JPSE
The Spirit of Education

Journal of Practical Studies in Education
ISSN: 2634-4629

GTA Press

Book Review: Kuzminov, Y., and Yudkevich, M. (2022). *Higher Education in Russia*. United States: Johns Hopkins University Press.

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Received: 19/10/2022
Accepted: 05/12/2022
Published: 01/01/2023

Volume: 4 Issue: 1

How to cite this paper: Manolescu, D. (2023). Book Review: Kuzminov, Y., and Yudkevich, M. (2022). Higher Education in Russia. United States: Johns Hopkins University Press. *Journal of Practical Studies in Education*, *4*(1), 1-7
DOI: https://doi.org/10.46809/jpse.v4i1.61

Well aware of the challenges presented by a thorough analysis of the higher education in Russia, Yaroslav Kuzminov and Maria Yudkevich make it very clear in the Preface of the book that their key idea was that "higher education is intrinsically intertwined with everything that happens in society, and thus with various social, economic, and political aspects of society's functioning." To this they add when they also point out that, in its turn, the higher education system shapes the intellectual elite by investing in new human capital, by spreading a system of values, and consequently enhancing the capabilities of individuals. As outlined in the same context, the authors focus on the performance of the higher education system with its quantitative, qualitative, and structural components, to which they add a clear explanation of the very design and features of these institutions as they continue to develop and change. The book is organized in 9 chapters, is introduced by a Foreword written by Philip G. Altbach, includes copious notes and references to help the reader fully understand the complexity of issues discussed throughout the volume, in an impeccable translation by Victor Sonkin, with a final revision done by Lisa Unangst.

The monumental task of delivering answers to questions raised right from the start becomes obvious when the reader is presented with an honest and well-balanced overview of the institutions that make up a unique education system with its achievements, its experiments, and its own innovations. As revealed at the onset of the project, the Russian universities reflect the historical evolution of the country with its political and social events of 1861, 1917, and 1991. Characterized by meritocracy and universal values, the Russian higher education institutions have generally blossomed due to their research values at various levels of it society, including local communities as well as the state as a whole. Specifically, its unique character can easily be seen if we consider the Academic Excellence Initiative (5-100 Program), conducted at 21 of Russia's best universities, and which cost more than US $3 billion, and which already has a considerable positive impact on the entire education system.

As a well-rounded and complete whole, the book is crafted as an in-depth analysis of the Russian higher education system, going through a historical background, followed by the Soviet era and the first post-Soviet decade, delving into the contemporary landscape, governance and resources, and then sifting through the academic profession with its focus on research. The last two sections outline the organizational logic from processes to projects which finally lead to subsequent strategies for internationalization.

Chapter I, *Historical Background*, goes back in time and covers the period between Peter the Great's reforms in the late 17th century and the first decades of Bolshevik rule at the beginning of the 20th century. The virtual birth of the higher education system was signaled by the creation of the Academy of Sciences in St. Petersburg and the first Russian university. Peter the Great is quoted to have said the following:

> I am obliged to reap great haystacks, but there is no mill; there is no sufficient water nearby to build a watermill; there is sufficient water far away, but I shall not have enough time to construct a canal, since our longevity is insecure; for that reason, I have begun building a mill first., and ordered that others start working on the canal, which

impel my heirs to lay on water to that mill that would be standing there. (Vernadskyi, 1988, p. 205; quoted on p. 2)

Although Peter the Great helped found the Academy of Sciences in the Capital, St. Petersburg, he died a few months before its opening. His extensive travels and consultations with leading European academicians shaped his vision of higher education, only to leave Catherine I to sign the Ukase (Decree) establishing the institution.

Several key facts are necessary to assess the complex and multi-faceted education system in Russia. Looking at its basic curricula, state controlled and funded, the authors also explain why it was necessary to place an important emphasis on the importation of ideas from Eastern and Western European sources. By the end of the 19th century the public and the private sectors began to take shape, both of which had to meet the demands of growing industry and of people who did not fit well within the government-dominated system. When the Bolsheviks came and the Soviets rose to power, what followed was a period of a "new fully state-controlled system," which was highlighted as "providing highly qualified staff (primarily engineers and technicians) for the plan-based economy." (p. 2) It is worth mentioning that, especially during the first twenty-five years of Soviet rule, the number of higher education institutions grew from under 100 before 1917 to more than 800 in 1940, a fact which included the growing number of students as well.

Over time, the expansion of programs, philosophies and ideas brought welcome awards in personalities who became known over the world like Mikhail Lomonosov, regarded by many as the founder of Russian science, although he only attended classes in Moscow for less than a year and was educated at the University of Marburg in Germany.

As pointed out in the first chapter, the 19th century saw the shaping of the Russian higher education system, where "The first universities were being founded […] not because the society had to satisfy a long-felt need, not because social thought and social awareness were culturally expanding, but in the interests and at the initiative of the state." (Zagoskin, 1902; quoted on p. 7) During the first decade of the century several universities were established: "in 1803, 1804, and 1805 the universities of Wilno (Vilnius), Kazan, and Kharkov opened their doors, respectively. The University of Dorpat was also relaunched; originally founded in 1632 in Sweden and subsequently closed down, it resumed activities in 1802," (p. 8) when Alexander I reinstated the institution as an imperial university.

According to historian Andrey Andreyev (2005), universities in the Russian Empire "were different from European contemporaries." The 1804 charter mentioned that "any university student who proceeded from the Ministry of National Education to any other sort of state service was granted personal nobility; before 1845 the highest honorary degree of *Doctor Habilitatus* granted its bearer hereditary nobility." (p. 9) Another striking difference between the two systems – European and Russian – was evident in the course-based instruction system. To be more specific, "The existence of a certain set of knowledge, necessary to be mastered, led to the shaping of a course system, where students were not selecting courses based on their interests and understanding, but were forced to go through a series of obligatory courses in a strictly defined order." (p. 9)

A period of well-deserved success came between 1875 and 1884, when the number of university students grew significantly, followed by another succession of years between 1865 and 1899, which was made possible by "the achievements of domestic chemical science" and by such names as Dmitryi Mendeleyev, Alexandr Butlero, Vladimir Markovnikov, and "the application of these achievements in the chemical and oil industries." (p. 13)

When the 20th century started, non-university higher education options appeared, with programs offered at university-level education which included privileged legal schools, others specializing in Oriental studies, and "both higher military and pedagogical institutions." The same period witnessed the establishment of "higher military and naval schools, divinity schools, agricultural schools, and engineering and industrial schools. The latter included both multi-department polytechnic institutions that prepared engineers for various branches of industry as well as single-department engineering schools encompassing mining, transport, electro-technical studies, architecture, and construction." (p. 20)

Furthermore, the late 1920s and 1930s, described by historians as "The Great Break," brought about "large-scale forced industrialization and agricultural collectivization, followed by radical restructuring of the whole social and economic foundation of the USSR." This also entailed a considerable switch to the new, Soviet framework for higher education institutions, and ultimately the first signs of government repression (Kislitsyn, 1993; Kumanev, 1991), when the Shakhty Trial (1927-1928) accused a large group of managers and specialists from the coal and mining industries of "subversion and sabotage" against the Soviet state. Along the same lines, the historical development saw the period of "cultural revolution" of 1928-1932, when the fields of education and cultured were dramatically restructured. Major changes included pedagogical institutes "made responsible for training all levels of teachers, and universities, stripped of that function, were thus 'less functionally useful' for the non-academic society." (p. 33) In the same vein, we find that from 1928 to 1931 the Communist Party promoted students named 'thousanders' in engineering and similar institutions, where they represented "the main subjects of the advancement policy, or the system for the promotion of workers to positions of authority envisioned in the First Five-Year Plan of 1928-1932." (p. 36)

The Great Patriotic War, when the Soviet forces participated in the Second World War between 1941 and 1945, caused huge changes which affected the economy and the higher education system as well. Nevertheless, after the first year of the war, students who initially dropped out or were called up or volunteered to serve in the army, came back to universities and the whole education process was re-started. Not only that, but "sixty new higher educational institutions were created, including fifteen focused on industry and construction, seven on agriculture, and three on transport and communication (Kruglyanskiy, 1970, p. 130; quoted on p. 40). The decades that followed saw more changes and new formats as the Russian education system continued to expand.

Significant developments that took place in *The Soviet Era and the First Post-Soviet Decade*, which if the title of Chapter 2, can still be noticed in present-day Russia. As the authors point out, "Higher education institutions were enlarged, higher education became mass scale, the quality of education became more diverse, the domain of correspondence education grew, and a new system of entrance examination took place." (p. 41).

Amid historical events, mostly shaped by the beginning of the Cold War and the creation of the socialist bloc, which also changed the face of the world map, the authors posit that the Soviet political and economic influence on socialist countries also affected, among other areas, the education systems in those countries. As new developments made the relationship between universities and research sectors relevant and necessary, in 1946 the Moscow Institute of Physics and Technology (MIPT) was established and results were quickly fruitful because of the physicists and future Nobel Prize winners Petr Kapitsa and Lev Landau. Furthermore, another institution of higher learning was created in 1953, when the training of specialists in the upcoming nuclear industry formally opened The Moscow Engineering Physics Institute (MEPhI), a perfect example of the importance of the military sector.

The trend continued with the opening of the Siberian branch of the USSR Academy of Sciences in 1957, followed by the Novosibirsk State University in 1958 and the Krasnoyarsk State University in 1963. The stability of such institutions - made possible by industrial growth - was consequently measured by their numbers: "there were 800 higher education institutions in 1950 and 883 in 1980." (p. 44) Evening classes conducted at factories, schools and other enterprises helped students to attend after work, which also explained the increase in student enrolment across the board. Without a tenure system, competition among faculty members attracted the best applicants and extended the availability of teaching staff, despite the fact that "faculty salaries were, on average, about one-third of an institution's aggregate expenditures." (Daynovskiy, 1976, p. 21: quoted on p. 49)

According to the authors, the period of stagnation and the alarming trends of the 1970s was quickly followed by the realization that there was an increasing gap between the Soviet Union and the developed countries in the fields of science and technology and therefore leaders in higher and secondary specialized education launched a reform issued in 1986 and amended in 1987. (p. 60) What was needed was obvious: "the authors of the reform suggested introducing elements of market economy into the plan-based mechanics of specialist training." (p. 61) That meant that traditional lectures and seminars should be replaced by project-based work methods which empowered students and their professors to work together with industry-based consultants. When the 1990s came with an educational landscape and outlook that evidently had serious problems, new challenges and possibilities arose. In particular, the 1992 law "On Education" symbolized the transformation spirit that eventually created new educational institutions in the context of the emerging market relations. "The law offered new opportunities, but at the same time, at least formally, it introduced new control and regulation tools." (p. 62) The results became clear when the numbers came on: in 1992 Russian higher education institutions had a student body of 2.6 million, which then grew to 4.7 million in 2000. Everything was new, including the students, the programs and their tuition policies.

At present, as described in Chapter 3, *The Contemporary Landscape*, there are 724 higher education institutions with a student body of 4.1 million, of which the public sector represents 68% of universities and 92% of students. (p. 69) Private universities make up a small portion of the education system, organizing mainly training programs in social sciences and humanities. Based on education mobility, it is estimated that students tend to choose universities of Moscow and St. Petersburg, where the best applicants are accepted.

When discussing popular views regarding higher education, the authors point to the general attitude towards the pragmatic aspect; respondents argue that higher education is "the necessary condition for getting a good job and general career building." (p. 71) To be more specific, three factors are thought to motivate Russians to consider this stage of their education:

> First, the avoidance of compulsory military service for young men (the importance of this factor has diminished in recent years due to changes in legislation); second, the low status of alternative secondary vocational education as a career track – however, many young people enter vocational schools (colleges) not because they plan to get a job, but because they want to enter a HEI (Higher Education Institution) using a simpler route. The third factor has to do with the specifics of secondary school education; school education in Russia is 25% shorter than in most developed countries owing to fewer years of study and very long school holidays. It does not provide graduates with a robust knowledge of foreign languages, social literacy (economics, law), philosophy, or advanced mathematics. (pp. 71-72)

Generally speaking, higher education programs, their targets and requirements also include a group of industry-specific universities training specialized experts "in manufacturing industry, agriculture, transportation, and communications, economics and law, medicine and healthcare, education and art." (Kuzminov, Semenov, and Froumin, 2013; quoted on p. 80) As such, major universities can be classified as leading classical universities like Moscow State University and St. Petersburg University, federal universities like Siberian Federal University and Southern Federal University, national research universities like Moscow Engineering Physics Institute and Moscow Institute of Steel and Alloys, and other higher education institutions, including those universities selected as most competitive on the international level. The same category can also boast "anchor universities, focused on the development of specific regions and functioning as catalysts, developing the intellectual, educational, and innovation capital of those regions." (p. 84)

The same chapter also reveals an uneven pattern regarding the issue of access to university and the chance to be well educated, which differs considerably across Russia. In the authors' opinion, the current network of universities is unevenly distributed across the country, with higher education opportunities being located in large cities, mainly Moscow and St.

Petersburg. As mentioned in the book, the Russian state is known for its overwhelming power and its significant role in funding, strategies, and market position.

A smooth transition takes the reader to *Governance and Resources*, which constitutes Chapter 4, with a focus on key factors regarding government control in major aspects: curricula, evaluation requirements, licensing, finances, admission quotas, per capita financing, "as well as cash inflow from tuition-paying students." (p. 105) Within the Russian Federation, the government's higher education policy is centralized and oversees both public and private institutions. That the state performs its governing role becomes clear when we look at the ways in which it is implemented:

> The first is the reality that the major components of the higher education system are public or government-controlled universities. […] The second avenue is the government's control over public universities as subordinate entities (administration management); for instance, every federal ministry issues dozens of orders, instructions, and recommendations each year that are binding for its subordinate universities. […] The third avenue is the fact that the governance of higher education (all universities, including non-public ones, are subject to it) occurs at the federal level, which makes it different from many countries of the world, where this function is largely performed at the regional level. (Carnoy et al., 2018; quoted on p. 106)

As an integral part of the Russian education system, most universities are considered "establishments," which, according to Russian law, are non-profit organizations created by the founder for strictly defined management, social, cultural, or other non-profit functions, fully or partly funded by the founding entity." (p. 107) Such establishment-based institutions are to be found elsewhere in countries like France and China, but, unlike in those countries, the Russian universities "do not have any independent external representation in the governance system, such as can be found in the UK, Germany, France and USA." (p. 108)

One major component of government control is the curriculum in higher education institutions. According to the federal state standards, first established in 1994, there are "three types of requirements: (1) the results of mastering the curriculum; (2) the structure of the curriculum (which compulsory courses the graduate is supposed to have mastered); and (3) the conditions of its implementation (to what extent the education process requires space – how the classrooms and library premises would be equipped, etc.)." (p. 115) With respect to the efficiency of uniform curricula, the authors find several benefits that would make it possible to organize joint programs across Russian universities, or in conjunction with their foreign partners, which also enables academic mobility of students, tracking courses and content, to name a few.

Other areas of government control can be found in licensing and accreditation, monitoring of the performance of the institutions, and funding of the Higher Education System, with its general principles to specific principles of budgeting. In a bird's eye view of the period between 1992 and 2005, funding was insufficient, and spending money within budget had to be controlled, mostly because of incompetent management. The light at the end of the tunnel came in the early 2000s reform, when "social obligations were replaced by the notion of state service." Afterwards, lists of state services were issued at the federal and regional levels taking into consideration the distribution of authority between executives and municipalities.

In time, the principle of "customer first, money follows" was gradually replaced by the principle of government assignment, or state target set for universities. The Federal Law No. 83-FZ issued on May 8, 2010 thus became the basis of the new Russian budgetary reform. Among other things, it promulgated "the general number and structure of budget-based admission, identifying the state target, the model of carrying it out, and the specifications of government guaranteed funds." (pp. 132-133) In recent years, however, the new decisions brought a considerable reduction in state-funded admission in fields like social sciences, economics, and management programs, as well as humanities, but it rose in engineering programs. The major issue still remains, in the author's view, the fact that the government sets the structure of fields of study, the curriculum within these areas, and controls the implementation of required standards simply by being the main funding source.

Chapter 5, *Through School to University*, masterfully dissects the basic parameters of school education in Russia, its structure and curriculum, as well as the major tools of selecting students for higher education, and the consequences of the transition from standard entrance examinations to the Unified State Exam (USE). The authors make a quick but necessary incursion into several key facts that characterize the Russian school education, and they mention that in their country families invest a lot of time and money educating their children. Consequently, half of university applicants make it to bachelor's or specialist studies right after school. Research shows that university admission is based on the results of the USE, which in fact is the final school-leaving examination. The switch to unified exams is touted to have "eliminated admission-related corruption, and simultaneously extended opportunities and access to higher education for young people from low-income families and for those living outside large urban areas." (p. 145)

A thorough compulsory education starts in Russia, as a rule, when the child is seven years old and the system is divided into three levels:

- Primary education (four years of study);
- Lower secondary education (five years of study);
- Upper secondary education (two years of study). (p. 146)

Intricately fused into the general education are the curriculum, academic achievements, the role of the family, including parents' involvement regarding homework and other activities involving substantial expenses like stationery and notebooks. Nevertheless, in the authors' opinion, "there are no incentives for organizing effective work with at-risk or marginalized children (from single-parent families, with lower household income, residents of socially deprived areas, etc.)" (p. 151)

Competition and cooperation in the Russian school system greatly contribute to the success of today's institutions. Schools that are deemed to be more competitive have more chances to select the best students for college admission. Working with universities has its advantages because it gives schools numerous opportunities to carry individual or methodological projects; by the same token, certain universities get a chance to promote important programs and to market their profiles among parents. The best example of cooperation would be the three- or four-year programs accepting students after the 7th or 8th grade, with costs covered by the region's budget. (p. 153)

In conducting their research for this project, the authors duly observed that, while there is diversity in the student body, college students usually come from families where "the share of fathers having earned a higher education diploma or degree is about 55%; mothers with a diploma or degree constitute about 60%." (p. 162). Another relevant factor noted in the project closely relates to employment during university studies. For various reasons, more than half of the students seek employment during their final years of study. This is a remarkable achievement which speaks volumes about the widespread nature of student employment and the numbers speak for themselves: in the bachelor's programs, "about 75% of master's students work, on average, more than the developed countries average." (Chirikov and Maloshonok, 2015; quoted on p. 181) The chapter ends with a clarification and consequently declare that currently the Russian higher education system is a combination of elements that survived from the Soviet era and traits of market logic obviously developed over the recent decades.

An objective perspective of the academic community constitutes the focus of Chapter 6, The Academic Profession. The achievements of the Russian higher education system are largely the results of the hard work of the professional staff. What needs to be mentioned right from the start is the high teaching loading in a system without tenure. "Today contracts with faculty are short term, and their extension is far from certain." (p. 190) The number of faculty members reach 230,000 at the time of the publication of the book (2022), 40 % fewer than in 2007. One of the main reasons the numbers went down can be easily explained by the fact that government took drastic measures to increase the number of students per faculty member, which was meant to improve the overall efficiency of these institutions. When analyzing the student/faculty ratio, the authors note that "there are about 11 FTE (full time equivalent) students per one faculty member, whereas in the USA the value is 14, in China 18, in India 24, and in Brazil 25." (p. 191)

In the absence of an academic market or competitive pressure, and compounded by the lack of geographic mobility, universities usually attract their own graduate students, who are drawn into the teaching process. Low funding also leads researchers to believe that this strategy is used because of "the stable cultural, social, and academic standards that endorse the close nature of the system." (p. 196) Since most universities cannot offer competitive salaries, students are hired before they reach the labor market. When they become faculty members, they rarely participate in international conferences, nor do they develop a network outside their own departments. However, the authors are optimistic when they assert that "In the recent years there has been a trend to increase external hiring," (p. 197) which also brings a shift from simply teaching to largely getting involved in research.

As the authors note, compensation and faculty remuneration have influenced the buildup of the academic core and consequently faculty motivation and performance. Specifically, lack of resources shaped the reality at most universities where researchers of international or domestic reputation can be hired. Furthermore, since 53% of faculty get their income from the university itself, about 80% of internal income is remuneration for their teaching, the rest representing administrative and research within the same institution. Whereas teaching remains the main ingredient of the education process, as time goes on, research is beginning to get more attention, which in its turn is reflected in academic contracts.

In the same context, a major issue is revealed in the duration of the contracts, which may be defined by university policy and basically utilized as a major support in increasing teaching and research quality. Unfortunately, the short duration of contracts has caused a lot of resentment among faulty members, and that has forced the Ministry of Higher Education and Science pay more attention to the values of research, and introduced "Monitoring of performance of Russian HEIs", which clearly stipulates that, "if research-related results are low, the university risks being closed down or reorganized." (p, 205) One predominant question that the current situation has presented refers to challenges the university creates and affects the faculty community. It remains to be seen how new trends can build on traditional academic core, which also leads to the issue of competition for human capital, and which one will prevail in the balance between teaching and research.

The great divide between the domains of higher education and academic research is viewed as an outstanding feature of the Soviet era, and this becomes the essence of Chapter 7, Research at Russian Universities. In their unflinching support of research in the context of today's market economy, the authors provide valuable evaluations of performance and development. The transition from planned economy to the current needs and requirements of a market economy is viewed in detail with a historical analysis attached for exemplification and clarification.

According to the authors, research and instruction in the 20th century were to a large extent separated in the Russian culture. Most universities were mainly focused on the process of teaching, and much less on research. Politics consisted the main reason the Bolsheviks in their conversion of education into a proletarian campaign. Training the teaching staff automatically meant channeling efforts and funds to influence politically the new generations. The social and economic development of the same century needed "an avalanche of various research organizations independent of universities (where their creators actually taught during the first Soviet decades) was therefore pragmatic and supported by new political realities." (p. 227)

Research and science institutes were helped in their development as explained by Loren G. Graham (1975), who argued that there were three major factors: (1) international research in Germany, France and USA had demonstrated the viability of such activities; (2) national initiatives "whose contents and organization indicated that research projects would not be confined

within existing university labs"; (3) politically there came a quest for a research branch, "servicing the needs of the industrialized society." (p. 229) Apparently, the impetus of these research institutes made them more prestigious than universities, which only brought them severe criticism, and in time, research left the universities.

During the Soviet years, as the authors assert, research had come under rigid control and the whole concept of science became integrated in the long-term planning and automatically inseparable from politics. With government in complete control, several decrees were issued during the thirty years from 1957 to 1987: "On measures for improving research at higher education institutions,", "On further development of research at higher education institutions," and "On improving the efficiency of research at higher education institutions," which made research and industry even more integrated. (p. 232)

A new period of university research development began, according to Gokhberg (2011), when the collapse of Communist rule ended, and priority funding had to be replaced by residual funding. Long-term planning, with its government contracts and state monopoly, suddenly became obsolete. Normal research activities were affected by severely reduced salaries, and consequently led to a considerable brain drain of faculty staff and researchers who were forced to look for off-academic side jobs. (p. 235)

A nuanced perspective of Russian higher education research led the authors to navigate through the period of transition in 1990s, when assistance was provided by foreign aid. Technical assistance was offered by the European Union, more specifically by countries like France and Germany, coupled with grant programs coming from foundations like the Fulbright Program and McArthur Foundation, among others. Modern teaching methods, including greater methodological support for students and Western Educational technologies raised the teaching standards in various field of study, especially in economics, sociology, and management. Translations of textbooks, study guides, and international programs empowered Russian researchers and faculty to voice their opinions and, as such, become a real part of the global academic community.

Underscoring the effects of all these changes, Kuzminov & Yudkevich also explore the role of academia, today's research in international and joint laboratories, the intrinsic value of resource centers and research/project training, as well as sources and tools of research funding. The Russian government, in its turn, has made the creation of international laboratories the principal goal so they could achieve international-level results. Building on the concept of cooperation, waves of such laboratories appeared in Moscow (37) and St. Petersburg (39), but also in Novosibirsk (26), Nizhny Novgorod (23), and Tomsk (13). In their concerted effort to sustain the new wave of research, the head of each laboratory is expected to take an active part in "shaping, establishing, and developing the team." (p. 246)

Multiple accomplishments brought a special touch to research performance at the university level, resulting in a large number of quality publications, which place Russian research on par with the UK, Germany, China, and the USA in the context of Web of Science journals, where STEM disciplines, especially physics, chemistry, and mathematics have turned out to be most competitive. At the same time, postgraduate studies with a focus on thesis/dissertation led to the publication of remarkable articles in 2,312 (2018) in such journals approved by the Higher Attestation Commission. Though not fully developed and implemented, changes in education and research only constitute a fruitful beginning with hopes of further gains in the years to come.

From the changes minutely discussed previously, the focus in Chapter 8, Organizational Logic. From Processes to Projects, moves smoothly to what is called the "project approach" at the university level. This new project component has already impacted the organizational structure of the Russian higher education, with chairs becoming departments and faculties turning into institutes. Such initiatives (carried on at twenty-one universities) and their overwhelming attributes are obviously producing impressive results leading to a significant improvement of the research quality. The novelty of the approach can be easily detected on a world stage, with the new governance principles being guided by development programs and key performance indicators. The propensity for changes has led to an increased focus on global rankings, which ultimately has modified the universities' attitude so that they could compete with similar institutions on a national and international level.

As viewed from the authors' perspective, "the Russian university governance model is largely defined by the nature of the relationship between the university and the government, as well as by its institutional conditions that determine university's function." (p. 261) Yudkevich and Sivak (2015) point to several conditions that must be scrutinized and which can be exemplified by "low academic mobility, widespread academic inbreeding, and insufficient development of the national academic market." (ibid.)

The academic structure is reviewed with a comprehensive description of the rectors' and the vice-rectors' functions, followed by the dean, and the whole chair system. Heavily indebted to the government's point of reference, as the authors assert further, the higher education administration's control is based on authority. "Within this framework, a dean is more powerful than a chair head, a chair head more powerful than chair professors, and semi-rank professors more powerful than junior-rank teachers." (p. 269)

In recent years, a remarkable shift has been detected in the field of strategic development projects within universities. Since the government requires an efficient use of federal spending, that means it has full control of the market of applied research and development, attracting international students, and providing new education products. Simultaneously, however, these requirements have brought multiple regulatory constraints which hamper the transformation process considerably. Notwithstanding, several Russian universities have become more international, which in fact can be seen in the academic ranking of world universities. As of 2015, twenty-three Russian universities are quoted to hold a position in the general ranking.

While the organization of academic life in Russian has recently seen a dramatic shift from old routines to developmental tasks, global rankings have become an irresistible engine with new benchmarks for changes. One such much-needed realignment with similar institutions on the global scene is undoubtedly internationalization, which constitutes the corollary of Chapter 9. At this level of integration, the Soviet Union boasted about accomplishments related to considerable numbers of international students from Africa, Asia, and Latin America, who attended technical and engineering programs; nowadays economic specializations make up the most popular field.

The language of instruction for all students, including the international segment, is Russian, but the authors have noticed an increasing number of applicants preferring to be trained in English. The current situation requires all foreign students to be proficient in Russian, which makes the education programs in Russia less attractive. Very few universities are known to offer bilingual programs, and this will be the next project going forward for most Russian institutions of higher education. The authors conclude that the internalization process, made possible by the new digital technologies, will have to be re-evaluated in such a way that all integral components can benefit from the quality of teaching and the inestimable effectiveness of research within the global market of educational services.

Hailed as an exhaustive analysis of the Russian higher education system, the book is also an encyclopedic approach to what the readers will find in the intricate research conducted by Yaroslav Kuzminov and Maria Yudkevich and will leave us all with a better understanding of the structure of a unique composite of human values in an ever-changing society. Although the Russian higher education system grew from European roots, the authors prove beyond the shadow of a doubt that it is worth analyzing it because of its distinctive character and because it has developed outside the global experience. The overview is a well-balanced appraisal of the successes accomplished over time, with the inevitable questions that still remain to be answered at the beginning of the 21st century.

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