its activity. For instance, in 2004 one of the leaders of a dissident faction of the Green Environmental Party of Mexico (PVEM) secretly filmed the head of the party requesting a multimillion-dollar bribe to influence Cancun city officials to facilitate the concession of a construction permit. The video was then made available to TV stations. (Sourcemex 2004) In Brazil in 2005 the weekly *IstoÉ* interviewed the former personal assistant of an entrepreneur that allegedly managed the illegal accounts of the Workers Party. She declared that she had seen her former employer handling large amounts of cash, and that he had frequent contacts with the presidential chief of staff José Dirceu and other top officials of the Workers Party.

The potential sources have personal motivations to speak: they might come from a faction hostile to the politician they are revealing information about, or they might be disgruntled former employees. Hence, they have incentives to misrepresent reality. A journalist can never be sure

whether the facts that are reported to her are true. Still, she can assess, using her professional skills, how likely it is that the allegations are factual or not.

Formally, the editor observes a signal $S \in \{S^H, S^L\}$ where S is the probability that the events mentioned in the lead are true.¹ In particular, S represents the probability that a story based on the lead would be ruled to be truthful by an independent court if a libel lawsuit were started by the politician.

The salary editors receive is a fixed share α of the revenues of the newspaper they edit. The parameter is exogenous and depends on the bargaining power of editors, that in turn depend on outside opportunities in other jobs, etc. The intuition is that an editor would like to head a newspaper which is informative and successful from the point of view of readership.

Editors can be sued by a politician if they write a story. If the court emits a guilt verdict, an editor pays a cost $P > 0$. It is common for politicians to sue journalists who uncover corruption scandals, and there's no shortage of examples. President Menem of Argentina and the members of his staff flooded journalists with lawsuits when several corruption scandals and other negative information were reported in newspapers; (Verbitsky 1997) in the Mexican state of Chiapas, the head of the department of education sued a journalist of the daily *Cuarto Poder* for libel because he reported that she used public funds to buy a house for herself; (RSF 2006) a reporter was arrested in the state of Chihuahua and charged with libelling a state prosecutor; the managing

¹It might be more realistic to think that this estimate is not the coarse likely/unlikely judgment that is modeled here, but rather takes the form of a value in the $[0, 1]$ interval. A previous version of the model allowed editors to assign a probability in this continuum to any lead: the threshold of reliability required for publication was endogenously determined. The formalism was quite involved and this simple binary classification of the lead has the same substantive implications while simplifying both the solution and the exposition of the results.

editor of a magazine and a daily in the city of Zacatecas was held by the police for five hours after a city council official filed a libel complaint against him;(RSF 2004) a columnist for the Ecuadorian daily *El Comercio* accused the former President, León Febres-Cordero, and other politicians of favoring the interests of the local oligarchy and was sentenced in September 2003 to 6 months in prison. (CPJ 2003)

Publishers Risk-neutral publishers (male in the following) have an exogenous preference for being friendly with politicians, but also a preference for profits. Each publisher owns a newspaper, and publishers have control of the content of the newspaper, in the sense that agreement of both editor and publisher are required for a story to be published: if publisher i thinks that it is in his interest not to publish a story written by editor i , he can “kill” it. Denote the decision of the publisher as $K_i = 1$ if the editor kills the story, $K_i = 0$ if the editor does not kill it, and lets the story be released to the public. If the publisher kills the story, then the newspaper is non-informative. Call **supportive** a publisher that would not kill a story, if his editor were to write one.

The $N > 1$ publishers vary in their preferences: some value political rewards more, other are more profit-oriented. Their preferences can be represented, for the generic publisher i , by a linear combination of political rewards $R > 0$ and profits Π of the form $\gamma_i R + \Pi$. The parameter γ_i has a discrete distribution, and ranges in the $(0, 1]$ interval.² In this model, the reward for political

²The assumption that rewards and weights are positive restricts the analysis to political *loyalty* of publishers. If R or γ were allowed to be negative, the model would be one of publishers’ *hostility* against the politician: publishers might want their newspapers to feature stories that negatively depict politicians not because the public (from which profits come) wants to read them, but because publishers themselves receive a reward from being hostile to the politician regardless of the market revenues that this stance generates.

loyalty R is not some transfer payment from the politician to the publisher (as for instance the “bribes” that politicians in Besley and Prat (2006) can use to silence press outlets), because it does not enter the utility function of the politician. Moreover, the political reward R cannot be transferred to the editor, i.e. cannot be used by a publisher to buy the editor’s silence. It is more akin to an ideological preference. For instance, the family that owns the major TV network in Mexico, *Televisa*, was considered politically close to the dominant PRI. The generational change and the takeover of the management by a younger member of the family, more interested in increasing the company’s profits than in cultivating political connections, lead to a change in the outlook in the political news coverage and in particular to the hiring of a professional editorial staff and a more balanced coverage of political parties in the 1997 elections. (Lawson 2002 p.109) Similarly, in Brazil, broadcasting and publishing conglomerate Globo is usually regarded to be close to the conservative political establishment (see Fox 1998). Yet, the interpretation of R can be broad, to encompass any (costless) way in which a politician can reward or punish, by withdrawing a reward, a publisher. ³

For convenience, rank the N publishers in descending order according to their preferences for profits compared to political rewards, give them order numbers $1, 2, \dots, N$ and assume that the distribution of the γ s is such that for the publisher i , $\gamma_i = \frac{i}{N}$. ⁴ The different weights assigned to

³The reward to loyalty R could be capturing the fact that politicians can control the allocation of advertisement for state-owned corporations or official government campaigns. In this case, the initial allocation across outlets in this model is considered exogenous, and the only thing that politicians manipulate is whether the reward is actually provided or it is withdrawn. At the same time, the withdrawal is not considered a strategic decision of the politician: it is simply a consequence of the fact that the publisher decides not to kill a story that negatively portrays the politician. For this reason, I prefer to interpret it as a political preference. Nonetheless, variations in the size of R relative to potential market profits might be capturing the variations of the dependence of publishers on politicians and government-funded advertisement for their survival. The issue is discussed in some more detail in the section devoted to the empirical implications.

⁴This choice regarding the distribution of the γ s embeds the assumption that in a context in which there are

political rewards might originate, in the simplest interpretation offered above, from an ideological preference, or, as suggested by Waisbord (2000, p.85), from the fact that independent dailies, owned by media-only firms, might be less amenable to political pressures, and therefore less dependent on political connections than news outlets owned by wide-ranging business holdings. Indeed, one of the ways in which politicians might withdraw the reward R if a newspaper publishes negative information regarding them is by damaging the conglomerate's interests in some other economic activity.

The publisher does not pay the political cost (i.e. the withdrawal of the political rewards R) for the mere fact that the editor writes a story. But if the publisher demonstrates that he backs the editor's decision to feature a negative story regarding the politician (be it true or false, based on reliable or unreliable sources), then the publisher has to give up the political loyalty reward. For instance, in the early 90s in Argentina, President Menem resorted to intimidation, such as selectively cutting government advertising, in retaliation for negative press coverage. (Financial Times, 24 June 1993) Menem justified the cuts in government advertisement declaring that he was not willing to "pay them to hit me". (Waisbord 2000 p.65) Similar allegations regarding skewed purchases of government advertising in Argentina were made for the current President, Nestor Kirchner (CPJ 2004) as well as for provincial governors (RSF 2005). An example of a direct intervention to induce the owners of the news outlet to "kill" a story is provided by

more publishers (i.e. N is larger) the most profit-oriented publisher values political loyalty less than the most profit-oriented publisher in a context in which there are less publishers (i.e. N is smaller). This assumption seems intuitively reasonable: for instance, a larger number of publishing firms might lead to more diversity in the political outlook of the publishers and therefore to a larger spread of the weights assigned to profits and loyalty rewards around the mean. Moreover, the assumption greatly simplifies the explicit solution, and is not crucial in driving the results, that can reasonably be expected to hold in a qualitatively similar fashion for any choice of weights $\gamma_i \in (0, 1]$ as long as at least for some i and j , $\gamma_i \neq \gamma_j$.

Verbitsky (1998 p.329-331): a television station canceled the broadcast of a documentary about the sources of funding for the construction of Menem's vacation house. After the decision of the station management not to air the reportage, the secretary of the presidential press office, in a phone conversation with one of the journalists that ran the program, allegedly asked whether the journalist knew "how many favors" the station manager owed the president's administration.

The assumption that loyalty takes the form of silence is to be consistent with some historical accounts of Latin American cases. For instance, in Mexico the political loyalty of newspapers, prior to the entry of investigative newspapers like *Reforma*, and television news broadcast prior to the change in the editorial line of the *Televisa* newscast, took the form of a simple lack of investigative or original informational content about politics. (Lawson 2002) Similarly, in Argentina prior to the success of *Pagina 12*, the daily that started "watchdog" journalism after the transition to democracy, the main newspapers, *Clarín* and *La Nación*, simply did not feature original content on politics, much less investigative content on political malfeasance. (Waisbord 2000).

Lawsuits The cost that a politician must pay to make the court inflict a sanction on the editor is a function of legal protection of press freedom and independence of the courts of law, which are modeled here as non-strategic actors. Formally the politician can "buy" a verdict at a price $C(t)f$ where $t \in \{\text{True}, \text{False}\}$, and f is a parameter that captures some general dimension of freedom of expression. The cost of a guilty verdict is a function of the truthfulness of the story the editor wrote, but the difference between the costs of a verdict might be smaller if courts are less independent. The difference might also depend on the details of the legal provisions that

regulate defamation.

Politicians know whether the story the editor decided to write is based on true facts or not: after the suit, the court observes whether the story is true or not and emits a verdict. The decision of the court, and the political pressure exerted on it by the politician, are blackboxed here, but the reduced form is assumed to be the following:

- if the story the editor writes is truthful then the politician can obtain a guilt verdict V at cost $C^T f$;
- if the story the editor writes is a hoax, then the cost of a guilt verdict V is $C^F f < C^T f$.

Here I model different dimension of freedom of the press in its meaning of *freedom from direct political pressure* enjoyed by journalists (as opposed to *indirect pressure* that might come from politically-minded publishers). The first dimension is the harshness of the sanction, captured by P , while the second dimension has to do with whether the sanction takes place only when the story published is not truthful, captured indirectly by f and by the difference between C^T and C^F . An example of a low P is the right of the defamed politician to reply, or the declaration by the court that the allegations are “null and void”, as happens in some Northern European democracies (Amponsah 2004); a fine or the payement of reparations is an example of a medium-low P . Criminal defamation involving prison sentences is at the opposite extreme, representing a very high P . One can think that legal regimes differ along the two dimensions I identify.

As a reduced form, assume that if negative news are reported on him, the politician pays a fixed and exogenous political cost, V_{Rep} . Sueing the editor and obtaining a guilt verdict allows

the politician to avoid the political cost derived from the publication of negative news regarding him.

1.2 Sequence of play

1. Nature randomly selects the N independent signals S_i
2. Each editor i observes her S_i and decides whether to write a story or not, unaware of what other editors observe and decide
3. Each publisher i decides whether to kill the story or not
4. The politician decides whether to sue the editors and withdraw the loyalty rewards
5. Newspapers are printed and readers make their purchasing decision; revenues are realized.

2 Equilibria

An equilibrium to this game is a profile of strategies such that:

- the strategy of the editor is optimal given the expected market revenues, the strategy of the publisher, and the probability of being sued;
- the strategy of the publisher is optimal given the expected market revenues, the observed behavior of the editor, and the (automatic) loss of the loyalty rewards if the newspaper is

informative;

- the strategy of the politician to sue is optimal given the observed behavior of the editor;
- the market revenues are allocated based on the informational content of the newspapers.

In the remainder of the paper, I focus on pure strategy equilibria. In the appendix I provide a sketch of how a mixed-strategy equilibrium to this game looks like, for one of the two configurations of parameters such that pure strategy equilibria do not exist.

First of all, notice the following feature shared by all equilibrium strategies of the publishers. In equilibrium, if a publisher with $\gamma_i > \gamma_j$ is supportive, then also the publishers with γ_j are supportive. In other words, if it is optimal for a given publisher to enter the market for informative newspapers, then it is optimal also for all those that assign less importance than he does to political rewards. This follows from the fact that, if the expected value of the market revenues $E(V)$ is such that $(1 - \alpha)E(V) \geq \gamma_i R$ (which is what is required for the publisher to enter) then the condition holds for all those that have lower γ . Then, a pure strategy equilibrium is characterized by a threshold γ^* such that all the publishers with $\gamma \leq \gamma^*$ enter and all the rest keeps the political rewards. This is similar to what happens in oligopoly (and auction) models with random cost of entry that are private information of the entrant (bidder) (e.g., Kaplan and Sala 2003, 2006). Here, the “cost of entry” is known. The only element of private information is that (in some situations) the publisher might want to enter but the editor does not want to publish. Hence each publisher is uncertain regarding whether the other potential competitors are going to enter or not.

2.1 Describing the market: oligopoly with linear demand.

Assume that a publisher that decides to produce an informative newspaper is constrained to supply one unit of it. The decision regarding the quantity supplied is simply the decision of supplying one unit, or 0. In the appendix, a second version of the market is analyzed. The solution has no closed form and is less tractable than the one proposed here, but the qualitative implications are the same.⁵

So, if the demand for informative newspapers is represented by a price $p = V_0 - \beta X$, the revenue of an “entrant” (the publisher of an informative newspaper), given that $w - 1$ other newspapers enter the market, is given by $V = V_0 - \beta w$.

Denote by ρ the probability that an editor receives a signal that induces her to write a story. The expected number of editors that receive a story and write it is given by $E(w) = \rho w^*$, where w^* is the number of publishers that are profit-minded enough to let the story be run rather than kill it. The expected profits of an informative newspaper are $E((1 - \alpha)V) = E((1 - \alpha)(V_0 - \beta w))$ and, by linearity of the demand function, $E((1 - \alpha)V) = (1 - \alpha)(V_0 - \beta E(w)) = V_0 - \beta \rho w^*$. For the marginal publisher m (if his editor has received a publishable lead) the choice is between not running the story and receive a payoff $\gamma_m R$, or the expected revenues if it runs it. The expected revenues depend on the behavior of the remaining $m - 1$ publishers that are more profit-minded than him. The expected number of these that are going to receive a publishable lead is given

⁵In the two formalizations of the demand side of the market, the readers condition their decision on the presence or absence of “informative” content, not on the quality (e.g., reliability) of the information published. This is reasonable in the one-shot context of the present model. Truthfulness or reliability could be modeled in a repeated-interaction framework, in which readers can, ex post, check whether the story they read in newspaper i was true and condition future purchasing decisions to the past behavior.

by $\rho(m - 1)$, and therefore the total number of suppliers is going to be $1 + \rho(m - 1)$ and the expected revenues are $E(V) = V_0 - \beta(1 + \rho(m - 1))$. The marginal publisher then enters if $\gamma_m R \leq (1 - \alpha)(V_0 - \beta(1 + \rho(m - 1)))$ from which follows that

$$\gamma^* = \frac{(1 - \alpha)(V_0 - \beta(1 - \rho))}{R + (1 - \alpha)\beta\rho N}$$

and (trivially, by the assumption of even-spaced preferences)

$$w^* = \frac{N(1 - \alpha)(V_0 - \beta(1 - \rho))}{R + (1 - \alpha)\beta\rho N}$$

2.2 Lawsuits

If the newspaper does not report any negative information about the politician, then the politician is not going to take any action. On the other hand, after observing that an editor has written a story on him, the politician must choose between suing and not suing the editor. The politician knows whether the news story is truthful or not.

It is more costly to sue an editor who wrote a truthful story, than an editor who followed a lead that turned out to be a hoax. Defamation suits are handled by a more or less autonomous courts system: it is more costly for the politician to exert pressure on the court to convict an editor when the story is true than when it is false.⁶ The politician chooses to sue only if the

⁶Equivalently, if the allegations made by the newspaper are true, the public could consider the lawsuit as an act of arrogance of the politician, while if the allegation are false, the public might think that the politician has

cost of a guilty verdict is less than the value he places on a clean reputation (that is salvaged by suing the editor). Formally, the politician chooses to sue false allegations only if $V_{\text{Rep}} > C^F f$ and true allegations only if $V_{\text{Rep}} > C^T f$.

Three regimes of legal protection of freedom of journalists from direct political pressure can be identified:

1. a **repressive** legal regime, such that suing is the optimal action for the politician even if the information reported is true, formally, $f^L \leq \frac{V_{\text{Rep}}}{C^H}$;
2. a **truth-seeking** legal regime, which is such that only hoaxes induce the politician to sue an editor, formally $\frac{V_{\text{Rep}}}{C^T} < f^N < \frac{V_{\text{Rep}}}{C^F}$;
3. a **libertarian** legal regime, in which it is so costly for a politician to sue a newspaper editor and obtain a verdict, that it is optimal to not sue even if the allegations published are clearly false, formally $f^H \geq \frac{V_{\text{Rep}}}{C^F}$

As a consequence, the probability ξ of being sued (and found guilty), given a signal S , the decision to write a story, and the decision of the publisher not to kill the story, in the three

a right to protect his reputation. I do not analyze here formally what might be the mechanism that insures that there is a different cost to sue true vs. false stories, I simply assume that some mechanism in this direction exists.

regimes⁷ is

$$\xi = \begin{cases} 1 - S & \text{if } \frac{V_{\text{Rep}}}{C^T} < f^N < \frac{V_{\text{Rep}}}{C^F} \\ 1 & \text{if } f^L \leq \frac{V_{\text{Rep}}}{C^H} \\ 0 & \text{if } f^H \geq \frac{V_{\text{Rep}}}{C^F} \end{cases}$$

In a repressive (truth-seeking) regime an editor that publishes a negative (false) story about the incumbent politician is always punished. The substantive implications that are drawn from this analysis would be unchanged if it were the case, for instance, that even in a repressive regime an editor was punished only with some probability, *as long as the probability of being punished does not depend on the truthfulness of the allegation reported*. In this case, P can be considered the expected value of the lottery that decides the sanction.

The Editor's choice. Call the probability of a guilty verdict ξ . Denote by an indicator variable $K_i \in \{0, 1\}$ the decision of publisher i to kill ($K = 1$) or not kill ($K = 0$) the story that the

⁷One could also identify a fourth regime, that does not emerge from the simple characterization of lawsuits provided here. Imagine that the court convicts the editor only if she decided to write a story based on the weak signal, *and* the story turns out to be a hoax. Regardless of truthfulness, the court never convicts an editor that based a story on a strong lead. This is similar, in some sense, to the Sullivan standard of contemporary United States: a journalist writes a story that not only is false, but is based on evidence that the journalist is aware is probably false. Then, the probability of being sued is $1 - S_L$ if the editor writes after a weak signal, 0 after a strong signal. This case is analyzed in the appendix.

editor writes. If the editor writes a story, her expected utility is

$$E(U) = \begin{cases} \alpha E(V) - \xi P & \text{if } K_i = 0 \\ -\xi P & \text{if } K_i = 1 \end{cases}$$

while she receives 0 for sure if she does not write a story.

Therefore the optimal choice for the editor is

$$\omega = \begin{cases} 1 & \text{if } \xi \leq \frac{\alpha E(V)}{P} \text{ and } K_i = 0 \\ 0 & \text{if } \xi > \frac{\alpha E(V)}{P} \\ 0 & \text{if } K_1 = 1 \end{cases}$$

The decision of the editor depends on the expectations regarding the market revenues of the newspaper she heads, on the behavior of the publisher, and on the probability of being punished. The editor writes a story only if she expects the publisher not to kill the story, and also if the expected monetary rewards compensates the risk of being sanctioned by a court.

Having characterized the strategies of the players, I can now analyze different types of equilibrium.

2.3 Domesticated equilibrium

There is an equilibrium in which even the most profit-oriented publisher is not willing to publish a story, regardless of the decision of the editor. Therefore, the number of “supportive” publishers is given by $w^* = 0$ and the number of informative newspapers is $w = 0$.

This equilibrium is sustained if the payoff of a deviation from uninformative to informative *for the most profit-oriented publisher*, i.e. the publisher with $\gamma = \frac{1}{N}$, is not optimal, formally

$$(1 - \alpha)(V_0 - \beta) < \frac{R}{N} \quad (1)$$

The domesticated equilibrium is sustained only if the potential revenues from the market are small compared to the political rewards, and if the the number of potential competitors is small. Equation 1 defines a threshold $V_0^*(R, N, \alpha) = \frac{R}{N(1-\alpha)} - \beta$ above which the domesticated equilibrium is not sustained.

Equation 1 also defines, for every size of the market V_0 , every amount of political rewards R and every compensation to editors α , a threshold N^* according to

$$N^*(V_0, \beta, R, \alpha) = \frac{R}{(1 - \alpha)(V_0 - \beta)} \quad (2)$$

If the number of potential competitors is larger than N^* , it is not sustainable to domesticate a news market, keeping the size of the market and of the rewards fixed.

2.4 Silenced equilibrium: sheer repression vs. the “chilling effect” of sanctions

In subsection 2.3 I explore the equilibrium in which no newspaper is informative, as a consequence of the political loyalty of publishers, and I call this a domesticated news market. Here, I explore when fear of lawsuits and their consequences induces editors to practice self-censorship, i.e. not write a story regardless of the reliability of the lead they receive.

If the editor writes a story, she receives her share α of the market revenues, and a potential sanction P with probability ξ , while she receives 0 if she remains silent, therefore she writes if

$$\alpha E(V) - \xi P > 0$$

The silenced equilibrium is sustained if no editor finds it in her interest to write, given that no other editor writes and therefore no newspaper is informative. Therefore, in a repressive regime, where $\xi = 1$, this equilibrium is sustained if

$$P > \alpha(V_0 - \beta) \tag{3}$$

and in a truth-seeking regime, in which the probability ξ of being sanctioned is equal to 1 minus the reliability of the lead received S , it is sustained if

$$P > \frac{\alpha}{(1 - S^H)}(V_0 - \beta) \tag{4}$$

while it is never an equilibrium in a libertarian regime. Equation 3 defines a threshold $P_r^* = \alpha(V_0 - \beta)$ such that, if the actual harshness of punishment is $P > P_r^*$, the silenced equilibrium is sustained in a repressive regime. Equation 4 defines a threshold $P_t^* = \frac{\alpha}{(1-S^H)}(V_0 - \beta)$ such that if the actual harshness of punishment for writing a hoax is $P > P_t^*$ the silenced equilibrium is sustained in a truth-seeking regime.

Notice that the lack of information in the repressive legal regime is due to the fact that the editor who dares to report negative information is sanctioned with certainty. It has to do, in a sense, with the arrogance of political power. On the other hand, in the truth-seeking legal regime, silence is motivated by the editor's fear of writing a hoax: the sanction for a hoax is so heavy that even reliable (but incompletely verified) leads are ignored. This is what is commonly referred to as the "chilling effect" of draconian defamation laws: even if sanctions are conditioned on truthfulness, journalists prefer not to write for fear of a sanction that, albeit unlikely if the lead is reliable, is highly undesirable.

For any harshness of punishment P , the conditions stated in (3) and (4) define also the thresholds $\tilde{V}_0^r(P, \alpha, S^H) = \frac{P}{\alpha} - \beta$ in a repressive and $\tilde{V}_0^t(P, \alpha, S^H) = \frac{P(1-S^H)}{\alpha} - \beta$ in a truth-seeking legal regime, such that if the size of the market is above the threshold, the silenced equilibrium is not sustained: when the threshold is crossed, the equilibrium breaks down. These thresholds do not depend on the political rewards that circulate, and the threshold is always higher (i.e. the market must be larger to make silencing unattainable) in a repressive regime than in a truth-seeking regime.

2.5 Well-functioning press.

Assume that we are in a “truth-seeking” regime of rule of law: an editor can be declared guilty and sanctioned only if the story she wrote was a hoax. A well-functioning equilibrium is one in which at least one publisher is supportive, and an editor that receives a reliable lead (the strong signal) writes a story.

In this case, the probability ρ that an outlet is informative is equal to the probability that an editor receives a strong signal, $\Pr(S = S^H)$. The threshold of political loyalty above which publishers are not supportive (and below which they are supportive) is given by

$$\gamma^* = \frac{(1 - \alpha)(V_0 - \beta(1 - \Pr(S = S^H)))}{R + (1 - \alpha)\beta\Pr(S = S^H)N} \quad (5)$$

In equilibrium, it must be that each editor with a supportive publisher finds it in her interest to write a story only when observing the strong signal. Hence, it must be that the compensation for the editor, given that a proportion⁸ γ^* of entrants is going to share the profits, is high enough for her to write after the strong signal, and not write after the weak signal. Hence, it must be that

$$(1 - S^H)P \leq \alpha(V_0 - \beta\rho w^*) < (1 - S^L)P$$

Call $P^L = \frac{\alpha V^*}{1 - S^L}$ the sensational threshold below which, in a truth-seeking legal regime, the

⁸Here and in the following, I abuse language slightly and I refer to γ^* as a “proportion” of supportive publishers, even though the actual proportion of publishers is the largest γ_i such that $\gamma_i \leq \gamma^*$.

sensational market is an equilibrium; call $P^H = \frac{\alpha V^*}{1-S^H}$. If the expected market profits do not lie in this range, the well-functioning equilibrium is not sustained. The implications of this fact are analyzed at the end of this section and in the appendix. Observe also that in repressive and libertarian regimes, the payoffs of the editor are independent of the signal they receive. Hence they won't separate based on the signal and the well-functioning equilibrium never obtains.

Notice also that the equilibrium expected market revenues of an informative newspaper are given by $V^* = V_0 - \beta\gamma^*\rho N$. Plugging in the expression for γ^* yields

$$V^* = \frac{V_0 R + (1 - \alpha)\beta^2 \rho(1 - \rho)N}{R + (1 - \alpha)\beta \rho N} \quad (6)$$

2.6 Sensationalistic equilibrium

In a sensationalistic equilibrium, there is at least one supportive publisher, and editors who work for supportive publishers write a story regardless of the quality of the lead they receive. This type of equilibrium obtains in the three legal regimes. In the libertarian legal regime, it is the only alternative to a domesticated equilibrium.⁹

In a repressive regime, the editors overlook the signal and write a story regardless of the reliability of the signal if the expected market reward for the editor is large enough that even the

⁹In this model readers do not take into account the reliability of the news. The only factor that affects their decision is whether there are news or not. Yet, if readers were picky when it came to reliability (i.e. market rewards were a function of reliability) then the returns to sensationalism would be smaller, and therefore some sort of “well-functioning” equilibrium could be sustained also in a libertarian legal regime. A “picky” market would be a substitute for courts.

certainty of a punishment is compensated. Formally, this equilibrium obtains when $\alpha(V_0 - \beta w) > P$.

In a truth-seeking regime, the editors overlook the signal and write a story regardless of the reliability of the signal if the expected market reward for the editor is large enough that even the *risk* of writing a hoax, based on the weak signal, is compensated. Hence, this happens when $\alpha E(V) > \xi P$. In this equilibrium, all the editors that work for a supportive publisher write a story. Hence $\rho = 1$, and the threshold of entry is given by

$$\gamma^* = \frac{(1 - \alpha)V_0}{R + (1 - \alpha)\beta N} \quad (7)$$

It can be shown that this equilibrium is sustained only if

$$V_0 > \frac{(1 - S^L)P}{\alpha} \left(1 + \frac{(1 - \alpha)\beta N}{R} \right) \quad (8)$$

The substantive interpretation of this inequality is relatively straightforward. If the punishment is relatively mild, compared to the possible revenues, this equilibrium is more likely to be sustained. Well-paid editors (i.e. editors with a large α) are more likely to support a sensationalistic news market. Sensational markets are less likely in a more competitive environment. The intuition is that competition reduces equilibrium revenues for every newspaper, and therefore reduces the temptation of editors to gain the market rewards in spite of a weak lead and in the face of a possible sanction.

One interesting remark can be made about the political rewards. Indeed, the condition above

is more likely to hold when political rewards to publishers are more generous. This happens because rewarding some publishers (and buying their silence) reduces competition on the market and therefore makes revenues of the informative newspapers go up: as a consequence, it creates incentives for editors to become sensationalistic. In this case, the influence exerted by the loyalty rewards is perverse, indirectly increasing the amount of negative coverage.

2.7 Summary of equilibria

From the discussion above, the following proposition follows.

Proposition 1 (Equilibria). *If $V_0 < V_0^*$, the news market is domesticated. Otherwise, if $V_0 \geq V_0^*$ and:*

- $P > P^*$ and $f < \frac{V_{\text{Rep}}}{C^F}$ the news market is silenced
- $P \in (P^L, P^H)$ and $f \in (\frac{V_{\text{Rep}}}{C^F}, \frac{V_{\text{Rep}}}{C^H})$ the news market is well-functioning
- $P \leq P^H$ and $f \leq \frac{V_{\text{Rep}}}{C^T}$ the news market is sensationalistic
- $P \leq P^L$ and $f \in (\frac{V_{\text{Rep}}}{C^F}, \frac{V_{\text{Rep}}}{C^H})$ the news market is sensationalistic
- $f \geq \frac{V_{\text{Rep}}}{C^F}$ the news market is sensationalistic

The following summaries describe substantively the equilibria characterized in proposition 1.

Domesticated Equilibrium If the political rewards are large compared to the profits that publishers can reap from the market if they decide to publish an informative newspaper, no newspaper provides information. An editor has no incentive to write stories because she knows that the publisher would kill it to please the politician and receive the political reward.

Silenced Equilibrium and Chilling Effect This equilibrium obtains under two different legal regimes. In a repressive legal regime, the harshness of the sanction for an editor who dares to write about the politician is such that she prefers to practice self-censorship. She knows that she would be sanctioned for sure. Regardless of what the publishers might desire: even in the absence of political rewards to publishers, no newspaper provides negative coverage of the behavior of politicians. In a truth-seeking legal regime, this equilibrium obtains when the harshness of the sanction for an editor who writes a hoax is very high. The risk of being sanctioned if a story based on a reliable lead turns out to be a hoax deters editors from writing. Again, regardless of the preferences of publishers, no newspaper provides information on political malfeasance. Notice that a news market can be silenced and domesticated at the same time. This case is discussed in some more detail in the section devoted to the empirical implications.

Sensational Equilibrium In a sensational equilibrium, the reliability of the leads does not affect the editor's decisions. This obtains in the three legal regimes. In a libertarian regime, this is the only equilibrium other than the domesticated one.¹⁰ In repressive regime, this is the

¹⁰The model assumes that readers do not care about the quality of the information provided (i.e. the reliability of the leads on which a story is based). If one were to assume this, then market-driven, as opposed to court-driven, well-functioning equilibria would be possible. In other words, editors would take into account the reliability of the lead they receive not for fear of being sued: rather, they would provide reliable information -and would try

alternative to a silenced market equilibrium and to a domesticated equilibrium. If the expected market rewards from being informative offset the relatively mild sanction that follows (from sure) from a lawsuit, then the editor prefers her share of market revenues *and* the sure sanction to no money and no sanction. Given that courts do not decide whether to inflict a sanction based on the truthfulness of the story, editors disregard this piece of information. In a truth-seeking legal regime, this equilibrium obtains if the sanction for writing a hoax is small. An editor who receives an unreliable lead prefers the likely sanction and her share of the market profits to no sanction and no profits. Even unreliable leads might turn out to be based on true facts: an editor who writes a story based on a lead that is unlikely to be true can still hope that it is actually true.

Well-functioning Equilibrium Editors publish only stories based on the high-reliability leads; at least one publisher is supportive and does not kill the story written by the editor. This equilibrium is sustained only in a truth-seeking freedom regime, i.e. only when courts inflict sanctions for writing hoaxes, but not for telling the truth. This induces the editor to take into account the information regarding the reliability of the lead. Moreover, this equilibrium is sustained only if the sanction lies in a relatively small range. The sanction cannot be so low as to induce editors to disregard the reliability of the lead. At the same time, the sanction for writing a hoax cannot be so harsh as to “chill” the press, i.e. to induce editors to self-censor themselves for fear of getting it wrong, something which is unlikely (after receiving the reliable lead) but not necessarily impossible.

to avoid writing hoaxes- to avoid being punished by readers on the market. This could be related to the need to build a reputation of reliability in a repeated interaction model.

No pure strategy equilibrium In two regions of the space of the parameter P , there is no pure strategy equilibrium. In a truth-seeking legal regime, if P lies between P_n^* and P^H , the silenced equilibrium is not sustained. An editor would find it in her interest to provide an informative newspaper, because the benefits she derives from heading *the only* informative newspaper would compensate the loss that derives from the punishment she receives after the lawsuit. Yet, if all the editors that work for the w^* supportive publishers *and* receive the strong lead decide to write a story, then the salary (i.e. the share of market revenues that goes to the editor) does not compensate, on expectation, the cost of the conviction. Therefore, this would not be an equilibrium, and editors would prefer not to write.

In a repressive regime, similarly, if P lies between P_r^* and P^S one editor would be tempted to write, if no one is writing, because she would head the only informative newspaper on the market. At the same time, if P is this range, the equilibrium with w informative newspapers is not sustained either: the salary one editor receives if there are $w - 1$ other informative newspapers does not compensate the sure sanction she is going to receive.

Clearly, there exist mixed strategy equilibria in these cases: after receiving their lead, the editors randomize and decide to write a story according to a mixing probability σ . In the appendix, I provide a characterization of such an equilibrium for the repressive regime.

Figure 1 provides a graphic representation of the different equilibria sustained, in a truth-seeking legal regime, at different levels of harshness of punishment P and market competition (captured by N).¹¹ In the shaded area at the top of the graph, the silenced equilibrium is

¹¹The figure is relative to a calibrated version of the model with size of the market and political rewards fixed

sustained. In the shaded area at the left of the graph, the domesticated equilibrium obtains.

[Figure 1 about here]

Depending on the harshness of punishment, if the number of potential competitors increases and crosses the threshold N^* of domestication, the market might switch to a sensational or a well functioning equilibrium. Notice that empirically, the behavior of newspaper actors in the top right shaded area, in the bottom left shaded area, and in the double-shaded area, from the point of view of an outside observer, might seem equivalent. Yet, the reason why there are no newspapers that provide information regarding political malfeasance is different. In the “silenced” area, the only reason why the press is not free is the editor’s fear of being sued and sanctioned; in the “domesticated” area, the only reason is the editor’s knowledge that the politically loyal publisher would kill any story. In the double-shaded area, the press is silent for both reasons: both the silenced and the domesticated equilibria obtain. This means that an exogenous decrease in P in that region would not induce any observable change in the behavior of the press. Similarly, an increase in market competition in this region would not have any effect. Only concomitant changes in *both* these restraints would make the press become informative.

at $V_0 = R = 20$ and with a demand function with slope $\beta = .8$. The share of market revenues that the editor receives is fixed at $\alpha = .4$. The probability that an editor receives a strong lead is $\rho = .6$ and the respective reliabilities of the leads are assumed to be $S^L = .3$ for the less and $S^H = .8$ for the more reliable lead.

3 Comparative statics and empirical implications

From the characterization of the equilibria outlined above, the following comparative statics results and empirical implications can be deduced.

Proposition 2 (Ownership of the media and freedom of the press). *In a well-functioning equilibrium and in a sensational equilibrium, the expected number of informative outlets is larger if ownership is more diffuse. All else being equal, the size of the market above which the domesticated equilibrium is not sustained becomes smaller when there are more competitors.*

Proposition 3 (Size of the market and freedom of the press). *In a well-functioning and in a sensational equilibrium, a larger market size leads to a greater number of informative newspapers. More profitable markets make domesticated and silenced equilibria more difficult to sustain.*

Proof. See Appendix. □

In other words, if the potential profits become larger, the political rewards influence the behavior of only those publishers that assign a large weight to them. In more profitable markets the threshold N^* is smaller. Similarly, increases in market size might break down a domesticated equilibrium, keeping N constant.

Remark 1 (Silenced equilibrium). *The thresholds P^* below which the silenced equilibrium is no longer sustained do not depend on the number of potential competitors N , on the number of actual competitors w , or the rewards to political loyalty R .*

As a consequence, if a news market is not providing information regarding political malfeasance because journalists fear to be sued and jailed or fined (or, in the extreme, killed), policies that increase competition, reduce ownership concentration or try to reduce dependence of publishers on political rewards are not going to affect the news market outcome at all. A reduction in the harshness of sanctions, on the other hand, might disrupt a silenced equilibrium.

Proposition 4 (Political rewards). *The number of supportive publishers and the number of informative newspapers in a sensational and in a well-functioning market are smaller when political rewards are more generous. When political rewards are larger, the domesticated market is sustained for larger market size and for more competitive markets.*

Proof. See Appendix. □

Remark 2 (On the relationship between market profits and political rewards). *The partial cross-derivative $\frac{\partial^2 N^*}{\partial R \partial d} = -\frac{1}{(1-\alpha)(V_0-\beta)^2}$ is negative: the increase in the domestication threshold following an increase in the size of political rewards is mitigated when markets are more profitable.*

The difference between the size of the political rewards R and the magnitude of the potential market revenues captures, among other things, the ability of publishing firms to rely on private-sector rather than government-funded advertisement. In Brazil, thanks to the existence of a large private advertising market, the media have been able to collect resources from the private sector. (Waisbord 2000 p.69) This has enabled the press and the news broadcast market to take oppositional stances towards the government. On the other hand, the Argentine press freedom group Periodistas claims that “nearly all provincial governments use the purchase of public advertising space to reward or punish the media according to their editorial line (...) in the current

economic climate, such advertising is an ever more important part of media revenue.” (RSF 2005 Argentina) It is reasonable to think that the larger the share of the economy the state controls through state-owned enterprises, the larger the size of R it controls. Privatization of state owned enterprises can be expected to increase freedom of the press because it increases private-sector profits and reduces the share of rewards that the government is able to allocate through the control of advertising contracts for state owned enterprises. Economic crisis, on the other hand, might increase the reliance of publishers on government handouts, hence making R increase compared to V_0 and increasing the number of outlets that are “domesticated”.

A well functioning market is sustained for $P \in (\frac{\alpha V^*}{1-S^L}, \frac{\alpha V^*}{1-S^H})$ where V^* are the equilibrium market revenues of an informative newspaper, as defined in equation (6). Call $P^L = \frac{\alpha V^*}{1-S^L}$ the sensational threshold below which, in a truth-seeking legal regime, the sensational market is an equilibrium; call $P^H = \frac{\alpha V^*}{1-S^H}$ the well-functioning threshold, below which the well-functioning market is an equilibrium. Define also the range of P for which the well-functioning equilibrium is sustained, i.e. $\Delta P = P^H - P^L = \alpha \Delta S \left(\frac{V_0 R + (1-\alpha) N \beta^2 \rho (1-\rho)}{R + (1-\alpha) \beta \rho N} \right)$ where $\Delta S = \frac{S^H - S^L}{(1-S^H)(1-S^L)}$. Some comparative statics results can be derived for the two thresholds P^L, P^H and for the range ΔP , conditional on market size and competition, for which a well-functioning news market is supported.

Proposition 5 (Well-functioning equilibrium). *An increase in the size of the market V_0 widens the range of severity of sanctions for which the well-functioning equilibrium is sustained. Increases in the number of potential competitors narrow the range of sanctions for which the market functions well.*

Proof. See Appendix. □

A small market depresses the potential rewards for an editor, and therefore makes the threshold P^H decrease. The same logic applies to the number N of publishers: the returns to being informative are higher if the potential competitors on the market are fewer. As an intuition, think of what happens if the market is small and highly fragmented: the profits of every newspaper are small and therefore the compensation of the editors is also small. For instance, part of the compensation of an editor might be an insurance policy that covers the risks of damage repayment if the editor is found guilty of defamation. However, small newspapers (i.e. newspapers whose revenues are small) cannot afford to buy a good insurance for the editor. If an editor, on the other hand, works for one of the few supportive publishers she knows that the rewards are high. Many of the potential competitors are kept silent with the political rewards, and the few informative newspapers share the whole market revenues. In that case, the insurance can cover even larger demands, and therefore an editor is willing to run the risk even if the punishment for a mistake -writing a hoax in spite of a high-reliability lead- can be relatively serious. In other words, the chilling effect is mitigated when a small number of large newspapers competes on a profitable market. This is consistent with the recent history of Argentina. The attempts to silence the press through a large number of lawsuits initiated by President Menem and his staff, described in Verbitsky (1998) did not achieve the goal of chilling the media. Indeed, the national daily press was dominated by three large newspapers, that attracted many lawsuits but were also able to sustain their costs.

Remark 3. *The expected market revenues V^* , and the range ΔP , are increasing in R .*

Proof. Differentiating V^* with respect to R yields

$$\frac{\partial V^*}{\partial R} = \frac{(1 - \alpha)\beta\rho N(V_0 - \beta(1 - \rho)N)}{(R + (1 - \alpha)\beta\rho)^2}$$

which is positive by construction of the demand function. □

The intuition is that the political rewards make some number $N - \hat{w}$ of publishers drop out of the market for informative newspapers: therefore, their effect is equivalent to an exogenous decrease in N . With less potential competitors, the expected market revenues increase.

Proposition 6 (Sensational threshold). *The threshold P^L , above which the sensational equilibrium is not sustained, decreases as the number of potential competitors N increases. The threshold increases when market size increases, and it increases faster when political rewards are larger.*

Proof. See Appendix. □

One policy implication of the first part of proposition 6 is the following. Assume that it is desirable to create incentives for editors to discriminate between reliable and unreliable leads. The expectation that publishing unfounded news story carries costs makes journalists take into account the reliability of the leads they receive, and publish only the reliable stories. If there are no consequences for the editor that writes a hoax, the information regarding how reliable the lead is will be discarded. Some sort of “sanction” is needed so that editors base their decision to write a story on how reliable the lead is. This sanction can be much milder in highly competitive

markets than in concentrated markets, where the returns to sensationalism are larger. The implication of this result is that more competitive markets require milder sanctions to sustain a well-functioning press. The court order to publish an apology or a retraction might be enough to induce editors to disregard less reliable leads and therefore make the news content in general more reliable. The odious criminal defamation laws (that are often used to silence the press) are not justifiable in general, but they are much less justified in a competitive and differentiated news market.¹² In this model readers do not take into account the reliability of the news. The only factor that affects their decision is whether there are news or not. If readers rewarded or punished newspaper editors for writing more or less reliable stories, defamation laws would be unnecessary to make editors take into account the piece of information regarding the reliability of the lead. A “picky” market would be a substitute for courts. The returns to sensationalism would be reasonably expected to be smaller in a more competitive market, in which readers have more options of choosing a reliable outlet. The second part of proposition 6 establishes that if profits are larger, editors might be willing to risk more and publish stories that are based on unreliable leads. At the same time, if political rewards do not induce many publisher to “kill” the stories written by their editors, the extra benefits are going to be smaller, because more editors would follow the same strategy, making it less appealing. The interference of politics in the media industry has this secondary negative effect: by altering (i.e. reducing) competition through a policy of domestication, they make it more appealing for the few editors that work for

¹²It is true that defamation laws are usually justified through appeals to the individual right of the politician to a reputation. The focus of this paper is the how defamation lawsuits might achieve the protection of the public interest that the media report reliable news as opposed to unfounded hoaxes. Yet, the latter goal is indirectly achieved if competition reduces sensationalism, as long as the right to a good reputation is interpreted as the right to avoid *false* allegations as opposed to the more extensive interpretation of the concept of reputation as the right to avoid *any* negative information.

non-domesticated publishers to write sensational stories, i.e. stories that are based on unreliable leads.

An exogenous increase in the number of competitors has different effects depending on the legal regime and the size of punishment P . If the level of punishment P is above the threshold of silencing P^* , an increase in competition will not produce any effect: the market will switch from being silenced and domesticated to being simply silenced.

On the other hand, if the sanction P is small, and in libertarian legal regimes (where the sanction is never administered), the market would switch from domesticated to sensationalistic when competition increases. This implies that the market is expected to shift from an equilibrium with no news on political malfeasance to an equilibrium in which w newspapers report corruption, and report the stories regardless of whether they are based on reliable sources or not.

Only if P already lies in the (P^L, P^S) range, and the legal regime is truth-seeking, an increase in competition is going to make a domesticated equilibrium switch to a well-functioning one. Substantively, this requires a system of independent courts and sanctions for defamation in a middle range: not too harsh but not as mild as to be negligible.

4 Conclusion

In this paper, I offer a general formal theoretical framework to analyze the interaction between media ownership, legal protection of speech, and political loyalty of the owners of newspapers in

shaping the amount and quality of news of political malfeasance that are written and published.

I model competition among a generic number of publishers and newspapers. Politicians, that prefer newspapers not to report negative information regarding their behavior, can sue newspaper editors. If a politician sues a journalist, the case is decided by a court that might be more or less independent from the politician. Furthermore, the preferences of publishers might be influenced by political concerns, namely loyalty towards the incumbent administration, a factor that has been identified by the literature as a hindrance to the ability of privately-owned media to provide the information needed by citizens of democracy to hold politicians accountable. Publishers vary in the relative weights that they assign to profits from the market and rewards derived from loyalty to the politician: some are more profit-minded, some are driven mainly by political loyalty.

Modeling lawsuits not only allows me to analyze when and how legal limitations of press freedom affect the decisions of journalists but also how these limitations alter the incentives of profit-oriented publishers. Based on the independence of the courts (a factor that affects the cost for the politician to “punish” a journalist), I identify various possible regimes of legal protection of freedom of the press: in a repressive regime politicians are always able to inflict a sanction to journalists who write about their malfeasance; in a libertarian regime, politicians never sue journalists; in a truth-seeking regime, journalists are sanctioned only if they write hoaxes. The comparative statics of the model yield predictions regarding the effects of rule of law, market size, and concentration of ownership of publishing firms on the ability of journalists to spread information that indicts politicians and on the standards of fact-checking adopted

by editors. Property structure and market competition affect the probability that negative information regarding the politician is disclosed to the public; they also determine whether publishers back editors who choose a “muckraking” strategy. Political loyalty of publishers might induce editors to practice self-censorship for fear of the publishers’ retaliation.

I identify different types of news market equilibria. In a “domesticated” market, negative news are not published because of the political loyalty of publishers, that exert pressure on editors. In a “silenced” market, it is the fear of being sued by politicians that induces editors to adopt a line of self-censorship. In a “sensationalistic” news market, the higher or lower reliability of the leads received by the editor does not affect the decision regarding whether to write a story involving the politician. In what I call a “well-functioning” news market, only reliable leads are used by editors to write stories that indict a politician, and some publishers support the editors and prefer market profits to the rewards related to political loyalty. The model allows to identify the joint political and economic conditions under which these news market equilibria are sustained, and what variables are expected to induce a news market to switch from one equilibrium to another.

5 References

Amponsah, Peter Nkrumah. 2004. *Libel Law, Political Criticism, and Defamation of Public Figures : The United States, Europe, and Australia*. New York: LFB Scholarly Publishing.

Baron, David P. 2004. “Persistent Media Bias.” Stanford GSB Research Paper No. 1845.

Besley, Timothy, and Andrea Prat. 2006. "Handcuffs for the Grabbing Hand? The Role of the Media in Political Accountability" *American Economic Review* 96(3):720-36.

Committee to Protect Journalists. 2003. "Rodrigo Fierro Bentez, El Comercio: Legal Action." Electronic source. Retrieved at http://www.cpj.org/cases03/americas_cases03/ecuador.html.

Committee to Protect Journalists. 2004. *Attacks on the Press 2004. Argentina*. Electronic resource. Retrieved at <http://www.cpj.org/attacks04/americas04/argentina.html>

Fox, Elizabeth. 1998. "Latin American Broadcasting and the State: Friend and Foe." In Patrick H. O'Neil (Ed.), *Communicating Democracy : The Media and Political Transitions*. Boulder: Lynne Rienner Publishers.

Gentzkow, Matthew, and Jesse M. Shapiro. 2006. "Media Bias and Reputation." *Journal of Political Economy* 114:280316.

Gentzkow, Matthew, Edward L. Glaeser, and Claudia Goldin. 2004. "The Rise of the Fourth Estate:How Newspapers Became Informative and Why it Mattered." NBER Working Paper 10791.

Hughes, Sallie, and Chappel Lawson. 2005. "The Barriers to Media Opening in Latin America." *Political Communication* 22:9-25.

Hughes, Sallie, and Chappel Lawson. forthcoming. "Propaganda and Crony Capitalism: Partisan Bias in Mexican Television News." *Latin American Research Review*.

Lawson, Chappell H. 2002. *Building the Fourth Estate : Democratization and the Rise of a Free Press in Mexico*. Berkeley: University of California Press.

Kaplan, Todd, and Aner Sela. 2003. "Auctions with Private Entry Costs." Unpublished manuscript, Department of Economics, University of Exeter, UK.

Kaplan, Todd, and Aner Sela. 2006. "Second Price Auctions with Private Entry Costs." Unpublished manuscript, Department of Economics, University of Exeter, UK.

Mullainathan, Sendhil, and Andrei Shleifer. 2005. "The Market for News." *American Economic Review* 95:1031-53.

Petrova, Maria. 2006. "Mass Media and Special Interest Groups." Unpublished manuscript, Program in Political Economy and Government, Harvard University.

Reporters Sans Frontiers. 2004. *Mexico. Annual Report 2004*. Electronic source. Retrieved at http://www.rsf.org/article.php3?id_article = 9979.

Reporters Sans Frontiers. 2005. *Argentina. Annual report 2005* Electronic source. Retrieved at http://www.rsf.org/article.php3?id_article = 13213.

Sourcemex 3/10/04. "Spotlight shines on political corruption ahead of state elections this year & 2006 presidential race".

Strömberg, David. 2004. "Mass Media Competition, Political Competition, and Public Policy." *Review of Economic Studies* 71:265-284.

Suphachalasai, Suphachol. 2005. "Bureaucratic Corruption and Mass Media." Environmental Economy and Policy Research Discussion Paper Series, University of Cambridge.

Thomas, Charles J. 2002. "The Effect of Asymmetric Entry Costs on Bertrand Competition." *International Journal of Industrial Organization* 20:589-609

Verbitsky, Horacio. 1997. *Un Mundo sin Periodistas: Las Tortuosas Relaciones de Menem con la ley, la justicia y la verdad*. Buenos Aires: Planeta.

Waisbord, Silvio R. 1998. "The Unfinished Project of Media Democratization in Argentina." In Patrick H. O'Neil (Ed.), *Communicating Democracy : The Media and Political Transitions*. Boulder: Lynne Rienner Publishers.

Waisbord, Silvio R. 2000. *Watchdog Journalism in South America : News, Accountability, and Democracy*. New York: Columbia University Press.

6 Appendix

6.1 An alternative model of the market

Assume that, instead of the linear demand function faced by publishers above, the market works like this. There is continuum of readers, normalized to 1. Readers have a taste for informative news as opposed to non-informative publications. Given the budget d allocated to news buying,

readers are going to pay a price to buy newspapers. This budget is exogenous and fixed: therefore, this is a model of competition among newspapers and publishers to obtain a share of an existing market, rather than a model in which newspapers try to offer a product that makes consumers divert their resources from other goods to buy newspapers. For this reason, I also assume that if no newspaper provides informative coverage, readers are going to split their resources across the non-informative newspapers. If more than one newspaper is equally informative, readers randomize across newspapers assigning equal probability to each of the informative ones, and the readers are split in equal proportions among papers. Denote by w the number of newspapers that are informative. There are $N - w$ uninformative newspapers. Let $V(\cdot, \cdot) : \{0, 1\} \times [0, N] \rightarrow \mathbb{R}$ a mapping from the informational content of the newspaper and the number of informative newspapers to revenues. The market revenues, as a function of whether the newspaper is informative, are

$$V(1, w) = \frac{d}{w}$$

and

$$V(0, w) = \begin{cases} \frac{d}{N} & \text{if } w = 0 \\ 0 & \text{if } w > 0 \end{cases}$$

Indeed, if there is at least one informative newspaper (i.e. $w > 0$), the revenues are going to be completely divided among the w informative newspapers. The uninformative newspapers are going to receive the political reward (which the informative newspapers do not receive). If there is no informative newspaper, the N newspapers are going to share equal portions of the market revenues d , and receive the political reward R .

The expected market revenues for an entrant are $E(V) = E(\frac{d}{w})$. Observe that, if the decision of the editor to write a story is conditional on the signal received, w is distributed as a truncated (non-zero) binomial with parameters w^* and ρ . The expectation of a truncated reciprocal binomial has no simple formulation, yet from the fact that $V(1, \cdot)$ is a concave function of w , it follows that, by Jensen's inequality, $E(V(1, w)) \leq V(1, E(w))$. Hence, one can put an upper bound on γ^* . This is the strategy I adopt here. Moreover, this more realistic model of the market allows me to formalize an intuition regarding how an increase in the number of potential competitors (i.e. an increase in the number of newspapers that compete on the market and might become informative) can break down a domesticated equilibrium. In general, the marginal publisher m faces this problem: choose between the expected profits from being informative, i.e. $E(\frac{(1-\alpha)d}{w})$, and $\gamma_m R + (1-\alpha)P(w=0)\frac{d}{N}$, where the first term in the summation represents loyalty rewards, and the second, the probability that no one else is informative multiplied by $V(0, 0)$, the revenues of an uninformative newspaper when all the outlets are uninformative.

As said above, by concavity of $\frac{d}{w}$ and Jensen's inequality follows that $E(\frac{(1-\alpha)d}{w}) \leq (1-\alpha)\frac{d}{E(w)}$.

Then, if the market is not domesticated, from the entry condition for the marginal publisher m follows that

$$\gamma_m \leq \frac{d}{R} \left(\frac{1}{\gamma^* N \rho} + (1-\rho)^{(\gamma^* N)-1} \right)$$

It can be checked that the qualitative nature of the implications of this model are analogous to those analyzed above. I'll focus now on the case of a domesticated equilibrium, that is simple but quite interesting because it allows to highlight the potential cascading nature of the adjustment

to equilibrium when an exogenous increase in the number of potential competitors makes the domesticated equilibrium no longer sustainable.

In a domesticated equilibrium, even the most profit-minded publisher is kept silent through the provision of the loyalty rewards. This equilibrium is sustained if the payoff of a deviation from uninformative to informative *for the most profit-oriented publisher*, i.e. the publisher with $\gamma = \frac{1}{N}$, is not optimal, formally

$$(1 - \alpha)d < \frac{(1 - \alpha)d + R}{N}$$

which can be rewritten as

$$d < \frac{R}{(1 - \alpha)(N + 1)} \quad (9)$$

The domesticated equilibrium is sustained only if the potential revenues from the market are small compared to the political rewards, and if the the number of potential competitors is small. Equation 9 defines a threshold $d^*(R, N, \alpha) = \frac{R}{N(1-\alpha)-1}$ above which the domesticated equilibrium is not sustained.

Equation 1 also defines, for every size of the market d , every amount of political rewards R and every compensation to editors α , a threshold N^* according to

$$N^*(d, R, \alpha) = \frac{d + R}{d(1 - \alpha)}$$

If the number of potential competitors is larger than N^* , it is not sustainable to domesticate a news market, keeping the size of the market and of the rewards fixed. Substantively, the

model leads us to expect that, starting in a domesticated market, when the least politically loyal newspaper finds in its interest to become informative, the equilibrium breaks down. The least loyal newspaper can break the equilibrium, but this might induce also the second-least loyal, the third-least loyal, etc. to step in the informative market: the choice they face is between commercial failure and political rewards, given that they can no longer rely on the share of market revenues they receive when they faced no competition. Anecdotal evidence seems to support the intuition. In Argentina in the 1980s *Página/12*, a daily newspaper offshoot of a radical weekly, entered the market practicing a new style of investigative journalism, and it started a cascade effect: its informative style allowed it to quickly capture a large share of the market, and it was often sold out early in the day in Buenos Aires. This affected the decision of the publishers and editors of other newspapers, in particular the established *Clarín* and *La Nación*, that felt the need to start to feature investigative journalism stories. Investigative journalism was not part of Argentine tradition and was not practiced in the first years after the latest democratic transition. (Waisbord 2000) A similar pattern can be noticed in Mexico after the success of *Reforma* and *La Jornada* on the newspaper market, and probably even more clearly in the TV market with the change in the attitude of *Televisa*, that induced the second largest TV station, *Azteca*, to give up its more traditional uninformative style. (Lawson 2002) Given that the profits from the deviation (becoming informative in a market in which all the other outlets are uninformative) are not shared with anyone, while the profits from the domesticated market are shared with all the other $N - 1$ publishers, an increase in N makes the option of deviating more appealing. Yet, in equilibrium, the profits are very likely going to be shared with more outlets. Notice that in the model with linear demand function, an increase in N causes the domesticated market to break down simply by making the most profit oriented publisher value

loyalty rewards less. Here, on the other hand, an increase affects the decision of the most profit oriented by reducing the revenues that can be obtained from sharing the total revenues of the market with the other $N - 1$ publishers.

7 Mixed strategies equilibrium in the linear oligopoly model

I provide the characterization of a mixed strategy equilibrium under a repressive legal regime when the harshness of punishment P lies in the interval in which, as claimed above, there is no pure strategy equilibrium because it is optimal for a given editor (that works for a “supportive” publisher) to deviate from the silenced strategy, given that all other editors are silenced, but it is not optimal for the editor who works for a supportive publisher to write a story, if all other editors that work for a supportive publisher write a story. The characterization for the mixed-strategy equilibrium in a well-functioning equilibrium is analogous. This proof is provided for sake of completeness, and does not imply that the idea of mixed strategies is of any intuitive appeal in this context.

Assume that P lies in the range in which the following two hold:

$$\alpha(V_0 - \beta) - P > 0$$

$$\alpha(V_0 - \beta w) - P < 0$$

where w is the number of informative newspapers. The first equation says that it is optimal for an editor to deviate from a silenced equilibrium (i.e., the profits of the only informative newspaper compensate the sanction P) while the second equation says that the equilibrium in which every newspaper with supportive publishers is informative is not sustained (the equilibrium profits do not compensate the editor for the cost of the -sure- sanction P). Hence there is no pure strategy equilibrium in this range. If each editor that works for a supportive publisher mixes with probability σ between writing and not writing a story, the equilibrium has the following properties.

In order to mix between the two pure strategies, the editor that works for a supportive publisher must be indifferent between writing and not writing. It must be that $E(\alpha V_0 - \beta \tilde{w}) = P$, from which follows (remembering that the number of expected informative outlets is σw , and by linearity of the demand function) that $\alpha(V_0 - \beta \sigma w) = P$. Hence the mixing probability σ is

$$\sigma = \frac{\alpha V_0 - P}{\alpha \beta w}$$

What is the number of supportive publishers w ? The publisher, when deciding to kill a story or not, compares the expected value of publishing it with the loss in the loyalty rewards R . Formally, a publisher is supportive as long as the expected revenues compensate the loss of the reward. For publisher i , this means that

$$(1 - \alpha)(V_0 - \beta(1 + (\sigma(w - 1)))) - \gamma_i R \geq 0$$

The choice faced by the publisher when the editors mix is analogous to what happens in the

“truth-seeking” regime, when editors separate according to the quality of the lead they received: he can observe the action of “his” editor, but can only have an expectation of what is the number of editors that are going to write a story. The threshold of loyalty below which a publisher is supportive is

$$\gamma^* = \frac{(1 - \alpha)(V_0 - \beta(1 - \sigma))}{R + (1 - \alpha)\beta\sigma N}$$

It follows that all the implications analyzed above have analogous counterparts in the mixed strategy equilibrium. Notice that in the mixed strategy equilibrium, only the editors that work for supportive publishers mix, while those that work for politically loyal publishers adopt the pure strategy of not entering. This is analogous to what happens in the (maximal Nash) mixed strategy equilibrium of costly oligopoly entry presented in Thomas(2002), where a subset of all potential competitors adopts mixed strategies, while a second subset follows the pure strategy of not entering. Notice that here the mixing is done by the editors, that are homogenous with respect to their preferences, hence the strategy σ is common to all editors that work for a supportive publisher, while in Thomas (2002) the mixing is done by the firms (analogous to publishers here) that differ in their entry cost and therefore follow firm-specific mixing probabilities.

8 A remark on the *Sullivan* standard

Imagine that, instead of working according to one of the three legal regimes identified above, the court, after a lawsuit, follows this rule:

- acquit a journalist that wrote a story based on a reliable lead, regardless of the truthfulness of the story
- find guilty a journalist that wrote a hoax based on an unreliable lead
- acquit a journalist the wrote a truthful story based on an unreliable lead

This is a formalization close to the standard followed by U.S. courts after the *Sullivan* ruling of the Supreme Court: it's not the falsity of the story, but the falsity combined with the disregard for the fact that the story is based on probably false information, that makes a journalist liable. The Court justified the decision claiming that conditioning liability on falsity would chill the press, and that this standard would balance the interest of spreading information with the interest of protecting reputation from maliciously false news reports. What are the effects of the rules laid out above, in the framework introduced in this paper?

First of all, all the editors that receive the reliable lead and work for a supportive publisher are going to write a story, because they face no danger of lawsuit. The editors that receive the unreliable lead (and work for a supportive publisher) face a trade-off between the expected sanction $\xi P = (1 - S^L)P$ and their share of market revenues $\alpha E(V)$. Now, the first observation is that a silenced equilibrium is never sustained in this regime. Indeed, the expected punishment for those editors that receive the strong lead is 0. On the other hand, what are the threshold above and below which the sensational and the well-functioning equilibrium are sustained? In a sensational equilibrium, all leads are turned into stories, regardless of their reliability. In the

legal regime presented in this section, this requires that

$$P < \frac{\alpha E(V)}{1 - S^L}$$

where $E(V) = V_0 - \beta w^*$ are the expected market revenues of an informative newspaper. The number of entrants is given by $w^* = \frac{N(1-\alpha)}{R+(1-\alpha)\beta N}$ and it is clear that this is sustained if

$$V_0 > \frac{(1 - S^L)P}{\alpha} \left(1 + \frac{(1 - \alpha)\beta N}{R} \right)$$

which is exactly the same condition for the sensational equilibrium under a truth-seeking legal regime as expressed in (8). Hence, the two standards do not differ in the consequences they have for the sustainability of a sensationalistic media market. The main effect is to prevent the silenced equilibrium, and this goal is achieved at no cost (i.e. it is not achieved by creating any incentive for sensationalism).

8.1 Proofs

Proof of Proposition 2. I prove the first part for the sensational equilibrium. The proof for the well-functioning equilibrium is analogous. Let $w(N)$ be the number of supportive publishers for a given choice of parameters of the model, as a function of the number of potential competitors. Given that N varies in discrete changes, we need to evaluate $\Delta w = w(N + 1) - w(N)$. In a

sensational equilibrium, this is

$$\Delta w = \frac{(1-\alpha)V_0(N+1)}{R+(1-\alpha)\beta(N+1)} - \frac{(1-\alpha)V_0N}{R+(1-\alpha)\beta N} = \frac{(1-\alpha)V_0R}{(R+(1-\alpha)\beta(N+1))(R+(1-\alpha)\beta N)} > 0$$

so the increment is positive.

The second part of the proposition follows from the fact that $V_0^* = \frac{R}{N(1-\alpha)} - \beta$ is strictly decreasing in N . □

Proof of Proposition 3. The first part follows from the fact that the proportion of supportive publishers, as characterized in (5) and (7), is increasing in V_0 . The second part follows from (1), (3) and (4). In particular, notice that $\frac{\partial N^*}{\partial V_0} = -\frac{R}{(1-\alpha)(V_0-\beta)^2} < 0$; $\frac{\partial P_n^*}{\partial V_0} = \frac{\alpha}{1-S^H} > 0$ and $\frac{\partial P_r^*}{\partial V_0} = \alpha > 0$. □

Proof of Proposition 4. Part 1 follows from the fact that γ^* as characterized in (5) and (7) is decreasing in R . The second part follows from differentiating N^* with respect to R and observing that $\frac{\partial N^*}{\partial R} = \frac{1}{(1-\alpha)(V_0-\beta)} > 0$, □

Proof of Proposition 5. The first part follows from the fact that ΔP is strictly increasing in V^* , and in turn V^* is strictly increasing in V_0 . The second part follows from the fact that ΔP is strictly increasing in V^* and V^* is decreasing in N . We now prove this last fact. Remember that N changes in discrete increments. Define a function $V^*(N)$ that, for a given configuration of parameters, maps N into the equilibrium expected revenues of an informative newspaper. I

need to evaluate

$$\begin{aligned}
\Delta V^* &= V^*(N+1) - V^*(N) = \\
&= \frac{V_0 R + (1-\alpha)\beta^2 \rho(1-\rho)(N+1)}{R + (1-\alpha)\beta \rho(N+1)} - \frac{V_0 R + (1-\alpha)\beta^2 \rho(1-\rho)N}{R + (1-\alpha)\beta \rho N} = \\
&= \frac{(1-\alpha)\rho\beta R(\beta(1-\rho) - V_0)}{(R + (1-\alpha)\beta \rho(N+1))(R + (1-\alpha)\beta \rho N)}
\end{aligned}$$

The sign of this expression depends on the sign of $\beta(1-\rho) - V_0$ which is negative because $V_0 - \beta k$ is not negative: by construction market revenues are positive. Therefore increases in N decrease ΔP . □

Proof of Proposition 6. Notice that P^L is strictly increasing in V^* . The first two claims follow from the behavior of V^* as a function of N and V_0 . The third claim follows from differentiating V^* with respect to R and V_0 and observing that $\frac{\partial^2 V^*}{\partial R \partial V_0} = \frac{(1-\alpha)\beta \rho N}{(R+(1-\alpha)\beta \rho N)^2} > 0$

□

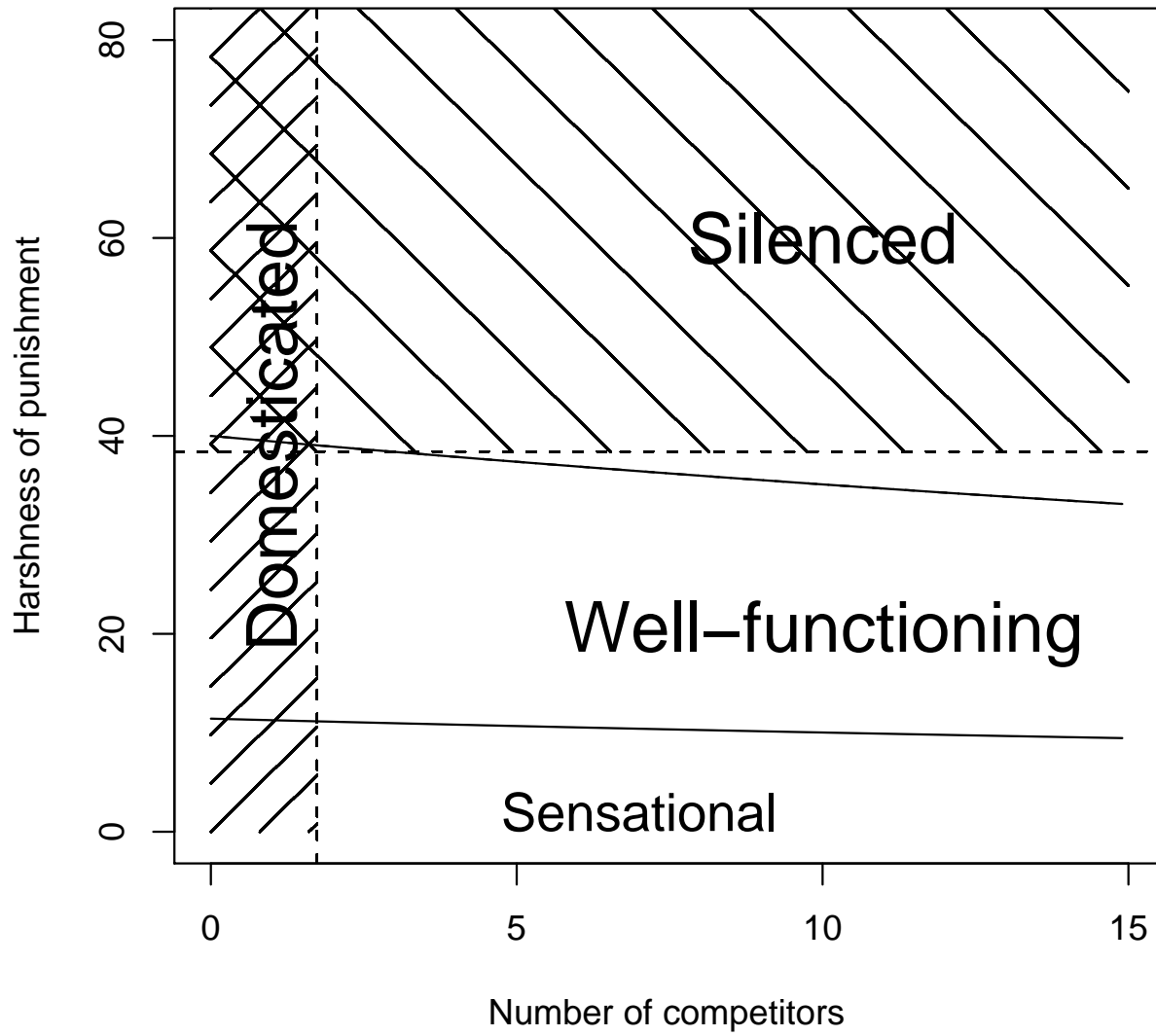


Figure 1: Equilibria in parameter space N, P