

The Political Economy of the Media Bias: Russian Case

Abstract

The paper is devoted to the media market problems and the possibility of the media bias generated and sustained by journalists' and media-owners' personal incentives. These incentives depend on the media assets property structure and property structure in Economy of country.

Problem	1
Model	2
Russian case and verification	5
Annex 1. Regional media data	13
Annex 2. Media monitoring data	16
Annex 3. Equilibrium political preferences of the medium (under biased journalists' preferences)	29

Problem

How could one explain media bias in ideological preferences? Why do some countries face pronounced media bias problem on some media-market segments while others not. D.Sutter (2001) discussed condition of media shift existence and supposed it could be under pressure of the news cartel and only cartel able to enforce the bias only. S.Mullainathan and A.Shliefer (2002) proposed analytical approach to explaining media bias through attempts to affect readers opinion (could be eliminated by the competition) and the spin caused by desire to create “memorable story”.

We offer model to explain this phenomena by personal incentives of journalists and present some data to support our hypothesis. These incentives are based on the different nature: journalist could extract the rent caused by owner's control failure and possibility of informal contracts.

The Media is key factor for coalition formation in the Transitional Countries, where political preferences relatively unstable. So the Media Bias Rules should be taken into account for Transitional Public Choice Analysis.

A. Jacobsson offered the model of a competition between politicians for citizen's voters through the Mass media¹. A. Jacobsson accents modelling of process of decision-making by the voters and stresses that the voters' preferences are formed in the very begging of election campaign. He comes to conclusion, that incumbent politician get real advantages before the challenger having more free access to Mass Media. The article develops the techniques for modelling voter's behaviour.

¹ A. Jacobsson, Political Media Contests and Confirmatory Bias, No 2002:3 in: Research Papers in Economics from Stockholm University, Department of Economics

It is also necessary to note the work by group of the scientists of World Bank in which discussed the state and private property efficiency on mass media². It is carried out cross-country analysis of independence Mass Media. The researchers conclude, that the state ownership on mass media leads to the less level of Mass Media independence (then private), and it is less effective for a society.

Russian National Newspaper observations sample since 1990 till 2003 represents dramatic changes in predominant political preferences, reflected in coverage, parties and politicians personal estimations.

Electoral statistics permits to evaluate gap between median voter position and the Newspaper journalists' predominant viewpoint.

Model

Suppose that there is a list of question (M) about preferences in possible policies outcomes and individual has an answer for each question. All answers are normalized from 0 to 1. Each individual could be represented by vector (M? 1), element v_j of it represents personal preferences about J's question.

One of essential dimension in individual preferences is attitude toward relations Private and State Property or share of private property in economy.

PP - share of private property in the economy.

PP = 0 - situation when there is no private property in the economy.

PP= 1 - there is no state property in the economy.

Individual political position is desirable share of a public ownership in the economy.

There are two parts of economy: media market and non-media market.

PP_{MM} – share of private property on the media market.

PP_O – share of private property outside of the media market.

I_{PP} = – the weight of media market in the economy.

$$PP = I_{PP} \cdot PP_{MM} + (1 - I_{PP}) \cdot PP_O \quad (1)$$

Journalist receives fixed salary and looking for informal contracts. Journalist has no exogenous ideological preferences. His (her) ideological preferences are determined by profit maximization motives. We consider his ideological preferences as desirable structure of economy in respect to public/private property.

² S.Djankov, C. McLiesh, T.Nenova A.Shleifer Who Owns the Media? No 8288 in NBER Working Papers from National Bureau of Economic Research, , 2001

- Private property based economy provides more chances to get shadow contracts for a journalist: journalists' opportunity to find a shadow contracts positively correlated with a share of private sector in economy (PP);

- Private medium could better control its content: private medium could control journalist spending less (control expenditures) then state medium. Owner could spend resources (I) in control of journalist but efficiency of the owners' control is directly proportional to a share of a private property in media market (PP_{MM}).

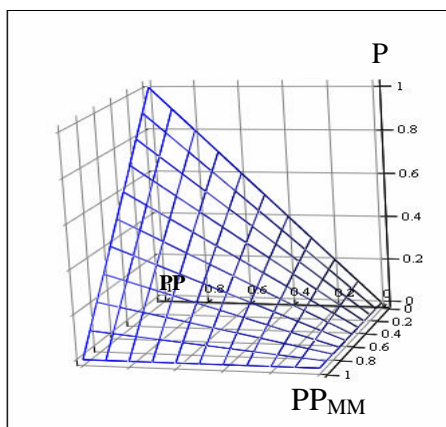
Journalist is interested in private property to maximize benefits from informal contracts and in public property in his own medium to minimize owners' control.

Media owner could affect probability of finding hidden contracts (P) through investments in control.

Suppose that under complete private property of media (PP_{MM} =1), owner could prevent journalists' hidden contracts (P=0). In state owned media (PP_{MM} =0), probability of finding hidden contracts (P) defined only by share of private property in economy (PP). If no private property in economy (PP =0) journalist have no ways of finding hidden contracts.

(2) trying in simplest way take account of assumptions mentioned above.

$$P = (1-PP_{MM}) PP \tag{2}$$



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Fig. 1. Probability to find hidden contracts (P) as a function of private property of media (PP_{MM}) and economy (PP)

As we mention in (1) share of private property (PP) in the economy defined by weight of media market (I_{PP})

$$PP = I_{PP} PP_{MM} + (1 - I_{PP}) PP_O$$

We will demonstrate this constrain on figure 2 by blue vertical plane. It means that journalist should understand that share of private property in media market influences the share of private property in economy.

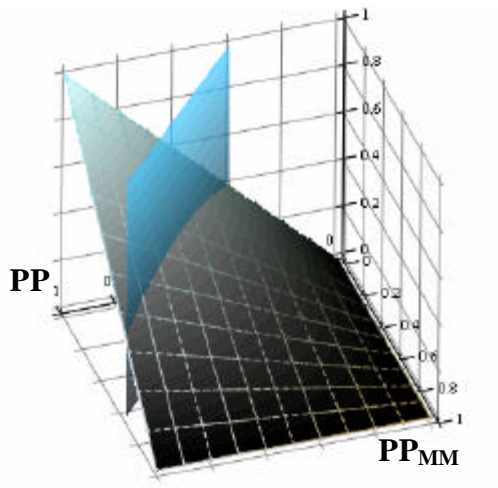


Fig 2. Probability to find hidden contracts (P) and constrain on PP and PP_{MM}

Journalist's benefits are the functions of property rights: PP_{MM} and PP and journalist could reveal his own preferences about PP .

If there is such PP^* which maximize journalist's utility function then journalist would prefer such share of private property in the economy.

All these only to demonstrate the fact that that journalist's political preferences could be endogenous. If journalist has political preferences that differ from median voter then we could built simple model of resulted political preferences of medium in the market (see annex 3).

Russian case and verification

The history of behavior of the majority of journalists, evolution of their attitude to government creates an opportunity of verification of model based on the dates in Central and East Europe. (Government is characterized in two scales: a share of government expenditure in GDP and a share of a public ownership)

Let us recollect, that on start of reforms the position of the majority of journalists whether coincided with a position of voter constantly addressed to mass-media, or even "right biased" and coincided with a position of the most radical reformers. The same phenomena appeared to the end of 1980-ties in the East Europe and even before: in Poland 1980-81, in Czechoslovakia 1968, etc., and also in Russia in the beginning 90-ties and, for the short period, in first half 1996 when the probability of jumping growth of a share of a state ownership in the economy was quite real.

The given hypothesis also well explains that, apparently, inexplicable solidarity of many journalists with "oligarch" Khodorkovsky. Indeed, the majority of them evaded from distribution negative information about him, despite of obvious demand for such information on the part of Executive authority and the population (the results of interrogations showing an uncooperative altitude to "oligarchs" of the majority of the population) testifies to demand on the part of the population. Journalists, probably, would like to serve in a powerful state broadcasting company, receiving the shadow contracts from oligarchs and simple capitalists and the salary comparable to the salary on private TV-channels. In such situation their "left bias" on a scale - the share of state property or a share of government expenditures easy explained.

However now situation when actually there are no more private national TV, and Russian capitalists must care rather about saving theirs' ownership and not about self-advertisement.

And journalists (as well as in 1996) no more being "left biased". To tell the truth, to assert the right on being «right biased» be becomes risky. The obvious declaration of such displacement is fraught with sanctions; however, evasion from participation in «exposing campaign» against oligarchs quite allowable form "quasi-right-wing" quasi-opposition.

In a situation when the freedom of speech seems guaranteed, the growing private sector does not give a release from orders for the publicity, the shadow advertising, etc., stimulus vary. The freedom of speech is maintained, as well as any common resource irrespective of the fact how such operation influences its «quantity and quality» under the known circuit of "tragedy of public pastures".

And as growth of a private sector as a whole starts to threaten with radical change of game rules and in the media - market (through probability of intrusion of new players, privatization and liberalization of the market and growth of a competition on this market, representations about an optimum role of the state from the point of view of the journalist can appear considerably "left biased" and for sure they would appear much left biased then position of the consecutive reformer.

Let's finish this section by the reference to well-known reforms experience of in United Kingdom. Fights of a reformist cabinet with strikers there have almost coincided on time with massed intrusion on the British market of Rupert Merdoks' media empire. The control of the Australian businessman, as a rule, caused shift the newspaper to the right, in the pro-governmental side. The government applied strict measures for suppression of illegal trade-unions encroachments on Merdok's private property gaining advantages both for the government, and for the reforms, and private business (so also for the society).

That is even in the country with the competitive market of printed mass-media and powerful traditions of democracy of the taxpayer and a private property the state intervention preventing "capture" of mass-media by journalists, appears very opportunely for deduction of the pro-reformist majority at elections.

Russian National Media-market Test

Table 1.

Variables List		
#	Variables' designations	Variables description
<u>Dependent Variables</u>		
1.1.	SumBias	Dependent; The Sum of maximum deviations from initial positions (modulus) for six Issues. <i>For instance, initial Profile: {-1; 0; 0; 1; 1; 0}. For the observation period Change to "1" appears for Issue #1; to "1" for issue#2; to "-1" for Issue#3. Positions for issues #4, #5 and #6 never changed. So Sum of deviations = 2+1+1+0+0+0=4</i>
1.2.	PartBias	Dependent; The Sum of every deviation from appropriate partisan profile (anti-reformist – set of six negative estimations (-1)).
<u>Independent Variables</u>		
	OwnerChng	Owner changed since 1, July 1992 till 1, April 2000
	DirectPartctctrl	Political Party direct affiliation and financing (-1 – free of any officially registered political party control; 0 – some informal channel of influence could exist; 1 – direct financial and political control of registered party).
	MEmp_own	The Media Proprietor: Media-Empire Individually owned (Media-Most owned by Vladimir Gusinsky) (-1 – out of Empire; 0 –

		affiliated or was in less than 3 years; 1 – belongs to the Empire, at least for 3 years)
	Edit_own	Editor – owner (1 – editor is major owner of the media; 0 – partial owner of the media)
	State_own	State owned media

Initial data presented in Annex 2.

The Media sample includes actually all Russian National-wide media covered political and economic issues on regular basis, presented on the market in 90-ties and included in regular commercial media-reviews and Public opinion Services Ratings of Media Resources³.

To exclude “natural shift” of National median voter position we added test for “partisan” press only (marked in accordance with self-identification). As all 19 Media sorted on rather broad categories - “reformist”, “anti-reformist” and “neutral” - it was feasible task. So, for this task we used 15 observations: 13 “reformist” and 2 “anti-reformist”.

The self-identification of the Media and the most famous journalist occurred in the end of 80-ties and the early 90-ties – before 1991 August Revolution. In 1988-90 “reformist”, “liberal”, “anti-communist” press predomination was obvious and reflects in proportion 10:1 to communist or nationalist press (“Pravda”, “Sovetskaya Rossia” etc). All media resources belonged to the Communist State that time, and even in June 1991 Yeltsin got so the “right-wing” bias was obvious. The fact agrees with the model “Owner-Journalist” quite well.

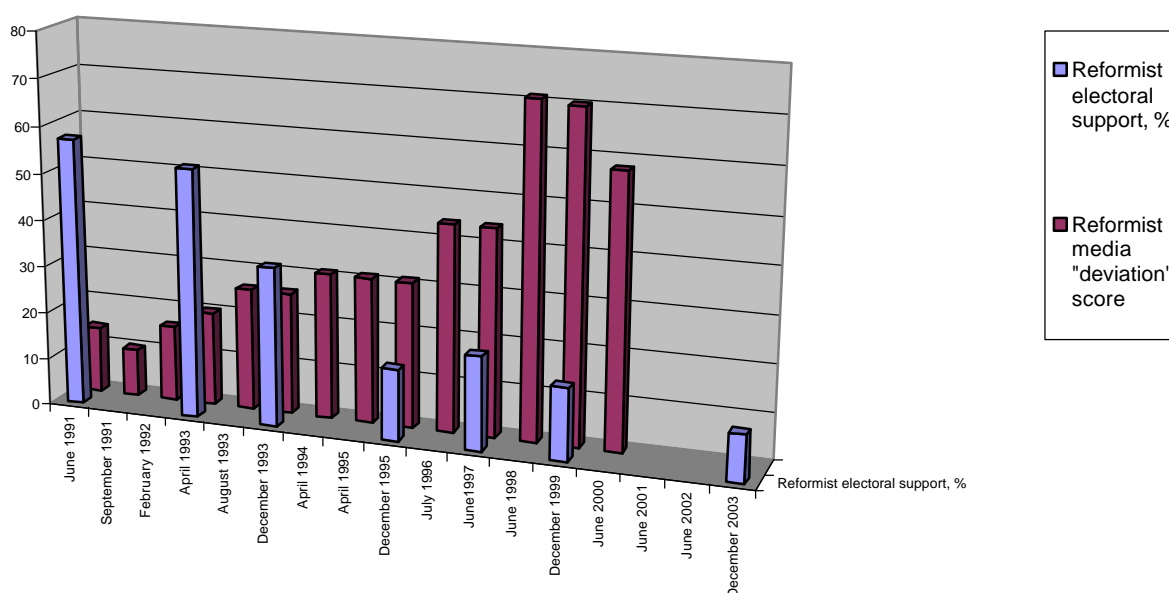


Fig. 3. Reformist parties electoral support dynamics and Reformists' media deviation from pro-reformist coverage

³ See The “Public Opinion Foundation” site www.fom.ru; All-Russian Center for Public Opinion Research (www.wciom.ru; www.levada.ru)

The data presented on the Fig 3. and Fig 4. (see for details Annex) shows as national Media identified themselves as reformist rapidly deviates from initial position and this trend started obviously before the median voter shift to anti-reformist direction. Annex data shows at the same time anti-reformist newspapers coverage remains quite stable.

This forward-deviation couldn't be explained by external factors, but it could, at least partially, explain subsequent pro-reformist coalition decline and median voter anti-reformist shift.

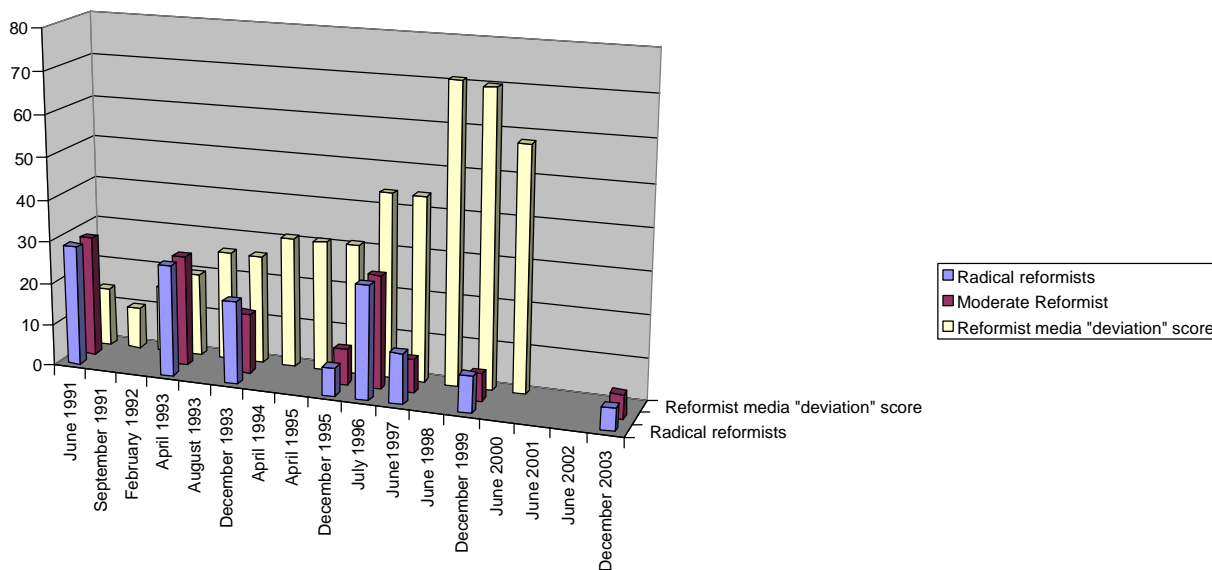


Fig 4. Radical and Moderate Reformist parties electoral support dynamics and Reformists' media deviation from pro-reformist coverage

Table 2

Statistical analysis results

#	Dependent variables	Independent variables	T-statistics	Adjusted R-Square
1.	SumBias	OwnerChng	0,602	-0,037
2.	SumBias	DirectPartctctrl	-2,769	0,270
3.	SumBias	MEmp_own	1,048	0,005
4.	SumBias	Edit_own	-0,952	-0,005
5.	SumBias	State_own	-0,345	-0,062
6.	PartBias	OwnerChng	0,289	0,065
7.	PartBias	DirectPartctctrl	-2,151	0,195
8.	PartBias	MEmp_own	1,765	0,124
9.	PartBias	Edit_own	-0,345	-0,062
10.	PartBias	State_own	-1,390	0,059

Of course, even only significant regression could not prove a thing, be based on only ONE clear (+1) observation (Sovetskaya Rossia, controlled by the Communist Party) – see Table

2 (relationship 2 and 7). But some other parties newspapers proves the same phenomena (bias from the partisan electorate “internal” media voter never appeared): see “Yabloko” (www.yabloko.ru); “Pravoe Delo” (Right Forces Union Newspaper one could find it through the party web-site www.sps.ru); “Limonka” by National-Bolshevik party newspaper etc. Therefore Russian experience shows, direct financial and political control could prevent the shadow contracts relatively efficiently.

So, Media Bias appears but it couldn't be associated with definite variable but Direct Party control.

Rent-seeking media in Russia.

L. Polishchuk and A. Savvateev in paper "Spontaneous (non) emergence of property rights"⁴ offer a model to explain the lack of property rights protection in rent-seeking environment. They demonstrate that inefficiency in production technologies and inequality in resource ownership could make favor less than full protection of property rights for wealthier agents.

They consider an economy with unit continuum of agents $x \in [0, 1]$ with stock w of economic resource which could be used either for production or, alternatively, appropriation.

And $f(w)$ density of resource distribution across the agents.

Production function $f(w)$ meets the following standard conditions:

$$f'(w) > 0, f''(w) < 0, \lim_{w \rightarrow 0} f'(w) = \infty, \lim_{w \rightarrow \infty} f'(w) = 0.$$

$k \in [0, 1]$ portion of the economy's GDP Y , which is available for redistribution through appropriation activities. Parameter k characterizes the quality of public protection of property rights: the smaller is k , the stronger is such protection. $k = 0$ correspond to full protection of property rights and $k = 1$ means complete anarchy.

Authors prove that for every $k \in [0, 1]$ and t agent will spend h for rent-seeking activities

$$h(x) = \begin{cases} 0, & w(x) \leq t \\ w(x) - t, & w(x) > t. \end{cases}$$

t could be found from the equation:

$$\frac{1-k}{k} f'(t) = \frac{\int_0^1 f(\min\{w(z), t\}) dz}{\int_0^1 (w(z) - t)_+ dz}.$$

⁴ IRIS Working paper – wp241 <http://128.8.56.16/DOCS/docs/wp241.pdf> or <http://www.iris.umd.edu/publications/detail.asp?ID=wp&number=241>

It means that agents richer than $w(t)$ would spend resources for appropriation activity. That is exactly what happened in Russia in 90-ties and media market was not exception. Poor protection of property rights in the economy created incentives for the owners of the media to spend resources in rent-seeking. Media-empires became the instrument for rent-extraction from the budget (to extort more property, cheap credits etc by blackmail). Media-owners were interested to invest in rent-seeking (to encourage journalists to attack politicians) instead of investment in control to prevent journalists' shadow contracts practices.

In long run, such behavior would be inconsistent and government could not resist the temptation to suppress such medium. However, in myopic environment when there is no future and only today matter, rent-seeking behavior would be quite rational.

Moreover, the government's desire to suppress medium would be irresistible in economy with poor protection of property rights.

Russian data.

To prove the fact of rent-seeking behavior of Russian media we will take a look on Russian regions.

We are able to observe whether medium is opposite to the current governor or not. Consider the medium that was opposite to the governor. We could not state that medium tried to blackmail governor only observing its opposition.

No doubt that most governors have some incentives to suppress opposite media whether media blackmailing him or not. Even if we could observe the suppression of opposite media, we could not state that this was because of medium blackmailing.

But what would happen with opposite medium if new governor comes to rule?

The fact that new governor would suppress medium opposite to the previous governor could mean few facts: whether new governor was not opposite to his predecessor but rather was his protégé or that media was opposite to the governor by rent-seeking motivation.

In 90-ties, it was not necessary for current governors to use protégé as none of them faced restrictions of "two terms".

Rent-seeking by blackmailing is a universal strategy for medium and there is no difference whether old governor re-elected or new governor comes to rule. Also new governor will face the same incentives as his predecessor to suppress in long run this medium.

This is exactly what Russian data demonstrates. In 19 Russian regions after election of new governor opposite (to the previous governor) media were suppressed (-1) with only one exception (Altai republic).

The Freedom of Speech rating significant (more 40 points or more than 15%) changes 2000 in comparison with 1999 often were caused by 2000 election campaign (for the regions with weak, “removable” governor it could improve situation before election date – it encourages challengers to invest in media; for strong, “irremovable” it could not affect or worsen situation). Sometimes rating growth reflects conflict with Federal Administration: administrative pressure balanced by federal power intervention.

Other effect of rent-seeking behavior of the medium would be small incentives for the owner to invest in economic efficiency of his medium and for journalists all this mean that they would find themselves free to look for hidden contracts.

Conclusion

Economies with high level of private property in media market could face left media bias because journalists have intentions to weak owners' control.

In economies with high level of state property (e.g. Russia in early 90th) journalist would rather right biased as they need free market to make informal contracts available.

References

K.Yanovskiy, S. Zhavoronkov, O. Kochetkova, A. Mazhuga, D. Cherny, Pierre-Marcel Dejardin, Paul Hobson, Donald Savoie “Politico-Economic Problems of the Russian Regions” (Economic Policy and Economic Development of the Regions Area) 2001, Moscow, IET Annex 1;

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L. Polishchuk and A. Savvateev "Spontaneous (non) emergence of property rights" IRIS
Working paper – wp241 <http://128.8.56.16/DOCS/docs/wp241.pdf> or
<http://www.iris.umd.edu/publications/detail.asp?ID=wp&number=241>

Annex 1. Regional media data

Region	Permanent governor since 1992 & competitive media market ⁵	Permanent governor & capital - region (Moscow)	Opposition media status after new governors reached the office ⁶	Freedom of speech ranking for 1999 ⁷	Freedom of speech ranking for 2000 ⁸	Last Governors' election till 15, April 2001 Date, strong challenger participation (Y/No) and comments
Adygeya republic	0	0	0	280	290	1997
Bashkortostan republic	-1	0	0	101	260	Dec., 1999, No., 2000 – confrontation vs Federal Administration
Buryatia republic	-1	0	0	448	388	1998
Altai republic	0	0	1	163	208	1997
Dagestan republic	-1	0	0	236	263	1998
Ingush republic	0	0	0	n/a	n/a	-
Kabardino-Balkaria republic	-1	0	0	221	196	1997;
Kalmykia republic	0	0	-1	181	219	1995; 2000 – confrontation vs Federal Administration
Karachaevo -Cherkessia rep.	0	0	-1	186	146	1999, May
Karelia republic	0	0	-1	356	368	1998
Komi republic	0	0	0	361	341	1997
Mariy-El republic	0	0	0	183	193	2000, Dec.
Mordovskaya republic	0	0	-1	306	263	1998
Yakutia	0	0	0	137	208	1996, 2000 -2001– confrontation vs Federal Administration
Northern Osetia - Alania rep	0	0	0	218	220	1998
Tatarstan republic	-1	0	0	394	346	March, 2001, No
Tyva republic	-1	0	0	203	210	1997
Udmurtia republic	0	0	-1	374	204	October 2000
Khakassia republic	0	0	0	321	329	Dec., 2000
Chuvashia republic	0	0	0	254	277	1997
Altaiskiy krai	0	0	0	374	356	March, 2000
Krasnodarskiy krai	0	0	-1	384	394	1996
Krasnoyarskiy krai	0	0	0	344	360	1998
Primorskiy krai	0	0	0	368	343	Dec., 1999
Stavropolskiy krai	0	0	0	416	410	Dec., 2000
Khabarovskiy krai	-1	0	0	274	275	Dec., 2000
Amurskaya oblast	0	0	0	401	384	1996
Arhangelskaya oblast	0	0	0	367	367	Dec., 2000
Astrahanskaya oblast	-1	0	0	389	345	Dec., 2000
Belgorodskaya oblast	0	0	0	267	338	1999 May; Governors' confrontation vs. Large Business
Bryanskaya oblast	0	0	-1	360	384	Dec., 2000
Vladimirskaaya oblast	0	0	0	482	493	Dec., 2000
Volgogradskaya oblast	0	0	0	296	281	Dec., 2000
Vologodskaya oblast	0	0	0	478	491	Dec., 1999
Voronezhskaya oblast	0	0	0	373	383	Dec., 2000
Ivanovskaya oblast	0	0	0	477	443	Dec., 2000
Irkutskaya oblast	0	0	0	476	445	1997
Kaliningradskaya oblast	0	0	0	465	405	Nov., 2000

⁵ See Yanovskiy et. al. 2001, Mau et.al. 2002; “-1” means “governor never changed AND media market is not competitive”.

⁶ ibid

⁷ Public Examination Evaluation of freedom of speech in Russia Project rating. www.freepress.ru

⁸ ibid

Kaluzhskaya oblast	0	0	0	451	463	Nov., 2000
Kamchatskaya oblast	0	0	0	395	388	Dec., 2000
Kemerovskaya oblast	0	0	-1	336	356	1997
Kirovskaya oblast	0	0	0	263	270	1996
Kostromskaya oblast	0	0	0	316	322	Dec., 2000
Kurganskaya oblast	0	0	0	251	285	Dec., 2000
Kurskaya oblast	0	0	-1	253	287	Nov., 2000; President intervention vs. governor; governor changed by court; our 2001 estimation – media market still uncompetitive ⁹
Leningradskaya oblast	0	0	0	419	424	Sept., 1999
Lipetskaya oblast	0	0	0	302	318	1998
Magadanskaya oblast	0	0	0	145	191	Nov., 2000
Moscovskaya oblast	0	0	0	393	413	Dec., 1999 Governor changed
Murmanskaya oblast	0	0	0	380	392	March 2000
Nizhegorodskaya oblast	0	0	0	324	308	1997
Novgorodskaya oblast	-1	0	0	403	380	Sept., 1999
Novosibirskaya oblast	0	0	0	386	431	Dec., 1999; governor changed our 2001 estimation – media market still uncompetitive
Omskaya oblast	-1	0	0	338	307	Sept., 1999
Orenburgskaya oblast	0	0	0	385	464	Dec., 1999; governor changed; our 2001 estimation – media market still uncompetitive
Orlovskaya oblast	0	0	0	319	322	1996
Penzenskaya oblast	0	0	0	291	314	1998
Permskaya oblast	0	0	0	321	357	Dec., 2000 Governor changed
Pskovskaya oblast	0	0	-1	247	290	Nov., 2000
Rostovskaya oblast	0	0	0	352	376	1996
Ryazanskaya oblast	0	0	0	312	315	Dec., 2000
Samarskaya oblast	1	0	0	314	331	July, 2000
Saratovskaya oblast	0	0	-1	384	374	March, 2000
Sahalinskaya oblast	0	0	0	412	417	Oct., 2000
Sverdlovskaya oblast	0	0	-1	420	473	Sept., 1999; Governor vs. Ekaterinburg magapolis mayor conflict
Smolenskaya oblast	0	0	0	388	371	1998
Tambovskaya oblast	0	0	-1	370	398	Dec., 1999
Tverskaya oblast	0	0	0	436	441	Dec., 1999
Tomskaya oblast	0	0	0	450	418	Sept., 1999
Tulskaya oblast	0	0	-1	338	354	1997
Tyumenskaya oblast	0	0	-1	405	383	1997
Ulyanovskaya oblast	0	0	-1	220	400	Dec., 2000
Chelyabinskaya oblast	0	0	0	246	291	Dec., 2000
Chitinskaya oblast	0	0	0	274	288	Dec., 2000
Yaroslavskaya oblast	0	0	0	478	448	Dec., 1999
Moscow	0	1	0	631	629	Dec., 1999
St.Petersburg	0	0	-1	505	502	1996
Yevreyskaya AO	0	0	0	298	302	March, 2000
Aginsky-Buryatsky AC	0	0	0	210	195	1996
Komi-Permyacky AC	0	0	0	177	223	1996
Koryaksky AC	0	0	-1	432	301	1996

⁹ See Yanovskiy et. al. 2001, Mau et.al. 2002

Nenecky AC	0	0	0	261	267	1997
Taimyrsky AC	0	0	0	269	294	Jan., 2001
Ust-Ordynsky AC	0	0	0	335	315	Nov., 2000
Hanty-Mansiysky AC	0	0	0	302	377	March, 2000
Chukotsky AC	0	0	0	188	188	Dec., 2000
Evenkiysky AC	0	0	0	222	296	April, 2001
Ymalo-Nenecky AC	0	0	-1	303	206	March, 2000

Sources:

- K.Yanovskiy, S. Zhavoronkov, O. Kochetkova, A. Mazhuga, D. Cherny, Pierre-Marcel Dejardin, Paul Hobson, Donald Savoie “Politico-Economic Problems of the Russian Regions” (Economic Policy and Economic Development of the Regions Area) 2001, Moscow, IET Annex 1;
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- Public Examination Evaluation of freedom of speech in Russia Project rating. www.freepress.ru

Annex 2. Media monitoring data

Sources: National News Service press reviews archive

<http://www.nns.ru/archive/>

The appropriate (listed in the table) newspapers files for 1992-2000 years.

20 century Totalitarian regimes Predominant evaluation – positive (1) Negative (-1) Neutral (0)

	Media-market niche (self-identification)	Observation date 1	Observation date 1	February 01-10	April 01-10	August 11-20	April 01-10	April 01-10	May	May	May	May
		June 01-10. 1991	September 01 -10 1991	1992	1993	1993	1994	1995	01-10 1996	1-10 1998	10-20 1999	1-10 2000
Ref_Profile		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
MK	Popular-reformist	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0
Argumenty e Fakty (The Arguments and Facts)	Popular-reformist	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0
Komsomolskaya pravda	Popular-reformist	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0
Trud (The Labor)	Popular-neutral	0	-1	-1	-1	0	0	0	0	0	0	0
Sovetskaya Rossia (The Soviet Russia)	Popular-anti-reformist	1	1	1	1	1	1	1	1	1	1	1

President Yeltsin evaluation – positive (1) Negative (-1) Neutral (0)

	Media-market niche (self-identification)	Observation date June 01-10. 1991	September 01 -10 1991	February 01-10 1992	April 01-10 1993	August 11-20 1993	April 01-10 1994	April 01-10 1995	May 01-10 1996	May 1-10 1998	May 10-20 1999	May 1-10 2000
Ref_Profile		1	1	1	1	1	1	0 or - 1	1	1	1	1
MK	Popular-reformist	1	1	0	1	0	0	-1	1	-1	-1	-1
Argumenty e Fakty (The Arguments and Facts)	Popular-reformist	1	1	1	1	1	1	0	1	0	-1	-1
Komsomolskaya pravda	Popular-reformist	1	1	0	1	0	0	0	0	-1	-1	-1
Trud (The Labor)	Popular-neutral	0	1	0	0	0	0	0	0	-1	-1	-1
Sovetskaya Rossia (The Soviet Russia)	Popular-anti-reformist	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Den / Zavtra (The Day / The Tommorrow)	Popular-anti-reformist	-	-	-1	-1	-1	-1	-1	-1	-1	-1	-1
Moskovskie Novosti (Moscow News)	Quality press – weekly - reformist	1	1	1	1	0	0	-1	0	0	0	0

Kommersant (The Business Men)	Quality press daily - reformist	1	1	1	1	0	0	0	1	0	0	0
Nezavisimaya Gazeta (The Independent Newspaper)	Quality press daily - reformist	1	0	0	-1	-1	-1	0	0	-1	-1	-1
Segodnya ("Today")	Quality press daily - reformist	-	-	-	-	-	0	-1	1	-1	-1	-1
Izvestia	Quality press daily - reformist	1	1	1	1	1	1	0	1	-1	0	1
1 kanal/ORT	Popular - neutral	-1	1	1	0	0	0	0	1	0	0	-1
RTR (Russian TV)	Official - reformist	1	1	1	1	1	1	1	1	1	1	0
NTV	Popular/ Quality - reformist	-	-	-	-	-	0	-1	1	-1	-1	0
6 kanal (6-th Channel)	Popular - neutral	-	-	0	0	0	0	0	0	0	0	0
Echo Moskvyy (Echo of Moscow)	Quality - reformist	1	1	1	1	1	1	0	0	0	0	1
Svoboda (Liberty – The US Congress Radio station)	Quality- reformist	1	1	1	1	0	0	0	0	0	0	0

Mayak	Popular-neutral	0	1	0	0	0	0	0	0	-1	-1	-1
Radio Rossii (Radio of Russia)	Popular-reformist	1	1	1	1	1	1	1	1	1	1	0

Gaydar (Chubais) Predominant evaluation – positive (1) Negative (-1) Neutral (0)

	Media-market niche (self-identification)	Observation date 1 June 01-10. 1991	September 01 -10 1991	February 01-10 1992	April 01-10 1993	August 11-20 1993	April 01-10 1994	April 01-10 1995	May 01-10 1996	May 1-10 1998	May 10-20 1999	May 1-10 2000
Ref_Profile		1 or 0	1 or 0	1	1	1	1	1	1	1	1	1
MK	Popular-reformist	0	0	0	0	0	0	-1	-1	-1	-1	-1
Argumenty e Fakty (The Arguments and Facts)	Popular-reformist	0	0	1	1	1	1	1	0	0	0	0
Komsomolskaya pravda	Popular-reformist	0	0	0	-1	-1	-1	-1	-1	-1	-1	0

Trud (The Labor)	Popular-neutral	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1
Sovetskaya Rossia (The Soviet Russia)	Popular-anti-reformist	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Den / Zavtra (The Day / The Tommorrow)	Popular-anti-reformist	-	-	-1	-1	-1	-1	-1	-1	-1	-1	-1
Moskovskie Novosti (Moscow News)	Quality press – weekly - reformist	1	1	1	1	1	1	1	0	0	1	1
Kommersant (The Business Men)	Quality press daily - reformist	1	1	1	1	1	1	0	0	0	0	1
Nezavisimaya Gazeta (The Independent Newspaper)	Quality press daily - reformist	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1

Segodnya ("Today")	Quality press daily - reformist	-	-	-	-	-	-1	-1	-1	-1	-1	-1
Izvestia	Quality press daily - reformist	1	1	1	1	1	1	1	1	-1	0	1
1 kanal/ORT	Popular - neutral	-	-	0	0	-1	-1	-1	-1	-1	0	0
RTR (Russian TV)	Official - reformist	-	1	1	1	1	1	1	1	1	1	1
NTV	Popular/ Quality - reformist	-	-	-	-	-	0	0	0	-1	-1	0
6 kanal (6-th Channel)	Popular - neutral	-	-	0	0	0	-1	-1	-1	-1	-1	0
Echo Moskv (Echo of Moscow)	Quality - reformist	0	1	1	1	1	1	1	1	-1	0	0
Svoboda (Liberty – The US Congress Radio station)	Quality- reformist	0	0	1	1	1	0	0	0	0	0	0
Mayak	Popular- neutral	0	0	0	-1	0	0	-1	-1	-1	-1	-1

Radio Rossii (Radio of Russia)	Popular- reformist	0	1	1	1	1	1	1	1	0	1	1	0
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Reformist parties (movements) Demokraticeskaya Rossia (Democratic Russia), Democratic Choice of Russia, Right Forces Union

Predominant evaluation – positive (1) Negative (-1) Neutral (0)

	Media-market niche (self- identification)	Observation date 1 June 01-10. 1991	September 01 -10 1991	February 01-10 1992	April 01- 10 1993	August 11-20 1993	April 01-10 1994	April 01-10 1995	May 01-10 1996	May 1-10 1998	May 10-20 1999	May 1-10 2000
Ref_Profile		1	1	1	1	1	1	1	1	1	1	1
MK	Popular- reformist	1	1	1	0	0	0	0	-1	-1	-1	-1
Argumenty e Fakty (The Arguments and Facts)	Popular- reformist	0	0	1	1	1	1	1	0	0	0	0
Komsomolskaya pravda	Popular- reformist	0	0	0	-1	-1	-1	-1	-1	-1	-1	0
Trud (The Labor)	Popular- neutral	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1
Sovetskaya Rossia (The Soviet Russia)	Popular-anti- reformist	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Den / Zavtra (The Day / The	Popular-anti- reformist	-	-	-1	-1	-1	-1	-1	-1	-1	-1	-1

Tomorrow)												
Moskovskie Novosti (Moscow News)	Quality press – weekly - reformist	0	1	1	0	0	0	0	0	0	1	1
Kommersant (The Business Men)	Quality press daily - reformist	0	0	0	0	0	0	0	0	0	0	0
Nezavisimaya Gazeta (The Independent Newspaper)	Quality press daily - reformist	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1
Segodnya (“Today”)	Quality press daily - reformist	-	-	-	-	-	-1	-1	-1	-1	-1	-1
Izvestia	Quality press daily - reformist	0	1	1	1	1	1	1	1	-1	0	1
1 kanal/ORT	Popular - neutral	-	-	0	0	-1	-1	-1	-1	-1	0	0
RTR (Russian TV)	Official - reformist	-	1	1	1	1	1	0	0	0	1	1
NTV	Popular/ Quality - reformist	-	-	-	-	-	0	0	0	-1	-1	0
6 kanal (6-th Channel)	Popular - neutral	-	-	0	0	0	-1	-1	-1	-1	-1	0
Echo Moskvy (Echo of Moscow)	Quality - reformist	0	1	1	1	1	1	1	0	0	0	0
Svoboda (Liberty – The	Quality-reformist	0	0	1	1	1	1	0	0	0	0	0

US Congress Radio station)												
Mayak	Popular- neutral	0	0	0	-1	0	0	-1	-1	-1	-1	-1
Radio Rossii (Radio of Russia)	Popular- reformist	1	1	1	1	1	1	0	0	1	1	0

Land private property idea (bills) evaluation positive (1) Negative (-1) Neutral (0)												
	Media-market niche (self- identification)	Obser- vation date 1	September 01 -10 1991	February 01-10 1992	April 01-10 1993	August 11-20 1993	April 01-10 1994	April 01-10 1995	May 01-10 1996	May 1-10 1998	May 10-20 1999	May 1-10 2000
Ref_Profile		1	1	1	1	1	1	1	1	1	1	1
MK	Popular- reformist	0	1	1	1	1	1	1	1	0	0	0
Argumenty e Fakty (The Arguments and Facts)	Popular- reformist	1	1	1	1	1	1	1	1	0	0	0
Komsomolskaya pravda	Popular- reformist	0	0	0	0	0	0	0	0	0	0	0
Trud (The Labor)	Popular- neutral	-1	0	0	0	0	0	0	0	0	0	0
Sovetskaya Rossia (The Soviet Russia)	Popular-anti- reformist	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Den / Zavtra (The Day / The Tomorrow)	Popular-anti- reformist	-	-	-1	-1	-1	-1	-1	-1	-1	-1	-1
Moskovskie Novosti (Moscow News)	Quality press – weekly - reformist	1	1	1	1	1	1	1	1	1	1	1
Kommersant (The Business Men)	Quality press daily - reformist	1	1	1	1	1	1	1	1	1	1	1
Nezavisimaya Gazeta (The Independent Newspaper)	Quality press daily - reformist	1	0	0	0	0	0	0	0	0	0	0
Segodnya ("Today")	Quality press daily - reformist	-	-	-	-	-	1	1	0	0	0	0
Izvestia	Quality press daily - reformist	1	1	1	1	0	1	1	1	1	1	1
1 kanal/ORT	Popular - neutral	-1	1	0	0	0	0	0	0	0	0	0
RTR (Russian TV)	Popular/ Quality - reformist	1	1	1	1	1	1	1	1	1	0	1
NTV	Popular/ Quality	-	-	-	-	-	1	1	1	0	0	1
6 kanal (6-th Channel)	Popular - neutral	-	-	0	0	0	0	0	0	0	0	0
Echo Moskv (Echo of Moscow)	Quality - reformist	1	1	1	1	1	1	1	1	1	0	1
Svoboda (Liberty – The US	Quality- reformist	1	1	1	1	1	1	1	1	1	1	1

Congress Radio station)													
Mayak	Popular-neutral	-1	0	0	0	0	0	0	0	0	-1	-1	0
Radio Rossii (Radio of Russia)	Popular-reformist	1	1	1	1	1	1	1	1	1	1	0	1

Large scale enterprises privatization idea (bills) evaluation

Predominant evaluation – positive (1) Negative (-1) Neutral (0)

	Media-market niche (self-identification)	Observation date 1 June 01-10. 1991	September 01 -10 1991	February 01-10 1992	April 01-10 1993	August 11-20 1993	April 01-10 1994	April 01-10 1995	May 01-10 1996	May 1-10 1998	May 10-20 1999	May 1-10 2000
Ref_Profile		1	1	1	1	1	1	1	1	1	1	1
MK	Popular-reformist	0	0	1	1	0	0	0	0	-1	-1	-1
Argumenty e Fakty (The Arguments and Facts)	Popular-reformist	0	1	1	1	1	1	0	0	0	0	0
Komsomolskaya pravda	Popular-reformist	0	0	0	0	0	0	0	0	-1	-1	0
Trud (The Labor)	Popular-neutral	-1	-1	0	0	0	0	-1	-1	-1	-1	-1
Sovetskaya Rossia (The Soviet Russia)	Popular-anti-reformist	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Den / Zavtra (The Day / The	Popular-anti-reformist	-	-	-1	-1	-1	-1	-1	-1	-1	-1	-1

Tomorrow)												
Moskovskie Novosti (Moscow News)	Quality press – weekly - reformist	1	1	1	1	1	1	1	1	1	1	1
Kommersant (The Business Men)	Quality press daily - reformist	1	1	1	1	1	1	1	1	1	1	1
Nezavisimaya Gazeta (The Independent Newspaper)	Quality press daily - reformist	0	0	0	0	0	-1	-1	-1	-1	-1	0
Segodnya (“Today”)	Quality press daily - reformist	-	-	-	-	-	1	1	1	0	0	0
Izvestia	Quality press daily - reformist	1	1	1	1	1	1	1	1	0	1	1
1 kanal/ORT	Popular - neutral	-1	0	0	0	0	0	0	0	-1	-1	0
RTR (Russian TV)	Official - reformist	1	1	1	1	1	1	1	1	1	0	0
NTV	Popular/ Quality - reformist	-	-	-	-	-	1	1	1	0	0	1
6 kanal (6-th Channel)	Popular - neutral	-	-	0	0	0	0	0	0	0	0	0
Echo Moskvy (Echo of Moscow)	Quality - reformist	1	1	1	1	1	1	1	1	0	1	1
Svoboda (Liberty – The US Congress Radio station)	Quality-reformist	1	1	1	1	1	1	1	1	1	1	1

Mayak	Popular-neutral	-1	0	0	0	0	0	0	0	0	-1	-1	-1
Radio Rossii (Radio of Russia)	Popular-reformist	1	1	1	1	1	1	1	1	1	1	0	1

Annex 3. Equilibrium political preferences of the medium (under biased journalists' preferences)

Profit of the medium correlated to the number of consumers (listeners, subscribers, visitors etc.).

Owner maximizes profit of his firm in ideology dimension. Optimal solution with no journalist bias is ideological preferences of median voter. Owner's control efficiency positively depends on the private property share and negatively depends on the firm size.

In case when endogenous ideological preferences of journalists are differ from median voter, owner faces additional costs of shifting journalist preferences. Final media ideological preferences shifted from median voter towards journalist.

In our model medium characterize by political orientation (P_N) and content quality (Q_N). Consider following actors, which influence medium political orientation:

- Journalists;

described by

$F_j(P)$ distribution function of political preferences

P_j – political preferences of journalist

P_{mj} – political preferences of median journalist.

$F(Q)$ – distribution function of journalists abilities

Q_j – abilities of one journalist

- Consumers;

i-th consumer with political preferences P_i has following utility function of medium consumption with orientation P_N

$$u_i(P_i) = Q_N - S |P_i - P_N|$$

S – value of social politization, it means how much consumers pay attention on they own political preferences and society utility function $U(Q_N, P_N)$

$$\text{if } P_i \geq P_N : u_i(P_i, Q_N, P_N) = Q_N + S P_N - S P_i$$

$$\text{if } P_i < P_N : u_i(P_i, Q_N, P_N) = Q_N - S P_N + S P_i$$

$$\text{then } U(Q_N, P_N) = \int_0^{P_N} (Q_N - S P_N + S P_i) f_c(P_i) dP_i + \int_{P_N}^1 (Q_N + S P_N - S P_i) f_c(P_i) dP_i$$

where $f_c(P)$ density of distribution function of consumers political preferences.

- Owner;

Maximizes medium Profit (Revenue minus Costs);

Advertisement medium revenue $R(P_N, Q_N) = A * U(Q_N, P_N)$

Where A – Advertisement medium revenue on one unit of social utility of medium P_N .

It means that we are talking here about full information model where advertisement revenue exactly corresponds to aggregated consumers utility.

We take into account few types of costs in the model :

wage $W(Q_N) = w Q_N$

Enforcements costs:

costs of shifting journalists political preferences from their own (P_J) to P_N

$$P_N = P_J - E * \Delta P$$

w – wage coefficient

E – control cost of journalist political preferences

We could expect that enforcements costs are large enough as apart from editor's functions enforcer should provide monitor, audit and lower functions to prevent hidden contracts and hidden advertisement.

$$C(P_N, Q_N) = w Q_N + E * |P_N - P_J|$$

Owner's could find optimal medium political orientation P_N to maximize profit under exogenous consumers and journalist political preferences. He could earn additional revenue by gaining consumers utility through control (shift) of journalist political preferences.

$$\text{Profit}(P_N, Q_N) = R(P_N, Q_N) - C(P_N, Q_N)$$

now we do not consider Q_N

As we described above journalist has his own political preferences and they are likely differ from consumers' ones. For the most of development counties our model gives that journalist in his political preferences would be "left" biased from the median voter. And optimal medial orientation would be "right" from the journalists' preferences ($P_N > P_J$)

$$\text{and } C(P_N, Q_N) = w Q_N + E * (P_N - P_J)$$

Max Profit

P_N

$$\text{Max } A * U(Q_N, P_N) - w Q_N - E *(P_N - P_J) =$$

$$d(A * U(Q_N, P_N) - w Q_N - E *(P_N - P_J)) / d P_N =$$

$$d\left(A * \left(\int_0^{P_N} (Q_N - S P_N + S P_i) f_c(P_i) dP_i + \int_{P_N}^1 (Q_N + S P_N - S P_i) f_c(P_i) dP_i \right) - w Q_N - E (P_N - P_J)\right) / dP_N$$

$$= A * \left(\int_0^{P_N} -S f(x) dx + Q f(P_N) + \int_{P_N}^1 S f(x) dx - Q f(P_N) \right) - E = A * S * (1 - 2 * F(P_N)) - E$$

$$A \left(\int_0^{P_N} -S f(x) dx + Q f(P_N) + \int_{P_N}^1 S f(x) dx - Q f(P_N) \right) - E = 0$$

$$\left(A \int_0^{P_N} -S f_c(P_i) dP_i + A Q_N f_c(P_N) + A \int_{P_N}^1 S f_c(P_i) dP_i - A Q_N f_c(P_N) \right) - E = 0$$

$$A \int_0^{P_N} -S f_c(P_i) dP_i + A Q_N f_c(P_N) +$$

where f_c (or just f) density of distribution function F .

$$\text{i.e. } f(x) = \frac{d}{dx} F(x)$$

and First Order Condition ¹⁰

$$A * S * (1 - 2 * F(P_N)) - E = 0$$

$$F(P_N) = \frac{A S - E}{2 A S}$$

or

$$F(P_N) = 0,5 - \frac{E}{2 A S}$$

but the definition of median voter is

$$F(P_m) = 0,5$$

¹⁰ SOC is strictly fulfilled.

i.e. optimal medium orientation is shifted "towards" journalists. And under linear functions of enforcement cost, consumers utility and revenue this shift in proportion to enforcement cost and in inverse proportion to advertisement revenue and social politization.