

Career of Young Scientists: Leadership, Professional Competence, and Social Status

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Abstract Over the past few years, systemic and structural-functional transformations in science have taken place in the Russian Federation: the reorganization of the Russian Academy of Sciences, reforms in the activities of dissertation councils, a reduction in the funding of scientific foundations, jobs in budgetary scientific and educational institutions, and a reorientation of the focus of scientific organizations from fundamental to applied. All these transformations primarily affect young scientists. In the context of the transformation of science, the ambiguity of the choice of professional guidelines and the career growth of young scientists can lead to a systemic crisis in the reproduction of scientific personnel. The problems and contradictions that arise in the life of young scientists are caused by the peculiarities of the position of the young scientist as an emerging, emerging subject of the scientific community. The motivating factor in attracting science is the satisfaction of the need to realize intellectual and creative potential. However, the socio-economic situation of the majority of young scientists is unstable as there are certain shortcomings in the personnel policy and the social security system, the distribution of income and material wealth, and the opportunities for realizing personal potential in the scientific community.

Keywords: *young scientists, leadership, professional competence, social status, career path*

1 Introduction

One of the significant factors of the socio-economic development of any country is the increasing role and importance of scientific research and the scientific community. In the context of the transformation of science, the ambiguity of the choice of professional guidelines and the career growth of young scientists can lead to a systemic crisis in the reproduction of scientific personnel. The study of the functioning factors of the socio-professional group of young scientists and their adaptation strategies in the new realities is determined by the need to study the development models of the scientific community. Even though, increasing the personnel potential and bridging the gaps between generations is declared as the main task of the state scientific and technological policy at present, the question of its priorities and the implementation mechanism remains unresolved. The effective use of the innovative potential of young people, the creation of conditions for their reproduction become a priority area of the policy of the Russian Federation, reflected in the Concept of socio-economic development of the Russian Federation for the period until 2020, according to which “the formation of an innovative economy means the transformation of intelligence, human creativity is a leading factor in economic growth and national competitiveness” (Russian Government 2008). In modern Russia, the scientific community is substantially divided, the regions have developed their own research areas and scientific schools,

and academies of sciences of the subjects have been formed, including in the Republic of Bashkortostan. With regard to the above, it is relevant to study the process of formation of the career of young researchers in modern institutional conditions. These issues constitute the main scope of our paper.

2. Theoretical background of the study

Sociological studies of young scientists are at the junction of the sociology of science and the sociology of youth. Thence, the social well-being of young scientists can be considered in the mainstream of social well-being as *“a syndrome of consciousness that reflects the relationship to the relationship between the level of aspirations (mainly determined by the substantive characteristics of a life strategy) and the degree of satisfaction of life-meaning needs (satisfaction with the implementation of a life strategy) in various areas of the subject’s life - professional, educational, family, leisure, communication”* (Petrova 2000). Objective and subjective factors of social and professional well-being are distinguished: in the first case - the demand for the results of science, the prestige of scientific activity, income level, material supply, etc.; in the second - motivation and personal qualities, individual conditions of activity that determine the success of adaptation.

The objective factors of social and professional well-being are the features of financing and demand for the results of scientific activities. Russia is characterized by a low degree of funding for research; the hypertrophied role of the public sector, low demand from the business sector which does not compensate for the emerging decline in the public sector (Chechenkina and Kucherenko 2016). The attitude of academic researchers to assessing the effectiveness of scientific activity was also studied: the introduction of formal criteria causes negative assessments. However, the prevalence of such answers is much lower among the younger generation. At the same time, at the beginning of a career, such criteria (publication activity, indexes, etc.) are assessed as barriers, with the achievement of a certain status, the attitude becomes loyal (see e.g. Sobkin et al. 2018).

The motivation for scientific activity depends significantly on the career strategies of researchers who have changed significantly. Accordingly, the analysis of approaches to determining the success or failure of a scientific career has changed. For graduate students who choose universities as their future place of work, the criterion of success is the availability of a scientific degree, income in the process of scientific activity, if scientific institutions are added to this - credibility among Russian and foreign scientists, as well as freedom of creativity and the possibility of international contacts. But if graduate students intended to build a career in a private scientific center or business in the field of science and high technology, the presence of a degree ceases to play any role, the importance of generating income and freedom of creativity increases. A study of the motivation structure of working scientific youth indicates the preservation of the traditional “ethos” of scientific activity - a craving for knowledge and a desire for scientific creativity (see Ablazhey 2019; or Bedniy and Sapunov 2019). Regardless of the age, researchers believe that in modern Russian society there has been a decline in the social status of scientists, while government policy has devastating consequences; and assessments of the impact of grant funds differ - if the older generation is prone to negative assessments of a decrease in direct funding, then young scientists evaluate positively or negatively depending on the successes or failures in their receipt (Ablazhey 2018). Thus, considering the structure of motivation and social well-being, young scientists, you should consider their diverse categories.

It was previously revealed that the collapse of scientific schools, low starting salaries, especially in academic institutions, negatively affect the system for attracting young scientists. In addition, poor material and technical equipment, low opportunities for academic mobility. At the same time, accelerating the academic mobility of young scientists threatens with a “brain drain” (Kugel and Ascheulova 1999).

3. Research information base

The hypothesis of the study was the assumption that a significant change in career strategies is determined by objective conditions; the motivational core of the scientific activity of young scientists remains the “ethos” of science (universalism, communism, selflessness, organized skepticism); the design of adaptation strategies of young researchers substantially depends on the role of the older generation in the scientific community; the older generation's assessment of the status of the young generation in science is divorced from the self-esteem of the young researchers themselves.

Social adaptation of a person is considered as an attribute property of subjects of social activity, realized through the interpretation of internal and external information models of social being in terms of their compliance with adaptive attitudes, a consistent understanding of the surrounding reality and identity which: a) were purposefully formed from the outside; b) spontaneously assimilated in the process of socialization; c) opened independently (Romm 2002). With regard to the above, the adaptation of a young researcher appears as a construction of social status under the influence of objective and subjective factors that act as motivating or demotivating in the process of scientific activity.

Different structural levels are distinguished in the structure of motivation: at the subsystem level, one can distinguish subsystems of external motivation (social factors), internal (meaning-forming), value (ideals), cognitive (achievements (result-oriented), safety (fear of failure, rejection), and competition (see Karpov and Razina 2014).

As part of the first study, young researchers under the age of 35 years old, with an active research position: either just beginning to work actively in a research environment, or having significant research baggage, became the object of study. The selection criteria were the number of publications, grants, patents over the past 5 years.

In the study of young scientists, taking into account the statistical distributions of the share of researchers in different areas of science (medical, social and humanitarian, natural, technical), the field of employment (universities, the business sector, research organizations), the category of researchers (graduate students, candidates of sciences under 35 years old, doctors of science up to 40 years old, researchers without a degree) corresponding strata were formed. The data collection method is snowball. The total sample size was 150 people. According to the results of the study, 72.1% of researchers have one main place of work in a scientific organization. Among those who have an additional place of work, 38.9% are engaged in research work there. More than a quarter of respondents have additional employment in commercial organizations, 9.3% - in higher education institutions, 4.7% - in secondary schools.

Representatives of the older generation of scientists were interviewed as a control group: Candidates of Science from 40 years old, Doctors of Science with recognized results of research activities and active scientific positions. The sampling was based on branches of science and place of primary work (universities and research institutes). A total of 50 people was interviewed. The data collection method is snowball.

4. Institutional environment

One of the fundamental components of the economic, social and cultural capital of Russia is science. However, at present, the significance of both the institute of science and the attitude towards scientists and the scientific community as a whole is being reassessed. The elite status of the scientist is leveled: the prestige of the profession of the scientist has fallen, his social status has sharply decreased, the participation of scientists in power and the possibility of influence on the management of society have been reduced to a minimum.

The situation of scientists, especially young ones, turned out to be ambiguous after the reforms and transformations of the scientific system of Russia that began in 2013. If, on the one hand, these reforms created the conditions for increasing the professionalism of a modern scientist, on the other hand, they became an obstacle at the very beginning of a scientist's career.

The changes that have occurred over the past few years in the scientific and educational fields, young scientists largely assess negatively, such 36.6% (extremely negative - 7.3%, rather negative - 29.3%). At the same time, positively assessing almost a quarter of all respondents.

However, assessing the conditions for realizing their scientific potential in the region, young scientists noted that the most favorable situation was in the field of active publication activity, as 78.6% of the young scientists surveyed think. Patent activity, along with publications, is the most important indicator of the effectiveness of both organizations and individual researchers. In the republic, more than half of those polled (57.1%) noted this sphere as favorable. Despite the fact that over the past few years, dissertation councils for the defense of candidate and doctoral dissertations have been significantly reduced, 54.8% of young scientists noted that there are conditions in the region for the defense of dissertations. The least favorable is the direction of commercialization of the results of scientific activity and implementation in production and in practice.

The reforms taking place in the modern Russian system of science primarily and to a greater extent affect precisely young scientists, since this group is the most vulnerable. According to the study, to a large extent from the recent reforms of science, young scientists touched on: toughening the requirements for publication activity (number of articles, citation index, articles in publications indexed by Scopus, etc.), reducing the number of dissertation councils in the republic, tightening the conditions for awarding academic degrees and changing research funding within the organization's budget.

The introduction of formal scientometric indicators also quite strongly influenced the scientific activity of young scientists. For 35.9% of respondents, the motivation to search for new knowledge was replaced by the pursuit of the number of publications; 23.1% say that the quality of publications has decreased. However, there are positive changes. 20.5% of young scientists began to focus on promising research topics, while 10.3% improved the quality of research and publications. At the same time, for 15.4% of the examined, the introduction of scientometric methods had no effect.

Assessing the conditions that exist for young scientists of the republic, representatives of the older generation note that at present in the region there are favorable conditions for the defense of dissertations, the establishment of international contacts, and the publication and patent activity.

From the point of view of reproduction of scientific personnel, experts of the older generation gave a ball-point assessment to the following problems in the Republic of Bashkortostan: young people generally do not

want to engage in science - 5.6; unmotivated people go to science (including graduate school) - 6.3; low efficiency of graduate school - 5.5; young researchers want to do science, but do not find work in the research field - 5.2; young researchers working in universities, research institutes and enterprises, for various reasons, leave the research field - 6.4; young researchers are forced to combine work in the research field and other industries - 7.9.

Comparing social support measures for young scientists compared to what was for them in the early 2000s, the representatives of the older generation noted that:

- In the 2000s, there were no measures of social support for young scientists. Now - housing certificates, apartments, and the grants for young scientists;
- In the early 2000s there was an opportunity for young people to participate in actions to purchase housing at cost. Now this is not. There is no construction from educational and scientific institutions”
- All measures to support young scientists are very insignificant and ineffective;
- A grant for young people to increase to 1 million rubles, more opportunities to participate in international conferences and internships in foreign research centers;
- With the scale of prices, nothing has changed. The bureaucracy has grown;
- The social protection of young scientists in Soviet times and even in the early years of the post-Soviet time was incomparably higher than now: they received a decent scholarship, there was the possibility of half-time part-time work either by a teacher or a researcher. Graduate students had the opportunity of paid annual (at least two times in three years) scientific trips to Moscow to work in the capital's libraries, paid trips to participate in scientific conferences. The graduate student must have been employed in organizations where his graduate school was located. For special achievements, some graduate students received increased scholarships. After graduate school, the organization committed to employing a graduate. Modern postgraduate students are deprived of all this;
- Now there are more grants for young people, but they are not enough. In the early 2000s there were more dissertation councils. This was an incentive to protection factor. Now it's more difficult for young scientists to defend themselves “on the side” in all respects, including and financially.

5. Employment and career motivation

Nowadays, one of the most important criteria for the competitiveness of the modern state is the level of state of its scientific and technological potential. At the same time, the problem of reproduction of the personnel potential of science is becoming more acute. The reason for this is the lack of highly qualified, with high research potential, motivated by scientific innovation.

The young scientists listed in our research over the past 3 years were engaged in scientific research in the following formats: the majority (42.9%) worked on their dissertation; 33.3% - were the head or member of a research group formed for a specific project; 19% are working on a doctoral dissertation.

At the same time, the main problems in introducing practical results of scientific activity in the opinion of young scientists interviewed were:

- Bureaucratic delays, isolation of the university from the enterprise;
- There is a problem of loss of qualification of scientific research organizations;
- Administrative barriers, many unnecessary procedures for coordination;
- There is no connection between science and production, designers are required who can create devices based on research results.

As part of our study, young scientists were asked to list the factors that attract science, giving them a mark. All factors were divided into 3 categories: economic, development factors and social. The most significant factors were development factors: the ability to learn interesting and new things - 8.5; interesting environment, surroundings - 8.1; belonging to a scientific school / feeling of one's team, belonging to a community of like-minded people - 7.3; prestige of a scientific career - 6.7; free mode of operation - 5.3. Social factors have become the least attractive factors in science.

Building a successful career for a young scientist according to the survey depends on the presence of the following factors, which were also rated on a 10-point scale: hard work, perseverance, determination - 8.9; intelligence, talent, ability - 8.6; sociability, ability to build interaction and the ability to creative thinking - 8.5; continuous self-education and team, team - 8.4; continuous training - 8.2; access to financial resources, grants - 7.8. It is noteworthy that the factor of “communication and dating in the academic environment” scored the lowest score - 7.4.

Respondents were also asked to note the obstacles present in their careers that prevent them from achieving science goals. So, personal obstacles for most of the respondents began: in science, there are practically no well-paid jobs, low wages (50%); insufficient self-organization, just laziness and not enough time for scientific activity due to work in two or more places (20.5% each). 25% of respondents said that they did not see any obstacles. The most common obstacles of an external nature were noted: lack of funding in the areas of activity of interest (60.5%); poor organization of research in the organization where I work; risk of losing a job; lack of trust in you as a mature researcher on the part of senior colleagues and / or scientific adviser (18.4%). The ideal image of a successful scientist among the young researchers surveyed is as follows:

- Leading his main scientific activities abroad, with short projects, occasionally living in his homeland;
- Authoritative, having a lot of knowledge in many fields of science, competent, competent, having experience in working with commercial organizations, having a contribution to the science of different fields, having his own research group;
- Financially secure person with progressive modern outlook on life;
- The image consists of the life of the following scientists: Korolev, Kurchatov, Chelomey, Tupolev, Koshkin, Lomonosov, Steve Jobs. With their energy, talent, combined with their capabilities to achieve their goals, to introduce ideas into a product of a cosmic scale provided by a country, a company;
- One is technically provided with a laboratory and equipment, so one is financially secure and does not think about where to earn an extra thousand rubles to feed his family;
- A scientist integrated into the global scientific community and leading developments in promising areas of research.

6. The balance of career and family

Personal reasons do not play a significant role as barriers in achieving goals in scientific activity in the assessments of young scientists. The primary factor that should be mentioned is the material factor - low wages and lack of funding.

A significant part of graduate students is determined to conduct research activities, but in the non-state sector, which indicates a huge potential for attracting young specialists to innovative enterprises and the growth of high-tech production. There are not so many people who are ready to replace scientific activity, which indicates a conscious choice of a scientific career by graduate students.

Every fifth young researcher is focused on changing jobs, but most do not intend to change their field of activity, but only want to leave the organization where they currently work. The vast majority (more than two-thirds) intend to work in the same organization where they worked at the time of the survey.

Regarding the reasons for the job change, the respondents indicated most often low incomes. A little less importance is attributed to the lack of demand for scientific results and the lack of transparency in funding, the lack of a decent assessment by management, which, apparently, is the root cause of low incomes. Equal importance is attached to poor material and technical working conditions. There is a big role for the quality of management in the organization, the presence of demand for results and the quality of the organization of scientific activity.

But as for the representatives of the older generation, if they are in solidarity with respect to low incomes, lack of demand for results and poor working conditions, otherwise there are discrepancies. Thence, if the lack of transparency of financing turned out to be a significant factor for young researchers, the older generation does not pay much attention to this reason as an incentive for changing the place of work of the younger generation. And they see career growth, or rather, its absence, as a reason that can "push" out of the organization, while this factor is not so significant for young people themselves.

There is a reflection of a different understanding of the success of a scientific career: if income is its result, then the content of the activity of the older generation is more connected with career and professional growth, then among young researchers, income generation is associated with distribution within the organization with the leading role of management. Social injustice acts as a pushing factor, since young researchers are not given a subjective role in organizing scientific activity directly in the organization.

Judging by the answers to questions from the older generation of scientists, revealing the balance of family and work, most often the balance shifts toward work: young scientists work constantly or often until late on work days and work at home, so extracurricular activities at home are common in half the cases.

It is worth noting that almost a third of young researchers are committed to temporary or permanent work outside the republic, which simultaneously indicates the potential of academic mobility and migration activity. This is at the same time a positive fact, pointing to the focus of young researchers on inter-regional and international contacts, but also negative for the reproduction of the scientific personnel of the republic. It is proved that the growth of mobility leads to migration activity, and these are its objective consequences.

7. Continuity in science

Succession in science involves not only building up scientific knowledge on the basis of theories and methodologies of previous generations, but also various forms of mentoring, translation of scientific ideas, behaviors and scientific ethics, ways to build a career, the formation of a scientific school, where these processes should take place. However, in conditions of serious socio-economic transformations, when intergenerational ties are breaking down, not only in science, but in society as a whole, it is difficult to preserve and reproduce further the accumulated scientific capital. Changes on a global scale (globalization, scientific and technological discoveries, technological development) have significantly affected the models of building a career, understanding of success and forms of scientific activity. The emphasis on practical orientation, implementation of results, search for financing of scientific projects forms a different approach to scientific activity, which is not always clear to the older generation, accustomed to fundamental science. Perhaps this affects a different understanding by generations of scientists of the necessary support that the younger generation expects from the older.

The younger generation of researchers does not appreciate the support provided by the older generation of scientists not high enough. So, to a greater extent, this support is expressed in training, mentoring in the field of professional knowledge - 6.9 points out of 10 possible, consultation in the preparation of articles - 6.7 points, assistance in writing a dissertation (scientific management of a dissertation) - 6.5 points, assistance in establishing scientific relations - 6.2 points, assistance in organizing protection - 6.1 points.

The least highly valued assistance in finding a job is 5.0 points, experiments and the necessary calculations for development are 5.4 points, assistance in preparing applications for grants, prizes, contests, etc. - 5.7 points, in the organization and execution of scientific projects - 5.8 points. At the same time, the older generation of scientists among the priority areas of work with the young generation is called: training, mentoring in the field of professional knowledge (78.6%), assistance in finding a job (57.1%), assistance in preparing grant applications, awards, contests, etc. (50.0%), assistance in establishing scientific relations (50.0%), assistance in organizing and implementing research projects (42.9%).

According to the results of the study, almost half (45.5%) of young scientists believe that the support provided by the older generation of scientists is not enough. Interestingly, the older generation of scientists also does not always believe that the support they provide is sufficient: 35.7% answered negatively to this question. Among the reasons for the lack of support for young people, the scientists called the lack of material and technical base (60%), the lack of a decent shift (45.0%), the insufficient level of remuneration for such work (40.0%), the lack of need for knowledge and experience on the part of young people researchers (39.0%).

Among the answers of young scientists to the question "Do you think the older generation is fulfilling the task of forming a new generation of scientists?" 38.8% answered positively. Among those who answered negatively, one can single out individual statements characterizing their opinion:

- In the Soviet period, yes, since there is a generation of scientists, at present there aren't so many young scientists and results - therefore, it's not fulfilled;
- In general, yes, but not the most talented, but politically opportunistic individuals often grow up;
- Promote only their people;
- I believe that the older generation can be divided into 2 groups: those who support their work and those who do everything with commercial gain.

Quite often, young researchers are faced with negative situations of unfair use of their work. So, only 44.2% of young scientists have never stacked with such a relationship. More often, young scientists are charged with the obligation to indicate in publications, as the author of a scientific adviser, the head of an organization/department (25.6%), the assignment of work that a senior scientist must do himself (teaching, development, etc.) (20.9%), the use of labor results in articles with priority in publications, experiments, etc. (18.6%) and other cases of exploitation.

However, quite often young researchers themselves are unscrupulous in scientific activity. The study showed quite frequent manifestations of infantility, unwillingness to exert more efforts to achieve a result (41.0%), low degree of responsibility (36.8%), plagiarism, attribution of work results in publications without reference (35.9%), low level discipline, non-compliance with obligations (34.2%). It is unacceptable for continuity in science to fail in exactly this way: the translation of behavioral models that discredit science and the scientist as a researcher.

The challenges facing the scientific community now require the formation of an active scientific community, the possibility of communication at different levels - international, Russian, regional, the potential for introducing the results of scientific work and the mechanisms for such implementation.

According to the results of the study, there is a mismatch between the expectations of young researchers in terms of mentoring, scientific support and assistance from the older generation of scientists. The experienced

scientists themselves feel the same. The young generation has a need for building scientific ties and continuity, and it is quite acute, but due to a number of material reasons, a feeling of lack of an explicit request, potential valuable personnel, the older generation of scientists does not realize this need. There are processes of unscrupulous scientific ethics, evaluation of a scientific partner as a resource, on the part of both generations of scientists, which also creates barriers to effective interaction. Moreover, according to the survey, both generations have valuable research qualities associated with the influence of historical and socio-economic transformations.

8. Income and prospects

Assessment of the financial situation of young scientists shows a rather different level of financial well-being. An analysis of the financial situation of their families showed that 37% can afford the purchase of household appliances, but buying a car is difficult; a third (27.0%) can afford only the basic household items (refrigerator, TV); about 4% cannot even afford the satisfaction of primary needs - in clothing and food. Some families (15%) can afford everything except an apartment, and 10% have no difficulties at all. However, it should be noted that the most affluent groups have an additional place of work, in addition to scientific (or educational) organizations, and mainly in the commercial sphere, those who do not have an additional place of work are classified as the poorest.

A fifth of young researchers (20.5%) do not see the possibility of earning additional income using their scientific knowledge and qualifications neither for themselves nor for their colleagues; 30.8% believe that there is such an opportunity, but not in the organization where they currently work. Only a quarter (23.1%) of the researchers noted that in the organization where they work, there is such an opportunity.

To increase the income of young researchers, first of all, additional competitions and grants for young scientists are needed, financed from the budget of the Republic of Belarus (66.7%), support for innovative and entrepreneurial initiatives of young scientists: legal, accounting, informational (42.9%), promotion additional education, advanced training of young scientists (40.5%), competitions and grants for young scientists, funded by the organization where the researcher is employed (33.3%).

Thus, the most vulnerable category of young researchers with high poverty risks - those who work in a scientific organization, do not have additional employment, i.e. devotes himself entirely to science. Of course, this is a serious factor in the outflow of personnel from the scientific sphere, in addition, the need for secondary employment reduces the effectiveness of scientific activity, sprays the potential of the scientist.

9. Conclusions

All in all, our study carried out in the Republic of Bashkortostan showed that the key qualities that a scientist should have can be divided into personal ones (sociability, creativity, desire for self-development) and professional ones - the ability to commercialize results, the connection with practice, the transfer of technology to production. Scientists emphasize that, on the one hand, the role of science in the economy is underestimated, on the other hand, they indicate the presence of high requirements for performance. Intergenerational communication among researchers is of no small importance, while it speaks of both the need for mentoring of experienced colleagues and barriers in the form of lagging behind modern requests from society and concentration of power resources. Among young researchers, a request for social justice is very powerful. Team building is an important direction in management in organizations where research is being conducted.

The highest degree of effectiveness of scientific work if the problem affects the research interests of the scientist. Often, the motivation for scientific work is not income, but personal enthusiasm, interest, in addition to strict regulations from above, the introduction of strict administrative rules leads to a decrease in the effectiveness of a scientist.

Significant motivational effect for a researcher is given by membership, participation in a collective project, a sense of belonging to a scientific school or a specific team, which allows you to more fully realize your potential, the resulting synergistic effect of cooperation often allows you to get a more significant result.

A certain problem is created by the fact that management cannot control the process of scientific activity, since often it occurs during non-working hours, its intensity also depends on various, often subjective, reasons.

Modern realities and the emergence of new approaches to management require a change in the approaches of conducting scientific activity - instead of an authoritarian system, a project-oriented approach, focus on specific results by stages of work. It is necessary to create conditions for conducting scientific activity in such a way as to maximize the realization and reproduction of intellectual capital, taking into account the expectations of the scientists themselves, which will increase the effectiveness of scientific activity.

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References

- Ablazhey AM (2018) New trends of integration of academic science and higher education in the period of radical reforms. *Siberian journal of philosophy* 16(4):103-113. doi: 10.25205/2541-7517-2018-16-4-103-113
- Ablazhey AM (2019) Institute of postgraduate studies in the post-Soviet period: comparative analysis, part 2. *Philosophy of education* 19(3):46-56
- Bedniy BI, Sapunov MB (2019) New model of Russian postgraduate studies: problems and prospects. *Higher education in Russia* 28(1):130-146. doi:10.31992/0869-3617-2019-28-1-130-146
- Chechenkina TV, Kucherenko KS (2016) Rossiyskaya nauka v kontekste mezhstranovykh sopostavleniy: obzor pokazateley finansirovaniya issledovaniy i razrabotok. *Nauka. Innovatsii. Obrazovaniye* 3(21):123-135
- Karpov AV, Razina TV (2014) Features of motivation of scientific activity of employees of commercial firms in the field of research and development works. *Dagestan state pedagogical University Journal Psychological and pedagogical Sciences* 4:15-20
- Kugel SA, Ascheulova NA (1999) Motivatsiya i napravleniya professionalnoy mobilnosti uchenykh v usloviyakh perehoda k rynochnym otnosheniyam. *IJET RAS, Scientific conference*, pp. 192-194
- Petrova LE (2000) Social well-being of young people. *Sociological research* 12:50-55
- Romm MV, *Adaptation of personality in society: theoretical and methodological aspect*, 1st edn. (Novosibirsk: Nauka, 2002), 275 p.
- Russian Government (2008) The concept of long-term socio-economic development. The Russian Federation for the period up to 2020 <http://government.ru/info/6217> Accessed 9 Nov 2017
- Sobkin VS, Andreeva AI, Rzaeva FRK (2018) Researcher in the field of education: barriers in the actualising scientific work. *National journal of psychology* 2(30):135-145. doi: 10.11621/npj.2018.0214