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WHY MANIPULATE?
PERFORMANCE MEASUREMENT
AND DATA MANIPULATION
IN REGIONAL AND LOCAL GOVERNMENT

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The problem of credibility of performance information is understudied in the public administration literature. Only a few scholarly articles examine the issue of (dis)honest performance reporting. Despite the widespread acceptance of the importance of public sector transparency and accountability, little attention has been devoted to examining the factors that promote or undermine honest performance reporting in government agencies. This article presents the results of a survey of 177 Russian municipalities who were asked to rate the credibility of 35 performance indicators used by regional government to evaluate performance of local authorities. The survey demonstrates that some indicators are trusted significantly less than others. The following statistical analysis shows that least trusted indicators exhibit a pecu-liar dynamics that Kalgin (2014) describes as "prudent data manipulation". Theoretical explanations of this are presented based on different theories of bureaucracy.

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Introduction

Dishonest performance reporting is a problem that has been theoretically predicted by the literature on performance management systems. Downs [1967] contended that bureaucrats tend to underreport information that may negatively affect them and overemphasize information that is favourable for them. Tullock [1965] theorised that any bureaucratic hierarchy produces a negative selection effect that results in selection against honesty. Smith [1995] lists *misrepresentation* among eight main unintended consequences of formal performance measurement.

The issue of credibility of performance information emerges because formal performance measurement is not neutral. It inevitably affects organisational behaviour of those whose performance is measured. The effects of measurement may be both desirable and undesirable.

A significant body of literature is devoted to the study of dysfunctional effects of performance measurement. Scholars focused on this issues as early as 1956 [Berliner 1956; Ridgway 1956]. More recently, Hood [2006] discussed the problem of "gaming" and distortions of managerial practice induced by the introduction of performance targets in British public sector organisations. Bevan and Hood [2006] examined the problem of gaming in the English health care system and suggested that formal measurement may cause undesirable effects. In contrast, Kelman and Friedman [2009] find no evidence of distortionary effect of performance measurement, but theorised that these effects can appear in certain conditions. Bohte and Meier [2000] found evidence of organisational cheating among public schools in Texas.

Some authors have compared potential unintended consequences of performance measurement with problems faced by Soviet system of economic planning [Bevan, Hood 2006; Smith 1995].

Whereas the problem of unintended consequences of performance measurement has received significant attention, the issue of credibility of performance data has been understudied.

The literature on the problem of credibility of performance information is scarce. Only two articles directly focus on the issue. Yang [2009] examines the role of organizational environment and organizational culture on perceived honest performance reporting. The study finds that innovation climate and stakeholder participation in performance management improves perceived honest performance reporting. Civil servants in organisations working in hostile external environments report lower levers of trust in performance reporting of their agencies. Van Ryzin and Lavena [2013] conducted an experiment and found that citizen trust in performance information does depend on the source of information: information provided by an executive agency or by an independent non-governmental organization seems to be trusted equally by citizens.

Civil servants may distrust performance data because they know that data may be manipulated. Kalgin [2014] found evidence of deliberate data manipulation among Russian regional

governments. Civil servants underreported minor negative changes in performance and disproportionally reported positive changes. Similar pattern has been observed in private sector financial reporting (the issue known as "earnings management") [Beatty et al., 2002; Burgstahler, Dichev 1997; Degeorge et al., 1999]. The propensity to underreport negative performance is one of blame avoidance strategies used by public sector managers. Charbonneau and Bellavance [2012] found that public organisations tend to use blame avoidance strategies in performance reporting. Low performance tends to be associated with the use of justifications to avoid blame.

Using mixed methods Kalgin [2015] collected evidence suggesting that some performance indicators may be prone to data manipulation more than other indicators. Data is more likely to be manipulated if data collection is delegated to the agency whose performance is being measured. The absence of independent audit increases chances of data manipulation. Some services are easier to audit than other services and, thus, are less likely to suffer from deliberate data manipulation.

Theoretically, the more challenging (hard to achieve) indicators are also more likely to be manipulated.

Kalgin [2014] describes two strategies of data manipulation: "prudent" and "reckless". Prudent strategy aims at avoiding the attention of the supervising authority by reporting only minor fluctuations in values of performance indicators. Reckless strategy aims at systematically inflating performance figures to maximise reported performance.

Using a survey of municipal civil servants, this study measures the level of trust in performance data for a selection of 35 indicators, measuring their own performance. The results show that indicators less trusted by civil servants are demonstrating suspicious performance over time.

Two strategies of data manipulation

Kalgin [2014: 10] gives the following explanations of this dynamics:

"The first strategy may be called the "prudent bureaucrat" strategy. Civil servants using this strategy preferred to play safe. They reported only minor variations in the data as this was least likely to cause suspicion and attract attention of their superiors. No one could be blamed for a drop of 1% in annual performance, and a 1% annual growth would also be inconspicuous. At the same time, reported figures had to show *some* variation to look more "normal".

One management consultant and former head of performance measurement unit in a regional government described a situation where the "real" performance was not simply different from reported performance, in was, in the given conditions, unknowable:

When we find ourselves in the situation in which we don't have enough money to build or reconstruct roads it is unreasonable to expect that we conduct surveys to measure precisely the

share of roads that are in good or bad condition. So, if we are required to show the share of roads that are in disrepair we just input a number of, say, 67%. Then we give a forecast that next year it will be 66%, and the last year it was 68% because there should be some improvement over time. But no one can ever check this. I would say that figures for about 10% of indicators are simply taken out of thin air.

The graphs below demonstrate how "prudent" manipulation could affect the dynamics of an individual indicator and trends in overall statistics. If pursued systematically by a significant percentage of reporting authorities, this strategy would force values of growth indices of affected indicators to converge to zero in a "more-normal-than-real" fashion. This strategy allows one to minimize the gap between reported performance and real life without giving an immediate impression of stagnation from year to year. Allowing the gap to grow large is imprudent as it may result in severe sanctions if it is found out".

a) Dynamics of an individual indicator

b) Hypothesized trends across municipalities in overall data over time

'Real' performance

Reported performance
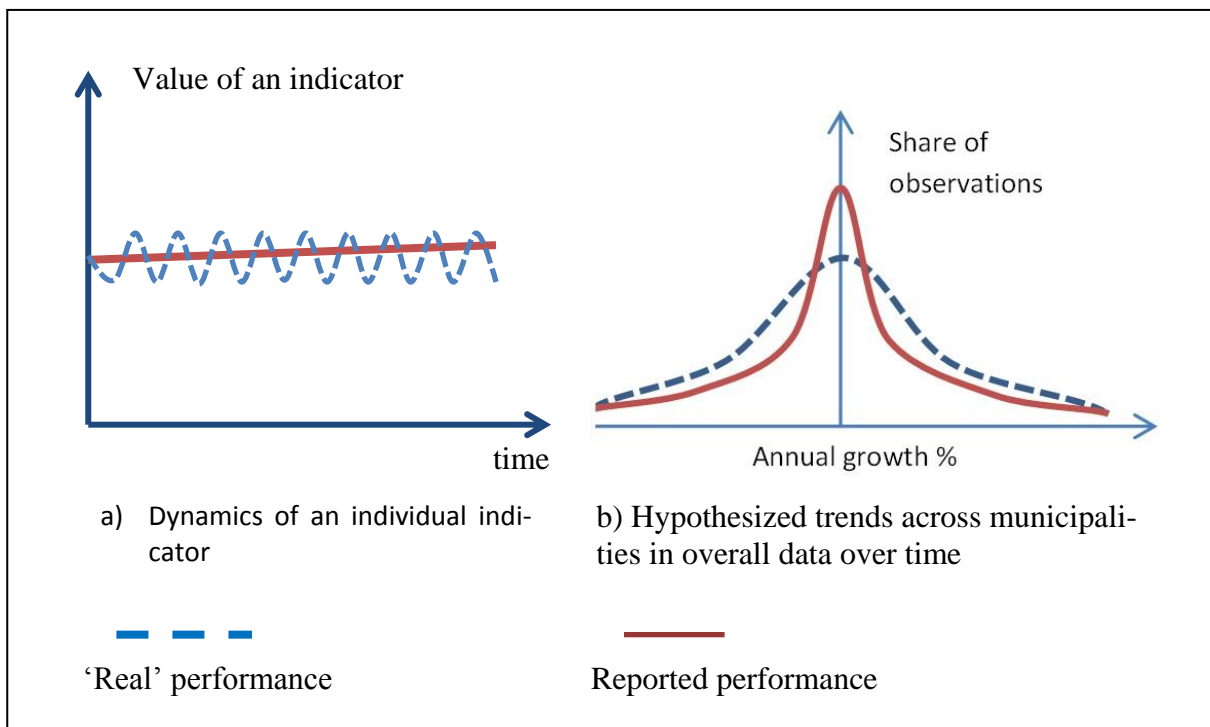
Source: [Kalgin, 2014].

Fig. 1. Consequences of systematic application of "prudent" manipulation
a) for an individual indicator, b) for overall data

The measure of clustering

A "measure of excessive clustering" was constructed to identify indicators that were most likely affected by "prudent" manipulation.[1] Indicators were ranked on this measure and top 20% were marked as "suspicious". See figure below.

Share of observations

S

Annual growth rate
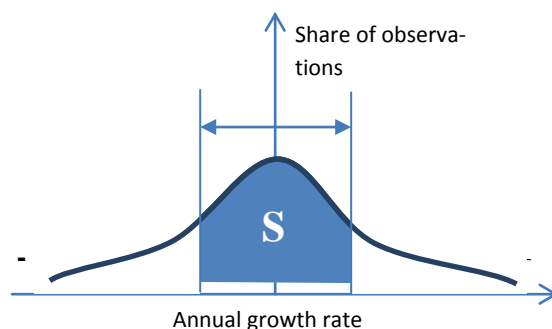
Fig. 2. Measure of clustering of growth indices around zero

Each of 35 indicators was thus assigned a measure of clustering. Indicators with excessive clustering were marked as suspicious. "Prudent" manipulation is likely to result in excessive clustering of growth indices around zero [Kalgin, 2014, p. 9; 2015, p. 140].

Kalgin [2014] quantitatively analysed the dynamics of indicators collected under Decree 825.[2] He found that indicators collected by regional administrations displayed suspicious dynamics that he labeled "prudent" data manipulation. For the purpose of this study from among the indicators of Decree 825 we selected indicators that were also used at the municipal level according to Decree 607[3] (the list of indicators was establish by the Government Act № 1313[4] until 2012 and according to Government Act № 1317[5] since 2012). The Government Act № 1317 reduced the number of indicators from over 140 to just 40. In our survey we mostly used indicators from the new list but also some indicators from the old list [Government Act № 1313]. The full list of indicators and respective source documents are given in Appendix1. To analyse civil servants perceived trust, we selected indicators that were collected by different reporting agencies and displayed different degree of excessive clustering: some did not show suspicious dynamics, whereas others were

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[1] The measure was calculated as the average of shares of observations (values of growth indices) that fell into intervals around zero (from –0,05 to 0,05, from –0,04 to 0,04, from –0,03 to 0,03; from –0,02 to 0,02, from –0,01 to 0,01; and 0).

[2] Указ Президента Российской Федерации от 28 июня 2007 г. № 825 «Об оценке эффективности деятельности органов исполнительной власти субъектов Российской Федерации» (Собрание законодательства Российской Федерации. 2007. № 27. Ст. 3256).

[3] Указ Президента Российской Федерации от 28.04.2008 г. № 607 «Об оценке эффективности деятельности органов местного самоуправления городских округов и муниципальных районов».

[4] Правительство Российской Федерации Распоряжение от 11 сентября 2008 г. N 1313-Р (в ред. распоряжений Правительства РФ от 15.05.2010 N 758-р (ред. 18.12.2010), от 14.06.2011 N 1033-р, от 13.07.2011 N 1225-р).

[5] Постановление Правительства Российской Федерации от 17 декабря 2012 г. № 1317 МОСКВА О мерах по реализации Указа Президента Российской Федерации от 28 апреля 2008 г. № 607 «Об оценке эффективности деятельности органов местного самоуправления городских округов и муниципальных районов» и пп. «и» п. 2 Указа Президента Российской Федерации от 7 мая 2012 г. № 601 «Об основных направлениях совершенствования системы государственного управления»

suspicious. It has to be noted that for some indicators the reporting body is different form the collecting body: data for indicators reported by regional governments in many cases is collected by municipal authorities. We used the classification officially given in Decrees 825 and 607 and respective methodologies of data collection.

Table 1. Sources of data for selected indicators

Source	N
Federal ministries	16
Rosstat	10
Region	9
Total	35

At the time of the survey the list of indicators was being introduced [Government act 1317] and therefore municipal civil servants were interested in providing their opinion on the quality of these indicators compare indicators from the old list [Government act 1313] and the new list.

Predicting data manipulation

The question is then – is this suspicious dynamics associated with lower trust from civil servants? If yes, then we would have at hand a quantitative measure able to identify suspicious performance indicators even before starting the measurement effort: indicators with low trust from municipalities should then be subjected to greater scrutiny from auditing authorities on preparatory stage (by finding the better source of data or ensuring the data collection process is reliable) as well as on implementation stage (by finding the abnormal degree of clustering and dealing properly with highly manipulate measures).

The survey of municipalities

Two strategies of data manipulation were identified based on respondents' accounts. A survey was conducted to estimate the perceived trustworthiness of municipal performance data. Civil servants were asked the following question: "Do you agree with the following statement – "Other municipalities of my region provide reliable and accurate data on values of this indicator". The following choices were given: Strongly agree; Agree; Disagree; Strongly disagree; Do not know. 177 answers were collected, yielding 2737 valid answers for 35 indicators. Results of the responses are averaged to arrive at the measure of credibility for each indicator. The credibility varied from 0,74 to 1,62. The ranking of indicators on the credibility index is given in Appendix 1.

Hypothesis 1: Lower trust from civil servants (lower credibility index) is associated with greater share of values of growth indices clustered around zero.

To test this hypothesis a simple regression analysis is performed.

Ordinal regression model

Ordinal regression was used to estimate the link between the measure of clustering and trust in performance data. This was done because a 4-point Likert scale was used to capture the degree of trust in data for each of 35 indicators (so the variable is ordinal rather than nominal). Answers were coded from 0 for "Strongly disagree" to 3 for "Strongly agree".

As expected, the coefficient is negative, indicating that higher measure of clustering is, indeed, associated with lower level of trust in performance data.

Case Processing Summary

		N	Marginal Percentage, %
Answers_recoded	0,00 "Strongly disagree"	19	0,7
	1,00 "Disagree"	100	3,7
	2,00 "Agree"	1018	37,2
	3,00 "Strongly agree"	1600	58,5
Total		2737[6]	

Parameter Estimates

		Estimate	Std. Error	Sig.
Location	**I_clustering**	**-,852**	**,246**	**,001**
	I_rapid_growth[7]	1,036	,519	,046

Dependent variable – Credibility of data. "Other municipalities of my region provide reliable and accurate data on values of this measure" from 0 "Strongly disagree" to 3 "Strongly agree"

The significant negative correlation supports "prudent manipulation" hypothesis: greater degree of clustering in associated with lower trust. The results of the survey may be used for triangulation to corroborate the "prudent bureaucrat" hypothesis. Statistical significance is at 0,1% level. Indicators that were most likely "prudently" manipulated appear to be less trusted by civil servants. It may be that they feel the weakness of the data from their first-hand experience of working with these measures themselves. Which is more, if the distrust to peers exists the problem of "crowd-leaded" manipulation is tended to arise: the servant aware of existing manipulation will tend to put unfair data in order not to be worse than those who are manipulating.

It also appears from the data that indicators that demonstrated significant growth are more trusted (index of rapid growth is positively associated with trust). It can be explained by the fact that these indicators are not challenging, easy to achieve, and therefore lack the necessity to manipulate with. However, the result is merely at 4,6% level of significance.

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[6] The total number of observations. This number is arrived at by multiplying the number of rated indicators (35) by the overall number of responses. The number of responses varied across indicators providing the average of 96 responses per indicator giving 3360 responses including "Do not know" or 2737 excluding "Do not know".

[7] Index of rapid growth was calculated as the share of observations with annual growth indices exceeding 5%.

Theoretical framework

We draw on four major theoretical traditions to explain the presence of prudent data manipulation strategy: 1) theory of negative selection in bureaucratic hierarchy by Gordon Tullock, 2) theory of bureaucratic personality types by Antony Downs, 3) theory of administrative behaviour by Herbert Simon, 4) theory of normalisation by Michel Foucault.

The natural selection in the "vertical line of power" as a filter against honesty

The "vertical line of power" is a term coined by Vladimir Putin to refer to the highly centralised structure of the executive branch of power. The creation of this vertical linemay be regarded as one of the achievements of the Putin era. This centralised structure may be studied using classical theories of bureaucracy by such authors as Gordon Tullock and Antony Downs. In his influential work on the theory of bureaucracy, Gordon Tullock [1965] used an analogy of a gaseous diffusion plant to illustrate the process of career selection in any hierarchy based on merit. Individuals entering the system are continuously tested and either rise, fall or remain in place as a result of the test. Only those who systematically make decisions in the interest of their career are likely to rise to the top:

> *Any political hierarchy in which personnel are selected for promotion by the system we have designated "merit" will function in much the same way. People entering the system are either a random selection or the result of a preliminary selection process. Once they are in the system, they are confronted with a number of situations in which they may either rise, remain in the same position, or fall. These "test" situations do not necessarily refer to formal promotions in the bureaucratic hierarchy. There are usually numerous smaller steps which prepare the way for formal promotion or demotion. The obtaining of a good assignment, earning the confidence of your superiors, getting a "good name around the office," all may be equated to the porous barriers of the gaseous diffusion plant* [Tullock, Rowley, 2005, p. 21].
>
> *...*
>
> *Any individual in any system will continually be confronted with choices between courses of action which will have at least some favourable effect on his chances and others which are less desirable from that point of view, but which have other advantages. Only the person who usually chooses in terms of his "career" will be likely to rise to the top* [Tullock, Rowley, 2005, p. 22].

Since people can adjust their behaviour to the rules of the game and since individual objectives often differ from organizational objectives, such a system inevitably selects against honest individuals and promotes those who always pursue the course of action that is favourable for their personal advancement even at the detriment of organizational objectives:

It is impossible to design a system that will select against the man of relatively low morals. This is because the intelligent but unscrupulous man will always assume the morally proper course of action if, in fact, this should be the one that is the most likely to be successful [Tullock, Rowley, 2005, p. 26].

An "idealistic" individual who attempts to pursue "the general good" will find himself in a disadvantage when confronted with a choice between two actions one of which is likely to bring him a career promotion but is bad for the organization as a whole, and the other one which is in true interests of the organization but is likely to hurt the individual. Thus, "any organizational structure in which selection on a merit basis is employed is likely, at least to some extent, to select against morality" [Tullock, Rowley, 2005, p. 26].

A "realistic" individual, who habitually chooses in his individual interests, may not necessarily be aware of the damage he is inflicting:

It is always difficult to distinguish between "what is good for me" and "what is good." The general good is never readily discernible. The "politician," the bureaucrat, who makes no especial effort to keep these two categories distinct can quite genuinely believe that a course of action which may appear cold-blooded and dishonest to the outsider falls legitimately within his range of duty [Tullock, Rowley, 2005, p. 27].

In an ideal organization one never has to choose between "what is good for me" and "what is good". It is unlikely, however, that his situation is common:

In the ideally efficient organization, then, the man dominated by ambition would find himself taking the same courses of action as an idealist simply because such procedure would be the most effective for him in achieving the personal goals that he seeks. At the other extreme, an organization may be so badly designed that an idealist may find it necessary to take an almost completely opportunistic position because only in this manner can his ideals be served. The idealist, in such cases, may find that only by taking the course of action that will advance his own career can he remain in the organization and advance to a position where he can hope to influence events. This is administrative organization at its worst [Tullock, Rowley, 2005, p. 24].

...
The general "moral level" of those bureaucrats who have reached the top layers in such a structure will tend to be relatively low" [Tullock, Rowley, 2005, p. 25].

The public sector is known to be the place where one inevitably faces such dilemmas. Thus, naturally moral people may prefer to avoid public sector employment deliberately. A mechanism of

negative self-selection is then set in motion. As a result, "few people expect career civil servants to act contrary to their own interests" [Tullock, Rowley, 2005, p. 27].

In Russia the situation may be exacerbated by the dominance of informal rules, ambiguity in criteria for career promotion [Yakovlev, 2010, p. 24], high turn-over and low organisational loyalty [Gimpelson, Magun, Brym, 2009].

A recent survey of Russian civil servants[8] found that over 73% of them think that the most relevant criteria of career promotion is the disposition of their immediate supervisor[9] and a large proportion of civil servants find criteria of career growth unclear and unpredictable (for a detailed analysis of the system of promotions and entry selection in the Russian public sector see [Gimpelson et al., 2009]).

It is, therefore, reasonable to expect that any ambitious civil servant, when confronted with the choice of whether to manipulate the data would choose to please his immediate supervisor by showing figures that show him and his department in a more favourable light. Since the criteria of career promotion are unclear and all depends on the discretion of supervisors, it is rational to try to portray a good image "just in case":

> *The paradox is that if one tries to introduce formal indicators without clearly defining their role and status, a system of informal incentives spontaneously emerges (including the desire to get noticed, etc.). The resulting effect of such indicators on the system is hard to predict, account for and correct* [Jakobson, 2006, p. 19].

The system of incentives tied to performance reporting was unclear. Apart from formal grants to top performing regions, which respondents considered a minor decorative feature, the system lacked defined rewards and sanctions. However, it was implemented in the context where informal rules were paramount and, thus, it became affected by traditional bureaucratic careerism.

When facing with a choice of whether to report a discovery of unrealistically inflated figures (perhaps, drawn in reports by his predecessor or by another agency), it would take exceptionally courage and moral fibre to blow the whistle and call for an investigation. One who decides to uncover such manipulations may expect his career prospects to be worsened[10].

If this situation is present, the system may become self-destructing in the long run:

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[8] См. <http://cinst.hse.ru/contract> (publications forthcomming).

[9] One of the questions read: "Who, do you think, is in the position to most accurately judge the results and quality of your work?". Responses: 73% immediate supervisor; 25% the head of department.
Another question: "How clear and predictable are the criteria of career growth in the civil service?" Responses: clear and predictable – 19%, all depends on the immediate supervisor – 24%, all depends on the head of department – 21%, criteria are unclear and unpredictable – 19%, do not know – 17%.

[10] An old Turkish joke illustrates the point well: "Once a long-serving head of province suddenly died and a young inexperienced official was appointed to replace him. Soon an order came from Istanbul to provide an updated report on the number of trees growing in the jurisdiction. The official duly sent his staff to count the number of trees and reported the number to his superiors. After some time an urgent request came back from Istanbul, it read: "Immediately explain why half of all the trees in your province disappeared?!"

...the barriers act so as to select by criteria that are not only irrelevant from the standpoint of the designers, but which will, in the future, result in even poorer performance and selection [Tullock, Rowley 2005, p. 24].

If civil servants in a position to manipulate data are unchecked, the whole edifice of performance management built on these data becomes shaky as the data increasingly detaches from reality.

It is not certain how far the data diverged from reality as a result of deliberate manipulation, but it is informative to consider the fact that in 2012 the sub-federal system of performance measurement in Russia was radically changed. Out of 325 indicators only 60 remained and out of these 60 not a single indicator was to be self-reported by the regional administrations.

It appears that the presidential administration learned the lesson and discontinued the bulk of indicators that became largely meaningless. One factor of this could be the two data manipulation strategies outlined above.

In addition to Tullock's theory of negative selection another theoretical perspective may be employed to explain the use of "prudent" manipulation strategy. This strategy, presumably was associated with the desire of civil servant to 1) keep a low profile; and 2) minimize efforts and labour spent on performance reporting. Both desires are accounted for by the model of "administrative man" proposed by Herbert Simon and the notion of "normalisation" elaborated by Michel Foucault.

Linking data manipulation strategies to bureaucratic personality types

The results may be theoretically generalised using the theory of bureaucratic personality types developed by Antony Downs [1967, p. 85]. Downs identified two types of motives making up bureaucrats' "utility functions": self-interest and altruistic (broader) motives. Self-interested motives include *power, money income, prestige, convenience and security*. Broader motives include *personal loyalty, "mission-commitment", pride in proficient performance of work and desire to serve "the public interest"*.

Using this typology of motives Downs defined five bureaucratic personality types: two "purely self-interested" and three "mixed-motive" types [Downs, 1967, p. 88]. The two self-interested types – *climbers* and *conservers* – fit well with the two observed strategies of data manipulation (Table 2). Presumably, data manipulation strategies used by bureaucrats driven by broader motives would be more subtle, context-specific and difficult to identify.

Table 2. Personality types of bureaucrats adapted from [Downs, 1967, p. 88]

Personality type	Dominating motives	Comment
Purely self-interested officials		
Climbers	power, income, and prestige	
Conservers	convenience and security	In contrast to climbers, conservers seek merely to retain the amount of power, income, and prestige they already have, rather than to maximize them

Bureaucrats belonging to different personality types, according to Downs, have different value systems and rank their motives differently. This difference may result in resorting to different courses of action when an opportunity comes to engage in data manipulation.

Conservers would aim at minimising risks and maintaining *status quo*. They would prefer to play safe by resorting to the "prudent bureaucrat" strategy. It is prudent from a *conserver's* point of view to avoid consistent inflation of performance figures. A *conserver* is motivated by the desire for maximum long-term security and minimum inconvenience. Thus, it is preferable for him to be inconspicuous. Any above-the-average as well as below-the-average performance is risky as it may attract superior's attention.

Climbers, on the other hand, would aim at maximizing their career prospects, by showing their agencies' performance in favourable light no matter the risk of sanctions. If faced with the same situation, they are likely to engage in deliberate inflation of their performance figures following the "reckless" manipulation strategy. This is likely to lead to severe penalties if found, but, if one is successfully in concealing this fraud, one may earn a promotion or obtain other perks.

Downs's theory of bureaucratic personality types may be usefully applied to a wide range of organisational contexts. If there is a link between a bureaucrat's personality type and a strategy of data manipulation he/she prefers then potential manipulations can be productively predicted from the knowledge of prevailing mentality in a given organisational context. And, vice versa, the information about the dominant strategy of data manipulation may be useful in diagnosing the dominant type of mentality in an organisation. It appears that in the Russian case prudent manipulation was more widespread. It was especially pronounced in the subset of indicators not linked to grants.

Tullock's theory of negative selection in hierarchies and Downs' typology of bureaucrats are particularly relevant for the Russian case. Indeed, the Russian public sector is facing important ethical challenges:

The Russian Federation is currently in transition from an ideologically driven society based on social class to one in which ethics are based on individualistic and civic principles [Barabashev, Straussman, 2007, p. 380].

In such transition ethical safeguards are temporally weakened and the problems of ethics and morality are exacerbated:

Thus, ethical safeguards, which are supposed to prevent antisocial, professional behaviours and corruption, are either weakened or absent. They have been replaced by short-term self-interest incentives. The new mechanisms of the merit-based system are only beginning to be realized in Russia. Presently, the Russian bureaucracy lacks unity because personal interests dominate the public interest [Barabashev, Straussman, 2007, p. 380]

In this context data manipulation in personal self-interest is more likely than in the contexts with strong established values of public sector honesty and integrity. Indeed, this view is shared by Russian politicians:

President Putin described the Russian bureaucracy as a closed and haughty caste system that sees public service as a kind of business rather than as an institution responsible for serving the citizenry [Barabashev, Straussman, 2007, p. 376]

Linking data manipulation strategies to types of performance measurement regimes

Hood [2007] offers a typology of performance measurement regimes. He classified performance measurement regimes into *target, ranking* and *intelligence* systems. *Target* systems aim at aggressively driving change by setting minimum standards or a spirational quantifiable goals and establishing sanctions and rewards. *Ranking* systems use league tables to identify winners and losers and apply appropriate measures. *Intelligence* systems aim at providing background information to facilitate learning without added pressure of formal targets and rankings.

From this perspective, the Russian system of regional performance measurement may be characterized as a hybrid system of *intelligence* and *ranking* indicators. Within one framework some indicators were formally used for ranking, others were only reported for intelligence purposes. Grants were allocated on the basis of the league table to top performing municipalities (league tables were calculated using only selected indicators, these indicators were included in the formula for grants).

Kalgin [2014] demonstrated that at the regional level among indicators included in league tables, signs of "reckless" manipulation were observable. In contrast, indicators not included in the grant formula were exhibiting a different trend – the dynamics in accord with the "prudent" manipulation strategy. This may indicate that "prudent" manipulation is a characteristic feature of *intelligence* indicators. They do not provide sufficient incentives for civil servants to engage in ambi-

tious manipulation. These *intelligence* indicators are labour-optimised and "drawn" (made up) to conform to the "prudent" trend.

A further complication in applying Hood's typology to actual practice is related to the predominantly informal nature of incentives in the Russia civil service. When classifying performance regimes into *target*, *ranking* and *intelligence* one cannot simply look at the officially declared mechanisms of linking performance to rewards and sanction. Informal rewards and sanctions have to be considered as well. If an indicator is officially regarded as an *intelligence* indicator in policy documents, it does not mean that it is regarded similarly by governors, heads of municipalities or other civil servants. Lower level civil servants may still engage in data manipulation driven by informal incentives to be recognized by their superiors.

It is hard to single out a particular example, because higher-than-average growth of an indicator does not automatically mean that this indicator is being manipulated. It should be noted, however, that, despite not being included in the formula for grants, all indicators related to sport demonstrated outstanding growth in the period between 2007 and 2011. In the run up to the 2014 winter Olympic games the sphere of sport received increased attention. This could create additional informal incentives to drive these indicators upwards. At least some portion of this effect may be the result of upward manipulation.

Indicators included in league tables are *morelikely* to attract attention of the superior, but other indicator also may be under pressure to be manipulated.

Informal incentives may intensify the theoretically predicted effect of negative selection against honesty in bureaucratic hierarchies. This effect is discussed in the following section.

Performance reporting as "bureaucratic panopticon"

In his book *"Discipline and punish"* Michel Foucault used a metaphor of a "panopticon" to analyse the nature of power relations in modern society [Foucault, 1977]. Panopticon was a "perfect prison" conceived of by an 18th century English philosopher Jeremy Bentham. This prison was designed as a circular structure with a watch tower in the middle and cells arranged around it in such a way that at any given moment the watchman could observe the prisoners, but the prisoners were not able to find whether they were being observed. A prisoner would have to constantly monitor his behaviour as if he was being constantly watched. The beauty of the system was in the fact that it made it unnecessary for there to be a watchman at all. Foucault used this metaphor to illustrate his notion of "normalization" – the process by which individuals in modern society are made to conform to dominant norms. Modern technology creates a situation in which individuals are aware of the possibility of being under constant surveillance and, thus, they internalize conformity.

This metaphor may be fruitfully applied to the system of performance reporting in Russia that seemed at the first glance an empty bureaucratic exercise. The municipal leaders were required to send their performance reports to the regional government. They perceived the danger (real of illusory) of getting unwelcome attention if their performance figures deviated too strongly from the trend that they perceived as normal (or thought that the central government would perceive as normal). Both unexpected rapid growth and a sharp decline in performance figures could lead to unwanted scrutiny by the central authority. Thus, the most prudent way of keeping a low profile was to normalize performance figures to conform to the perceived normal trend even in the absence of formal instructions or incentives to do so.

A strong tradition of informal relationships within bureaucratic hierarchy in Russia could have magnified the effect of this normalization stimulus, but it is, we believe, common to any bureaucratic system of reporting. It is consistent with this interpretation that the system of reporting that existed in Russia at the time had very weak formal incentives to improve performance figures. E.g., our respondents were unable to give an example of formal sanctions for bad performance.

This interpretation of motives behind data manipulation links well with the model of "administrative man" developed by 1978 Nobel Prize laureate in Economics Herbert Simon. Among Simon's many contributions is the development of the theory of "bounded rationality". His "administrative man" (in contrast to the "economic man" of classical economic theory) has a limited ability to process information and a limited "focus of attention" [Simon, 1954]. For instance, a supervisor can at any one moment monitor only a small portion of his subordinates' activities. Being aware of this, the majority of subordinates try not to attract their superior's attention by behaving "normally" and staying "under the radar". It is only when some unusual activity is noticed does a supervisor begin to investigate more thoroughly and direct his focus of attention toward some particular activity.

We believe that by fusing Foucault's theory of normalization and Simon's model of administrative man one gets a productive interpretation of the phenomenon of "prudent" data manipulation. Civil servants in the process of formal performance reporting attempt to stay out of their superior's focus of attention by reporting "normal" performance data. The relationship between a reporting agent and his supervisor is somewhat akin to the relationship between Frodo and the Eye of Sauron in *The Lord of the Rings*. One can get away with practically anything as long as one does not attract the scrutinizing gaze.

This interpretation explains the presence of "prudent" manipulation strategy in the Russian case. In addition to negative bias traditional to the public sector, this suggests a certain "attention aversion" that characterizes internal bureaucratic relations. It seems likely that such attitude is shared by many hierarchical systems, both public and private. Bureaucratic transparency may ren-

der effects of such attitude quantifiable. Efforts to be inconspicuous, if taken systematically by a large proportion of reporting agents, produce a distortion that becomes itself conspicuous.

Conclusion

The system of performance measurement at the municipal level produced significant amount of data that can be used to analyse bureaucratic survival strategies related to performance measurement. This article presents a number of theoretical explanations for observed patterns in performance data. An instrument suggested here for identifying indicators that were most likely manipulated can be used in actual practice to evaluate systems of performance measurement in both private and public sectors. Quantitative analysis of data produced by performance measurement systems may enhance effectiveness of audit.

For practice of performance measurement and management the following lessons should be learned from this study:

1) Managers in the public sector need to recognize that performance data are often biased at their source and at further layers of bureaucracy involved in processing and communication of performance data.

2) Indicators which are harder to improve (usually they are at the same time more important for further evaluation) are more likely to be manipulated.

3) Before starting the performance measurement effort, the effort driver can consult those bodies who are to be evaluated. Usually they can recognise the measures disposed to manipulation by giving it less trust while answering the corresponding question.

4) While implementing the performance measurement the indicators that demonstrate suspicious dynamics should be selected for further scrutiny with qualitative methods. All data proved unreliable should be at least excluded from formula determining the grant's value and/or grant recipients.

5) If the suspicious information is proved by qualitative data analysis, the effort driver should think of a three possible ways to improve performance data:
   a. turn to independent sources of performance data on corresponding indicator;
   b. if first is not possible or costs too much, it is necessary to apply additional requirements for performance reports, which should contain not only the achieved value of indicators but some additional proof of the value (registers, summary of actions, raw data from internal statistics etc.)
   c. The effort driver can also think of changing the indicator for another measure of the same activity, which is expected to be more reliable.

Appendix 1. Ranking of indicators on credibility index

Credibility index is calculated as the average among all responses to the following question: "*Other municipalities of my region provide reliable and accurate data on values of this indicator*". Values range from 0 "Strongly disagree" to 3 "Strongly agree". Sources: Fed.min – line federal ministry; Region – regional government; Rosstat – Federal Bureau of Statistics.

N	Credibiltiy index		Source	Название (рус.)	Title	Document:
1	1,62		Fed. min	Доля выпускников муниципальных общеобразовательных учреждений, не получивших аттестат о среднем (полном) образовании, в общей численности выпускников муниципальных общеобразовательных учреждений	The share of high school graduates who did not receive the high school certificate in total number of high school graduates	1317[11]
2	1,61		Fed. min	Доля выпускников муниципальных общеобразовательных учреждений, сдавших единый государственный экзамен по русскому языку и математике, в общей численности выпускников муниципальных общеобразовательных учреждений, сдававших единый государственный экзамен по данным предметам	The share of high school graduates who successfully passed state exam in mathematics and Russian language in total number of high school graduates	1317
3	1,61		Fed. min	Среднемесячная номинальная начисленная заработная плата учителей муниципальных общеобразовательных учреждений	The nominal salary of municipal school teachers	1317
4	1,61		Fed. min	Расходы бюджета муниципального образования на общее образование в расчете на одного обучающегося в муниципальных общеобразовательных учреждениях	The expenditure on education per pupil	1317
5	1,59		Fed. min	Расходы бюджета муниципального образования на содержание работников органов местного самоуправления в расчете на одного жителя муниципального образования	The expenditure on municipal civil servants per citizen	1317
6	1,58	High credibility	Rosstat	Среднемесячная номинальная начисленная заработная плата работников муниципальных общеобразовательных учреждений	Monthly salary of municipal school teachers	1317
7	1,58		Fed. min	Доля налоговых и неналоговых доходов местного бюджета (за исключением поступлений налоговых доходов по дополнительным нормативам отчислений) в общем объеме собственных доходов бюджета муниципального образования (без учета субвенций)	The share of tax and non-tax local income in total income of municipal budget	1317

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[11] Правительство Российской Федерации. Постановление от 17 декабря 2012 г. № 1317 О мерах по реализации Указа Президента Российской Федерации от 28 апреля 2008 г. № 607 «Об оценке эффективности деятельности органов местного самоуправления городских округов и муниципальных районов» и пп. «и» п. 2 Указа Президента Российской Федерации от 7 мая 2012 г. № 601 «Об основных направлениях совершенствования системы государственного управления».

8	1,58		Region	Наличие в городском округе (муниципальном районе) утвержденного генерального плана городского округа (схемы территориального планирования муниципального района)	The existence of general city planning scheme	1317
9	1,57		Rosstat	Среднемесячная номинальная начисленная заработная плата работников муниципальных учреждений культуры и искусства	Average monthly salary of employees in the sphere of culture and arts	1317
10	1,56		Region	Доля расходов бюджета городского округа (муниципального района), формируемых в рамках программ, в общем объеме расходов бюджета городского округа (муниципального района), без учета субвенций на исполнение делегируемых полномочий	The share of municipal budget allocated in accordance with government programmes	1313[12]
11	1,51		Rosstat	Среднемесячная номинальная начисленная заработная плата работников муниципальных учреждений физической культуры и спорта	Average monthly salary of employees in the sphere of sports	1317
12	1,51		Fed. min	Количество муниципальных услуг, предоставляемых органами местного самоуправления, муниципальными учреждениями в электронном виде	The number of municipal services provided on-line	1313
13	1,47		Fed. min	Уровень фактической обеспеченности учреждениями физической культуры и спорта в городском округе (муниципальном районе) от нормативной потребности: спортивными залами	The availability of sport halls (percentage of standard availability)	1313
14	1,42		Fed. min	Уровень фактической обеспеченности учреждениями физической культуры и спорта в городском округе (муниципальном районе) от нормативной потребности: плоскостными спортивными сооружениями	The availability of playing fields (percentage of standard availability)	1313
15	1,40		Fed. min	Доля детей первой и второй групп здоровья в общей численности обучающихся в муниципальных общеобразовательных учреждениях	The share of children of 1st and 2nd health groups in the total number of pupils	1317
16	1,35		Fed. min	Доля муниципальных общеобразовательных учреждений, здания которых находятся в аварийном состоянии или требуют капитального ремонта, в общем количестве муниципальных общеобразовательных учреждений	The share of boarding schools requiring capital renovation in the total number of boarding schools	1317
17	1,35	Medium credibility	Region	Площадь земельных участков, предоставленных для жилищного строительства, индивидуального строительства и комплексного освоения в целях жилищного строительства	The area of land licensed for housing development per capita	1317
18	1,31		Region	Объем не завершенного в установленные сроки строительства, осуществляемого за счет средств бюджета городского округа (муниципального района)	The share of unfinished construction financed by the municipal budget	1317

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[12] Правительство Российской Федерации. Распоряжение от 11 сентября 2008 г. N 1313-Р (в ред. распоряжений Правительства РФ от 15.05.2010 N 758-р (ред. 18.12.2010), от 14.06.2011 N 1033-р, от 13.07.2011 N 1225-р).

19	1,28		Rosstat	Общая площадь жилых помещений, приходящаяся в среднем на одного жителя, всего	Housing area per capita	1317
20	1,28		Fed. min	Доля организаций коммунального комплекса, осуществляющих производство товаров, оказание услуг по водо-, тепло-, газо-, электроснабжению, водоотведению, очистке сточных вод, утилизации (захоронению) ТБО и использующих объекты коммунальной инфраструктуры на праве частной собственности, по договору аренды или концессии, участие субъекта РФ и (или) городского округа (муниципального района) в уставном капитале которых составляет не более 25%, в общем числе организаций коммунального комплекса, осуществляющих свою деятельность на территории ГО (МР)	The share of communal service providers with less than 25% state ownership in the total number of communal service providers	1317
21	1,27		Rosstat	Общая площадь жилых помещений (в расчёте на одного жителя), введенная в действие за отчётный год	Total area of housing built annually per capita	1317
22	1,27		Fed. min	Объём расходов бюджета муниципального образования на компенсацию разницы между экономически обоснованными тарифами на жилищно-коммунальные услуги и тарифами, установленными для населения	Budget expenditure on communal services – subsidies of tariffs	1313
23	1,26		Region	Площадь земельных участков, предоставленных для строительства (всего) в расчете на 10 тыс. человек населения	The area of land licensed for housing development per capita	1317
24	1,23		Region	Площадь земельных участков, предоставленных для строительства, в отношении которых с даты принятия решения о предоставлении земельного участка или подписания протокола о результатах торгов (конкурсов, аукционов) не было получено разрешение на ввод в эксплуатацию в течение трех лет (для объектов жилищного строительства)	The area of land sites for which the time between issuing the development license and completion of construction exceeded 3 years	1317
25	1,22		Region	Доля многоквартирных домов, расположенных на земельных участках, в отношении которых осуществлен государственный кадастровый учет	The share of apartment blocks located on land sites that have been included in the cadaster	1317
26	1,21		Fed. min	Доля населения, систематически занимающегося физической культурой и спортом	The number of people regularly doing sports	1317
27	1,20		Region	Доля населения, участвующего в платных культурно-досуговых мероприятиях, организованных органами местного самоуправления городских округов и муниципальных районов	The share of population taking part in organized cultural events	1313
28	1,16	Low credibility	Rosstat	Доля населения, проживающего в многоквартирных домах, признанных в установленном порядке аварийными	The share of population living in houses requiring capital renovation	1313
29	1,12		Rosstat	Доля прибыльных сельскохозяйственных организаций в общем их числе	The share of profitable large and medium sized agricultural businesses	1317
30	1,05		Region	Объем инвестиций в основной капитал (за исключением бюджетных средств) в расчете на одного жителя	Capital investment (excluding government investment) per capita	1317

31	1,00		Rosstat	Число субъектов малого и среднего предпринимательства в расчете на 10 тыс. человек населения	The number of small and medium sized business per 1000 people	1317
32	0,99		Rosstat	Доля протяженности автомобильных дорог общего пользования местного значения, не отвечающих нормативным требованиям, в общей протяженности автомобильных дорог общего пользования местного значения	The share of local low quality roads in the total mileage of local roads	1317
33	0,90		Fed. min	Доля обрабатываемой пашни в общей площади пашни муниципального района	The share of tilled ploughed field in total land area of the district	1313
34	0,88		Fed. min	Удельная величина потребления энергетических ресурсов в многоквартирных домах	Unit quantity of electrical power consumption in apartment blocks	1317
35	0,74		Rosstat	Доля среднесписочной численности работников (без внешних совместителей) малых и средних предприятий в среднесписочной численности работников (без внешних совместителей) всех предприятий и организаций	The share employees of small and medium sized businesses in the total number of employees	1317

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В существующей научной литературе проблема намеренного искажения данных о результативности исследована недостаточно. Несмотря на всеобщее признание важности оценки результативности, вопрос о доверии к данным, получаемым в рамках этой оценки, часто не ставится. В данной работе приводятся результаты опроса сотрудников 177 муниципальных образований, которым был задан вопрос о том, насколько они доверяют данным 35 показателей региональной и муниципальной статистики. Результаты опроса показали, что некоторые показатели характеризуются значительно более высокой степенью доверия, чем другие. Статистический анализ динамики значений этих показателей, предложенный Калгиным, позволил установить зависимость между субъективным уровнем доверия и объективными данными о динамике значений показателей, потенциально подверженных «осторожной» манипуляции данными. Рассмотрены теоретические объяснения причин возникновения намеренных искажений данных.

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**Оценка результативности
и намеренное искажение данных
на региональном и муниципальном уровнях власти**

(на английском языке)