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THE IMPLEMENTATION OF PERFORMANCE-RELATED PAY IN COLLABORATION WITH EMPLOYERS: THE CASES OF TWO RUSSIAN VOCATIONAL SCHOOLS

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THE IMPLEMENTATION OF PERFORMANCE-RELATED PAY IN COLLABORATION WITH EMPLOYERS: THE CASES OF TWO RUSSIAN VOCATIONAL SCHOOLS³

Vocational schools are involved in partnerships with employers to generate extra resources and in the implementation of high-stake accountability reforms in Russia. We examine school capacity in the top-down implementation of performance-related pay (PRP) in Russia. We consider two cases of collaboration between schools and local employers that are either highly or loosely integrated with different companies. We elaborate the understanding of the resource and productivity dimensions of school capacity embedded within the broader context of schools' formal and informal ties. The findings indicate tensions that emerge in the implementation of a system of rewards with regard to the within schools' trust and the trust developed with their partners and funders, educational goals, work arrangements, and the distribution of school finances generated in partnerships. These issues can be negotiated with local industrial partners at multiple levels.

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Keywords: school capacity, partnerships with employers, performance-related pay, Russia.

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Introduction

There is a consensus that ensuring adequate resources is essential for successful policy implementation in education [Malen et al., 2015]. In times of austerity, public institutions diversify their incomes through collaboration with employers [Bryson, 2004], [Acar and Robertson, 2004]. However, the such partnerships vary depending on their potential for generating supplementary income for schools, which can be also used to meet other school needs, such as, supplementary resources to finance renovations of the school facilities, bonuses for staff, or scholarships for students. These collaborations can also generate commitments and expectations which may not align well with those implied by the policy being implemented. The capacity of an educational organisation to improve its performance according to policy goals has been the focus of a number of studies [Hess, 1999], [Hallinger and Heck, 2010], [Newmann et al., 2000], [Malen et al., 2015], [Carnoy and Loeb, 2002] although the role of collaborations has not been given sufficient attention within the policy implementation debate [Malen et al., 2011]. The present study analyses how collaboration with employers can support or constraint the implementation of performance related pay (PRP) in two vocational schools in Russia.

An adequate system of incentives and pay is one of the central factors of school performance [Britton and Propper, 2016]. In many countries, higher teachers' wages are associated with better student performance [Dolton and Marcenaro-Gutierrez, 2011]. The systems of incentives and pay are central for raising the motivation of teachers and retaining the best teachers within the public education system [Marsden and French, 1998].

PRP has been widely implemented as a mechanism of accountability capable of shaping and reshaping schools [OECD, 1993], [OECD, 2009]. PRP is a system of pay that makes individuals' salary dependent on the attainment of performance indicators. The salary contains a large 'variable part' made up of performance bonuses. PRP can result in the improvement of the teachers' work [Marsden and French, 1998], [Murnane and Cohen, 1986]. Many studies have found that PRP is positively associated with higher motivation, organizational commitment and job satisfaction among the teachers and staff [Ewing, 1996], [Lazear, 2000], [Parent, 2002].

Russian vocational education and training (VET) institutions experienced decentralisation and public funding cuts during the 1990s [Hellwig, 2007]. Through this, the schools gained more financial and operative autonomy and began to collaborate with external partners in order to secure facilities and fiscal resources [Wohlstetter et al., 2004]. However, central authorities expect a greater emphasis on performance and accountability from schools due to the recent reforms which started in the 2000s [The Concept, 2005]. Starting in 2012, PRP was integrated

into the accountability system of each VET school as a part of the administrative reform in Russia [The Programme, 2012]. The major principles of the reform were formulated at the federal level (ibid.). The aim of the PRP policy in Russia as formulated by the central authorities was the reorientation of institutions and teachers toward externally imposed performance standards and the promotion of accountability and teacher focus on assignments within one position (rather than combining jobs) [The Programme, 2012]. Another goal was an increase in overall teacher salaries, thereby retaining young teachers (ibid.). The policy implementation took place on the level of the federal states. Importantly, no extra budget funds were allocated at the federal level for the reform. Only limited resources were available because about 80% of regional budgets have a deficit. Regional authorities were also in charge of the development of the PRP procedures and criteria. In addition, the reform was implemented in a top-down way without accommodating the interests of the key stakeholders, such as students, teachers, employers and local communities.

This paper applies Dual Dimensions of Capacity (DDC) [Malen and Rice, 2004] to better understand the policy implementation in the specific Russian context. We further elaborate this framework by considering the wider context where the schools operate. Our analysis integrates resources, work arrangements and commitments, which emerge in the collaboration between schools and employers [Evans, 1995]. In particular, collaboration strengthens the capability of schools to generate resources and develop ties to their local context, which is a valuable school capacity. The implementation of PRP may benefit from other school capacities where diverse interests and organizational arrangements are balanced.

This paper analyses two cases characterized by different levels of collaboration with different types of companies. The research question concerns the identification of the effects of collaboration with employers on the capacity of a school to raise financial resources (“resource dimension” of school capacity) and translate them into the outcomes expected by the reform (“productivity dimension”). The paper identifies the payoffs of collaboration with employers for the implementing PRP.

In both schools, even when supplementary resources were generated in collaboration, the PRP implementation was constrained in the resources and productivity dimensions. Not only was there a lack of coherence between the actors regarding the goals of PRP, but also, in light of inefficient financial resource allocation within the reform, there was a lack of coherence regarding the reallocation of school finances. In both cases, collaboration with employers produced employee incentives different from those imposed by the PRP policy, such as elements

of profit-related pay and fee for services [Parent, 2002]. This indicates the need to incorporate the schools' ties to the local environment and a wider range of stakeholders into the process of policy implementation.

The paper proceeds with an introduction to the context of the VET system in Russia, before providing a literature review and the analytical framework, and continues with the presentation of methodology and results. The presentation of the two case studies is followed by conclusions and policy recommendations.

Background of the study

The VET system in Russia inherited its structure from the Soviet period. It includes full-time school-based training and practical training at companies. There are two levels in vocational education: primary and secondary. The network of institutions encompasses about 4,900 vocational technical schools and institutions of vocational education [The Ministry, 2017]. In Russia, most public VET schools report to local authorities (the funders).

VET institutions offer 'basic programmes' (three to four years in duration), which are regulated by country-level standards [Federal state educational standard, 2016, for different vocations], as well as short professional training programmes (one to six months) and retraining programmes (18 academic hours), regulated by VET schools. Short programmes are financed either by the students or by the employers. About 20% of them are for local public employment agencies, funded from the public budgets of federal states. Basic programmes remain free of charge and are funded by the public authorities based on input-driven criteria (student and staff numbers). The public budget finances wages, planned major renovations and utilities, such as water and electricity. The actual financial resources of VET institutions vary due to the additional income generating strategies of schools and regional differences in public funding.

The teaching staff at Russian VET schools are teachers of general technical and specialised disciplines, and instructors in vocational training who have previously worked for enterprises. On average, 56 teachers are employed at each vocational school with approximately half of them being older than 50 [Information Bulletin, 2017].

The systemic outcome of the lack of funding for education in the 1990s alongside the economic crisis ensured that the VET sector turned into a "low-cost low-quality system" [Fretwell and Wheeler, 2001], negatively affecting the quality of instruction and teachers'

motivation. Until 2008, the remuneration system was not performance-based. Teachers were paid based on a nationwide system of tariffs and their qualification rank. In order to supplement their wages, teachers combined teaching jobs at school with those outside of the school [Hellwig, 2007].

In 2008-9, the central government introduced elements of the New System of Pay in certain schools, including a variable part for better performance. The performance indicators used measures of higher workload and work intensity (teaching hours), work experience, qualification and state awards.

In 2012-13, reforms were enacted to raise the salaries of VET teachers and introduce a new system of payment based on results according to clearly defined performance criteria [Executive Order, 2012], [The Programme, 2012]. From 2012 onwards, the initiative became binding and regional and central authorities were committed to implementing PRP-based contracts nationwide by the end of 2018.

In the new employment contracts for teachers at vocational schools, the variable part of the pay depends on quantified target indicators. These include students' academic performance and participation in Olympiads, teachers' work in preparing students for local and country-level competitions (Olympiads', exhibitions), extra-curricular activities, participation in the management of an institution (commissions, teachers' councils), special tasks (organising school events), and methodological work. These indicators depend upon particular regions and are formulated by the local authorities, with some involvement from the school administration.

The policy has the goal of both modernising the principles of pay, individualising them, generating transparency, and raising pay in education [Sheregi, 2016]. However, insufficient funds were provided for the reform which resulted in the "optimization" of staff and a subsequent redistribution of the available wage funds among teachers increasing teachers' workloads (ibid.). In 2016, it became evident that the salary increase was 'eaten' by inflation, while workloads remained high (ibid.). The salary increase was financed partially by off-budget school funding and this raised the attractiveness of commercial educational programmes in schools. In 2012-14, on average, 16% of funds in VET schools were supplied through supplementary funding (calculated based on the data of The Ministry of Education and Science of Russian Federation).

Collaboration with employers and school capacity

An important factor in the implementation of PRP in many countries is a lack of sufficient funding [OECD, 1993, p. 62]. Studies also identify such factors as a lack of clearly formulated measures [Murnane and Cohen, 1986], the low involvement of teachers in designing performance pay schemes and their resulting low awareness of the measurements [Kelly et al., 2008], and staff resistance [Marsden and French, 1998]. To address these challenges, scholars have identified best practices and indicators [Tranter and Percival, 2006], [Kane and Staiger, 2002], and formulated policy recommendations to make pay systems more sustainable [Murlis, 1992].

However, the literature does not sufficiently discuss the potential benefits and shortcomings of schools' relationships with their environment for policy implementation. This is especially surprising, because the policy implementation often takes place within systems where dual education or its elements have been developed [Hellwig, 2007]. This system assumes the existence of strong collaboration between vocational schools and other stakeholders, with the central roles played by employers, trade unions, and the state. In our study, we consider the implementation process as embedded within these ties of collaboration, formal and informal [Evans, 1995].

The literature shows that when adequately designed and implemented, PRP has a positive impact on schools and teachers. For example, Woesmann [Woesmann, 2011] shows that across the countries participating in PISA 2003, "the use of teacher salary adjustments for outstanding performance is significantly associated with math, science, and reading achievement across countries" (ibid., p. 404). For example, pay based on student performance has improved teaching and learning in Israel and the UK [Atkinson et al., 2004], [Lavy, 2004]. The reason is that the well-specified PRP measures can stimulate teachers to improve their teaching practices (ibid.). The research of VET institutions in Russia has demonstrated that PRP improves subjective perceptions of material circumstances of teachers, perceived professional prestige, and increases trust to the VET system in general [Derkachev and Zinovyev, 2018].

These improvements in student performance can lead to wider positive social and economic outcomes. For example, Hanushek and Woesmann [Hanushek and Woesmann, 2008] demonstrate that student performance at country level is associated with economic development. Heckman, Humphries and Veramendi [Heckman, Humphries and Veramendi, 2017] identify the

contribution of education and ability to reduced crime rates and higher levels of trust and mental health.

At the school level, the complex nature of the relationship between the systems of performance, autonomy, and accountability, on the one hand, and positive school outcomes, such as changes in teaching practices and improved student performance, on the other, is addressed within the framework of school capacity [Malen and Rice, 2004]. The resource dimension of capacity refers to fiscal, human, cultural and other resources available to the school for meeting the goals of the policy. Fiscal resources include those routinely allocated, supplemental funds that “might be used to initiate specific reforms or school improvement plans” [Rice and Croninger, 2005, p. 75] and off-budget funds. Financial resources can improve schools’ capacities to achieve their goals and thus make schools more productive (ibid.). Moreover, they can be used to ‘purchase’ other resources, such as attracting qualified teachers who can make further organisational improvement possible (ibid.). The resource dimension provides an understanding of the key resources needed to improve but does not depict a comprehensive representation of an institution’s capacity.

In contrast, the productivity dimension of capacity moves beyond the “inventory” view by focusing on institutes’ ability to translate resources into expected outcomes [Malen and Rice, 2004]. The policy “might affect the number of distinct and disjointed tasks and responsibilities embedded in the work of the organization” (2004, p. 636), constraining the capacity for meaningful school improvement [Malen et al., 2015, p. 136]. DDC therefore shifts the focus away from individual attitudes or executive coherence towards the structural conditions of implementation [Malen and Rice, 2004, p. 632]. This makes this perspective more relevant for our analysis compared to other frameworks, such as the readiness of staff [Harris, 2001], [Holt et al., 2007, p. 326].

The school capacity for improvement is embedded into the ties of collaboration that generate multiple external demands. It is a multifaceted structure that concerns trust, formal and informal communications, financial resources, work arrangements and power relations [Shaari and Hung, 2018, p. 580]. This represents potential challenges as well as opportunities.

First, school productivity can be constrained when there is misalignment between an institute’s existing capacities and the capacities required to effectively respond to a particular reform. Productivity might be constrained when the features of a high-stake accountability reform undermine existing capacities. The demands of the reform and the joint responsibilities developed in collaborations converge on frontline staff - teachers and school principals - who in

many cases lack the resources and capacities to address them [Honig and Hatch, 2004, p. 16]. Incoherence between the interests of stakeholders in policy implementation [Hatch, 2001], [Spillane and Kenney, 2012], and the school principal's multiple accountability [Gonzalez and Firestone, 2013] constrain school productivity. As a result, policy initiatives risk being only partially implemented.

Second, the process of policy implementation can benefit from the resources generated in those collaborations and receive substantial local support [Evans, 1995]. In a context of low levels of trust among the population, poorly developed industrial unions, weak trade unions, and economic uncertainties, involving employers as partners in policy implementation may compensate for possible failures [Remington, 2017, p. 327]. We extend the existing discussion about school productivity by describing the structures that enable and constrain the productive use of resources at schools and the utilization of existing school capacities in policy implementation.

Methods

In this study a purposeful sample was applied. Informed by the types of collaboration identified by Austin [Austin, 2000], such as philanthropic and integrative, two contrasting cases were selected based on the level of integration in collaboration. In the philanthropic collaboration, the employer is a charitable donor, while in the integrative form, partners undertake collective actions that integrate organisations in various ways (ibid.). The integration level was operationalised as the percentage of extra funding in the budget of vocational schools (over 30%) and the presence of structures supporting collaboration, such as specialised study programmes, employer-oriented training centres, employer-funded laboratories, agreements on internships for students, and the number of years of collaboration.

The sectors were chosen according to their share of GDP, determining their potential for collaboration: wholesale and retail trade, mining and quarrying. Two partner company types were considered for the analysis: collaboration with one large production company, and with SMEs. The vocational schools we selected are typical for the Russian VET sector in how they have developed their collaboration with employers; they represent two out of the three types (the third type of school does not collaborate) [Dudyrev et.al., 2018]. A 2013 survey of cooperation practices between employers and educational institutions in Russia showed the dominance of the ““philanthropic”” and ““transactional”” [Austin, 2000] – loose forms of collaboration between

vocational schools and employers [RSPP, 2014]. Employers support educational institutions by improving their facilities and equipment (42.1%) and providing educational grants to some students (34%). The provision of internships for students of VET schools is seen as another form of cooperation and is the case for 61.7% of employers. Approximately 11% of companies fund in-service training for their own employees at VET institutions [RSPP, 2014].

A two-case descriptive case study [Yin, 2014] was carried out in order to describe different contextualised characteristics of the phenomenon. Through a qualitative case study analysis, the ways in which VET schools formed relations with the external partners and implemented PRP were investigated. The first case, that of an industrial college, offers an example of integrative collaboration [Austin, 2000], covering both basic programmes and extra, short-term programmes. The second case study involves a technical school which demonstrates a loose sponsorship type of collaboration. The names of the schools have been changed and the names of locations and partner employers, as well as exact figures, were removed from the presentation of the results in order to ensure confidentiality.

The study used a variety of data sources, including 12 expert interviews with managers of VET schools at various levels and with representatives of local authorities (6 for each case), two focus groups (with eight and ten teachers in each one), documents (pay regulations, collective agreements with employees, incentive regulations, job contracts of teachers, school budgets, agreements with employers) and the websites of the VET schools. The interviews lasted between 90 and 120 minutes, and the focus groups lasted for approximately 100 minutes. Each interview and focus group were recorded and transcribed.

The cross-case synthesis analytical technique was applied to aggregate the payoffs of collaboration for the policy implementation outcomes across the two individual cases [Yin, 2014, p. 164]. The focus was on identifying differences and similarities in school capacity for policy implementation (see Table 1). Data analysis was carried out using the coding procedures of Grounded Theory (GT) [Strauss and Corbin, 1990]. By using the comparison techniques of GT, the themes that relate to the use of resources, trust and work processes were inductively generated. The analysis was first performed separately and then repeated jointly by the authors of the paper to verify the points of contention. Different types of collaboration were mapped to create a visual representation of the findings (Table 1). The themes and the research framework were also discussed with some of the research participants.

Tab. 1. Characteristics of two vocational schools

School	Income generation strategy	Demands of employers	Pay system characteristics	Supplementary funds
IHC	Staff (re)training, involves all types of educational programmes	Stable graduates' demand from one large company, quality assurance by the employer, adjustment of education programmes to the demands of the employer	Loyalty-oriented, oriented at common-good, stable, financially autonomous.	Stable high extra funds
TSTE	Autonomous training centre, only short-term training	Unstable employers' demands (local SMEs) on the number of graduates and their qualification	Unstable, dependent on individual workload, dependent on regional budget provision.	Lower and unstable extra funds

The two cases

The school “Industrial-Humanitarian College” (IHC), which represents integrative collaboration, was founded in 1987 in response to the workforce demands of a local petrochemical plant. Later, in the 1990s, it began training skilled workers and technical staff for companies working in oil extraction and transportation. In the late 1990s, IHC developed an enduring partnership with a company which installs and maintains handles pipelines – a large monopoly with 12 local subsidiaries. The collaboration is in the form of analogue corporate education (in-service training). The educational programmes include geology, mining, chemical technology, IT and oil refining, and last up to three years, in some cases being funded by employers on a contractual basis. The graduates become technicians and operators. There are

also short-term programmes funded by employers, lasting three to five months, such as those for pumping unit drivers and chemical analysis assistants, and short-term training (from 18 hours). Many of the graduates of the basic programmes get placements with the partner employer but some seek jobs in other local industries.

The second case study involves “Technical School of Trade and Economics” (TSTE) and illustrates demand-driven collaboration in sponsorship form [Austin, 2000]. The school was founded in 1971 and is currently training specialists for the retail and wholesale trade, catering and other branches of the economy, including accountants, goods managers, sales managers and food technologists. Programmes are usually three years in duration. The income generation strategy of the school was to offer short-term training courses (mostly three to six months in duration) at a special unit of a school as a part of loosely coordinated partnerships with many local SMEs.

At TSTE, the training demanded by partner employers takes place at the retraining centre organised at the school – ‘the Centre for Applied Qualifications’ (the Centre). The Centre offers short-term commercial training and retraining programmes to its students and the employees of local companies. For students of the college, the Centre provides a specific and market-relevant qualification. For the employers, a graduate of the Centre is more prepared for the actual demands of the workplace, meaning minimal on-the-job training is needed, because the training is carried out in collaboration with employers and includes practical training at the company. The courses also offer a qualification upgrade: shop assistant with an extra qualification of cashier, waiter with an extra qualification of barman. The certificate of completion of short-term professional courses, in addition to basic qualifications obtained at the school, can also grant the graduate a higher rank in the profession, and the formal right to work in a position that otherwise requires a higher education degree or a minimum of three years of relevant work experience.

At IHC, the percentage of extra-budgetary funding is significantly higher than at TSTE, most of it coming from commercial educational services. The commercial training is fully funded by the employer at IHC, while at TSTE it is funded mostly by the students. In addition, TSTE has lower funding from the budget due to regional differences (‘nordic territory’ coefficients, see Table 2) and also must rely on its own budget, rather than employer support, in some aspects related to school maintenance, for example, in the renovation of the premises.

Results

The payoffs of collaborations for the policy implementation

Alignment of education programs to the local demands

In both cases, the collaboration with employers reoriented the schools in the local labour market and therefore, made the otherwise centrally regulated educational programs more relevant to the local needs. This made the power structures in the relationships among the schools, employers, and the state funders more salient.

At IHC and TSTE the conceptualisations of the educational goals vary. The principal of IHC sees it as educating “a ready-made employee” for the partner employer to meet its specific expectations regarding competencies, and therefore IHC emphasises the importance of specific training which will guarantee future employment with the company. The limitation of this conceptualisation is evident when the employer is a more powerful partner and programmes are adjusted to become shorter and more specific:

I offered that system myself. We are not based on the Federal State Educational Standard, and we prepare students based on the programmes we negotiate with [the partner employer] (the principal, IHC).

The TSTE principal emphasises that education should first of all fit “the current trends in the environment” and therefore combine training in the basic programmes with specific short-term extra training in order to increase the employability of the graduate. The principal defines this as “competency development”, meaning that professionals can specialise in the requirements of their qualifications [Berryman, 2000, p. 30]:

The employers say: ‘we can hire your graduates, but they have to pass a training period.’ We develop their competency at the Centre. It is beneficial for both the students and the employers.

At IHC, the representatives of the employer provide an independent evaluation of the quality of the graduates every half a year. The teaching staff must finish an internship at the company every two years. The school has adopted a ‘code of conduct’ for its employees similar to that of the employer.

Within the casual sponsorship at TSTE, there is no close collaboration in monitoring the quality of education services or staff retraining. At TSTE, the partners of the school are local

SMEs, which provide sponsorship support to the college for the modernisation of some of its facilities (“they gave us two laboratories, because they are interested in us”, said the TSTE principal), are involved in the design of education programmes, and formulate the demand for extra qualifications of the graduates (their hiring is not guaranteed). SMEs do not seek a stable working relationship as they do not have stable demands for graduates with particular qualifications.

The reorientation of the schools to the local context is potentially relevant for PRP implementation as it can make the policy more responsive to local needs. At the same time, the collaboration of the schools with external partners produces joint responsibilities which make them less accountable to state funds. The power structures are reinforced by the resource dependencies caused by collaboration.

Supplementary resources and performance orientation

Collaboration with employers has affected the systems of pay and more generally the work arrangements at the schools. On the one hand, these arrangements contribute to the capability of the school to form a stable wage fund and provide bonuses for teachers. On the other hand, the existing understanding of what makes good performance are coupled with external commitments.

Supplementary funding covers 41% of the wage fund at TSTE and 73% at IHC. At IHC, the system of pay has been developed in collaboration with the employer, without the involvement of state agencies. The bonuses paid out of the supplementary funding considerably exceed the base pay (up to double the amount) and is perceived by many teachers as secure pay. This helps the college pay competitive salaries to its teachers ranging from 22,000 to 70,000 rubles, whereas the average overall salary in the region is 26,000 rubles (see Table 2).

Tab. 2. School characteristics

No.	Characteristics	TSTE	IHC
1.	Components of teachers’ pay:		
1.1.	Base pay:		
1.1.1	For teaching hours (for the minimum amount of 720 academic hours per year within one position; if the number of teaching hours is higher, the base pay increases)	85	90

1.1.2	Monthly pay for supporting work (review of student homework, laboratory equipment maintenance, leading the student group)	80-90	46
1.1.3	Pay for tenure and the level of qualification (the qualification category)	30-40	50-60
1.1.4	'Nordic territory' coefficients	-	50
1.2.	Variable pay:		
1.2.1	Variable pay, lowered in case the teacher has 'penalties' (for low student performance, for delays in submitting methodic work and plans of the class, evaluation materials, such as tests and other)	-	Up to 230
1.2.2	Variable pay revised every month (depends on the scores collected by the teacher in the previous month for participation of students in Olympiads, competitions, usage of innovative approaches in teaching, participation at conferences, publications, student performance and other achievements (altogether eight criteria at TSTE, and 12 at IHC)	Up to 50	No funds allocated
1.2.3	An occasional bonus payment for an outstanding contribution to school development, awarded based on subjective evaluation by the administration	-	From 230
1.2.4	Total award:	300	350 – 1,100
2	General school characteristics		
2.1	No. of students enrolled in 'basic education programmes'	910	580
2.2	No. of teachers	60	40
2.3	No. of students enrolled in commercial additional training programmes (varying between 18 academic hours to six months in duration)	1,3	3,3
3	School budget		
3.1	Supplementary funds in school budget	546	1,375,000
3.2	Wage fund covered by supplementary funds	140	1,031,000

Notes: in Euros, converted from rubles according to the rate for the time of the fieldwork.

IHC has developed a system of pay which views the performance of teachers as contributing to the capacity of the school to provide the high quality of teaching that meets the expectations of the employer. This is why the results of the evaluation of the students' performance carried out by the employer and their successful placement at the company are seen by the teachers and the administration as the central quality criterion. The bonus is equal for all teachers if they have no 'penalties' (Table 2, line 1.2.1). These penalties apply for cases of, for example, poor student results, based on the monitoring carried out together with the employer, delays in submitting methodological provision for meeting the demands of study programmes, and failure to regularly upgrade qualifications. The school has also formally introduced a list of performance criteria imposed by the local authorities as a part of the PRP implementation. The school, however, did not allocate any funds for this component.

At TSTE, the understanding of good performance translates the principles of teacher flexibility and responsiveness to the changing market demands. The variable pay depends on the scores obtained by each teacher for the quality of teaching measured by students' performance and a variety of extra activities. TSTE works on the strategy of the school and the performance indicators in groups, which include local employers. These indicators are adjusted every year considering the demands of the employers. The valuable activities in the list are not selected based on any quality understanding of any specific employer. Each activity has a score with a small monetary equivalent. The teacher is free to select any criteria from the list to pursue in her work according to her preferences. At both schools, performance criteria, applied with varying degrees of flexibility, embody the principles of better pay for better work, compared to the older unified tariff system based on seniority. This makes both schools better prepared for the implementation of PRP.

The constraints on policy implementation in the context of collaboration

Lack of trust in the content of the reform

The administration and the teachers view PRP as an externally-imposed and prescriptive measure. The dichotomy of 'us vs. them' (local authorities who implement the policy) was clear in the interview with the principal of IHC. Only formal compliance with the policy can be identified: the list of PRP criteria is not used. A lack of trust in the imposed indicators and the state as a political actor is one of the reasons behind this.

The IHC principal perceives the severe crisis at the nearby petrochemical plant in the 1990s and public funding cuts as having been a great shock to the college. The principal emphasises his role and the efforts of the school as a ‘collective’ in overcoming this difficult situation when the school had to rely on itself to survive in the 1990s: “We were looking for partners, and through this, we survived.” The administrators and teachers went to production sites and personally attended company management meetings. The collaboration has been important for the school: public funding is insufficient and supplementary funding guarantees its functioning. According to the principal, the reform in general and the imposed evaluation principles have the goal of standardising schools rather than accounting for their unique capacities.

In the interview, the principal defends the right of the school to allocate resources according to the productivity principles developed there: the school formally implements the imposed criteria, but the supplementary funds of the school are not used to finance that bonus. He emphasises: “we have the right by law to spend the money in the way which is best for us”.

The existing pay system is based on the common good so that the outcomes of the school’s performance are shared by all employees. This is different to the principles of individual productivity introduced in PRP. The existing system provides stability, and this is one of the reasons why it is accepted by the employees. As the vice principal notes,

the system of incentives was developed at our college, so to say, it is made of concrete [...]. We provide an opportunity for the teachers to start working every month with a positive attitude.

The position of the school administrators resonates with the views of the teachers. Teachers critique the top-down introduction of particular performance criteria which have to replace the criteria developed by the teachers themselves:

We have designed these efficiency criteria. These criteria were discussed at the teacher’s council here, the teachers said they would like to have them. We will continue using them but if they [the local authorities] will push us, we will have to change them.

The teachers refer to the quality of teaching in explaining their lack of trust in the policy. The quality of teaching and learning, following the interviewees, is not adequately addressed by the reform. One of the teachers says:

I have not understood so far, what our government wants in education. Does it want us to teach well? Or does it want us to prove that we have earned this money? [...] This bureaucracy is not related to the improvement of teaching, but to control. The 'thing' [pay policy] is declared to us, but nothing is behind it (teacher, TSTE).

As a result, the teachers resist changing their approach to work to “maximize” the number of valuable activities (such as participation in competitions, innovative teaching, publishing papers among others) as expected by the PRP, as these activities take time and are not essential to providing high quality teaching at their schools. The teachers are convinced that the quality of teaching at the school is already very high and the successful collaboration with the local employer proves this. This is also one of the reasons why they do not support the idea of high variability of pay among the teachers.

Unattractive bonuses within the system of performance-related pay

This theme concerns how insufficient resources allocated within the policy reinforce the low levels of trust in the state actor who is in charge of the implementation and the low accountability to the funders. The work arrangements developed in collaboration with employers are inconsistent with the structures of PRP. The implementation of PRP disrupts the existing structures and undermines trust in the state actor at the level of school administration and teachers.

The financially unattractive system of incentives [Marsden, 2004] became especially salient in the interviews at TSTE. At this school, the financial situation of teachers became especially unstable in the absence of other system of bonuses, as at IHC. The administration of TSTE has to balance the bureaucratic accountability with accountability to the employers and the market. For the principal, both the employers and the local authorities are important actors in the changing environment of the college and, therefore, the interests of the school, employers and funders must be negotiated. The college is implementing the policy according to how the authorities define it, aiming to achieve executive coherence. However, the school administration is concerned with the stability of the public funding provision. The TSTE administration does not consider the state authorities as partners interested in the survival of the college in the context of the changing national demographic situation. The college principal expects the demographic situation to get worse and regional budget funding, which is based on the number of students, to decrease. In this situation, commercial services provide financial security. This is

why TSTE is increasing the number of short-term training courses able to meet the demands of the local employers.

Officially, there is only one system of pay at TSTE because commercial training is localised in the Centre, an autonomous unit. However, the main opportunity for the staff of the school to earn substantial supplementary income is by working at the Centre. Teachers receive an hourly rate and a system of payment by results is not used there. As teachers are paid on an hourly basis, the decreasing demand for training will mean a decrease in income for teaching staff at TSTE.

Dependence on market demand at the Centre does not allow the college to develop a stable and comprehensive incentive system which can ensure bonuses for productivity or allocate a sufficient supplementary budget to provide for this. As a result, each indicator and their sum fail to provide a substantial bonus and a representative of local authorities interviewed is well aware of this: “The criteria are good, but their value is very small.” The variable part of the teachers’ salary, defined by the performance criteria, does not allow for a substantial overall salary increase (see Table 1). One of the teachers criticises the system:

This month my salary is smaller, although I got more points, because the funding for the variable pay is the same [every month] and then it is divided between all teachers.

Another tension in the productivity dimension is that the existing structures push teachers to work extra hours at the Centre, and this undermines the system of incentives based on individual performance and constrains the achievement of the policy goals as teachers combine teaching assignments. This leads to an overload at work:

I cannot ‘waste myself’ on raising the bonus, so I lose out there [the bonus is lower]. As a result, I am in a rush, I am very tired and dissatisfied. I work from eight in the morning until eight in the evening (teacher, TSTE).

She continues, describing that this situation leads to a ‘protest’ from the teachers’ side:

Several teachers, around ten, just stopped doing all this [PRP requirements], as a form of protest. I respect them very much too because it appeared to be only a game, all these “points”. And this insults them. Many people protested at the beginning [of the implementation process], especially those teachers who combine jobs, they did not submit these forms [for performance evaluation]. They did not see any good reason for doing it.

At TSTE, the teachers take extra teaching jobs to survive. The changing rules of the game reinforce the low level of trust in prescriptive policy measures. Teachers perceive their situation as highly insecure; they are speaking out for an increase in base pay. This, according to the teachers, can also help to attract young teachers to the school, who are otherwise discouraged by the low base salary and unstable variable part.

Conclusion/Discussion

The analysis illustrates that the capacity of schools for effective policy implementation cannot be achieved when it is understood in the narrow terms of formal compliance with the policy requirements [Evans, 1995]. The implementation process can benefit from existing school capacities if the mechanisms that align the policy goals with the existing resources and structures are developed. The two cases show that collaboration with employers offers the opportunities to generate extra income and reorient these schools to local demands; both can potentially enhance PRP implementation. These two types of schools are typical for the Russian VET system, however, not all schools have succeeded in developing partnerships. This is why the conclusions of our study cannot be extrapolated to all types of vocational schools in Russia.

Still, in the Russian VET system, funding is allocated at the state level which may be one reason why the policy implementation may not succeed without coordinating the interests of stakeholders both at the school level and at the regional level (*ibid.*). Our analysis shows that collaboration in these two cases has unlocked schools' ties to their local contexts and this may make PRP implementation and the needs of the students, teachers, local communities and employers more coherent. This important aspect of school capacity has been largely overlooked within the DDC framework.

Collaboration also generates risks for policy implementation. The financial and operative autonomy of the schools coupled with a fall in public funding facilitates the commercialisation of educational services. This leads to lower accountability of schools to their funders, including the state, in their salary payment systems [Dickson et al., 2004]. In our study, the collaboration and one school took the form of 'corporate education' which involves basic education programmes and short-term programmes creating a highly integrated partnership with one large company; and at the other school a transactional and sponsorship-type of collaboration with many local SMEs providing short-term training courses at a special unit of the school.

The pay system was affected by schools' ability to form a stable wage fund based on routinely allocated budget and off-budget funding. A stable wage fund allowed for the financing of bonuses and makes them valuable for employees. As supplementary funds for PRP were not provided, off-budget funds generated in collaboration improved the overall resource capacity of the schools [Rice and Croninger, 2005, p. 75]. In reality, these resources were not used in accordance to the school policy and produced contradicting performance orientations among the teachers.

The lack of trust and fragmentation within the schools diminished the capacity of both schools to use supplementary resources productively. In addition, teachers were marginalized in setting the PRP standards [West et al., 2011], resulting in an overall lack of trust in the state actor involved in the policy implementation. This impeded the expected outcome where the teachers focus on their teaching assignments at their primary position instead of combining jobs. It also hampered the teachers' orientation to the individual productivity criteria.

These cases tell us that involving various stakeholders in the negotiation of service quality criteria and financial jurisdictions might support policy implementation at some schools. The problems associated with the lack of coordination among state agencies, the school and employers, resulting in the high dependence of schools on their industrial partners. Tackling this problem involves aligning work remuneration principles and indicators with the guiding principles of quality negotiated by different stakeholders, and basing wage funds on diversified financial resources. Such negotiations would give the teachers, the school administration, and the employers the opportunity to develop shared views of the educational goals in their specific local context [Spillane and Kenney, 2012, p. 561]. This measure would avoid the duplication of pay principles at schools which cooperate with employers, ensuring that educational programmes address local demands.

This finding resembles the idea that PRP and the accountability and autonomy of educational institutions, "should not be thought of as isolated policies that can be independently introduced" [Hanushek and Wößmann, 2007, p. 19]. Otherwise, any additionally allocated resources risk being disconnected from the changes in teacher practices and student learning (ibid.).

However, alongside the introduction of adequate performance-oriented incentives for teachers, an adequate level of school autonomy should be guaranteed, in a way that school principals will be able to take actions to improve student achievement, and identify relevant school performance criteria (ibid., p. 10).

Recommendations for policymakers who want to create a more market-oriented VET system include taking into account the fact that commercial service provision renders schools vulnerable to market uncertainties, and that the provision of VET might not be economically viable in some educational programmes. The implementation of policies such as PRP also requires sufficient supplemental funding and other types of support, including informational, for the policy goals to be achieved. Relying on off-budget funding is a potentially risky practice which drives the schools towards lower transparency in their operations and practices.

List of Abbreviations

DDC – Dual Dimensions of Capacity

GDP – Gross Domestic Product

GT – Grounded Theory

IHC – “Industrial-Humanitarian College”

PRP – Performance-related pay

SMEs – small and medium sized enterprises

TSTE – “Technical School of Trade and Economics”

VET – Vocational education and training

References

- Acar, M. and Robertson, PJ 2004, „Accountability Challenges in Networks and Partnerships: Evidence from Educational Partnerships in the United States“, *International Review of Administrative Sciences*, vol. 70, no. 2, pp. 331-344.
- Atkinson, A, Burgess, S, Croxson, B, Gregg, P, Propper, C, Slater, H and Wilson, D 2004, „Evaluating the Impact of Performance-Related Pay for Teachers in England“, CMPO Working Paper 04/113, University of Bristol, Bristol.
- Austin, JE 2000, *The Collaboration Challenge: How Nonprofits and Business Succeed through Strategic Alliances*, Jossey-Bass, San Francisco, CA
- Britton, J, and Propper, C 2016, „Teacher pay and school productivity: Exploiting wage regulation“, *Journal of Public Economics*, vol. 133, pp. 75 – 89.
- Bryson, JM 2004, „What to Do When Stakeholders Matter“, *Public Management Review*, vol. No. 6(1), pp. 21-53.
- The Concept of the administrative reform in Russian Federation in 2006-2010. (2005) The executive order from 25 October 2005 № 1789-r. [Konceptiya administrativnoj reformy v Rossijskoj Federacii v 2006 – 2010 godah (rasporyazhenie Pravitel'stva Rossijskoj Federacii ot 25 oktyabrya 2005 g. № 1789-r)].
- Evans, P 1995, *Embedded Autonomy: States and Industrial Transformation*. Princeton, NJ: Princeton University Press.
- Finegold, D, Soskice, D 1988, „The Failure of Training in Britain: Analysis and Prescription“, *Oxford Review of Economic Policy*, vol. 4 (3), pp. 21–53.
- Derkachev, P, Zinovyev AK 2018, „Was the Transition to the Performance-based Contract at Vocational Schools in Moscow Region Successful?“, *Russian Education and Society*, vol. 60(2), pp. 161-181.
- Dickson, M, Gewirtz, S, Halpin, D, Power, S and Whitty, G 2004, „Education Action Zones: Model Partnerships?“, in Franklin, B, Bloch, M. and Popkewitz T. (eds.), *Educational Partnerships and the State*, Palgrave MacMillan, New York, NY, pp. 109–136.
- Dolton, P, Marcenaro-Gutierrez, OD 2011, „If you pay peanuts do you get monkeys? A cross-country analysis of teacher pay and pupil performance“, *Economic Policy*, vol. 26 (65), pp. 5–55.
- Dudyrev, FF, Romanova, OA, and Shabalin, AI 2018, „Dualnoye obucheniye v rossiiskii regionah: vjdeli, luchshiye praktiki, vozmoznosti rasprostraneniya“ [Dual education in Russian regions: models, best practices, opportunities], *Education Studies*, vol. 2, pp. 117-138.
- Dudyrev, FF, Shabalin, AI 2015, „Rossiiskoye professionalnoye obrazovaniye: novaya konfiguraciya studencheskih potokov“ [Russian vocational education: a new configuration of students' streams], *Universitetskoye Upravleniye: praktika i analiz*, vol. 3, pp. 6-20.
- Federal state educational standard of middle-range vocational education level on the vocation “cook, baker” [Federalnyi obrazovatelnyi standart srednego professionalnogo obrazovaniya po professii povar, konditer] 2016, Adopted by the order of the Ministry of Education and Science of Russia from 09.12.2016 No. 1569.
- Ewing, BT 1996, „Wages and Performance Base Pay: Evidence from the NLSY“, *Economics Letters*, vol. 51, no. 2, pp. 241-246.

- Fretwell, DH, Wheeler, A. 2001, *Russia: Secondary Education and Training*, World Bank, Human Development Network, Secondary Education Series, The World Bank, Washington, D.C.
- Gonzalez, RA, Firestone, WA 2013, „Educational tug of war: internal and external accountability of principals in varied contexts“, *Journal of Educational Administration*, vol. 51, no. 3, pp. 383–406.
- Hallinger, P, Heck, RH 2010, „Collaborative leadership and school improvement: Understanding the impact on school capacity and student learning“, *School Leadership and Management*, vol. 30 (2), pp. 95-110.
- Hanushek, EA, Wößmann, L 2007, „The Role of Education Quality in Economic Growth“, Policy Research Working Paper 4122.
- Hanushek, EA, Woessmann, L. 2008, „The role of cognitive skills in economic development“, *Journal of economic literature*, vol. 46(3), pp. 607-68.
- Harris, A 2001, „Building capacity for school improvement“, *School Leadership and Management*, vol. 21, no. 3, pp. 261–270.
- Hatch, T. 2001, „Incoherence in the system: Three perspectives on the implementation of multiple initiatives in one district“, *American Journal of Education*, vol. 109, pp. 407-437.
- Hellwig, W 2007, „Vocational Teachers in Russia“, in Grollmann, P, Rauner F (ed.), *International Perspectives on Teachers and Lecturers in Technical and Vocational Education*, Institut Technik und Bildung, University of Bremen, Bremen, pp. 205-228.
- Hess, GA, Jr 1999, „Expectations, opportunity, capacity and will: The four essential components of Chicago school reform“, *Educational Policy*, vol. 13, pp. 494-517.
- Holt, DT, Armenakis, AA, Harris, SG, Field, HS 2007, „Toward a comprehensive definition of readiness for change: A review of research and instrumentation“, *Research in Organizational Change and Development*, vol. 16, pp. 289–336.
- Honig, MI, Hatch, TC 2004, „Crafting Coherence: How Schools Strategically Manage Multiple, External Demands“, *Educational Researcher*, vol. 33, no. 8, pp. 16–30.
- Information Bulletin, 2017, *Monitoring VET: quality of education and training in Russian Federation*, Ministry of education and Science of the Russian Federation. [Informacionnyi blulluten' Monitoring SPO...]. Moscow.
- Kane, T. J. and Staiger, DO 2002, „The Promise and Pitfalls of Using Imprecise School Accountability Measures“, *Journal of Economic Perspectives*, vol. 16, no. 4, pp. 91–114.
- Kelly, KO, Ang, SYA, Chong, W, Hu, WS 2008, „Teacher Appraisal and its Outcomes in Singapore Primary Schools“, *Journal of Educational Administration*, vol. 46, no. 1, pp.39-54.
- Law of the Russian Federation On Education of 10th July 1992.
- Law of the Russian Federation On education of 29 December 2012. No. 273. Paragraphs 96, 101.
- Lavy, V 2004, „Performance Pay and Teachers' Effort, Productivity and Grading Ethics“, Working Paper 10622, National Bureau of Economic Research, Cambridge, Massachusetts.
- Lazear, EP 2000, „Performance Pay and Productivity“, *American Economic Review*, vol. 90, no. 5, pp. 1346-1361.

Malen, B, Rice, JK 2004, „A framework for assessing the impact of education reform on school capacity: Insights from studies of high stakes accountability initiatives“, *Educational Policy*, vol. 18, no. 5, pp.631-660.

Malen, B, Rice, JK, Jackson, C, Hoyer, KM, Hyde, L, Bivona, L, Sutter, J 2011, *Implementation, payouts, and perceived effects: A formative analysis of Financial Incentive Rewards for Supervisors and Teachers (FIRST)*. Prince George's County, MD: Prince George's County Public School System.

Malen, B, Rice, JK, Matlach, LK, Bowsher, A, Hoyer, KM, Hyde, LH 2015, „Developing Organizational Capacity for Implementing Complex Education Reform Initiatives: Insights From a Multiyear Study of a Teacher Incentive Fund Program Educational“, *Administration Quarterly*, vol. 51, no. 1, pp. 133–176.

Marsden, DW 2004, „Value for Money“, LSE Research Online Documents on Economics, London School of Economics and Political Science, LSE Library.

Marsden, DW, French, S 1998, „What a Performance: Performance-related Pay in the Public Services“, Centre for Economic Performance Special Report, London School of Economics, viewed 20 September 2017, <<http://cep.lse.ac.uk>>.

Ministry of Education and Science of Russian Federation Database (Analytical forms 2013 - 2018), viewed 20 May 2018
<http://eis.mon.gov.ru/education/SitePages/%D0%A1%D0%9F%D0%9E_%D0%A4%D0%BE%D1%80%D0%BC%D1%8B.aspx/>.

Murlis, H. 1992, „Performance Related Pay in the Context of Performance Management“, in Tomlinson, H (ed.), *Performance-Related Pay in Education*, Routledge, London, pp. 55-72.

Murnane, RJ, Cohen, DK 1986, „Merit Pay and the Evaluation Problem: Why Most Merit Pay Plans Fail and Few Survive“, *Harvard Educational Review*, vol. 56, no. 1, pp. 1-17.

Newmann, FM, King, MB, Youngs, P 2000, „Professional development that addresses school capacity: Lessons from urban elementary schools“, *American Journal of Education*, vol. 108, pp. 259-299.

Organisation for Economic Co-operation and Development [OECD] 1993, *Private Pay for Public Work: performance related pay for public sector managers*, OECD, Paris.

Organisation for Economic Co-operation and Development [OECD] 2009, *Evaluating and Rewarding the Quality of Teachers—International Practices*, OECD, Paris.

Parent, D 2002, „Performance Pay in the United States: Its Determinants and Effects“, in Brown, M, Heywood, JS (eds.), *Paying for Performance: An International Comparison*, Sharpe Publishers, M.E. Armonk, NY, pp. 17-51.

Programma poetapnogo sovershenstvovaniya sistemy oplaty truda v gosudarstvennyh (municipalnyh) uchrejdeniyah na 2012-2018 gody [The Programme for the Gradual Improvement of the Remuneration System in the State (municipal) Institutions in 2012-2018].

Remington, TF 2017, „Business-government cooperation in VET: a Russian experiment with dual education“, *Post-Soviet Affairs*, vol. 33, no. 4, pp. 313-333.

Rice, JK, Croninger, RG 2005, „Resource Generation, Reallocation, or Depletion: An Analysis of the Impact of Reconstitution on School Capacity“, *Leadership and Policy in Schools*, vol. 4, no. 2, pp.73-103.

- Robert, KY 2014, *Case Study Research: Design and Methods*, 5th ed., Sage Publications, Thousand Oaks.
- Russian Federation Federal State Statistics Service Database 2017, viewed 20 February 2018, <http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/en/main/>.
- Sanders, M 2012, „Achieving scale at the district level: A longitudinal multiple case study of a partnership reform”, *Educational Administration Quarterly*, vol. 48(1), pp. 154-186.
- Shaari, I, Hung, D 2013, „Building relationships between the schools and community agencies to meet the 21st century learning demands: Critical factors”, *KEDI Journal of Education Policy*, vol. 10(1), pp. 19-42.
- Spillane, JP, Kenney, AW 2012, „School administration in a changing education sector: the US experience”, *Journal of Educational Administration*, vol. 50, no. 5, pp. 541-561.
- Strauss, A, Corbin, J 1990, *Basics of Qualitative Research*, Sage, Newbury Park, CA.
- Tranter, S, Percival, A 2006, *Performance Management in Schools. Unlocking your Team Potential*, Pearson Education: Harlow.
- Ukaz Prezidenta Rossijskoj Federacii o meropriyatiyah po realizacii social'noj politiki [Executive Order on Implementing State Policy in Science and Education], dated 7.05.2012, no. 597.
- West, A, Mattei, P, Roberts, J 2011, „Accountability and sanctions in English Schools”, *British Journal of Educational Studies*, vol. 59, no. 1, pp. 41–62.
- Woessmann, L 2011, „Cross-country Evidence on Teacher Performance Pay”, *Economics of Education Review*, vol. 30(3), pp. 404–418.
- Wohlstetter, P, Malloy, CL, Smith, J, Hentschke, G 2004, „Incentives for charter schools: Building school capacity through cross-sectoral alliances”, *Educational Administration Quarterly*, vol. 40, no. 3, pp. 321-365.

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