

Accessibility of Preschool Education

I. Abankina, L. Filatova

Received in
December 2017

Irina Abankina

Candidate of Sciences in Economics, Professor, Director, Institute for Education Studies, Institute of Education, National Research University Higher School of Economics.. Email: abankinai@hse.ru

Liudmila Filatova

Candidate of Sciences in Economics, Senior Researcher, Institute for Education Studies, Institute of Education, National Research University Higher School of Economics. Email: lmfilatova@hse.ru

Address: 20 Myasnitskaya St, 101000 Moscow, Russian Federation.

Abstract. The article presents the latest changes and modern mechanisms in providing accessibility of pre-school education that relate to the tasks in the formation of norms and values of early childhood development. It explores the issues related to developing private entrepreneurship in the field of child care and education, and the regulation of legislative changes aimed at increasing competition between private and municipal kindergartens. It assesses parents'

basic demands for modern accessibility mechanisms when electronic services for admission to the pre-school institution are introduced; it analyses various aspects of increasing pre-school education accessibility with regard to the selection of a kindergarten, the regime of day-care programs, the number of children per group, and the work of the day-care assistants. Special attention is paid to comparing public (municipal) pre-school educational institutions and private kindergartens in order to evaluate the different opportunities which enable parents to have a free choice of pre-schools institutions. The article describes the vectors in the development of pre-school education accessibility, and in levelling the starting opportunities for successful educational strategies.

Keywords. pre-school education, child care, accessibility, accessibility mechanisms, private kindergartens, competition, choice of kindergarten, electronic queueing solutions.

DOI: 10.17323/1814-9545-2018-3-216-246

The article was prepared during a study based on a sociological survey of preschool teachers and parents of pre-school pupils conducted in 2014–2016 by National Research University Higher School of Economics in cooperation with Yuri Levada Analytical Center with the assistance of the Ministry of Education and Science of Russia as part of the Monitoring of Education Markets and Organizations.
Translated from Russian by I. Zhuchkova.

Under the current education system, preschool educational institutions are being granted more and more freedom in choosing the content, methods, and techniques of the education they provide. It boosts the diversity of kindergartens, enabling them to implement innovative educational technology and unique customized curricula.

Families today recognize the importance of preschool as the base level of education and share the responsibility for their children's education with preschool institutions. There is evidence that parents have been putting more trust in preschool institutions, their professionalism and quality lately. As one of the development strategies, preschool establishments seek to engage with parents and skillfully promote a

meaningful dialogue in the best interests of children, their development, health improvement and maintenance.

Accessibility of early childhood education is determined by the availability of places in preschool institutions and the capability of households to pay for relevant services. Right now, children as a demographic cohort are at the highest risk of poverty, which is twice as high as the average rate. For many parents, sending a child under three years of age to a preschool educational institution becomes a true challenge.

Accessibility is quite often understood as a quantitative characteristic, or metric (for an extensive overview of such studies, see [Geurs, van Wee 2004; Páez, Scott, Morency 2012]). Application of a specific metric is contingent on the subject of research. Normally, accessibility is measured in three dimensions: social (socioeconomic characteristics of a family), spatial (location of home, educational and transport infrastructure), and motivational (factors motivating families to move for the choice made or eliminating such necessity) [Niedzielski, Boschmann 2014]. Quantitative education accessibility research methods are used in academic research to adequately operationalize the concept of accessibility and assess the pros and cons of the selected indicators as well as methods of their calculation and application.

However, quantitative parameters are sometimes not enough to provide a comprehensive analysis. Regardless of how elaborated an accessibility improvement policy may be, its implementation in real life often has to deal with unexpected and hard-to-realize barriers, which are not always subject to quantitative evaluation [Curl, Nelson, Anable 2011]. For instance, it will be rather difficult to relieve social tension in a preschool institution if no allowance is made for how the latter is perceived by families, i. e. its direct consumers. Accessibility as a multifaceted characteristic of the education system can be unraveled by finding out how it is perceived by the parties involved and concerned.

The poor infrastructure of preschool education and the lack of efficient support for nonpublic institutions eager to improve it are the main barriers to solving the problem of the accessibility of early childhood education in Russia today.

This research paper studies the efficiency of the existing mechanisms for providing accessibility of preschool education and the opportunities for promoting equalization of educational opportunities among children from different social backgrounds and population groups. Such opportunities are contingent on expanding the private sector of early childhood education. The results of the Monitoring of Education Markets and Organizations, conducted by National Research University Higher School of Economics in cooperation with Levada Center by order of the Ministry of Education and Science of Russia, are used to measure the extent to which national preschool education support strategies are consistent with parental demands and social realities as well as to assess the reception of legislative

transformations in preschool education. The Monitoring studies behavior and performance of the key actors in education and the impact of personnel policies on improving accessibility of quality preschool education.

The article is structured as follows. Section one introduces the characteristics of education accessibility and various participation rates which are crucial for early childhood education. Section two provides an insight into the existing financial and economic mechanisms for improving accessibility of preschool education, in particular the differences in preschool education funding across countries, including the involvement of parents, the nonprofit sector, and businesses. Section three zeroes in on the main requirements that parents expect the education system to meet in terms of access to preschool education as well as their attitudes to modern accessibility improvement methods in the context of dealing with the online preschool registration system. Special focus is placed on comparing public and private preschool educational institutions and seeking ways to equalize children's chances for quality education. Section four is devoted to the development of preschool education infrastructure. It presents the results of implementing a national public preschool management model that implies cooperation between kindergartens and parents and their constructive interaction in the best interests of children.

1. Preschool Education: Contemporary Challenges

Early childhood education is designed to provide early socialization of children, develop age-specific 21st-century competencies and creative skills in them, and teach them to establish relationships with adults and peers. Attending early childhood education classes is not just a popular trend anymore but rather a social prerequisite for a successful start in life. Besides, preschool institutions enable economically active parents to get back to their careers without losing many of their skills. International studies show that development of the collective and individual nursing care system is a pivotal component of family policies [Vincent, Ball, Kemp 2004; Mollborn et al. 2014; Wong et al. 2014]. Such a system makes it as easy as possible for a woman to re-enter the workforce after giving birth to a child [Stooke 2012; Ertas, Shields 2012], whereas long maternity leave, unavoidable in the absence of such a system, reduces the probability of giving birth to more children, thus having adverse effects on the demographic situation.

Preschool education issues have become particularly pressing in present-day Russia: on the one hand, parents have actually developed a higher demand for preschool education and a higher level of trust for preschool institutions; on the other hand, the shortage of places in kindergartens has exacerbated the problem to an extreme degree, provoking negative attitudes. As a result, the focus of public and expert attention has shifted towards making preschool education accessible. The problem is especially acute in large cities, where most

preschool institutions are overcrowded. Early childhood education is the most actively developing sector of education today. In this context, municipalities and education authorities need to improve accessibility by supporting both public and nonpublic establishments.

According to the Monitoring of Education Markets and Organizations, Russia has been developing new forms of preschool education but they are not always supported by parents [Abankina, Rodina, Filatova 2017]. What matters for parents is the cumulative effect of education, socialization, and skills for building peer relationships. Preschool education is clearly dominated by the public sector: principals of municipal kindergartens report feeling no competition from the private sector. It means that competition as a mechanism for improving quality and attractiveness does not work with preschool education. In fact, it is families' demands and requirements that can motivate preschool institutions to improve the quality of their services. A survey of preschool principals confirms that the influence of parents on the performance of preschool institutions has increased and many kindergartens have become more family-oriented and made their management systems more transparent.

Families recognize the importance of preschool education as the base level and seek to share the responsibility for raising and educating their children with preschool educational institutions. Over recent years, a number of countries with the highest school achievement indicators—including Finland, Sweden, England and Australia—have adopted new programs and standards for preschool education, strengthening their focus on early childhood development. These countries design their policies with due regard for the high return on investment in early human capital, substantiated by Nobel prize winner James Heckman [Heckman, Layne-Farrar, Todd 1996; Heckman et al. 1997].

Subjective perceptions of accessibility are represented in society, i.e. by every individual or family as a holder of the right to education. With regard to preschool education, such holders are preschoolers and their parents (or other legal guardians). Declared universal access implies that all children have equal access to preschool education. In addition, the law prescribes that the government should adopt education standards and requirements to allow for curriculum diversity and the opportunity to design curricula of various complexity and specialization depending on students' educational needs and capabilities.

Therefore, accessibility of preschool education involves equal access to education for everyone, on the one hand, and the right for choosing one's own educational trajectory, on the other. Equal access and choice variety are the key qualitative characteristics of contemporary preschool education. However, society is heterogeneous in many ways: levels of income, lifestyles, occupations, leisure preferences, etc. As a result, perceptions of accessible and quality preschool education vary across different social groups.

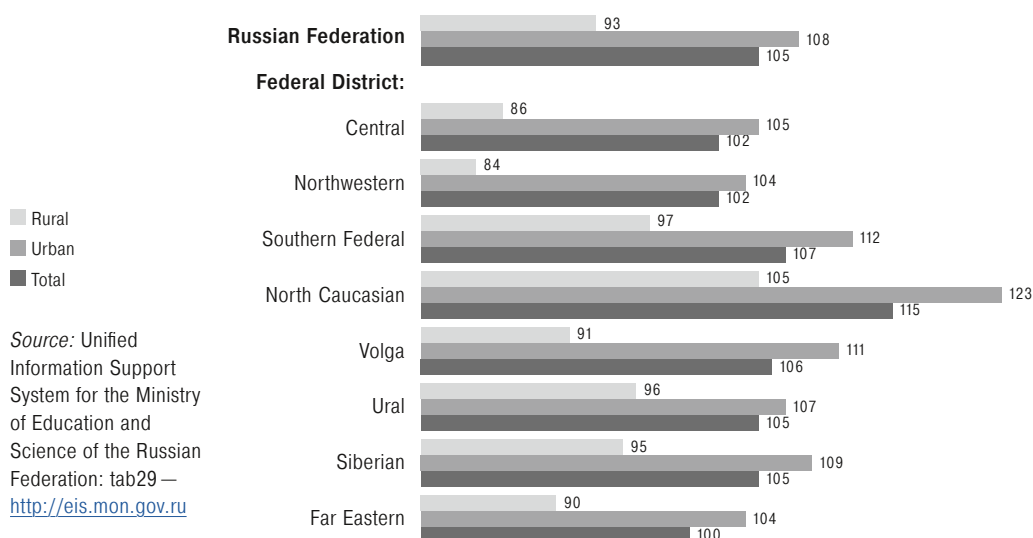
David Konstantinovskiy and his co-authors suggest measuring accessibility of preferred education by the presence or absence of any barriers to it, whether sociocultural, territorial, economic, institutional, informational, or motivational [Konstantinovskiy et al. 2006]. Measures to remove those barriers should be an overriding priority when implementing social policies. Meanwhile, variance of demand for education is contingent not so much on particular barriers as on the diversity of consumers' preferences and beliefs about education.

Every preschool educational institution is characterized by a specific geographical range of accessibility, which depends on the adopted enrollment rules. There are basically two major enrollment models used globally: choice-based, similar to a free market, with parental choice as the driving force, and strictly neighborhood-based. For instance, the United States and Great Britain have traditionally applied the neighborhood-based model. There is evidence that this enrollment model sometimes leads to stratification of preschool educational institutions, which become dependent on the socioeconomic status of families in the neighborhood. Society quite often sees such stratification as unwelcome. The cure can be found in the so-called liberal models, among which choice-based enrollment models are classified, although their effects are not always unambiguous [Gibbons, Silva 2006; Hoxby 2000].

Another way of boosting competition among educational institutions is proposed by the economic theories of monetarism and neoliberalism, underlain by Milton Friedman's ideas. It is assumed that the government reserves the only leverage to itself—that of controlling the amount of money in education—allocating it proportionally to the number of students enrolled. By doing so, it creates a quasi-market environment for educational institutions, granting them a lot of autonomy in choosing the content of education and solving their academic issues [Friedman 2006]. As a result, the number of students becomes the key factor, prompting institutions to swell their groups, especially now that the maximum group size requirements, formerly stipulated in sanitary regulations, have been abolished. Some institutions may merge to jointly maintain their administrative structures and other departments, which is known as economies of scale. A few studies analyze the effects of enrollment rate on economic efficiency (for a comprehensive overview of such studies involving American schools, see [Leithwood, Jantzi 2009]). No distinct relationship, however, can always be found. For example, a study on financial indicators of New York educational institutions found that per student spending was the highest in schools with capacity from 600 to 2,000 [Stiefel et al. 2000]. However, few studies have focused on the effects of kindergarten mergers so far.

Variable demand for education results in variable offers, at least in those countries that implement reforms designed to promote competition in education or did so in the past, such as the United States and Great Britain [Gibbons, Silva 2006]. Yet, school diversity does not

Fig 1. Number of students per 100 places in institutions providing services in preschool education and childcare, 2016



necessarily imply equal educational opportunities; in fact, it may even make social segregation worse.

The overall accessibility rate¹ of preschool education for children aged between 3 and 7 is gradually growing in Russia: from 92.71% in 2013 to 98.94% in 2016. Some regions, however, have not succeeded in ensuring a level of accessibility that would not only consider all children who need preschool education but also ensure vacant places for everyone. Some of them even resorted to a rather questionable way of reaching the performance targets, making their preschool education groups as large as possible. For instance, there were 123 children per 100 places in preschool educational institutions of urban localities in North Caucasian Federal District in 2016, which is higher than in any other federal subject (Fig. 1).

About 7.3 mln children attended preschool educational institutions in Russia in 2016. The average participation rate of children aged from 2 months to 7 years² in preschool education provided by educational

¹ Preschool education accessibility rate is defined as a ratio of the population of children aged between 3 and 7 receiving preschool education in the current year to the sum of the population of children aged between 3 and 7 receiving preschool education in the current year and the population of children aged between 3 and 7 on the waiting list for preschool education in the current year.

² Participation of children in preschool education is defined as the ratio of the

institutions subordinate to federal subject's executive authorities was 57.4%. The rate grew by 1.4% to 56% in 2015, being much higher in urban localities (63.2%) than in rural ones (42.2%). These urban and rural participation rates increased in 2016 by 1.1% and 1.4%, respectively. Short-stay early childhood education groups were attended by 2.35% of all children attending municipal preschool institutions in 2016.

The low participation of children in preschool education is explained by the limited capacities of the regions and the lack of demand for relevant services caused by the peculiarities of ethnic cultures and local traditions. In particular, North-Caucasian families prefer educating their children at home.

Promotion of nonpublic institutions' services in preschool education also makes it more accessible. Private education has been growing rapidly due to significant changes in the legal framework in terms of granting governmental funds to relevant institutions so that they could cover their expenses on implementing preschool education programs as well as removing excessive administrative, financial, information and other barriers to establishing private preschool institutions. The national sanitary regulations have been cleared of a number of restrictions and overly detailed wording that impeded the multi-purpose use of various preschool institution rooms and premises and the development of private preschool education. On the whole, 102,622 students (1.4% of the total population of students attending preschool educational institutions, including branches) were enrolled in private preschool institutions in Russia in 2016³.

The most rapid growth of the nonpublic preschool education sector has been observed in Samara Oblast, where private institutions are attended by 12.7% of children in the respective age cohort. High growth rates have also been demonstrated by the Sakha Republic (7.4%), Yamal-Nenets Autonomous Okrug (4.8%), and Khabarovsk Krai (4.1%).

Russian law allows educational institutions to set up preschool family courses to satisfy the population's need for early childhood family education. According to the Russian Federal State Statistics Service (Rosstat), there were 2,345 preschool family education groups in Russia as of January 1, 2017, attended by 19,540 children including those aged under three. It also appears advisable to provide preschool courses under institutions of higher-level education, which has already been practiced by 26 colleges in 12 regions. However, this initiative has been facing funding problems so far, the problem still awaiting a legislative resolution.

population of children attending preschool educational institutions to the total population of children aged from 2 months to 7 years inclusive, adjusted for the population of children of the respective age attending schools.

³ Unified Information Support System for the Ministry of Education and Science of the Russian Federation: tab39p (UISS MESR) <http://eis.mon.gov.ru>

2. Ways of Ensuring Accessibility of Preschool Education

Preschool education is becoming an essential component of national education systems in the OECD countries, so the latter develop and implement various institutional structures and funding mechanisms to make it more accessible. The key role in funding this level of education is played by local authorities which cover the best part of the expenses on teacher salaries and property maintenance. Private businesses are invited to provide peripheral and auxiliary services, i. e. supply preschool institutions with meals, medical, transport and administrative services. In addition to governmental measures designed to attract money from different sources, education accessibility is enhanced by rational use of acceptable funding methods and wise resource allocation.

There are a variety of funding mechanisms for early childhood development programs, and every country finds an approach of their own which is best matched with their national education system and the environment it operates in. These approaches differ in the size of contributions from service suppliers (property and staff suppliers) and consumers (parents) as well as in the role played in service supply and funding by partners from the public, private and community sectors. Thus, the following major early childhood education funding models can be identified:

- *Centralized government funding.* This is the direct funding of children's education via rent of premises, personnel recruitment, etc. (e. g. in France);
- *Decentralized government funding.* The government allocates block grants to municipalities (a sum of money granted without specifying the expenditure items) for specific needs or to be used at the beneficiary's discretion, and municipalities implement children's education programs (e. g. in Sweden or Germany);
- *Government incentives (result-based funding).* The government funds suppliers of early childhood education services through block grants or per capita financing. The size of grant depends on the level of performance, kindergartens with higher levels of national accreditation being financed more heavily (e. g. in some U.S. states);
- *Mixed model and market formation.* The government dissociates itself from early childhood education as much as possible, allowing parents and non-governmental organizations to finance most of the services. Yet, it renders supplementary services, such as informing and consulting parents, and provides transportation between school and home for children (England is now actively creating market conditions in addition to other funding models);
- *Government subsidies for families and private funding.* The government grants sizeable subsidies (education vouchers or monetary payments) to allow low-income parents to pay for early childhood education services provided by private businesses or

nonprofit organizations. If subsidies are large enough, they guarantee viability of private suppliers (e. g. in New Zealand).

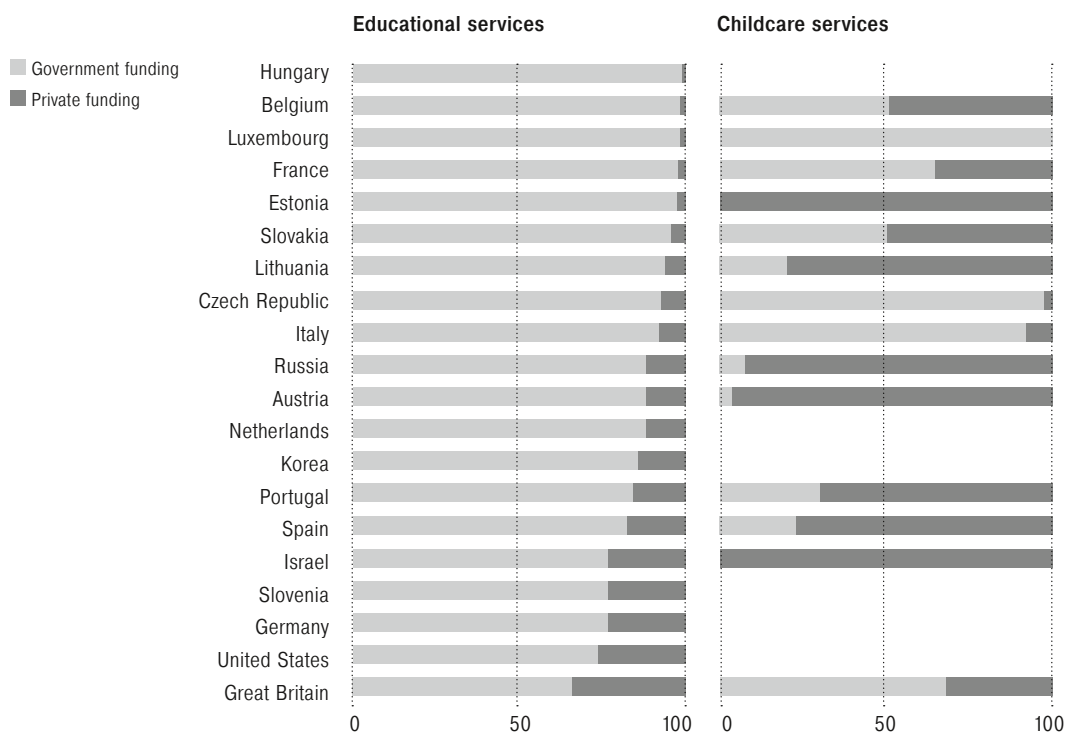
Governments of a number of countries recognize the importance of investing in preschool education and childcare—such investments increase the level of social justice in society. In most OECD countries, especially those in Europe, governments participate actively in preschool education funding, exerting a great influence on its development [OECD2017]. Out of ten three-year-olds, seven are enrolled in preschool institutions in such countries (as compared to eight in Russia), and the rate among four-year-olds amounts to almost nine out of ten (which is nearly the same as in Russia). As for two-year-olds, 40% attend preschool institutions in the OECD countries (as compared to 48% in Russia). About 75% of the OECD countries pursue integrated early childhood education and care programs, spending from 0.1% to 2% of their GDP on this sector [OECD2016]. Institutional structure and the size of government spending are only two of the factors determining accessibility of preschool education, which is also contingent on the involvement of nonprofit organizations, private businesses and households in funding of this education level. Studies show that the nonpublic sector can play a crucial role in providing accessibility of services in preschool education and early development of children between 18 months and 3 years of age [West 2006; Hu, Roberts 2013; Song 2016; O'Connor et al. 2016]. Participation of the nonpublic sector may take diverse and flexible forms: family courses offered by self-employed entrepreneurs, nonprofit day care centers, leisure and sports centers, etc.

The ratio of sources of preschool education funding varies greatly from country to country (Fig. 2). The governments of Belgium, Luxembourg and France cover nearly all the costs of early childhood education, while parental contribution is higher in Great Britain, the US, Germany and Slovenia than in other countries. In Estonia and Israel, childcare services are fully compensated from private sources of finance. The Lithuanian, Spanish and Austrian governments cover from 4% to 23% of the costs of early childhood care services. In Russia, parents of preschool-aged children have their expenses on such services partially reimbursed both in the public (municipal) sector of preschool education and in private kindergartens⁴ [OECD2017].

Private funding in the OECD countries covers on average 31% of spending on early childhood education programs and 17% of spending on preschool education programs [OECD2016]. Meanwhile, government investments still account for about 90% of all funding used to maintain kindergartens, i. e. to pay teacher salaries, maintain the property, buy and develop methodological and educational materials, pro-

⁴ Unified Information Support System for the Ministry of Education and Science of the Russian Federation: http://eis.mon.gov.ru/education/SitePages/Дошкольное_формы.aspx

Fig. 2. Sources of funding of early childhood education and care institutions, 2013 (%)



vide general administration, and other types of activities. Money from private sources of finance covers the best part of expenditure (about 54% on average) on peripheral services, i.e. meals, medical services, and transportation. In some countries, such as Estonia and Israel, all auxiliary services, which include administration, are fully covered by private investors.

In Australia, Colombia and Denmark, the governments actively support private structures and households in their preschool education organization efforts. Twenty percent of preschool education programs are funded by the private sector in these countries, while the governments lend considerable financial support to private institutions in the form of transfers that account for over 5% of all the government spending on preschool education.

Intergovernmental transfers serve to support early childhood education in most countries. Financial transfers granted by national and regional structures to local authorities in the OECD countries normally account for about 13% of total government spending on education. By delegating preschool education funding and decision making to local authorities, the government brings them closer to families' needs.

Local authorities make the greatest contribution to public funding of early childhood education in the OECD countries, covering on average 48% of the total government spending on this education sector, even before transfers from national and regional authorities are taken into account. Government funding of preschool education is structured differently across the OECD member and partner countries, from education fully subsidized by federal governments (e. g. Costa Rica, Ireland and New Zealand) to education nearly fully funded by local authorities (Estonia, Norway, Iceland, Slovakia and Great Britain). Regional authorities play a significant role in Argentina, Spain and Belgium. As for Russia, funding of the major preschool education programs has been handed over to the regional level since 2014, so municipal authorities now only provide financial support to kindergartens, i. e. pay their utility and property maintenance bills.

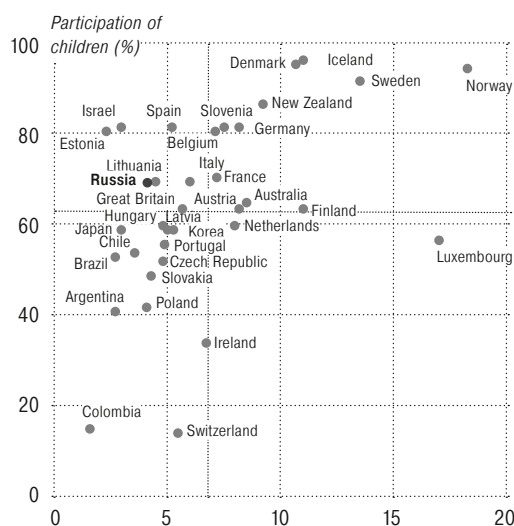
A comparison of the participation of children aged 2–4 in preschool education with the level of government spending on this sector confirms the correlation between these two indicators (Fig. 3). Countries like Denmark, Iceland, Norway and Sweden, where overall government spending on preschool education per child is the highest, show participation rates of over 90%, whereas low spending per student in Ireland and Switzerland correlates with low participation rates.

A number of countries have managed to achieve high participation rates in preschool education—over 80%—despite relatively low levels of government spending. These include Israel and Spain, where almost 25% of total preschool funding is covered by the private sector. It should be noted, however, that the Israeli standard of compulsory preschool education for children aged 3 and older implies only short-term four-hour courses that do not include childcare services.

Heavier spending on preschool education has no unambiguous effect on the pupil-teacher ratio (Fig. 4). For instance, total spending per child from all sources is pretty much the same in Slovenia and the Netherlands, yet there are 16 children per preschool teacher in Slovenia and only 8 in the Netherlands. The Netherlands invest more in teacher salaries, while most funds in Slovenia go to property maintenance, purchase of study materials, meal arrangements, and rent of premises. Therefore, wise allocation of funds among teacher salaries, property maintenance, material supplies, meal arrangements and other expenses is required to provide accessibility of preschool education and achieve an optimal pupil-teacher ratio.

Russia retains a significant differentiation in the cost of childcare services between private and public (municipal) kindergartens. However, it is not explained by differences in the quality of services but by different environments in which private and public (municipal) preschool institutions operate, their unequal access to budgetary resources, and high expenses, first of all rent. Consequently, parents sending their children to private and public kindergartens find themselves in unequal conditions.

Fig. 3. **Comparison of children's participation in preschool education with total government spending per child, age 2–4, 2013**



Total spending per child in preschool education (USD based on purchasing power parity) in Russia was estimated using the findings of studies by Mark Agranovich [Agranovich, Poletaev, Fateeva 2005; Agranovich et al. 2009].

Fig. 4. **Comparison of the number of pupils per preschool teacher with total government and private spending per child, 2013**

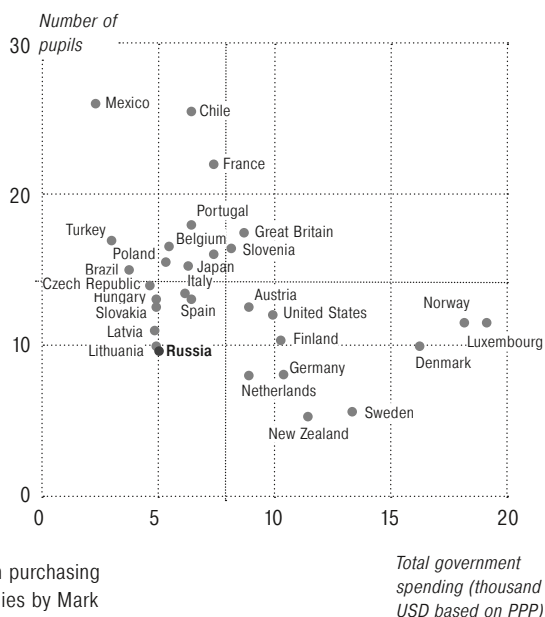
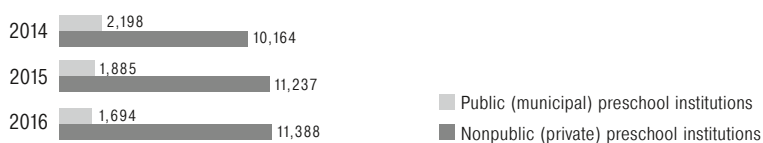


Fig. 5. **Average cost of childcare services in public (municipal) and private preschool institutions (rubles)**



The cost of childcare services in the private sector of preschool education decreased by 10% in 2016 as compared to the previous year, while rising by 17% in public (municipal) preschool institutions, still being 4.6 times higher in the private sector than in public (municipal) preschool institutions (Fig. 5). The gap in parent fees between preschool institutions of different forms of ownership is thus reducing every year: it used to be 6 times in 2015 and 7 times in 2014⁵.

⁵ Here and elsewhere in this section, we cite findings of the sociological sur-

As prices surge, parent fees increase unevenly (or sometimes decrease), thus intensifying the differentiation and inequality in access to high-quality preschool education across regions. Parent fees may be not enough to cover food expenses, so many parents try to pay extra to provide their kids with better meals (3.7% of parents whose children attend public (municipal) preschool institutions and 3% of those whose children attend private kindergartens). Not everyone can afford additional meal expenses, first of all due to limited family budgets. Another reason is that preschool institutions often outsource meal arrangements, and parents often have no opportunity to contact third-party suppliers directly or sometimes do not even know who they are. That is why menus in kindergartens often contain substitute products, which leads to the degradation of the food quality and, subsequently, the children's health.

Families whose children attend private preschool institutions reduced their expenses on extracurricular studies dramatically in 2016, spending less than in 2013. In the future, when deciding on the development of the fee-based segment of extracurricular studies for preschoolers, it is necessary to take into account how much parents are ready to spend on them. This sum is about 20,000–25,000 rubles yearly, or 2,500 rubles monthly. Less than one third of families are ready to incur such costs, regardless of whether their children attend a public (municipal) or private kindergarten. Thus, the potential for further development in this direction appears to have been exhausted.

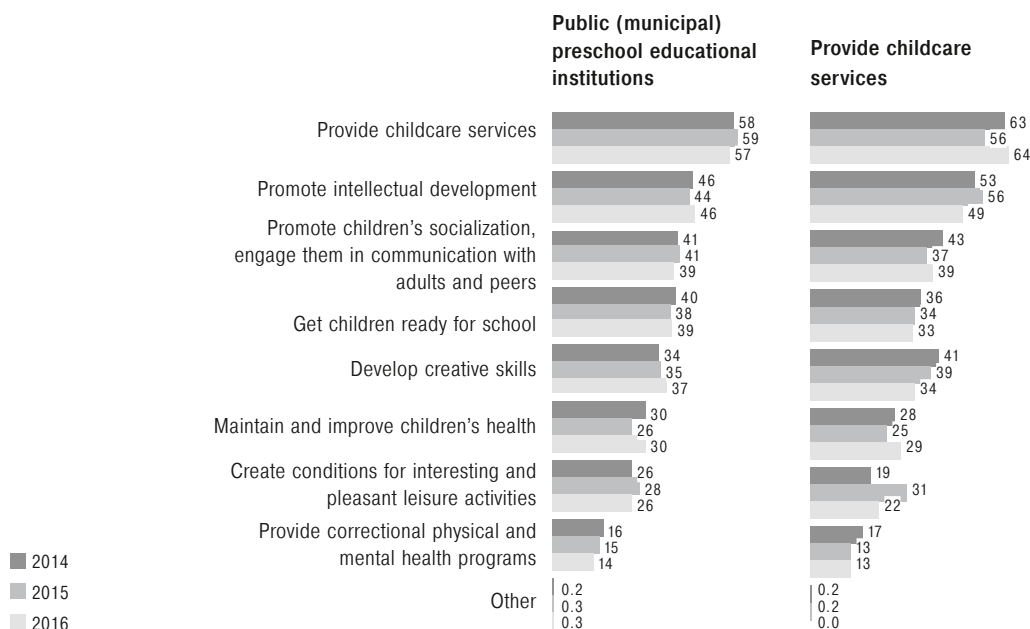
3. Parental Choices and Preferences

Long preschool waiting lists represent an acute social problem in Russia today. Kindergartens currently seek out every opportunity to increase their capacity, swelling their groups, revising the functional purpose of their premises to accommodate as many groups as possible, rebuilding and extending sports facilities and music rooms to free up more space.

As judged by the 2016 Monitoring of Education Markets and Organizations, more than half of the parents whose children attend kindergartens were choosing from two or three options. Eleven percent of parents made advance arrangements to enroll their children in a corporate or public (municipal) kindergarten in 2016, as compared to 15% in 2015. Twelve percent of preschoolers' parents had no choice, as there was only one kindergarten in their populated locality. A choice of two or three preschool educational institutions was most often available to families in Moscow (83%) and least often to families in rural towns and villages (30%), where about 54% of the respondents reported having one kindergarten only.

vey of parents of preschool pupils conducted as part of the 2016 Monitoring of Education Markets and Organizations.

Fig. 6. The most important responsibilities of kindergartens, as seen by parents (%)

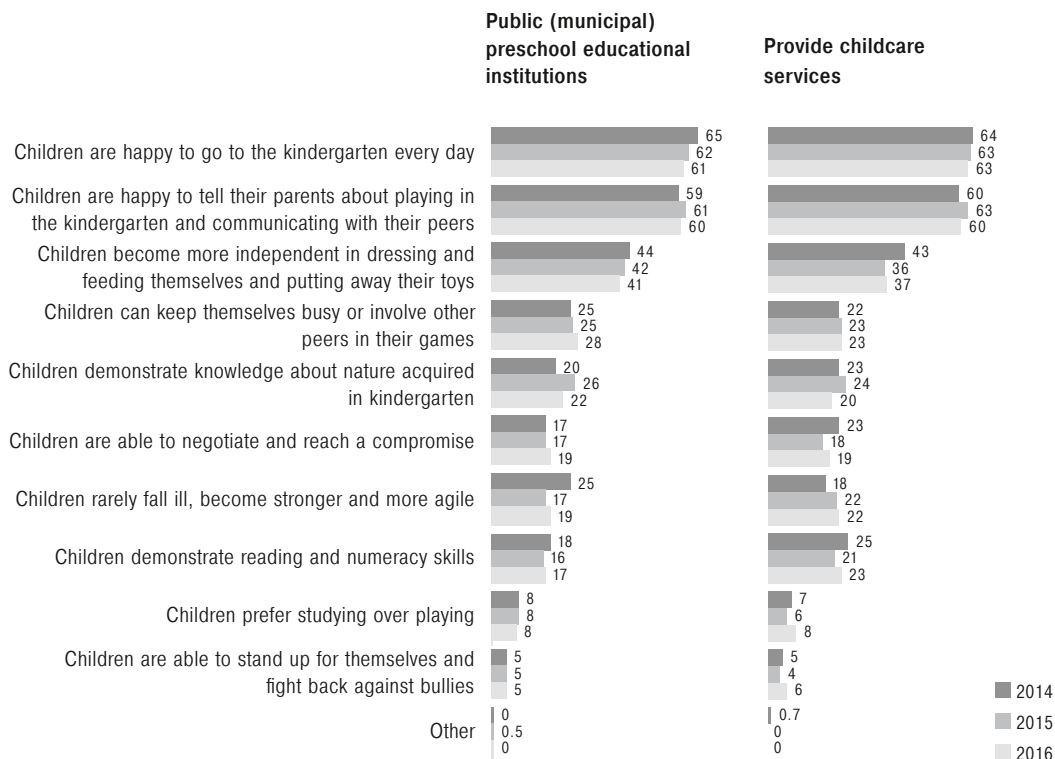


Proximity to home is the most widespread factor in choosing a particular preschool institution. Most parents are concerned about teachers' competencies, childcare conditions, the institution's reputation, and the level of readiness for school it provides. When choosing a private kindergarten, parents have been paying more attention to affordability. Parents see the most important responsibilities of preschool institutions in providing childcare services, promoting children's intellectual development and socialization, and preparing them for school, whether their children attend a public (municipal) or a private kindergarten (Fig. 6).

When parents assess the performance of a kindergarten, they first of all consider their children's attitude: whether they want to go there, whether they are happy to tell their parents about playing in the kindergarten and communicating with their peers, etc. Besides, parents find it important that their children learn to be independent and develop self-care skills in kindergarten (Fig. 7).

Most children attending public (municipal) kindergartens reach them by foot (60%). Slightly less than one third of children are driven to their kindergartens by their parents, relatives or acquaintances, and 9% use public transport. Sixty percent of children from private kindergartens get to their destination by car, public transport, or kindergarten bus (Fig. 8).

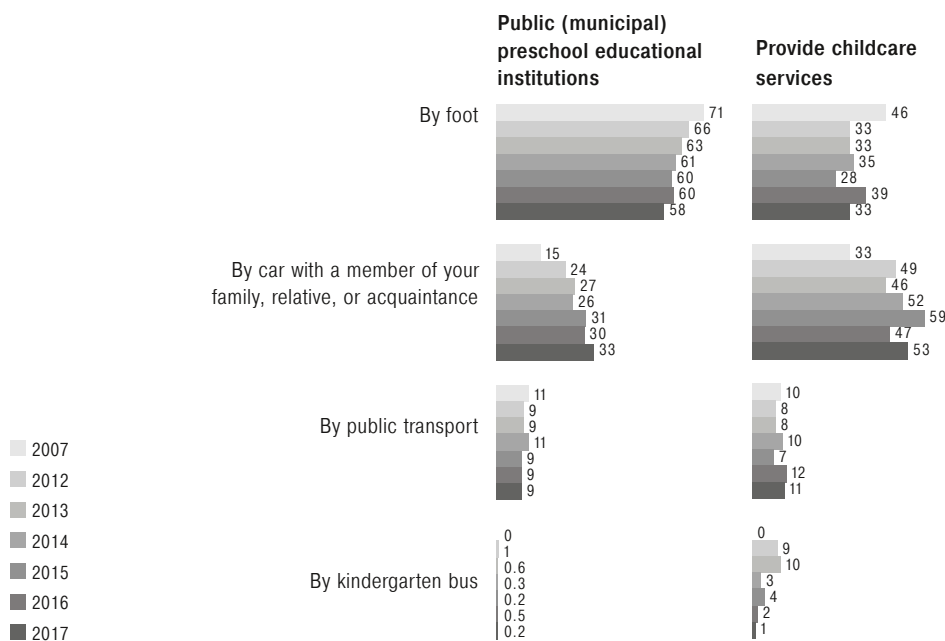
Fig. 7. The most important indicators of kindergarten performance, as seen by parents (%)



The transport accessibility of a kindergarten implies the organization of kids' transportation using public or private transport. In this case, specific requirements should be elaborated for every kindergarten to optimize the way they arrange their premises and organize the adjacent grounds. Hardly any parking lots, embussing or debussing points are provided around kindergartens and educational complexes with preschool departments. It is vital to change the standards for design, construction, reconstruction and overhaul of approach routes and adjacent areas as well as for traffic organization. Regulatory documents have been falling dramatically behind the modern structure of the network of educational institutions, the existing methods of delivering children to kindergartens, and the ways children move within educational complexes between their core and supplementary courses.

Online waiting lists have recently been introduced as a way to reduce social tension caused by long waiting lists for preschool educational institutions, particularly in urban localities. This way, the authority to control the fill rate of preschool institutions (assignment and enrollment of children to specific institutions) has been transferred

Fig. 8. Walking and transport accessibility of public (municipal) preschool institutions and private kindergartens
(% of all parents surveyed)



from the level of kindergarten administrators to that of the founders, i. e. municipal education authorities, in order to prevent abuse, make the process of enrollment more transparent, and ensure equity.

More than half (60%) of the families with preschool-aged children used online waiting lists to obtain places in public (municipal) preschool institutions. In 27% of the cases, families did not use online waiting lists because there was no need to do so. Only 7% of the families did not use online waiting lists because they had no such opportunity. Online services develop all the time, and the proportion of parents who experience difficulty using online waiting lists to enroll their children in public (municipal) kindergartens is constantly reducing. However, such services are not yet used to their full potential due to the lack of parent awareness of preschool group formation procedures, insufficient representation of the network of kindergartens in databases, ambiguity about the rules of movement on waiting lists, and hence the lack of understanding by parents of their own rights and the authorities' scope of responsibility for providing accessibility of preschool education. No online waiting lists are offered to enroll in nursery groups.

Groups in public (municipal) kindergartens are constantly growing in size: an average group comprised 25.2 children in 2016, as compared to 24.6 in 2015. Teachers in private kindergartens also report

Fig. 9. **Average group size in public (municipal) preschool institutions and private kindergartens, based on a survey of preschool teachers**

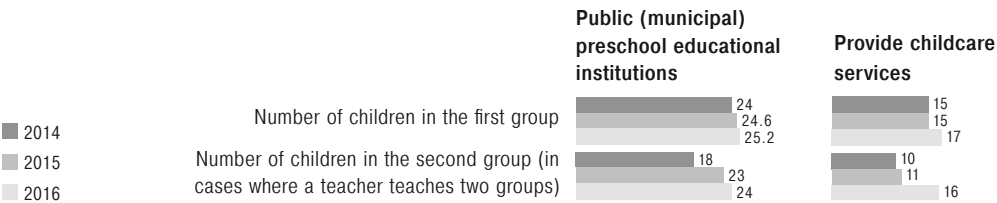
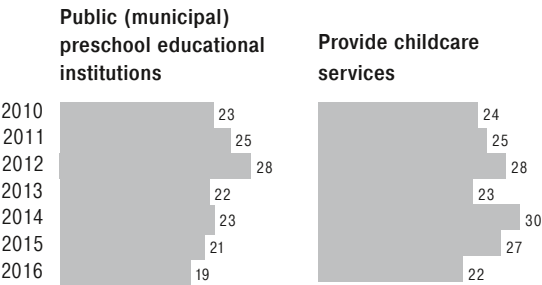


Fig. 10. **Average duration of classes in public (municipal) preschool institutions and private kindergartens, 2010–2016, based on a survey of preschool teachers** (hours/week)



an increase in the size of their groups by up to 17 children on average (Fig. 9).

Teachers in public (municipal) kindergartens encounter a larger administrative load and additional responsibilities from year to year. The average amount of time devoted to actually engaging with children keeps decreasing in both the public (municipal) and private sectors of preschool education, yet it remains greater in private kindergartens (Fig. 10).

As can be seen, classes become ever shorter and groups taught by teachers in public (municipal) kindergartens keep expanding. As a result, preschool teachers become overloaded, which prevents any quality implementation of preschool education programs.

Preschool teacher performance is contingent, in particular, on financial incentives [Klyachko, Avramova, Loginov 2015]. The results of teacher performance evaluation by parents are used in preschool institutions to calculate incentive payments (as reported by 24% of public (municipal) preschool teachers), to decide on sending teachers to advanced training courses (confirmed by 23% of teachers), and to allocate non-recurring financial incentives in 16% of the cases.

4. Development of Preschool Educa- tion Infrastructure

Barriers in access to kindergarten services directly affect birth rate as a critical demographic indicator. A sample survey of reproductive intentions in 30 federal subjects of Russia conducted by Rossstat in 2012 revealed that inability to enroll a child in a kindergarten or daycare nursery ranked third among the top reasons against having another child, preceded by financial difficulties and housing issues. Moreover, among the governmental measures affecting the decision to have more children, compensation for expenses on childcare services is regarded by parents as more significant than childbirth allowance or paid parental leave and nearly as important as multiple-child allowance and subsidized home loans.

This problem is especially acute in large cities, where the network of preschool institutions has reduced dramatically since the 1990s. Various mechanisms are used to develop a new network: greenfield development, reconstruction, major overhauls, retrieval of previously transferred buildings, development of flexible home-based daycare centers, assistance to businesses, and development of corporate kindergartens. The network of preschool educational institutions is rigid, consisting of over 80% public and municipal kindergartens. Other sociocultural institutions engage little in providing preschool education services, yet this segment has excess capacity in a number of municipalities. The rapid growth of the network is thus fraught with some inevitable challenges.

At the same time as infrastructure is being developed, the problems of transition to a new quality level of preschool education are being solved. Since preschool education was recognized as a full-fledged level of education, an urgent need has arisen, i. e., to reach public consensus on the goals of its development as well as on acceptable and relevant forms of its organization. Preschool education is designed to solve issues in both education and childcare. What parents expect from the preschool education system is not only the education of their children under a specific program but also a childcare schedule that they would find appropriate and comfortable for themselves. Ways of combining alternative approaches to childcare with various models of early childhood education into an integrated system are being investigated and tested around the world [Freitas, Shelton, Tudge 2008; Rode 2009].

Integrating preschool education and childcare services into “packages” in Russia imposes high requirements on the infrastructure, including sanitary and epidemiological standards and regulations. Preschool education facilities must be adapted to accommodate children for 12 hours a day, which implies high infrastructure costs. However, neither kindergarten staff nor parents are interested in more flexible ways of rendering services. Construction of new kindergartens is the most desired way of preschool infrastructure development for the population. Meanwhile, requirements to preschool education facilities in Russia are comparable to and often higher than those in the

OECD countries with much higher levels of per capita income. Not infrequently, regions compete in building modern kindergarten facilities, including swimming pools, special-purpose rooms, etc. While this policy is quite in line with the population's needs, it requires heavy resource investments and eventually deepens inequality instead of making education more accessible.

An entirely different infrastructure is needed to provide preschool education only (excluding childcare services), as in short-stay groups. Their use varies greatly across regions of Russia, but they have not been widely recognized anywhere yet. This vector of preschool education development seems rather promising but it suggests adjusting preschool education, culture and sports facilities to short-term classes in the morning hours. Flexible formats of preschool education on the basis of either municipal or private kindergartens can be implemented using funding models based on inter-municipal agreements, which allow integrating and consolidating resources of the whole sociocultural industry in order to promote preschool education.

Private preschool institutions as an alternative to public or municipal kindergartens do not account for more than 2% of the total number of preschool educational institutions in Russia. This is very different from the situation in other countries. In Australia, for example, private-owned companies provide 46% of preschool education and childcare services [Tayler 2016]. Estimates of the number of nonpublic preschool institutions in Russia may be inaccurate: first of all, many of them get incorporated as nursing and care businesses, thus falling out of the educational statistics; besides, such services are often rendered by self-employed entrepreneurs without founding a legal entity at all. An essential part of such entrepreneurs (equal to or even exceeding the official one) is working outside the legal framework, either incorporated to "provide social services to population without accommodation" or organize "leisure clubs" or not incorporated at all.

Barriers to establishing private preschool educational institutions significantly increase the startup capital requirements for anyone willing to invest in this business. Before the changes in legislation provided equal access to public funding for private preschool institutions, some federal subjects of the Russian Federation had used the practice of placing municipal orders for preschool education services with non-municipal service providers (in Perm from 2007, in Lipetsk and Kaliningrad Oblasts) and subsidizing private kindergartens (in Perm, Lipetsk and Pskov Oblasts, the Sakha Republic (Yakutia), and Kemerovo). As soon as the law was amended, more regions began to grant subsidies to private kindergartens (Samara, Moscow Oblast) and sometimes reimburse parents for part of their expenses on child care services in private kindergartens (Tomsk Oblast).

Searching for an optimal model of public or home-based kindergarten is technically searching for an optimal model for the creation of preschool education infrastructure or conditions for its development.

This is not restricted to elaborating funding strategies or legislative improvements. For instance, the problems experienced by the private preschool education sector in Vologda Oblast indicate that most entrepreneurs lack the motivation to develop their businesses and promote their services [Leonidova, Svirelkina 2016].

Affordable daycare nannies could be one type of service rendered by private companies in preschool education. They would definitely be in high demand among families with toddlers. When children reach the age of 18 months, parents stop receiving a care allowance. This is when young families find themselves at risk of falling into poverty, as mothers cannot get back into the workforce: they have no one to leave their children with and no opportunity to send them to kindergarten [Abankina et al. 2016].

The public sector in preschool education thus faces the task of reconciling funding with accessibility of services and the quality of education and childcare, i. e. adopting performance-based funding instead of meeting expenses. However, this is harder to achieve in preschool education than in any other industry. At the current stage of preschool education development, it appears important to find concise indicators of quality associated not only with the education of children but also with accessibility of services, improvement of children's health, implementation of correctional programs, and consideration of individual preferences in meals, outdoor activities, and learning materials for different children.

5. Conclusion Attending a kindergarten today becomes a social standard regardless of place of residence and family income. Over recent years, a number of countries with the highest school achievement indicators have adopted new programs and standards for preschool education, strengthening their focus on early childhood development. These countries design their policies with due regard for the high return on investment in early human capital. In Russia, making preschool education accessible to all categories of the population is impossible today due to the insufficient development of preschool infrastructure and the lack of actual support for nonpublic preschool institutions. Steps in this direction can be an effective tool for reducing social tension and strengthening Russia's status as a country with high-quality preschool education, which is one of the crucial factors of social wellbeing.

Early childhood development determines school achievement to a large extent, which, in its turn, is critical for later success in life. Being concerned about the social stability and quality of the workforce, many developed countries invest actively in preschool education, paying special attention to children from low social backgrounds. In order to keep the early development of Russian children apace with the indicators of the advanced economies, it is necessary to expand the sys-

tem of public preschool education, ensure psychological and pedagogic support of infants, and provide assistance to family education by raising parent awareness.

The lack of state-guaranteed right for preschool education that would equalize children's opportunities (irrespective of attending a kindergarten) results in considerable heterogeneity in first-grade pupils in terms of their psychological, social and cultural readiness for school. This heterogeneity is intensified with the spread of fee-based school preparation courses for children aged 5–6, which are only available to relatively affluent families and vary greatly in their quality.

The costs of childcare services remain very different between public (municipal) preschool institutions and private kindergartens, putting parents in unequal situations. Such a huge gap, however, is not explained by differences in the quality of childcare services but by different conditions in which private and public (municipal) preschool institutions operate, their unequal access to budgetary resources, and high expenses, primarily rent.

The high cost of private preschool education services is not inducing real competition yet, and neither does it drive public (municipal) kindergartens to improve the quality of their services—market mechanisms are barely involved here. Equalization of parents' expenses on private and municipal (public) kindergartens will promote competition as an important mechanism for enhancing preschool education quality.

While developing the financial strategy of supporting early childhood development and preschool education, it should be kept in mind that offloading the best part of expenses onto parents is impossible, as household income in young families varies greatly across regions. An increase in parent fees, outrunning the rate of inflation, has been observed in nearly one third of preschool educational institutions in rural towns and villages, where purchasing power is the lowest. This means that financial load associated with maintenance and education of children in preschool institutions is transferred from local authority budgets to household ones, which is partly caused by the imbalance of municipal budgets that are supposed to fund preschool education.

Preschool education is the most expensive education industry in Russia, the costs exceeding even those in professional education. This is because preschool institutions have assumed too much responsibility—not only for education programs but also for nursing, care, and health improvement services. Preschool funding decision-makers should understand that investment in early childhood development yields the highest return on investment in human capital. By providing children with places in kindergartens, not only do we simply help working parents but we also encourage the development of the country's youngest generation.

References

- Abankina I., Filatova L., Kozmina Ya., Sivak E. (2016) *Dinamika rashodov semey na doshkolnoe obrazovanie, prismostr i uhod* [Dynamics of Expenses of Families on Preschool Education and Care]. Monitoring of Education Markets and Organizations, no 3 (92). Moscow: HSE.
- Abankina I., Rodina N., Filatova L. (2017) *Motivatcii, povedenie i strategii roditel'ey vospitannikov obrazovatel'nykh organizatsiy, realizuyushchih programmy doshkolnogo obrazovaniya, na rynke doshkolnogo obrazovaniya* [Motivation, Behavior and Strategies of Parents Whose Children Attend Educational Organizations that Implement Pre-School Education Programs in the Preschool Education Market]. Monitoring of Education Markets and Organizations, no 13 (112). Moscow: HSE.
- Agranovich M., Kovaleva G., Polivanova K., Fateeva A. (2009) *Rossiyskoe obrazovanie v kontekste mezhdunarodnykh indikatorov. Analiticheskiy doklad* [Russian Education in the Context of International Indicators. Analytical report]. Moscow: Sentyabr.
- Agranovich M., Poletaev A., Fateeva A. (2005) *Rossiyskoe obrazovanie v kontekste mezhdunarodnykh pokazateley. Sopostavitel'ny doklad* [Russian Education in the Context of International Indicators. Comparative report]. Moscow: Aspect Press.
- Curl A., Nelson J., Anable J. (2011) Does Accessibility Planning Address What Matters? A Review of Current Practice and Practitioner Perspectives. *Research in Transportation Business & Management*, vol. 2, no 11, pp. 3–11.
- Ertas N., Shields S. (2012) Child Care Subsidies and Care Arrangements of Low-Income Parents. *Children and Youth Services Review*, vol. 34, no 1, pp. 179–185.
- Freitas L., Shelton T., Tudge J. (2008) Conceptions of US and Brazilian Early Childhood Care and Education: A Historical and Comparative Analysis. *International Journal of Behavioral Development*, vol. 32, no 2, pp. 161–170.
- Friedman M. (2006) Kapitalizm i svoboda [Capitalism and Freedom]. Moscow: New Publishing House.
- Geurs K., van Wee B. (2004) Accessibility Evaluation of Land-Use and Transport Strategies: Review and Research Directions. *Journal of Transport Geography*, vol. 12, no 2, pp. 127–140.
- Gibbons S., Silva O. (2006) Competition and Accessibility in School Markets: Empirical Analysis Using Boundary Discontinuities. *Improving School Accountability: Checkups or Choice* (eds T. J. Gronberg, D. W. Jansen), Oxford: JAI Press, pp. 157–184.
- Heckman J., Layne-Farrar A., Todd P. (1996) Human Capital Pricing Equations with an Application to Estimating the Effect of Schooling Quality on Earnings. *The Review of Economics and Statistics*, vol. 78, no 4, pp. 562–610.
- Heckman J., Lochner L., Smith J., Taber C. (1997) The Effects of Government Policy on Human Capital Investment and Wage Inequality. *Chicago Policy Review*, vol. 1, no 2, pp. 1–40.
- Hoxby C. (2000) Does Competition among Public Schools Benefit Students and Taxpayers? *The American Economic Review*, vol. 90, no 5, pp. 1209–1238.
- Hu B. Y., Roberts S. K. (2013) A Qualitative Study of the Current Transformation to Rural Village Early Childhood in China: Retrospect and Prospect. *International Journal of Educational Development*, vol. 33, no 4, pp. 316–324.
- Klyachko T., Avramova E., Loginov D. (2015) Zavisimost effektivnoy deyatelnosti ot material'nykh stimulov [The Dependence of the Effective Activity from Financial Incentives]. *Economics of Education*, no 2, pp. 63–73.
- Konstantinovskiy D., Kurakin D., Roshchina Y., Vahshtajn V. (2006) Dostupnost kachestvennogo obshchego obrazovaniya v Rossii: vozmozhnosti i ogranicheniya [The Accessibility of Quality Education in Russia: Opportunities

- and Restrictions]. *Voprosy obrazovaniya / Educational Studies*. Moscow, no 2, pp. 186–202.
- Leithwood K., Jantzi D. (2009) Review of Empirical Evidence about School Size Effects. *Review of Educational Research*, vol. 79, no 1, pp. 464–490.
- Leonidova G. V., Svirelkina I. I. (2016) Non-State Preschool Education: Current Practices of Territorial Development. *Economic and Social Changes-Facts Trends Forecast*, vol. 43, no 1, pp. 138–152.
- Mollborn S., Lawrence E., James-Hawkins L., Fomby P. (2014) When Do Socioeconomic Resources Matter Most in Early Childhood? *Advances in Life Course Research*, vol. 20, pp. 56–69.
- Niedzielski M., Boschmann E. (2014) Travel Time and Distance as Relative Accessibility in the Journey to Work. *Annals of the Association of American Geographers*, vol. 104, no 6, pp. 1156–1182.
- O'Connor M., Gray S., Tarasuik J., O'Connor E., Kvalsvig A., Incledon E., Goldfeld S. (2016) Preschool Attendance Trends in Australia: Evidence from Two Sequential Population Cohorts. *Early Childhood Research Quarterly*, vol. 35, no 2, pp. 31–39.
- OECD (2016) *Education at a Glance 2016. OECD Indicators*. Paris: OECD.
- OECD (2017) *Who Bears the Cost of Early Childhood Education and How Does it Affect Enrolment? Education Indicators in Focus*, no 52. Paris: OECD.
- Páez A., Scott D., Morency C. (2012) Measuring Accessibility: Positive and Normative Implementations of Various Accessibility Indicators. *Journal of Transport Geography*, vol. 25, pp. 141–153.
- Rode L. (2009) Formation of Pre-school Educational Establishments Network for Well-balanced Territorial Development. *Economic Science for Rural Development: Primary and Secondary Production, Consumption*, no 19, pp. 282–287.
- Song Y. (2016) Trends in Preschool Education: Public Finance Investment, Development Trends, and Challenges to Its Equality. *Chinese Research Perspectives on Educational Development*, vol. 3, pp. 77–110.
- Stiefel L., Berne R., Iatarola P., Fruchter N. (2000) High School Size: Budget and Performance in New York City. *Educational Evaluation and Policy Analysis*, vol. 22, no 1, pp. 27–39.
- Stooke B. W. (2012) Australian Early Childhood Education and Care Reform: A Child, Gender and Business Case. *Child Research Net*, May 25. Available at: http://www.childresearch.net/projects/ecec/2012_02.html (accessed 10 May 2018).
- Tayler C. (2016) Reforming Australian Early Childhood Education and Care Provision (2009–2015). *Australasian Journal of Early Childhood*, vol. 41, no 2, pp. 27–31.
- Vincent C., Ball S., Kemp S. (2004) The Social Geography of Childcare: Making Up a Middle-Class Child. *British Journal of Sociology of Education*, vol. 25, no 2, pp. 229–244.
- West A. (2006) The Pre-School Education Market in England from 1997: Quality, Availability, Affordability and Equity. *Oxford Review of Education*, vol. 32, no 3, pp. 283–301.
- Wong S., Harrison L., Whiteford C. Rivalland C. (2014) Utilisation of Early Childhood Education and Care Services in a Nationally Representative Sample of Australian Children: A Focus on Disadvantage. *Australasian Journal of Early Childhood*, vol. 39, no 2, pp. 60–69.