Public and Private Enforcement of Law under the High Risk of Type I Errors: the Russian Case

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The paper considers private and social costs and benefits of *selective public enforcement* of law (enforcement by public authority upon complaints of private parties) in comparison with private and pure public enforcement. The theoretical framework developed reflects the specific features of Russian system of law enforcement. Under certain conditions (no compensation of damages and low cost of complaint to public authority) selective public enforcement is privately desirable. Selective public enforcement underperforms both private and 'pure' public enforcement if acting upon complaints of interested parties increases the probability of Type I errors and selected for investigation cases are skewed towards violations those induce private harm in contrast to violations reducing social welfare.

Conclusions on private choice of enforcement models are supported by the evidence on the enforcement of three branches of civil law in Russia, where private and public enforcement systems compete and selective enforcement is supported by the public agencies. Consumer protection law and labor law are the examples of legislations where private enforcement both provides potentially higher deterrence than public enforcement and reveals to be privately preferable. In contrast, antitrust law is an example of legislation where private enforcement is completely crowded out by formally public enforcement and 'pure' public enforcement protecting social welfare is largely replaced by selective public enforcement preventing harm on private parties.

Kew words: public, private and 'selective public' enforcement Type I errors, deterrence, consumer protection law, labor law, antitrust law, Russia.

JEL Classification: K42, K21, K31, K32.

1. Introduction

For many years the question on comparative social efficiency of private and public enforcement of law is debated. The literature on public versus private enforcement starts with Becker and Stigler (1974) who argue that private enforcement could achieve deterrence as efficiently as optimal public enforcement. Both private and public enforcement can exhibit comparative advantages in different settings.

Landes and Posner (1975) and Posner (1992) show that the private enforcement can lead to over-deterrence. Polinsky (1980) argues that it can result in under-deterrence of poor offenders. Garoupa (1997) shows that it can lead to both under-detection and lower accuracy in investigation. Shleifer and Hay (1998) argue the comparative advantages of private enforcement if bureaucracy is corrupt.

There are many papers comparing private and public enforcement in particular area of antitrust law (see Segal and Whinston, 2006 for survey), immigration law (Pham, 1996), corporate security law (Armour et al. 2009; Roe and Jackson, 2009), etc.

Comparative advantages of enforcement models depend on a number of factors. Public enforcement can concentrate on the violations which reduce social welfare and can take into account opposite effects of the given action while the main reason of private enforcement is to prevent or compensate private damage. Thus private enforcement could be neutral and even detrimental for social welfare because private parties underestimate possible positive externalities of actions which induce harm on them. On the other hand, public enforcement suffers from agency problem but that is not generally the case of private enforcement. Private party injured has higher incentives to collect information and to initiate legal action. Powerful incentives allow private parties to achieve cost advantages in enforcement. However, private enforcement necessarily suffers from collective action problem and this restricts it's effectiveness when number of persons injures is high enough. .

Long list of factors affecting comparative advantages of private and public enforcement makes the question of which model should be developed very complex. Law and economics literature considers different combinations of enforcement environment which influence the choice. For instance, according to Poilinsky and Shavell (2000) public enforcement is advantageous when the victim cannot easily identify the violator, there is economies of scale in the law enforcement, and high cost of abuse of law by those whose rights are protected.

However, in our opinion, literature on private and public enforcement is missing two aspects of the problem. One is artificial limitation on models of enforcement compared. There are many researches on advantages of private enforcement vis-à-vis public and vice versa. At the same time insufficient attention is paid to selective public enforcement, when public authorities act upon complaints of private parties. In some legal systems selective public enforcement plays important role. Sometimes (for instance, in Russia nowadays) selective public enforcement is even considered as desired direction of the enforcement evolution. It is unclear however if selective public enforcement system is preferable from social point of view or from the point of view of the given group of participants of enforcement system? In contrast to McAffee (2005)

point of view that selective enforcement can replicate advantages of both private and public enforcement we concentrate on the conditions when selective enforcement replicates shortcomings of both models.

The second issue important for the comparison of public and private models of enforcement are probabilities of Type I legal errors (*false positives*). In contrast to Type II errors their effects are studied insufficiently. However the impact of Type I errors on deterrence and welfare effects of enforcement could be very high, especially in the countries with less developed traditions of legal actions and relatively poor standards of proof in litigation. In many cases this refers to Russia. Type I errors significantly affect deterrence and therefore social welfare , in some settings they provide more severe effects on coordination than Type II errors (Shastitko, 2011). The legal errors and their effects are studied extensively (Calfee and Craswell, 1984, 1986, Kahan, 1989, Grady, 1989, Poilinsky and Shavell, 2007) but mostly in the framework of the particular type of the enforcement. In turn, we concentrate on the dependence of Type I errors probabilities on the enforcement model.

Comparative analysis of different types of enforcement is very important, inter alia, for the development of legal system and regulations. Improvement of the system of public control has been under active discussion in Russia since the beginning of the 2000s. The task of reducing administrative pressure on business connected, in part, with excessive and inefficient public regulation and control, was set for the first time in 2001 in the so-called "Gref Program." Measures proposed by the Program were fulfilled to less than a quarter (CSR, 2010) and reducing the burden of administrative control and supervision on business is still among the declared priorities of economic policy. At the same time, every high-profile accident or catastrophe in Russia is followed by justified statements that public control does not ensure security and by mass-scale inspections of companies in relevant sector uncovering scores of violations. Proposals to tighten requirements and responsibility for the violation of the prescribed regulations are being put forth and often accepted. But after a while the excitement subsides until the next serious accident. Administrative costs of control and supervision remain high and are not conducive to a favorable business climate in Russia.

Many Russian experts view as the main recipe for optimizing administrative control, first, maximum regulation of the control and supervision procedures in order to exclude discretion and, second, shift from regular to reactive (based on victims' complaints) control. Relevant provisions were proposed in the Gref Program (2001) and replicated in the Russian Federation Administrative Reform Concept (2005). The Law on Protection of the Rights of Legal Entities and Individual Entrepreneurs in the Process of State Control (Supervision) and Municipal Control (2008) prescribed that planned inspections of economic entities' activity may be conducted not more often than once per three years, whereas extraordinary control has no frequency restrictions. In practice, there has been a true shift towards selective control.

At the same time, the disadvantages of public enforcement in response to victims' complaints have never been discussed and are not discussed now. The possibility of developing

private legal enforcement as a real alternative to public enforcement is not being considered either.

The goal of the paper is to contribute to the discussion on the comparative advantages of the alternative models of enforcement of civil law, by inclusion into comparison selective public enforcement model and taking into account the influence of the different models on the probabilities of Type I errors specifically. We develop the analytical framework allowing to compare incentives of private parties, level of deterrence, and effects on social welfare under three alternative models.

We illustrate the problem of private *vs.* pure public and private *vs.* selective public enforcement models using examples of three legislations in Russia – consumer protection law, labor law, and antitrust law. The recent trends in the enforcement of these three legislations differ a lot: though for each of them both private and public enforcement are allowed, enforcement labor and consumer protection law are drifting toward private model, large part of the enforcement of antitrust rules is subject of selective public enforcement. We explain the choice made and demonstrate its impact on deterrence and social welfare.

Finally, we develop some policy recommendations for legal and regulation reforms in Russia, which could be useful also for other countries with relatively weak traditions of private enforcement and over-developed public enforcement, regulation and control.

2. Types of Enforcement

We are comparing three enforcement models: pure public enforcement, selective public enforcement, and private enforcement.

Pure public enforcement means the practice of planned public control (supervision):

(1) an executive authority carries out inspections for compliance with mandatory requirements on its own initiative or in accordance with the inspections schedule;

(2) if violations are detected penalties are imposed on the offenders. The amount of penalty is not directly tied to the size of the inflicted (or potential) damage. Moreover,the existence of a victim and damage is not a necessary condition for imposing a penalty. In addition, the controlling authority may issue a remedy to eliminate the violation of the law.

The model of selective public enforcement envisages initiation of inspection based on a stakeholder's complaint:

1) there is a person (a victim) considering that the actions of an offender have inflicted damage on the former;

2) the victim applies to an executive authority for terminating the violation;

3) the executive authority carries out an inspection for compliance with relevant requirements;

4) if violations are detected the offender is subjected to penalty, and a binding remedy may be issued to terminate the violation of the law.

Private enforcement means generally the following situation:

1) there is a person (a victim) considering that the actions of an offender have inflicted damage;

2) the victim applies to court for termination of the offense and compensation for the damage;

3) if the court issues a positive decision on the victim's claim the violator is to pay compensation to the victim plus penalty.[1]

We consider enforcement errors as decisions when an innocent person is recognized guilty and penalized (Type I error) or when a guilty person is not recognized guilty and therefore is not brought to responsibility (Type II error). In alternative enforcement models, we mean, for public enforcement, erroneous decisions issued by executive authorities, and for private enforcement, erroneous decisions made by courts of first instance.

Condition for deterrence is considered according to classic Becker's (Becker, 1968) approach. The expected benefit from an offence is:

$$EU = pEU(Y - F) + (1 - p)EU(Y) \quad (1)$$

Where Y stands for the gains from an offence, p – the probability of imposition of sanctions, F – the amount of the sanctions.

Assuming that persons are risk neutral, moving from expected benefit to expected gains and taking into account the probability of Type 1 error (punishment of innocent). The condition for the refraining from law violation is achieved when:

$$qA + (1 - q)(A - F) \geq p(A + Y - F) + (1 - p)(A + Y) \quad (2)$$

$$Y \leq (p - (1 - q))F \quad (3)$$

where A - gains when acting in good faith, Y – additional gains from the offence,[2] F – amount of penalty, p – probability of sanctions on violator, q – probability of non-imposition of sanctions on innocent person. Correspondingly $1 - p$ indicates the probability of Type II errors and $1 - q$ probability of Type I errors. This means that the probability of committing Type I errors reduces the deterrent effect of penalties. Even an increase in the probability of punishing offenders may turn out ineffective if it entails higher probability of punishing the innocent.

Comparative advantages of enforcement models depend on the factors affecting the probabilities of errors.

[1] In this case, "penalty" is interpreted wider than in the case of public enforcement. We regard as penalty all payments made by the offender, including those which are not paid in compensation to the victim (for instance, the offender's legal expenses).

Pure Public Enforcement

The penalty is fixed and legally prescribed. It is not directly connected with the benefits gained from the violation and the inflicted damage.

The probability of punishment of the offender is rather often regarded as the function of resources spent on detecting the offence (r) which, in turn, is calculated as the amount of resources at the controller's disposal (R) divided by the number of offenders (O) (e.g., Landes and Posner, 1975). However, it may be more appropriate to interpret variable O as the number of units of compliance (the number of requirements multiplied by the number of entities obliged to abide by these requirements). In addition, the probability of punishment of the offender depends on the controller's efforts (e) (see Table 1 for details).

Consequently, the more requirements are set the lower is the probability of detecting offences. The increase of resources available for the controlling authority's (money, human, information) should lead to higher probability of punishment of the offender. Intensified efforts by the controller depending, inter alia, on the setting of incentives, should also lead to an increase in the probability of punishing the offenders. However the link between efforts and probability of errors is not so simple issue. Not only the *strength* of the incentives but also the *design* of the incentive contract is important (we regard an executive authority as an entity to which an incentive contract is applied – dependence of remuneration on some target achieved). If the incentives are strong enough, Type I and Type II errors are caused by totally different effects. Detection and punishment not of all offenders is a manifestation of external factors beyond the influence of the entity and its efforts (different costs of detecting offenders, insufficient resources, the offenders' efforts to conceal the offence). Punishment of the innocent, in contrast, is an evidence of negative externalities resultant of an erroneous design of the incentive contract (Kerr, 1975). This is why it is rather difficult to predict the influence of the amount of allocated resources on the probability of Type I errors $(1 - q)$. An assumption can be made that under certain conditions (for example, when using the number of detected offences or the amount of imposed penalties as an official or unofficial measure of an agency's performance efficiency) the growth of available resources entails an increase in the quantity of Type I errors. In this case, the reinforcement of controlling authorities may in fact lead to the lowering of the deterrent effect of public control.

Legal certainty and standards of proof in the controlling authorities are of paramount importance.The toughening of standards of proof enhances the probability of Type II errors but reduces the probability of Type I errors. In order to enhance deterrence increase of penalties should be accompanied by tightening standards of proof.

Private Enforcement

Sanctions include monetary compensation for material and moral damage plus additional expenses (e.g. penalty in favor of the state plus uncompensated legal expenses). For the sake of simplicity, let us consider only the effect of compensation (see Table 1).

The probability of punishment of the offender within the system of private enforcement is defined as the probability of filing a claim by the victim multiplied by the probability that this claim will be satisfied.

The factors influencing the probability of filing a claim were reviewed in many articles analyzing economics of civil law (see, for example, Posner, 1983, Shavell, 2003). In the simplest case the probability of filing a claim depends negatively on the court litigation expenses (c) and positively on compensation and expected probability of satisfaction of the filed claim.

The probability of satisfying a claim depends on the specifics of the legal system. The question whether the probability of satisfying a claim is connected with the parties' court expenses is debatable. It is generally presumed that litigation costs increase the probability of a party's winning (Posner, 1983). If this is true, there is a certain optimal value of c ensuring, maximum expected gains of the claimant . In Russia, however, such connection can be put to doubt for many types of claims. For instance, most individuals (over 70%) filing consumer claims do not use the services of lawyers. Moreover, no statistically significant relationship between the presence/absence of a lawyer and judge's decision has been registered.[3] On the whole, the percentage of satisfied claims in cases of protection of consumer rights is very high (see below). It allows us for some purposes to consider litigation costs as fixed and dependent on the rules of filing lawsuits. If so, the reduction of litigation costs undoubtedly increases the probability of punishment of the offender.

In the case of private enforcement the amount of damage and the probability of punishment of the offender are not independent variables. The higher is the damage and the expected compensation, the higher is the probability of filing a claim. In the case of private enforcement, in contrast to public enforcement, there are strong incentives for detecting and terminating the most significant violations entailing serious damage. Of course the victim can both underestimate and overestimate the damage inflicted. To achieve deterrence, overstated claims are preferable than understated ones. The task of the court is not merely to take a decision whether there has been a violation and whether damage has been inflicted, but also to estimate the adequateness of the claims. In Russian legal practice, compensations are often lower than actually inflicted damage (especially in situations when moral damage is much higher than the material damage which can be objectively assessed). It is an obstacle for the private enforcement in many cases.

The correspondence of the expected and actual probability of winning is also important. Data of sociological polls show that the Russian citizens, especially thouse with no experience of court litigation, systematically underestimate the expected probability of winning a case. This perception is being adjusted with experience, there are significant differences in the attitude

[3] Survey of individuals' and the legal community's attitude toward the legal system. Sverdlovsk regional society for consumer protection Garant. Yekaterinburg, 2004.

toward the legal system and readiness to apply to court among those who had and did not have litigation experience.[4]

Victims' interest in preventing future damage, in addition to compensation for the damage already inflicted, is an additional incentive for filing private claims. Even if damage is not compensated, the possibility of preventing future harm is an additional source of gain for a victim (Table 1).

The extent to which the possibility of preventing future damage influences incentives forlitigation, in turn, depends on the ability of the system of sanctions to deter law violation by a particular offender. In other words, incentives to litigations increase with the lowering of the probability of Type II errors and also require as necessary condition of a sufficiently high amount of the applicable sanctions.

[4] Russians' Attitude toward the Legal System. First wave of the Russian national representative population poll. Yuri Levada Analytical Center. Moscow, 2010, available at: http://www.beafnd.org/common/img/uploaded/files/Otchet_po_sudebnoiy_reforme_naselenie_saiyt_1volna.pdf

Table 1. Characteristics of alternative enforcement models

	'Pure' public enforcement	**Private enforcement**	**'Selective' public enforcement**
	$F = const$	$F = F(\overset{+}{Z})$	$F = const$
Condition of law enforcement by private person	X	$c \le E(p_2^s)(F + Z^f)$	$c_c \le E(p_3^s) Z^f$
Determinants of Type II errors	$p_1 = p_1(\overset{+}{r}, \overset{+}{e})$ $r = \frac{R}{O}$	$p_2 = p_2^a p_2^s$ $p_2^a = p_2^a(\overset{-}{c}, \overset{+}{F}, \overset{+}{Z^f}, \overset{+}{E(p_2^s)})$	$p_3 = p_3^a p_3^s$ $\quad p_3^a = p_3^a(\overset{-}{c^c}, \overset{+}{Z^f}, \overset{+}{E(p_3^s)})$ $p_3^s = p_3^s(\overset{+}{r}, \overset{+}{e})$; $r = \frac{R}{N}$; $N = (p_3^a + q_3^a)O$
Determinants of Type I errors	$q_1 = q_1(\overset{+}{r}, \overset{+/-}{e})$	$(1 - q_2) = q_2^a q_2^s$ $q_2^a = q_2^a(\overset{-}{c}, \overset{+}{F}, \overset{+}{Z^f}, \overset{+}{E(q_2^s)})$	$q_3^a = q_3^a(\overset{-}{c^c}, \overset{+}{Z^f}, \overset{+}{E(q_3^s)})$; $q_3^s = q_3^s(\overset{+}{r}, \overset{+/-}{e})$; $r = \frac{R}{N}$ $N = (p_3^a + q_3^a)O$

- F - money equivalent of penalties; Z - money equivalent of damage ; Z^f - money equivalent of future damage that could be prevented.
- p - probability to punish the guilty person; q - probability not to punish innocent person;
- r - resources of public authority to inspect one person subject to regulation R - overall amount of resources available to public authority; O- number of requirements subject to control.
- e - efforts of public authorities to inspect ;
- c - costs of litigation under private enforcement; c^c - costs of complaint under selective public enforcement;
- p^a - probability of justified lawsuit (under private enforcement) or complaint to public authority (under selective public enforcement)
- p^s - probability of satisfaction of justified lawsuit (under private enforcement) or complaint (under selective public enforcement); $E(p^s)$ - expected probability of satisfaction of justified lawsuit (under private enforcement) or complaint (under selective public enforcement)
- q^a - probability of unjustified lawsuit (under private enforcement), or complaint (under selective public enforcement); q^s probability of satisfaction of unjustified lawsuit (under private enforcement) or complaint (under selective public enforcement); $E(q^s)$ - expected probability of satisfaction of unjustified lawsuit (under private enforcement) or complaint (under selective public enforcement)
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- N - number of complaint to public authority under selective public enforcement.

Indexes correspond: 1 – to pure public enforcement; 2 – to private enforcement; 3 – to selective public enforcement .
Signs of partial derivatives of functions are indicated in the Table.

Probability of lawsuit against innocent person depends exactly on the same variables as probability of lawsuit against offenders. The lowering of legal costs, the growth of expected compensation, and increase of the expected probability of winning a case enhances the risk of Type I errors. However, it may be assumed that the effect of lower cost and higher compensation on the growth of the probability of punishment of an innocent party is less than on punishment of a guilty party, as compared to the effect of increase of resources allocated to an executive authority for exercising control, at least, for the following reasons:

(1) the court, unlike the controller, is more neutral and it pursues no objective of satisfying as many claims as possible (in Russia this is true if the point at issue is exclusively civil, and not criminal litigation);

(2) the cassation and appeals system diminishes the probability of Type I errors;

(3) under competitiveness of the parties in the litigation, the standards of proof are generally higher than under the administrative decision.

The rule of indemnity of the legal costs (all the proceeding costs are paid by losing party) also restricts the probability of Type I errors. As the chances of winning a justified claim are, presumably, higher than an unjustified one, shifting of legal costs significantly reduces the risk of Type I errors. At the same time the rule of indemnity promotes out-of-court settlements together with an increase of satisfied claims, as it is confirmed by empirical studies (e.g., Hughes and Snyder, 1995).

Selective Public Enforcement

The penalty is fixed and legally prescribed. It is not connected with the gains from the offence and the inflicted damage.

The probability of punishment of the offender equals to probability of filing a claim by a victim multiplied by probability of imposition of effective sanctions by an executive authority on the basis of the victim's complaint (see Table 1).

The probability of filing a claim by a person considering himself a victim depends, in contrast to private enforcement, on the future damage that can be prevented. This constitutes the fundamental difference between selective public and private enforcement. Since the point at issue is not the compensation of damage the victim files a complaint with an executive authority, first of all to change the behavior of an offender. Similar to private enforcement, the probability of filing a claim negatively depends on costs, but unlike a private claim, the point at issue is the costs of filing a claim with a competent authority.

A decision to file a complaint is made if the expected gains from preventing the victim's future damage exceed the costs of filing a claim. Necessary condition of filing a claim is again the capability of the system of sanctions to prevent future actions inflicting damage on the victim.

The probability of imposing sanctions by an executive authority on the basis of the victim's claim depends, in turn, on the number of reviewed complaints in addition to the number of objects of control and the controller's efforts. In contrast to pure public enforcement, the amount of resources available for the analysis of one case within the system of selective public enforcement depends directly on individual choice of victims. The more victims are applied the less resources is available for the one claim.

The probability of Type I errors is calculated, as in the case of private enforcement, as the product of the probability of filing an unjustified claim by the probability of its satisfaction. The probability of satisfying an unjustified claim, in turn, negatively depends on the amount of resources related to the number of complaints and on the authority's efforts to analyze the complaints.

The most important distinction of the factors influencing the probability of Type I errors under the selective public enforcement in comparison with pure public enforcement is connected with the number of complaints. Unlike the objects of control under pure public enforcement the number of which at any moment is regarded as exogenous, the number of complaints depends on individual decisions to file claims – both justified and unjustified ones. This is why the increase of the size of penalties imposed on offenders within the system of selective public enforcement reduces the resources allocated for investigation in each individual case and may lead to the growth in Type II errors as well as Type I errors..

Comparison of Enforcement Models

The following comparative advantages of enforcement models can be identified in terms of impact on the deterrent effect and, hence, on social welfare.

To ensure a deterrent effect of pure public enforcement, it needs very precise fine-tuning. Increasing responsibility for violations can have a deterrent effect only on condition of relatively low probability of Type I errors. And this requires intricate work on setting the controlling authorities' incentives. If the controller is punished for failure to detect a violation but is not punished for accusing an innocent party, the risk of Type I errors grows significantly.

It is extremely important to develop standards of proof reducing the probability of accusing an innocent person. Increase of the probability of punishment of the offender, if accompanied by simultaneous increase of the risk of punishment of an innocent person, will not result in a considerable deterrent effect either.

Private enforcement has comparative advantages over public enforcement in the following parameters:

- the amount of payment by the offender is connected with the actual damage;

- the probability of Type I errors is lower;

- if the benefits from a violation exceeds the victim's losses, compensation deals are possible and are effective;

- the chances for excessive requirements to increase burden on market participants are lower since the offences which do not bring substantial damage will not be a basis for private lawsuits (for example: Rospotrebnadzor penalizes sellers for incorrect price tags or restaurant menus, absolutely unimportant for consumers).

In some areas private enforcement is or may be less efficient than public enforcement. The following list is not exhaustive. However it should be mentioned that some limitations to private enforcement can be adjusted by changing the rules of court litigation (including minor ones).

1. High discount rate of future gains (losses). Legal proceedings take more time on average than administrative proceedings. Therefore if the discount rate is high even relatively small amounts of penalty today may have higher effect than the prospect of payment of a considerable sum of money on a court order. The common decision of this problem is punitive compensations allowing to enhance victim's incentives as well as deterrence.

2. Uncompensated damage (on the life, health, the environment, or monuments of architecture). Controlling authority may prevent a violation before damage has been inflicted whereas generally the court deals with facts of damage already inflicted. Rules on preliminary injunction could possible way to empower private enforcement.

3. Infliction of considerable damage with a low probability. The prospects of compensation by court order do not have a sufficient deterrent effect in this case.

4. The offender has no funds to compensate for damage. Deterrence should be improved by using the bankruptcy procedure with subsequent disqualification. This rule among other promotes demand for liability insurance.

5. Gap between private and social costs and benefits. Individual damage may be insignificant, but there are many victims (e.g. the sale of a shipment of substandard food products). The possibilities of private enforcement can be extended to a certain degree by reducing the costs of collective actions (class action suits). An additional tool of addressing the problem is again punitive sanctions when the amount of compensation deliberately and significantly exceeds the monetary equivalent of the inflicted damage. The efficiency of punitive sanctions, in turn, is higher in cases where the evidence of infliction of damage requires expert assessment and argumentation owing to the contingency fee – dependence of the lawyer's fee on the outcomes of the case.

6. Credence goods where a victim may not be aware of being a victim. In a broader sense – cases requiring specific evidence and expensive expert analysis (e.g. in cases where damage is inflicted by medical institutions). To a certain degree, the problem can also be settled by lowering the costs of collective actions – extending the possibilities of filing claims by specialized organizations with subsequent compensation of expenses, class action.

7. High corruption sensitivity of private enforcement as compared to pure public enforcement. In the latter case deterrence may be corruption-neutral: for the violator it makes no difference whether the penalty is paid to the state budget or to the pocket of a corrupt inspector;

in any case, the larger the penalty the higher the deterrent effect. Corruption within the system of private enforcement has a strong impact on the very probability of filing a claim and as a consequence limits the deterrent effect.

As far as selective public enforcement is concerned, at first glance, it may combine the advantages of private and pure public enforcement: owing to low costs of filing a claim, ensure the punishment of offenders in cases where private enforcement is complicated by the problem of collective actions or high costs of proving the violation. But this is not exactly so.

At the level of decisions with respect to an individual victim, the choice between selective public and private enforcement depends on the proportion between the expected gains and costs of initiating a case. The probability of satisfying a claim is regarded by each participant in the enforcement system as given. The victim's costs of applying to a controlling authority are generally much lower than the costs of litigation. If the probability of satisfying a claim is positive, gains are expected from a change in the violator's future conduct and the task of compensating for actually inflicted damage is not on the agenda, under certain conditions selective public enforcement is preferable to private enforcement. Moreover, the mechanism of fee shifting to the applicant is not applied in the system of selective public enforcement, which raises the incentives for filing unjustified complaints.

The victim prefers selective public enforcement to private one if:

$$c - c^c \geq p_2 F + (p_2 - p_3) Z^f \quad (5)$$

If cost saving by filing a complaint to an authority exceeds the gains from the expected compensation for damage and the increase of the expected gain from preventing future damage within the system of private as compared to selective public enforcement, the latter would be preferable. Increase of the possible compensation and costs of complaining to an authorized authority could, on the contrary, encourage the choice in favor of the private enforcement.

Individual choice in favor of selective public enforcement is accompanied by a change in the results of actions of a competent authority. First, the structure of cases shifts towards of those involving considerable influence on private gains (which could in principle be initiated also within the frames of private enforcement). The share of cases that would never have been initiated within the private enforcement system is declining, primarily cases versus offenders inflicting relatively small (on intangible) damage on each individual victim, even if the decrease in social welfare is significant. Second, if low costs of filing complaints (including unjustified ones) entail such settings of the executive authorities' incentives that envisage the punishment of a maximum number of regulated companies at any cost, the probability of Type I errors would grow substantially as compared to pure public enforcement. As shown above, this strongly undermines the deterrent effect of enforcement. From this point of view, the effects of selective public enforcement are one more example of the problem of collective actions.

4. Choice between Private and Public Enforcement in Russia

Russia has several areas where both public and private enforcement can be appliedat the same time. These include, among others, the protection of consumer rights, labor rights, and antimonopoly legislation. If the choice of victims in the first two spheres is obviously made in favor of private enforcement, in the sphere of antimonopoly legislation there are no private litigations and selective public enforcement dominates. Let us try to explain this fact using conclusions from the theoretical framework presented above.

4.1. Protection of Consumer Rights

A basic law On Consumer Rights Protection is in effect in Russia. The legislation is simple and the consumer can apply to the court without specialized legal assistance and representation by the bar association member.. In addition, there is a public enforcemet agency – the Russian Federal Service for Surveillance in the Sphere of Consumer Rights Protection (Rospotrebnadzor), which also controls the abidance by sanitary and epidemiological standards. In some Russian regions consumer protection bodies are functioning at the municipal level and are vested with certain inspection functions.

The principles applied to consumer claims in Russia ensure advantages of private enforcement:

- The litigation fee is zero for the plaintiffs,

- there are no significant limits on representation of parties in the proceedings such as bar membership);

- there is rule of fee shifting (all the legal costs are paid by losing party);

- if the claimant's requirements are satisfied, the offender pays a penalty imposed by the court tied to the amount of the claim, and if the claim is filed by a public consumer organization or a body of local administration, 50% of the penalty is transferred to this organizationThis rule reduces the costs of collective actions;

- duration of proceedings on cases is relatively short.

The available judicial statistics enable to assess the probability of winning a court suit in cases of protection of consumer rights, as well as the amount of compensation (Table 2).

Table 2. Results of Review of Cases of Protection of Consumer Rights by Trial Courts of General Jurisdiction

	2008	2009	2010
Total cases completed, thou	136,72	160,81	232,24
Cases reviewed and decisions issued, thou	92,49	115,71	150,63
Claims satisfied, thou	78,66	100,53	127,97
Amount paid on satisfied claims (including moral damage), mln RUB	5580,69	16703,75	12786,52
Share of satisfied claims in the total number of completed cases, %	67.7	72.0	64.9
Share of satisfied claims in the total number of reviewed cases, %	85.0	86.9	85.0

Amount per one satisfied claim, thou. RUB /approximate equivalent in thou USD	70.95/ 2.37	166.17/ 5.54	99.92/ 3.33

Source: Reports of trial courts of general jurisdiction on review of civil cases for 2008, 2009, 2010, Judicial Department at the RF Supreme Court, http://www.cdep.ru/

Judicial statistics show that over 85% of claims reviewed are being satisfied by courts. A considerable part of cases completed but not reviewed with the issuance of decisions are cases settled out of court, which means that the result required for the consumer has been attained.

This means that the probability of satisfying a filed consumer claim can be assessed at 0.85. The top margin of the probability of filing a claim can be assessed on the basis of survey of Russian citizens as 0.7 (70% of respondents are ready to apply to court in the event of significant violation of their rights including consumer ones).[5]

The data of judicial statistics do not lead to direct conclusions on the probability of Type I and Type II errors in consumer cases. However, the fact that less than 1% of decisions in cases of consumer rights protection are reversed by cassation instances is indirect evidence of a relatively small probability of Types I and II errors.

The data of legal statistics can be compared with the data on results of Rospotrebnadzor's control and supervisory activities.

There were about 40 thousands inspections of Rospotrebnadzor in 2010. The violations were detected in almost 70% cases. The highest penalty by the law is 30 thousand RUB (less than 1 thousand USD). The average penalty was about 7 thou RUB (233 USD).

It is an interesting fact that about 40% of all violations detected by the Rospotrebnadzor in 2010 are the violations of the requirements to the information (33% in 2007). It is not the most dangerous type of violation. There are many penalties for such 'gross' violations as incorrect price tag (no information of the country of origin at the price tag, for instance, even if such information is provided by the retailer by other means).Thus, we can see that the potential deterrence effect of private litigation is more than of the public enforcement. The substantial part of injured persons also prefer the private litigations as a way to compensate the damage.

From our point of view, it is possible to reject the system of consumer protection inspections at all. There are some types of claims when the private litigation is not very effective. They are: claims where the moral damage considerably exceeds the material damage (there are low compensations of moral damage in Russian judicial practice), the cases of low individual damage but many injured persons (there are no adequate legal framework of the class actions in Russia). However, it requires the improvement of legal procedures but not the expansion of the public inspections and penalties.

[5] Russians' Attitude toward the Legal System. First wave of the Russian national representative population poll. Yuri Levada Analytical Center. Moscow, 2010, available at: http://www.beafnd.org/common/img/uploaded/files/Otchet_po_sudebnoiy_reforme_naselenie_saiyt_1volna.pdf

It is interesting to note one more trend. Recently a considerable part of municipal bodies for consumer protection have reoriented their activities from discharging controlling functions to consultative assistance to consumers and support of their lawsuits. This, undoubtedly, facilitates private legal enforcement.

4.2. Labor Legislation

The situation in this sphere is almost the same as in consumer protection one. There is the public enforcer (Rostrud) and the right of the injured person to litigate. The filing fee is zero for individuals.

Analysis of the judicial and administrative practice in cases of protection of labor rights provides picture similar to those of consumer protection (Table 3).

Table 3. Results of Review of Labor Disputes by Trial Courts of General Jurisdiction

	2008	2009	2010
Total cases completed, thou	505,72	915,72	864,64
Cases reviewed and decisions issued, thou	442,56	823,39	766,90
Claims satisfied, thou	406,44	781,20	701,34
Amount on satisfied claims, mln RUR	10409, 89	27181,84	21986,70
Share of satisfied claims in the total number of completed cases, %	87.5	89.9	88.7
Share of satisfied claims in the total number of reviewed cases, %	91.8	94.9	91.5
Amount per one satisfied claim, thou. RUR/ approximate equivalent in thou USD	25.61/ 0.85	34.79/ . 1.16	31.35/ 1.05
Including:			
- on compensation for damage in connection with discharge of official duties, thou .RUR/ approximate equivalent in thou USD	78.93/ 2.63	102.18/ 3.41	109.69/ 3.66
- on reinstatement in a job, thou.RUR / approximate equivalent in thou USD	59.12/ 1.97	60.80/ 2.03	65.22/ 2.17

Source: Reports of trial courts of general jurisdiction on review of civil cases for 2008, 2009, 2010, Judicial Department at the RF Supreme Court, http://www.cdep.ru/

The share of satisfied claims in labor disputes is even higher than in consumer cases and is 0.92%. The compensations for damage are also rather high.

For comparison, let us turn to statistics of Rostrud. A total of 182,734 inspections were conducted in 2010, including over 72% based on complains. Violations were detected in 142,431 of them (i.e. in 77% of cases). Penalties to the total sum of RUB 503,881 thousand were

imposed, which means an average RUB 3,500 (approximately 117 USD) per one inspection which revealed violations.[6]

The percentage of court decisions in labor disputes reversed by cassation courts is slightly higher than in consumer cases (approximately 1.2%), but is not high either, which provides indirect evidence of an insignificant number of Type I errors.

So, presumably, in this case private enforcement also happens to be relatively more effective. From our point of view, public control could be abandoned in this sphere as well while strengthening private enforcement mechanisms (for example, facilitating the registration of trade unions and their capabilities of filing claims in protection of their members and not only their members).

Of course, the comparison made is limited by the available information. To make more accurate conclusions on comparative advantages of enforcement models, a more thorough analysis should be conducted of the contents of the claims and the subject of control and supervisory activity to identify more precisely the types of violations that are the subjects of civil lawsuits and administrative sanctions.

4.3. Antimonopoly Legislation

The employment of the Russian antimonopoly legislation recently is an example of stormy development of selective public enforcement.

Russian law On Protection of Competition, as well as European, recognizes invalid two types of illegal actions, those restricting competition and those inflicting damage on particular persons (for more details see Avdasheva and Shastitko, 2011, Girgenson and Numerova, 2012). As a matter of fact, the Russian antimonopoly authorities, and sometimes even the courts are more often than their European counterparts inclined to issue indictments when charges are brought precisely for the fact of infliction of damage. This tendency is particularly vivid in cases of abuse of dominance (Art. 10 of the Law on Protection of Competition), the number of which in the Russian system of antimonopoly policy exceeds not only the number of cases on collusions (in proportion at least 6 to 1), but even the number of annually analyzed economic concentration transactions.

During a sufficiently long period private demand for antimonopoly legislation remained low. Its drastic increase was triggered by the tightening of sanctions. Introduction of turnover penalties (up to 3–4% of a company's turnover) instead of fixed sanctions in 2007 created the necessary condition for the effective deterrence. New standards of penalties are applied extensively. According to data of the Federal Treasure RF, the amount of penalties paid to the state budget for violations of the antimonopoly legislation in 2011 exceeded RUB 12 billion (or about 400 mln USD), whereas before 2009 it hardly reached RUB 1 billion (33.3 mln USD respectively).

[6] Data presented in form N-1, control for 12 months of 2010, available at Rostrud's website: http://www.rostrud.ru/activities/28/22307/

The improvement of the system of sanctions practically coincided in time with the introduction of possibility to enforce antitrust rules privately. Previously, victim of violation of the antimonopoly legislation could file a complaint only to an antimonopoly authority which, in turn, conducted an investigation Now he/ she can apply directly to court. The Supreme Arbitration Court of Russian Federation specially explained in 2008 that the courts are not eligible to refuse from opening proceedings in a case of violation if competition authorities have refused to consider a certain complaint. The senior officials of the Russian antimonopoly authority, Federal Antitrust Services (FAS)also actively advocate private lawsuits.

The rules adopted seemingly provide opportunities for proper delimitation of two types of cases of violation of the antimonopoly legislation. Claims on damage inflicted on given persons should have been reviewed *predominantly* in a private enforcement regime. This concerns a considerable part of cases of abuse of dominant position, especially those where qualification of a dominant position is sufficiently simple. The antimonopoly authorities, in turn, should have focused on cases where the filing of private claims is blocked by the collective action problem and/or high costs of investigation and proof of illegal practices. This refers, first and foremost, to collusion.

However, five years after new sanctions have been introduced it became clear that the enforcement system is totally different from the described ideal version. The number of cases initiated on facts of violation of the antimonopoly legislation has increased drastically, from about 1.5 thousand to 3 thousand annually. However, *not a single* example of private litigation on antimonopoly law has been registered. At the same time the share of cases initiated by the antimonopoly authorities on the initiative of actual or alleged victims is growing at outstripping pace. This conclusion can be drawn on the basis of several types of observations.

First, faster growth of the number of cases initiated under Art. 10 (dominance abuse), where it is easier to present conflicts between two persons within the context of violation of antimonopoly legislation. There are hundreds of examples thereof: the famous Pikalevo case where the reluctance of BazelCement-Pikalevo, a member of the Rusal Group (alumunium producers), to continue loss-making production in order to supply counterparties with its by-products was qualified as an abuse of dominant position (case A40-38746/09-149-211 in the system of arbitration courts RF). Another example is the case versus the company Novo Nordisk initiated by distributors of pharmaceutical products denied the status of authorized distributor (case A40-148956/2010), although the turnover of the “victims” among distributors significantly exceeds the turnover of Novo Nordisk on the Russian market. There are also standard cases initiated by Rostelecom (largest national-wide telecom company) against *very small* operators of local telephone networks on the fact of dominance abuse by the latter manifested in monopolistically high (excessive) prices of interconnection services (e.g. case A04-1572/2011). All these cases, as well as many others, have two things in common. First, the issue admittedly did not concern any restriction of competition. Second, the cases were initiated on the basis of complaints. In our opinion, in all these cases antimonopoly provisions either should not have been applied in principle for the settlement of conflicts between sellers, or should have been used by interested parties within the frames of private enforcement.

Second observation: the contents of remedies developed by competition authorities upon the results of review of cases of violation of antimonopoly legislation. Even in cases where companies are accused of restriction of competition *in the market*, including in the form of collusion, the remedies are oriented at actions beneficial to particular companies (or even given company).

Third observation is the motives for initiation of cases of violation of antimonopoly legislation described in decisions of the antimonopoly authority. A considerable part of decisions begins with the statement of the fact of complaints (including multiple ones) of representatives of the executive authorities, entrepreneurs or their associations, and given companies. There is an impression that the complaints as such are regarded by the antimonopoly authorities as some sort of indirect evidence of violation. Meanwhile the connection between the contents of the complaints and decisions may be quite unclear.

So, we can state that, first, private entities have made their clear choice in favor of selective public enforcement and, second, the incentives of the antimonopoly authorities are set in favor of the same model. The latter can to a certain degree be explained by the system of their performance assessment, both external and internal. The number of cases reviewed by the antimonopoly authorities is regarded as an indicator of effectiveness. Given the existing amount of available resources, initiating cases by the complaints of actual or alleged victims enables to increase their number. Many proposals on antimonopoly authorities' external performance evaluation are conducive to aggravation of this problem. This is true, for instance, in respect of the periodically offered idea of considering as an important component of external performance evaluation the responses of regional entrepreneurs to the question: "Did FAS help solve your company's problems?" Apparently, the model of selective enforcement will help receive higher scores than pure public enforcement. At the same time, FAS performance evaluation does not take into account the impact of its activities on social welfare. Finally, rules on authority's activity strongly support enforcement by the complaint. In particular, competition authority is obliged to record decisions on every complaint officially. Complaint with no investigation open is considered as an evidence of bad work of the agency, whereas open investigation on complaint could not result in negative assessment of the activity in any case.

The welfare impact of each particular decision within selective public enforcement may differ from the assessment of impact on welfare made by the system as a whole. Many decisions of Russian competition authorities may be evaluated positively. This is true, among other, for many cases against vertical integrated companies in regulated industries (natural monopolies). A typical example was the case against Transneft, operator of oil pipeline (2001) opened on the initiative of the association of independent oil producing companies complaining on discriminatory conditions in contracts of oil transportation *vis-à-vis* large suppliers . Despite the fact that the antimonopoly authority lost the case in court, Transneft has actually adjusted the terms of its contracts in favor of small suppliers. Positive effects of that case evidently go far beyond the interests of any given group of companies. The point at issue is the principal terms of doing business in sectors where access to network capacities is necessary and the price of such access is vital for taking a decision to start a business.

However, selective enforcement on the whole, for our mind, has a rather negative impact on social welfare. First of all, it induces the shift of the activity of competition authorities toward cases involving redistribution of welfare to the detriment of cases connected with net losses of welfare. This leads to an increase in the probability of Type II errors (evasion of responsibility by the offender) in cases of antimonopoly law violations that should have been investigated by the antimonopoly authorities as a matter of priority (above all, collusions). Second, this is connected with a wide spread of overt abuse of antimonopoly rules by initiators of complaints (very close to those described by McAffee and Vakkur, 2004). We cannot prove *deliberate* abuse of the law, but there are plenty of cases where an antimonopoly authority is being involved in the settlement of disputes between companies, and legal decisions are full of references to a multitude of counterclaims and cases of violations of several laws in addition to the Law on Protection of Competition. Third, both the objective difficulty of analyzing cases initiated on the facts of inflicted damage (as an abuse of dominance position or as a result of collusion) and misapplication of the law lead to numerous Type I errors when the innocent are being prosecuted. The significant share of decisions against economic entities reversed on the claims of market participants by courts of first appearance is indirect evidence of this fact. In 2009 –2011, their share reached 40%.[7]

In accordance with the analytical framework presented above, the increasing number of errors of both types should be accompanied with the limiting deterrence. The trap of selective public enforcement largely bars the positive effect we could have expected from modernization of the system of sanctions.

The question to be answered is: what distinguishes the antimonopoly law from labor legislation and the law on consumer protection, and why did enforcement development embark upon the path of selective enforcement precisely in this sphere? Of course, we do not compare the labor and consumer legislation with the antimonopoly legislation in general, but only with those antimonopoly cases (quite a significant share) that regard as violations the actions the inflict damage on counterparties.

Several explanations are possible, consistent with the framework presented above. First of all, it is different prospects to compensate damage as a result of legal proceedings. The evaluation of damage inflicted by a violation of the antimonopoly law is a far more complicated task than those in consumer or labor disputes. Hence, the compensation for damage seems far more problematic. Second, for the initiator of complaint to change the future conduct of counterparty in many cases is much more important that to compensate damage. The combination of the first and second explanations makes selective public enforcement individually preferable. An additional factor is the need to employ professional expertise not only for gathering evidence, but for qualifying the offender's actions as well. Expenses on experts induce additional costs on claimants within the context of private enforcement, which is evidently absent in the system of selective public enforcement.

[7] Naturally, the courts as well as antimonopoly authorities can make mistakes in their decisions. But the comparison of decisions of the antimonopoly authorities and the courts provides an impression that the latter abide by the antimonopoly legislation both in letter and spirit nearly as well as the former.

5. Conclusions and Policy Implications

We have shown that the impact of Type I errors on deterrence and welfare effects of enforcement could be very high, especially in the countries with less developed traditions of legal actions and relatively poor standards of proof. We compare the three models of enforcement (pure public, selective public and private) taking into account this type of errors. The individual choice of selective public enforcement could be harmful from the social welfare point of view exactly because of the high probability of Type I error. Under certain conditions selective enforcement model replicates shortcomings of both private and pure public enforcement model in terms of social welfare. Negative effects of selective private enforcement include distortion of the structure of activity of the executive authorities in favor of the violations whose detection incentives and mechanisms largely coincide with the incentives and mechanisms of preventing damage in private claims. The data of the number of reviewed decisions on the violation of Russian civil legislation supported the conclusion of the high probability of Type I error in the case of selective public enforcement and extremely lower probability under private litigations. Comparing the about 40% of the decisions of the competition authority which are reviewed by the courts, the only 1% of the first instance court decisions on consumer and labor law are reversed by the court of appeal.

The injured person can prefer either private litigation or the selective public enforcement. Expected gains for private party in both types of enforcement in the case include gains from termination of illegal damaging actions. In addition, in the case of private enforcement expected gains include compensation of damages. Cost of enforcement for private party is close to zero in the case of the selective public enforcement and positive in the case of private litigation. The rule of shifting of the legal costs decreases the incentives for unjustified applications. In order to keep probabilities of both types errors low under public enforcement and especially selective public one sophisticated setting of authorities' incentives is needed. In the enforcement system like Russian with the prevalence of administrative control and supervision comparative advantages of private enforcement are important. In many spheres private enforcement is a simpler and accurate tool both in terms of detection of the most significant violations and in terms of minimizing Type I errors. Even if complete abandonment of public enforcement in favor or private one is impossible but the opportunities to develop private enforcement are much wider than might seem at first glance, especially in countries with strong traditions of administrative control.

Unfortunately many recent changes of legal rules in Russia restrict incentives towards private enforcement instead of encouraging it. One example are number of decisions of Supreme Arbitration Court and Constitutional Court RF on contingency fees in last ten years. Decision of Supreme Arbitration Court declared contingency fees contradict Civil Code RF, few years later Constitutional Court allowed to employ contingency fees but only as non-enforceable in legal settlement (exactly like betting). Decisions on contingency fees restrict incentives toward private

enforcement in many cases, for instance when considerable damage has been inflicted on the victim but the probability of sustaining the claim is low.

Another obstacle to private enforcement in Russia is very low standard of compensation for damages and, among other, inadequate understanding of compensation for moral damages. In many decisions compensation for moral damage is calculated as an opportunity costs. In addition, opportunity costs are also compensated by very low rates.

It is possible to give some policy advices based on the theoretical framework and analyses of the enforcement practice.

1. The public selective enforcement is neither the only nor the best way to prevent abuses. The policy papers in Russia support the idea that in many spheres public intervention should be made if and only if there is explicit private demand for it in the form of written applications and appeal. The reason for that is the aim to decrease the administrative burden on the business by the decreasing of the number of inspections. From our point of view such policy will lead to the over-deterrence and increasing administrative costs especially if the penalty fee is relatively high. The risk of strategic abuse of public enforcement in private interests will also increase. Of course, complete avoidance of selective public enforcement in favor of private one is impossible, but it's use in Russia is wider than it seems at first glance and wider than it would be efficient.

2. It is necessary to create additional incentives for the private litigations of civil including:

- increased opportunities for collective action;
- increasing the amount of compensation for damage in civil claims, including moral damage;
- introduction of punitive sanctions for legal offences inflicting insignificant private damage but high social losses. Specifically, it is necessary for raising compensation standards in possible private claims in cases of violation of antimonopoly legislation;
- legalizing contingency fees in private suits.

Irrespective of fulfillment of these recommendations, we believe that in some areasspheres all forms of public legal enforcement could be easily abandoned in medium-run: wherever the imposition of minor sanctions for insignificant violations is standard practice and at the same time legal conditions exist forfor the results of private enforcement are satisfactory. The activities of Rospotrebnadzor for protection of consumers and Rostrud for protection of labor rights are most vivid examples.

3. It is necessary to limit incentives for selective public enforcement at the expense of pure public one. Public authorities are the principal object for applying this group of recommendations.

- It is necessary, for purposes of performance evaluation of the executive authorities, to completely refuse from the indicators based on the scale of activity in favor of indicators reflecting effects on welfare. Of course, *precise* measurement of these effects is impossible, but imperfect indicators are

admittedly preferable to those the application of which indisputably leads to negative externalities of the incentive contracts.

- Performance evaluation of the executive authorities should be based on the understanding of the economic nature of their functioning. If public enforcement is engendered by the collective action problem or other private enforcement imperfections mentioned above, the activity of the executive authorities should be focused on a well-defined group of cases.
- To prevent selective enforcement abuse, it is necessary to increase its application costs. A far more difficult question is who exactly should bear additional expenses of initiating proceedings. It seems hardly probable that they would be attributed to the individuals filing the claims. Consequently, the system of the executive authorities' incentives should motivate to select cases for investigation much more carefully, especially if the initiator of a complaint has already proven to be a legal abuser. As a minimal requirement, the rule that proceedings are to be open on every complaint should be excluded from the regulation of the executive authorities activity.

In spite of the fact that Russian experience in both private and public enforcement is unique we believe it illustrates some universal factors affecting the comparative advantages of difference enforcement models.

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