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PERFORMANCE-BASED
REMUNERATION OF RUSSIAN
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AT WORK IS CHANGING**

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FROM SALARY TO THE PERFORMANCE-BASED REMUNERATION OF RUSSIAN PHYSICIANS: HOW MOTIVATION AT WORK IS CHANGING³

This paper examines changes in the motivation of physicians at work since the start of the salary reforms in 2008. These reforms included a shift from a fixed salary system to performance-based remuneration and an overall increase in salaries.

The data of six surveys of health workers from 2007–2016 were used to reveal physician's motives at work and to track the changes during this period. The changes were minor, and the directions of these changes were contrary to the expected strengthening of financial motivation at work: the importance of earning money is no longer primary. The share of doctors willing to work more and better on the condition of linking salary with labour contribution did not increase. In contrast, almost 66% of physicians believe that they are working at a high level of quality and performance.

The majority of physicians desire an increase in the base salary, not the performance-based part. Doctors who receive bonuses for the intensity, quality and performance of their work, and those who have a higher salary overall also wish to see a higher base salary. This is a clear indication that they wish to strengthen the protective function of the base salary rather than to have increased opportunities for earning money.

JEL Classification: I18, J08, J31

Keywords: health care, physicians, salary, performance based remuneration, motivation at work, incentives.

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1. Introduction

Motivation at work is a key factor for the performance of individuals and organizations, and is an important prerequisite for a functioning health system (Barr et al. 2005; Dolea, Adams, 2005; Franco et al., 2002; Hornby, Sidney, 1988; Martinez, Martineau, 1998; Pangu 2000; Rowe et al. 2005). The subject of this paper is a motivation at work of physicians, who are the main actors in health care systems.

Financial reward is an important reason for health workers to perform better, and it is widely believed that the right remuneration scheme will enhance their motivation at work. The most common remuneration scheme for physicians, especially in low and middle income countries, is a fixed salary system which is usually based on a national pay scale, and an individual physician's salary depends primarily on seniority (years of service) (Hayford, 2009), and not on any measure of the physician's output or performance (Eichler 2006; Hongoro, Normand 2006). Such a remuneration scheme creates very weak incentives for health workers to perform better and to achieve the goals of the health system (Hayford, 2009). An alternative type of salary system is performance-based pay, which can be defined as payments “conditional on taking a measurable action or achieving a predetermined performance target” (Eichler 2006: 5).

The effects of reforming the remuneration schemes of health workers are usually considered in terms of the volume and quality of care. Much less is known about the impact of performance-based pay on health workers' motivation. There is evidence that performance-based pay provides stronger incentives to health workers and thereby improves their performance and efficiency (Hayford, 2009; Huilleryy, Sebanz, 2014). However much research has shown that the motivation of health workers is multidimensional. The determinants of a physician's motivation include financial reward, professional development, recognition in the workplace, and social respect (Franco et al., 2002; Dieleman, Harnmeijer, 2006; Tsounis et al., 2014; Willis-Shattuck, et al., 2008). A multiplicity of non-financial motivational determinants can devalue the effects of the introduction of new remuneration schemes (Deci, Ryan, 1985; Paul, 2009; Shen et al., 2014).

The ambiguity of the impact of performance-based pay on physician's motivation shows the importance of continuing to study this issue. Special attention should be paid to the cases where such remuneration schemes were introduced to health care systems where the level doctors pay is low in comparison with the national average salary. Is it reasonable to believe that low salaries actualizes doctor's primarily financial motivation, and therefore a tangible salary increase and the introduction of performance-based payments will be enough to motivate doctors increase the quality of their work? The answer to this question is important for countries with low and middle incomes, which might be considering shifting from a fixed-salary to a performance-based system.

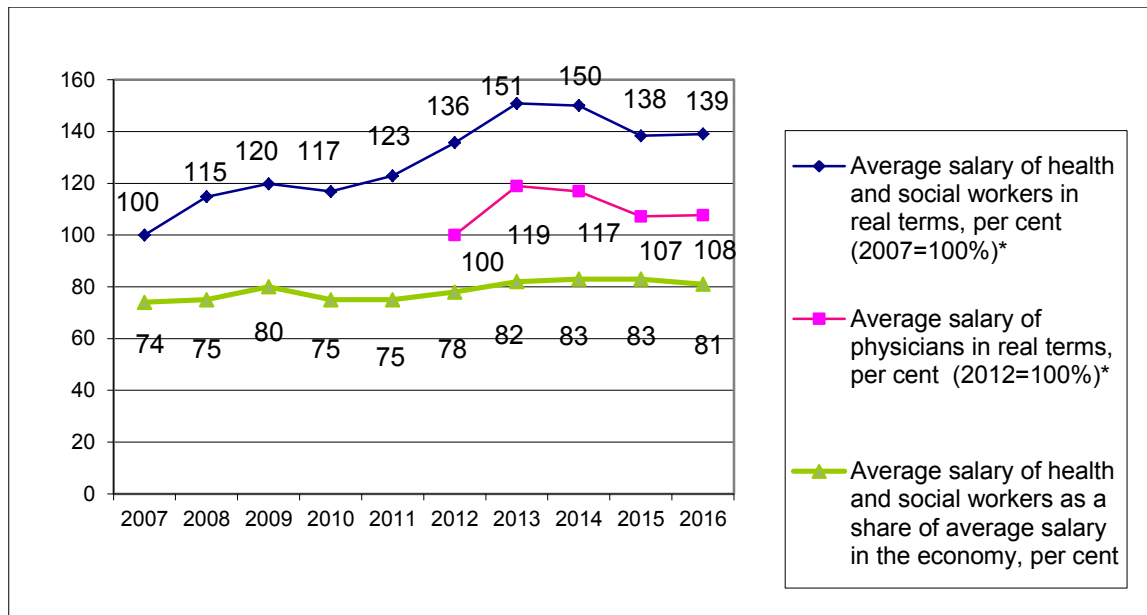
Russia is a good example for such a study. Health worker salaries in Russia were very low: the average monthly salary of health and social workers was 67% of the national average in 1990 (Rosstat, 2001: 194); in 2005, after 15 years of transition to the market economy this proportion had increased slightly to 69% (Rosstat, 2006: 176).

In 2008 Russia began reforming the salary system for health workers. These reforms include a shift from a fixed-salary system to a performance-based system and a significant overall increase in salaries. To provide greater incentives to health workers to improve performance the new remuneration scheme was launched in 2008. The government substituted the strict national pay scale for public sector workers with a more flexible scheme of a base salary and allowed public institutions to pay staff performance-based bonuses. It was recommended that institutions using the new salary scheme paid at least 30% of the salary in the form of performance-based bonuses, which are not guaranteed by the employer, and depend on employee effectiveness. In fact the transition to a new salary scheme was stretched out over time, and the proportion of bonus depended on the financial capacity of individual institutions.

In 2012 the government adopted a six year program of health worker salary increases that increases the average physician's salary to 200% of the national average salary, and for nurses 100%. The program includes the introduction of a so-called effective contract with health workers. This includes in the employment contract criteria for evaluating performance for calculating bonuses depending on the output of work and the quality of services provided. The introduction of effective contracts is intended to enhance the performance based remuneration incentives.

From 2007 to 2012 the salary of health workers increased 140% in real terms, while its ratio to the national average salary increased from 74% to 78% (see Figure 1). In the first year of the new program, the average salary of physicians increased by 19% in real terms, and rose to 142% of the average salary in 2013. In 2014–2016, due to the economic crisis the average salary of doctors decreased in real terms, but the ratio of salary of physicians to the average salary in economy did not change significantly (139% in 2016).

Figure1. Dynamics of average salary of health workers in 2007–2016



*Note: the indicator is calculated with use of the consumer price index growth.

Source: Rosstat data.

This paper focuses exclusively on motivation at work and does not consider doctors' efforts and performance.

The objectives of the paper are:

- i. to identify the work motives of physicians and to reveal the changes in the hierarchy of these motives during the reformation of the remuneration system (2007–2016);
- ii. to identify the willingness of doctors to work longer and more effectively under a performance-based remuneration scheme than under a fixed-salary scheme;
- iii. to reveal the attitudes of doctors towards increasing proportion of the performance-based part of salary including bonuses for the intensity and performance.

The data from six surveys implemented 2007–2016 were used to reveal the hierarchy of physician's motives at work and to track the changes during this period. The changes were minor, and the directions of these changes were contrary to the expected strengthening of financial motivation at work. The interesting result of reforms is the desire of doctors to increase not the performance-based part of the salary, but the base salary.

2. Literature review

The most general meaning of motivation is “something that makes someone act in a particular way” (The Oxford English Dictionary, 2016). In relation to motivation at work, the meaning of motivation depends on the goals of organization for which someone works. According to the definition of health worker motivation proposed by Franco et al. (2002) “motivation in the work context can be defined as an individual's degree of willingness to exert and maintain an effort towards organizational goals”. The latter goals for the health care system are associated with the quality and accessibility of health services. Well-motivated health workers are likely to offer better services to patients and thus improve the patients experience of health care (Okello, 2014; World Health Organization, 2007).

There are various theories to explain motivation and its determinants. Two main lines can be distinguished: needs theories and process theories (Dolea, Adams, 2005). According to the former, the factors that influence a person's attitude towards work are needs. The most prominent theories from this group are Maslow's theory of needs and Herzberg's two-factor theory. Maslow's theory gives a hierarchy of needs that determine motivation at work (Maslow, 1987). These needs range from the basic need for survival to higher needs like self-actualization. The Herzberg's two-factor theory divides work attitude determinants into two groups: job and hygiene factors (Herzberg, Mausner, Snyderman, 1959). Job factors are intrinsic to the task: achievement, the work itself, recognition, responsibility, advancement and growth. The satisfaction of these needs encourages an employee to put more effort into their work. The hygiene factors are extrinsic to the job: organization policy and administration, supervision, interpersonal relationships, working conditions, salary, job security. Their presence or absence causes dissatisfaction in an employee and negative effects motivation at work. Herzberg's two-factor motivation theory is used more often as a theoretical framework in the literature on health worker motivation (Dolea, Adams, 2005). The process theories of motivation explain a person's attitude towards work by the outcomes which people expect to get for their efforts. In particular, the equity theory, which is the most prominent of this group of theories, explains motivation in the workplace as a process of comparison by the employee of his input/outcome ratio with the perceived ratios of others employees and seeking a balance between efforts and rewards received or anticipated (Adams, 1965).

While existing theories present different explanations for the impact of various factors in work motivation, there seems to be a consensus in the literature that the motivation of health workers is multidimensional: financial reward, desire for achievement, the work itself (autonomy at work, meaningful and challenging work); opportunities for personal development (opportunities for training, getting new skills, career development opportunities); relationships at

work (recognition, appreciation by colleagues and superiors); workplace conditions (infrastructure availability, resource availability; working hours; workload); management practices, organizational culture (workplace values), social respect, pride, job stability and security (Chandler et al., 2009; Dieleman et al., 2006; Franco et al., 2004; Kontodimopoulos et al., 2009; Mbindyo et al., 2009; Peters et al., 2010; Purohit, Bandyopadhyay, 2014; Unterweger et al., 2007; Willis-Shattuck et al., 2008).

Financial reward is an important reason for health workers to perform better, and it is regarded as the key motivator in the general work context (Roberts et al. 2004). However the other components of motivation often play the main role in motivation of physicians at work. In developed countries these include self-achievement, professional development, recognition in the workplace (Tsounis et al., 2014). It may seem that financial reward should be the dominating factor of health worker motivation in developing countries where salaries do not fulfil the basic needs of physicians. A number of studies however have demonstrated that even in low-income countries financial motivation is not the sole reason and often not the main reason for physicians to perform better (Franco et al., 2002; Dieleman, and Harnmeijer, 2006; Willis-Shattuck, et al., 2008).

Despite the fact that the role of financial rewards in physician's motivation at work is assessed differently in different theories, the importance of this factor is always emphasized. The consideration the role of financial motivation at work focuses on effects of reforming the remuneration schemes for health care providers, and in particular on the effects of the introduction and development of performance-based pay. The literature has focused mainly on the effect on health care delivery at the level of the service unit. There are numerous studies assessing the effect of explicit financial incentives on the volume and quality of care (overviews are presented in Cashin et al., 2014; Chaix-Couturier et al., 2000; Gosden et al., 1999; Petersen et al., 2006, Scott et al., 2011).

It is believed that performance-based pay has the potential to provide stronger incentives to health workers and thereby improve their performance and efficiency (Hayford, 2009) and there is some evidence of such an impact. For example a study of the effects of performance-based payments on health worker motivation in one low-income country revealed that the piloted financial incentive induced higher worker motivation overall (that is, a shift in workers' attention from non-financial to financial motives) compared to fixed payments when the incentives were in place, and lower total motivation and a decrease of worker effort after the incentives were withdrawn (Huillery, Sebanz, 2014).

There is a strand of literature which refers to the multiplicity of the determinants of motivation at work and shows the limits of the enhancement of health worker motivation by

increasing reward. According to Herzberg's motivator–hygiene theory, salary refers to “hygiene factors”, which can lead to lower levels of dissatisfaction, but it will not actually encourage an employee to put more effort into their work. Moreover, financial incentives might create a 'crowding-out effect' for intrinsic motivation: “When subjects receive monetary rewards for working on a variety of activities under a variety of circumstances [...] their intrinsic motivation for the rewarded activity decreased” (Deci, Ryan, 1985: 48). Performance-based remuneration systems that used only financial incentives risk exploiting health workers and can lead to a reduction of work efforts (Paul, 2009).

Shen et al. (2014) focus on the other aspect of alternative types of salary systems: the possible trade-off for the individual between fixed pay and performance-based pay. They show that the individual preferences for the payment system and the magnitude of trade-offs between fixed pay and performance pay are different for individual risk preferences.

3. Data and Methodology

3.1. Data

This research uses data monitoring the working conditions and remuneration of physicians working in public health facilities implemented by the Higher School of Economics (HSE). The monitoring includes a set of surveys⁴:

- i. May–June 2007 in Russian two regions⁵ with a sample of 561 physicians;
- ii. October–November 2009 in three regions, 791 physicians;
- iii. November 2011 in twenty regions, 2450 physicians;
- iv. September–October 2013 in twelve regions, 1608 physicians;
- v. September–November 2014 in four regions, 951 physicians;
- vi. September 2016 in three regions, 772 physicians.

The regions for the surveys were selected so that they represented different levels of socio-economic development, measured by per capita GDP, density of settlement, etc.

The sampling for each region used the following criteria in all surveys:

- the coverage of the main types of public health care facilities; in each region the following types of medical facilities were selected for the survey:

⁴ The 2007 survey was conducted by the Levada-Center under the contract with the Independent Institute for Social Policy. The 2009, and 2014 were implemented also by the Levada-Center under the contract with the HSE. The 2011 survey was done by the VTSIOM survey agency by contract with the HSE. The 2013 survey was implemented by the HSE under organizational support of the Ministry of Health of the Russian Federation. The 2016 survey was implemented by the S-Media survey agency by contract with the HSE.

⁵ Russia has 85 regions as the constituent territories of the Russian Federation.

- (i) regional hospitals,
- (ii) city hospitals (both in the capital and in other cities of the region, including the hospitals for adults and hospitals for children),
- (iii) city polyclinics (adult and children),
- (iv) central district hospitals (based in rural district);

- the distribution of the sample of physicians within each region by the types of medical facilities reflecting Russia's average ratio of the number of doctors working in the respective types of institutions;

- the representation of district general practitioners and paediatricians, and other specialists in the sample of respondents from outpatient facility;

- the representation of physicians from surgical and therapeutic profiles in the sample of respondents from inpatient facilities.

Despite the different number of regions included in the surveys, the data can be regarded as comparable, because a relatively homogeneous samples of doctors by the type of health care facilities, gender, age and length of service were provided in all surveys (see Annex).

As mentioned, the introduction of the new salary scheme started in 2008. The sample of the 2009 survey included 74% of medical facilities where the new scheme had been adopted, and 63% of the respondents received performance-related bonuses in addition to their base salary. The share of medical facilities using the new salary scheme was similar in the sample of the 2011 survey—71%. We did not divide each sample into a “treatment” group (new salary scheme) and a “control” group (old salary scheme) as it would be difficult for follow-up surveys. From 2013 the reforms affected all facilities, but the share of physicians, who indicated that they received bonuses, varied in the follow-up surveys: 89% of respondents in 2013, 74% in 2014, and 86% in 2016. These differences might be explained by the financial crisis which affected physicians’ salary increases in 2014.

3.2. Methodology

We distinguish the terms ‘motive’, ‘motivation at work’ and ‘motivation structure’. By ‘motive’ we understand the reason that a person has for acting in a particular way. ‘Motivation at work’ means a motive or a number of motives that impel a person to do their job. ‘Motivation structure’ we define as the hierarchy of these motives.

We did not use any psychological tests to understand the motives for the professional activity of physicians. To identify the structure of physician’s motivation at work, the respondents were asked questions on professional values and their feelings about work. In particular, they were asked “What motives at work are crucial for health workers?” A list of

eleven suggestions with multiple choices of possible motives at work was offered to respondents. The list was formed based on the results of the studies of health workers motivation (Dieleman et al., 2003; Franco et al., 2004; Mathauer, Imhoff, 2006; Unterweger et al., 2007).

The range of answers and hierarchical cluster analysis were used to reveal the hierarchy of motives and to distinguish the groups of physicians with different motivational structures. The results represent an assessment of the motivational structure of the whole sample of physicians in each year of observation. A comparison of these estimates for different years allows us to measure changes in motivation of physicians occurring during the reforms.

Two other types of data were used to estimate the influence of changes in the salary system on motivation at work: respondents' answers to questions about (i) their willingness to work better if their remuneration is linked to their personal labour contribution, and (ii) the desired ratio of the base salary to the performance-based one.

4. Results

4.1. Changes in the motivational structure of Russian physicians

To identify the structure of the work motivation of physicians, the respondents were asked about which motives at work are crucial for health workers. Respondents could choose up to three answers from the options offered. The motives were further ranked according to the frequency of choice. The hierarchies of motives, obtained in different surveys, are presented in the Table 1.

The data show that the work of Russian doctors is poly-motivated. The three most significant motives at work are money (to earn money to live on), professionalism (professional interest in the work) and altruism (compassion and care for patients). During the observation period the structure of work motivation of physicians (that is, the hierarchies of motives) remained fairly stable. Note that after 2011 the monetary motive moved from first place to third in importance, but the changes in terms of frequency of respondent's choice the top three motives were not statistically significant.

Table 1. The hierarchy of motives at work according to physicians estimates (the ranks of importance, has a maximum value of 1, 11 min)

The motives	Year of survey ⁶				
	2007	2009	2011	2014	2016
Opportunity to earn money for life	1	1	3	3	2
Professional interest	2	2	1	1	1
Compassion and assistance to patient	3	3	2	2	3
Ability, if necessary, to help relatives, friends, ourselves in health care	4	4	4	4	4
Job security	5	5	6	5	5
Professional development	6	6	5	6	6
Inability to settle in the region to another over-paid jobs in the medical profession	9	7	9	8	7
Respect and support by family and close friends	7	8	7	7	8
Opportunity to make a career	8	9	10	9	9
Opportunity to earn the respect of colleagues	10	10	8	10	11
Increased opportunity to communicate with other people	11	11	11	11	10
<i>Number of respondents</i>	<i>621</i>	<i>791</i>	<i>2399</i>	<i>945</i>	<i>772</i>

4.2. Clustering by dominant motives at work

Hierarchical cluster analysis with the use of inter-group average linking and Euclidean metrics was used and Table 2 shows four groups of work motivation for physicians which are fairly uniform in structure.

⁶ This question wasn't asked in the 2013 survey

Table 2. Clustering of physicians by dominance motives at work, per cent

Clusters: dominate motives, title	Year of survey ⁷			
	2009	2011	2014	2016
1 Ability, if necessary, to help relatives, friends, ourselves in health care. « <i>Social capitalists</i> »	35	26	27	28
2 Professional interest, compassion and assistance to patients, opportunity to earn money for life. « <i>Harmonious</i> »	62	64	71	69
3 Respect and support by family and close friends. « <i>Oriented to respect and support by family and close friends</i> »	-	7	-	-
4 Increased opportunity to communicate with other people. « <i>Communicators</i> »	3	3	2	3
Total	100	100	100	100
Number of respondents	791	2450	950	758

The largest cluster is characterized by a combination of three complementary determining motives at work: (i) professional interest, (ii) compassion and assistance to patients, (iii) the opportunity to earn money. Therefore, the physicians included in this cluster may be called “harmonious” in that their motivational structure is professional, financial, and socio-cultural. The proportion of physicians, that make up this cluster, increased in the years of research from 62% to 69%.

The second cluster by size includes from 25% to 33% of respondents, recorded in different years of study. They are called "social capitalists" focusing on maximizing their social capital: their dominate motive at work is the ability to help relatives, friends, themselves in health care. The share of “social capitalists” decreased in 2009–2016 by 7 percentage points.

In 2011, a small cluster formed, with a dominate motive of respect and support by family and close friends. According to its semantic content it is close to the cluster of "social capitalists", and perhaps due to this reciprocity it was not distinguished in the 2009, 2014 and 2016 survey data.

The last cluster is marginal (2–3% of respondents) but it was sustained across all surveys. The dominate motive is increased opportunity to communicate with other people, and therefore

⁷ The clustering of physicians obtained for the 2007 survey’s data is not presented in the Table 2 due to differences in the scales used for the answers on the question about motives at work. The ordinal scale was used in 2007, but a nominal scale with multiple choice in subsequent years.

such physicians may be called "communicators". The small size of this cluster stresses the background role of the value of communication in motivation.

A comparison of the results of the cluster analysis of different surveys data reveals a stable clustering of physicians during 2009–2016 by their dominant motives for their work, but with a moderate shift from “social capitalists” to “harmonious”.

A comparison of the clusters by socio-demographic characteristics shows that only gender was a stable discriminating demographic factor in the last three studies (see Table 3). The proportion of men in the "social capitalists" cluster was smaller in terms of the representativeness of the sample in comparison with the "harmonious" cluster. The most active age for professional activity (36–49 years) dominates noticeably among the "social capitalists" in 2011 and in 2014, but not for the 2016 data. The proportion of married people does not differ significantly for the clusters. These characteristics suggest that women who are focused on creating networking and close-circle relationships from friends, acquaintances, colleagues, and patient groups, set the tone in the "social capitalists" cluster.

Table 3. Representation of different socio-demographic groups of physicians in the clusters, per cent

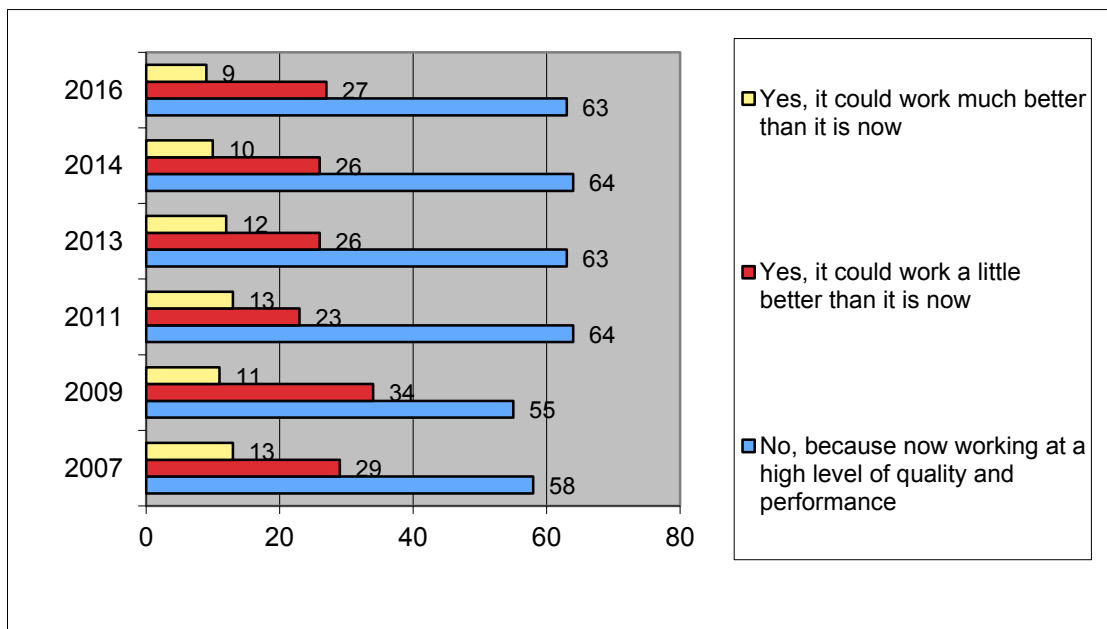
Cluster	Year of survey								
	2011			2014			2016		
	Men	At the age of 36-49 years	Married	Men	At the age of 36-49 years	Married	Men	At the age of 36-49 years	Married
« <i>Social capitalists</i> »	26	43	70	31	39	66	25	36	72
« <i>Harmonious</i> »	31	33	75	38	33	73	31	38	70
<i>The sample, total</i>	29	35	73	36	35	71	30	38	72

4.3. The effect of changes in the salary system on willingness to work better

Another tool that we used to reveal the impact of the changes in remuneration scheme of physicians was to question respondents on their willingness to increase the intensity and quality of their work if their remuneration is linked to their personal labour contribution. Answers to this question show that only about 10% of physicians expressed a willingness to work much better than now. The proportion of these respondents slightly decreased during the period of observation from 13% in 2007 to 9% in 2016. Between 20% and 33% of doctors were willing to

work a little better than now. The majority believe that they cannot work more and better, because now are working at a high level of quality and performance. The proportion of such respondents increased in 2001 in comparison with 2007 and then stabilized (Figure 2).

Figure 2. Willingness of doctors to work better if their remuneration is linked to personal labour contribution, per cent



It is interesting to see which doctors declare that they could work much better than now. Their socio-demographic profile and the structure of their motivation to work do not change (Tables 4 and 5). There are some more men (13% of those among men and 7% of women according to 2016 survey data) and younger people (10% aged 23-35 years, and 8% over 50 years). The highest proportion of doctors willing to work much better (16%) was detected in the 2016 survey among those physicians who, by family income level, indicated that they did not have enough money for essentials, sometimes even for food. It is necessary to clarify that there is a qualitative assessment of the material well-being of the family. The desire to work much better is conditioned by unfavourable subjective assessments of financial situation of the family. There were no detected significant differences in the willingness to work better, depending on the quantitative estimates by respondents their remuneration and the total family income.

Table 4. Willingness of doctors to work better if their remuneration is linked to personal labour contribution depending on gender, per cent

Willingness to work better:	Year of survey			
	2014		2016	
	Man	Female	Man	Female
No, because now working at a high level of quality and performance	54	69	53	66
Yes, it could work a little better than it is now	32	23	34	27
Yes, it could work much better than it is now	14	8	13	7
Number of respondents	344	606	226	530
Cramer coefficient	0,153		0,138	

Table 5. Willingness of doctors to work better if their remuneration is linked to personal labour contribution depending on the age, per cent

Willingness to work better:	Year of survey			
	2014		2016	
	23-35	50 \geq	23-35	50 \geq
No, because now working at a high level of quality and performance	55	68	57	67
Yes, it could work a little better than it is now	35	23	33	25
Yes, it could work much better than it is now	10	9	10	8
Number of respondents	230	386	167	302
Cramer coefficient	0,133		0,103	

Another characteristic of those who are willing to work better is a lower level of satisfaction with almost all aspects of their work. Beginning with the 2007 survey, it was found that the lower the level of work satisfaction, the greater the potential willingness to work better if remuneration is linked with their individual labour contribution. This correlation was confirmed in all the subsequent surveys.

The willingness of doctors to work much better increases significantly with higher levels of dissatisfaction with the content of the work, the opportunities for training, the organization of work and workplace (Table 6). Doctors willing to work better more often emphasise the dependence of their salary on their relationship with management, and that they are increasingly

dissatisfied with such relations or their relations with colleagues. They often say that their colleagues have become less responsible.

Table 6. The correlation between willingness of doctors to work better if their remuneration and satisfaction with organization of work and workplace, the content of the work (Spearman coefficient, $p \leq 0,01$)

Satisfaction:	Year of survey	
	2014	2016
with organization of work and workplace	-0,122	-0,120
with the content of the work	-0,107	-0,137

Table 7. Share of physicians who have secondary employment, depending on their willingness to work better, per cent

Willingness to work better:	Year of survey					
	2014			2016		
	Secondary employment					
	In other public health care facilities	In other private medical organizations	Besides health sector	In other public health care facilities	In other private medical organizations	Besides health sector
No, because now working at a high level of quality and performance	10	11	2	9	12	2
Yes, it could work a little better than it is now	17	16	4	11	14	6
Yes, it could work much better than it is now	15	16	4	14	24	12
<i>Number of respondents</i>	<i>114</i>	<i>122</i>	<i>31</i>	<i>75</i>	<i>106</i>	<i>31</i>

Is the more critical attitude of doctors willing to work better constructive or is it a manifestation of their dissatisfaction with their situation and material disadvantage? These doctors demonstrate greater confidence in their employment opportunities in the case of

dismissal; they are potentially more mobile towards opportunity and even more willing to leave health care sector, and they more often undertake professional training at their own expense. These doctors are more active in secondary employment in comparison with those who believes that they cannot work more and better (Table 7). According to the 2016 survey data, the share of respondents who work part-time in other public health care facilities is 14% of the former and 9% of the latter. The corresponding figures for secondary employment in other private medical organizations are 24% and 12%, and for employment outside the health sector 12% and 2%. Such patterns of labour behaviour suggest a constructive position of physicians focused on themselves and their personal interests, but not on the goals of the organization. These characteristics of doctors are complemented by their notes that awards mean nothing for professional recognition, that state and departmental awards are distributed unfairly, and that the doctor's career is practically impossible.

4.4. The preference of doctors for a higher base salary

The last tool that we used to reveal impact of changes in salary system on physician's motivation at work was the assessment by respondents of the desirable proportion of their base salary to the performance-based salary. The introduction of performance-based remuneration connected with outcomes of health worker activity was the key element of the salary system reform.

According to the 2016 survey data, the average share of physicians' base salary was 59%. Approximately 66% of doctors over the years of the surveys consistently point out that they work significantly more compared with the remuneration received. This suggests that their claims for higher salary has a compensatory nature, and focuses on increasing the base salary rather than the performance-based part.

The vast majority of physicians (89%) would like to have their base salaries increased. About 10% would like to reduce the base salary and thus increase the performance based part. Significant differences were not found in the responses of doctors, depending on the subjective assessments of the level of per capita income of the family, or on the estimates of its absolute size. A more noticeable effect was the size of the salary at the main place of work and the level of satisfaction of it.

One would assume that the claim to a higher share of the base salary is due to dissatisfaction with the conditions for greater earnings, but the data suggest otherwise. Doctors with higher salary and with the higher level of satisfaction of income wish to see the base salary higher than it is now. In contrast, physicians with a lower level of income and with a lower level of satisfaction with it wanted to reduce the share of the base salary. However the Cramer

coefficient is approximately 0.1. Nevertheless, we can assert that there are indications that the opportunity to earn more than others cause the doctors who are highly paid and satisfied with their earnings to wish to consolidate the achievements.

The trend was even clearer when analysing the relationship between doctors' expectations about the base salary and the payment of bonuses for intensity, quality and performance. Those who receive such bonuses were significantly more likely to indicate a desire to have the base salary share increase (Table 8). The same trend, but less significant is seen in relation to the bonuses for the provision of paid services. The preference of doctors for a higher base salary does not shows that an increase of salary and opportunities to earn more bonuses lead to higher motivation to increase rewards but rather to a weakening of this motive.

Table 8. The share of the fixed part of salary desired by physician’s, depending on whether they receive incentive bonuses for the intensity, quality and results of the work (per cent)

Desired share of the fixed part of salary	Year of survey ⁸			
	2014		2016	
	Receive incentive bonuses	Not receive incentive bonuses	Receive incentive bonuses	Not receive incentive bonuses
Above available	89	78	93	65
Equal available	3	4	2	8
Below the available	7	18	5	27
Number of respondents	386	112	367	48
Cramer coefficient	0,125		0,303	

5. Conclusions

The results of the 2007–2016 surveys of Russian doctors demonstrate that their motivation at work is multidimensional. The three leading motives are the money, professional interest in the work and altruism. Despite a marked increase in physician’s salaries over that period and changes in the salary scheme aimed at strengthening its motivating character, the changes in the hierarchy of intrinsic motives of doctors at work were minor and contrary to the objectives of the reform: the monetary motive moved from the first place.

Almost 66% of physicians feel that they cannot work more or better, because they are now working at a high level of quality and performance. Only 10% of doctors are willing to work harder and better—on the condition that salaries are linked to labour contribution. These

⁸ The question about the desired share of the fixed part of salary has been included into the questionnaire only since 2013.

physicians are more dissatisfied with their financial situation and the most valued aspects of the work. At the same time they show a greater level of activity in additional paid work; they are ready to leave the organization and leave the profession. The share of this category slightly decreased during the period under consideration.

There is an increase in the proportion of doctors who believe that a share of base salaries should be higher, and the performance-based share lower. This demonstrates their orientation to strengthening the protective function of the salary rather than to use increased opportunities for earning money.

There are several reasons for this reaction. First, due to the very low level of remuneration at start of the reforms, physicians evaluated the salary increase primarily as corrective and which does not oblige them to return efforts.

Second, this preference points to assumptions about the desire of doctors to consolidate the results achieved in the remuneration of work by stabilizing the current situation and increasing the base salaries, and not to take risks of salary increases due to changes in the performance-based part of remuneration. This conservative assessment by doctors of their labour activity suggests continued paternalistic attitudes towards the state and the administration of medical facilities, connected with the idea of injustice in remuneration, and the duty of the state to the medical community, but not connected with a readiness to engage in reforms.

Third, the introduction of the new salary scheme was not well organized. The introduction of incentive bonuses and ensuring their alignment with the doctor's output indicators was obviously not sensitive enough for many doctors to change their attitude to established labour practices.

Fourth, the results confirm the findings of other studies that financial incentives alone are not enough to motivate health workers, and there is a need for a more comprehensive approach to increasing motivation, satisfaction and performance (Franco et al., 2004; Willis-Shattuck, et al., 2008).

These results lead to the conclusion that the policy of reforming the salary system which focuses on increasing the performance-based part of salaries and on ensuring its alignment with a greater volume and quality of work might be ineffective. The reform of the salary system should be elaborated and implemented as a reform of the overall reward system. In particular, equal attention should be given to the regulation of the base salary. It is necessary to make changes in the procedures confirming the skills of doctors (certification), and in linking the base salary to this level. This will allow the actualisation of other motives for better work besides financial reward.

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Annex

Table 9. The distribution of respondents in the samples of implemented surveys by type of medical facility, gender, age, work experience of doctors, per cent

	Year of survey					
	2007	2009	2011	2013	2014	2016
Type of medical facility						
Regional hospital		12	11	6	21	6
City hospital	39	37	31	34	28	27
City polyclinic	43	34	33	39	30	47
Central District Hospital (based in rural rayon)	18	17	11	11	16	11
Another			14	10	5	9
Gender						
Male	27	41	29	30	36	30
Female	73	59	71	70	64	70
Age						
19 – 35 years	30	25	26	24	24	22
36 – 49 years	43	37	35	39	35	38
50 years and older	27	38	39	37	41	40
Years of service in health care						
Up to 15 years	*	35	34	35	34	30
16 – 25 years	*	27	27	29	25	30
26 years and older	*	38	39	36	41	40
<i>Number of respondents</i>	<i>561</i>	<i>791</i>	<i>2450</i>	<i>1608</i>	<i>951</i>	<i>772</i>

* Note: the question was not asked.

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