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EARLY CHILDHOOD EDUCATION IN RUSSIA: THE INTERRELATION OF INCOME LEVEL AND PARENTAL INVESTMENT

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**EARLY CHILDHOOD EDUCATION IN RUSSIA:
THE INTERRELATION OF INCOME LEVEL
AND PARENTAL INVESTMENT**

Within the framework of human capital and rational choice theory the effective formation of cognitive and non-cognitive skills in early childhood attracts both parents and researchers. Besides traditional home-based activities and kindergarten programs, many families in Russia choose extra classes for their children. The increasing inequality in early childhood education (ECE) has become a new problem, since not all parents can afford to pay for such extra activities (EA). This study investigates the interrelation between family income and the educational strategies chosen by parents. Data for the study were drawn from an online survey, conducted among 260 parents of children aged 3–7 years old. This dataset made it possible to estimate how much families with different income pay for EA in ECE and identify the motives of their educational investment practices. The results showed that the gap in spending on education in poor, low- and middle-income families is significant. However, financial constraints lead to increased parental involvement. The results show that parents from poor and low-income families value extra classes for preschoolers. This study emphasizes the need for further research into home-based teaching practices within poor and low-income families. A deeper understanding of this issue could improve the efficiency of ECE for children from disadvantaged families.

JEL Classification: E32.

Keywords: Russia, preschool education, parental involvement, skill formation, educational expenditure, educational economics.

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1. Introduction

The investment and returns on human capital are key topics in the economics and sociology of education. Human capital is defined as the sum of personal knowledge, skill, and abilities, which are formed through family care and the educational system. The theory of human capital took shape in the US in the middle of the 20th century (Becker 1976, Schultz 1971). Early childhood education (ECE) is the basis for all subsequent stages of education. This stage is extremely important for shaping the child's cognitive and non-cognitive skills (Heckman 2007), thus it plays an essential role in producing human capital.

According to the Human Capital Index Russia ranks 34th in the world (World Bank 2018), and is among the countries with a very high level of human capital. Russia owes its high place in the rankings due to its well-developed education system, including public preschool education. However, concerning social inequality, there are significant discrepancies between the recognized level of human capital development and the low income of large groups of people which is present from generation to generation. The modern socio-economic situation in Russia reflects problems in the accumulation and proper use of human capital (Kapeliushnikov 2012; Gimpelson 2016; Gimpelson et al. 2020). This issue is closely related to the system of ECE. This period is key for the formation of the basic skills that are necessary for personal success and prosperity. However, this area of preschooler development remains understudied, Russian researchers are more often attracted by the problems of school and university education. Thus, the practices of Russian families in early childhood development are an important topic for a deeper understanding of human capital in Russia.

ECE intervention first emerged in the US in the form of two experimental projects: Perry Preschool and the Abecedarian program. These two programs for disadvantaged families were found to be an optimal strategy to reduce the income-based achievement gap in the 1960s. As subsequent studies have shown, compared to children who stayed home, children who attended the Perry Preschool or Abecedarian programs completed more years of education, had higher levels of employment and income as adults, and fewer lifetime arrests (Jones et al. 2019). Many authors have found preschool education to be the most effective way for families and governments to invest in human capital (Temple, Reynolds 2007; Cunha, Heckman 2007, 2009; Cleveland, Krashinsky 2010). The studies provide strong evidence that the positive economic returns of high-quality preschool programs exceed most other educational interventions, especially those that begin during the school-age years (Temple, Reynolds 2007). ECE interventions hold great promise not only for improving lives but also for potentially producing an economic return on investment linked to key outcomes from program effectiveness. For example, the Committee on Economic Development (2006)

estimated that social cost savings for the Perry Preschool were \$16.14 for every \$1 invested (Jones et al. 2019).

The legacy of the USSR in the form of widely available free educational and medical services continues to play an important role in the accumulation of human capital (Kosyakova, Yastrebov 2017). Among other countries, Russia stands out for the availability of preschool and school education. But the question remains why, with seemingly equal starting opportunities, a significant percentage of the population continue to be classified as poor or low-income. Research has found that in modern Russia the preschool education system is well developed and has actively improved since 2013, when preschool education was reformed (Abankina et al. 2017). There is almost no inequality in access to the formal sector of ECE (public kindergartens). However, with equal participation in preschool education, the differentiation associated with the families' expenditures for non-formal services is steadily growing (Kosyakova, Yastrebov, 2017). Inequality in the consumption of services for childcare, depending on the socio-economic status of the family, leads to educational inequality (Sukhova 2011). Thus, financially disadvantaged families, through patterns in the development of their children, could (re)produce social inequality.

Based on human capital and rational choice theory, this study investigates whether parental decision-making regarding the investment in ECE is correlated with their financial status. Research into the factors that affect educational strategies is needed because it can highlight the problem areas of families of low economic status in Russia and give insights into educational inequality. This can be useful for adjusting and reassessing educational policies and providing more targeted support to poor and low-income families with children.

1.2 Literature review

Theoretical framework

This study is guided by human capital and rational choice theories (Becker 1976, Coleman 1990). These two approaches form the basis for understanding economic behavior in the transmission of accumulated family capital from parents to children via ECE. Human capital in a broad sense is understood as the sum of the knowledge, skills and abilities of an individual acquired during their life, used to meet their own needs, achieve social well-being, and maintain and improve working capacity and health. The family as a unit of society has its own capital that it passes on to the next generation. These resources include accumulated family capital (level of parental education, experience), material and time resources. A function of the family in the long term is to transform all these resources into the future human capital of the following generations. Coleman's theory includes the concept of rational family action. He concluded that when considering investment in children's development, parents conduct a cost-benefit analysis to determine which strategy to choose. This

decision affects the earliest stages of a child's development. Regarding ECE, parents choose a certain educational pattern for their child concerning additional preschool investment for their child. This theory makes it possible to trace the relationship between family resources and the accumulation of human capital of a preschool child.

Formal and informal ECE

ECE is considered as both formal (state or business provided) and informal (family) education. Social and economic policies of each country largely determine form of preschool education. It could be an education arrangement in the year before kindergarten (Ansari 2017), center-based care (Loeb et al. 2007), low-income family child-care centers (Cleveland, Krashinsky 2010), or migrant children-oriented programs (Ressler et al. 2020). The direction of research is determined by the peculiarities of a country's situation (Hu et al. 2017, Delalibera and Ferreira 2019; Ansari et al. 2020). For example, Campbell-Barr et al. (2014) show that for Finland the starting point of ECE policy implementation was work-life balance with a strong focus on child development and well-being, while in England (the male breadwinner model), the focus is on school readiness and the acquisition of skills in preparation for later life.

Despite the great interest in kindergarten issues (Xie and Li 2020), it has been suggested that family (parental financial capital and involvement) plays a bigger role than formal schooling in motivating learning and ensuring academic success (Heckman 2011). The family (an informal educational institution) is of great importance in determining academic achievement (Cunha, Heckman 2007). Recent research has found that family socioeconomic status (SES), most commonly measured by parental education and income, is a powerful predictor of school achievement (Heckman 2011; Schlee et al. 2009; Restuccia, Urrutia 2004). It contributes to decision-making on education (Kotomina et al. 2019). As wealthier parents are likely to be better educated, they are more able to develop academic ability in their children by helping and guiding them. Liu et al. (2020) showed that the parents with higher SES had higher parenting self-efficacy and greater involvement in their children's home-based activities, which explained their children's stronger cognitive competence. Green et al. (2021) suggests that children of less educated parents may derive more benefit from center-based care than those with more educated parents. Thus, the educational and economic level of the parents can determine which strategy for the child's education (home-based or center-based) is more effective.

Parental economic status and involvement

In the last decade, more attention has been given to wealth as an aspect of household economic status. According to Lareau (2002), parents' perceptions of what children need for successful development are stratified by social class. These differences in parenting represent a key

mechanism through which higher status parents transmit their advantages to their children. Schlee et al. (2009) revealed that parents' financial capital is the best predictor of childhood academic achievement. Slicker et al. (2021) support the notion that family economic background may be related to parental teaching, involvement, and stronger beliefs in the importance of education. Studies also reported that children were more likely to graduate from high school if they lived in households where parents were homeowners (Aronson 2000). Restuccia and Urrutia (2004) concluded that the existence of borrowing constraints affecting parental investments in early education leads to the persistence of low earnings across generations. Chernova and Shpakovskaya (2016) found that poor families are wary of spending on ECE as they are less likely to associate their children's future educational success with preschool development. Therefore, economically viable parental choice leads to the persistence of inter-generational social inequality (Restuccia and Urrutia 2004).

However, the economic viability and educational background of parents are not the only components of success. Another important factor in ECE is parental involvement which is a broad concept that entails many behaviors shaping the ability and readiness of a child for education (Heckman 2011, Li et al. 2021, Jeon et al. 2020) and is sometimes used interchangeably with terms such as family involvement, or family engagement (Barnett et al. 2020). Such engagement in during early childhood (including telling stories, singing) may be especially important, given the links between home activities and children's early academic skills and competencies (like motivation and persistence). Some research links high levels of parental involvement with stronger literacy and mathematics performance of preschoolers (Slicker et al. 2021). But the correlation between parental involvement and income level remains unclear. Bradley et al. (2001) showed that compared to high income parents, poorer parents not only devote fewer financial resources to their children's education but are also less likely to help them with schoolwork. Some studies found parents with higher SES reported more home-based activities, than parents with lower SES (Slicker et al. 2021). However, Ressler (2020) found that regardless of income, parents who value their children's education are tend to devote more resources to their well-being. Yang and Bansak (2020) suggest that there is an inverse link between income and involvement. They found rural-to-city migrant parents (who have been away from home house for a long time) spend more money on children's education to offset the lack of parental time spent. Thus, the concept of parental involvement is disputed; there is no exact understanding of how income level correlates the family engagement in ECE.

Not all studies show the influence of the family engagement on school readiness, considering the frequency of home activities with a child. One reason for these inconsistencies may be that the quantity of family involvement is often based on parental self-reports that do not account for the quality of engagement (Barnett et al. 2020). Slicker et al. (2021) suggest that based on a person-

centered approach, very high parental expectations about kindergarten readiness may be more important than having a high quantity of home activities (which requires more time investment). In this situation positive home-school perceptions—not parental income, educational level or home-based storytelling—are more important in promoting school readiness for children from low-income backgrounds.

Russian historical context for ECE

Russia inherited the Soviet system where young mothers are encouraged to return to the workplace as soon as possible. This system was built in accordance with the ideological and economic goals of a socialist society. The economic goal was to provide an additional labor to the socialist economy, giving women more opportunities to participate in working life (Kosyakova, Yastrebov, 2017). To accomplish this task, the Soviet Union created a well-developed system of institutions for childcare (nursery groups, kindergartens, five-day, long-term care groups). Many distinctive features of ECE from the last century remain in Russia today.

The collapse of the Soviet Union in the early 1990s pushed many people into financial hardship and instability. The 2000s were characterized by a decline in living standards, education, a fall in the birth rate, and a reduction in spending on ECE. However, even in those years, a pro-natalist social policy was still pursued. The need to solve demographic problems led to the preservation of expanded social guarantees for families with small children. In particular, parents still retained the right to long maternity leave (up to 3 years) with a guarantee of returning to their previous workplace (Kosyakova, Yastrebov, 2017). In the 2010s, when the economic situation in Russia was improving, the preschool education system was modernized. Related reforms have contributed to an increase in the birth rate, an improvement in the economic situation of families with children, and the improvement of ECE services. Shabunova and Leonidova (2018) concluded that this process has had a positive effect on the accumulation of knowledge and skills of children and contributes to the formation of their individual human capital. Many parents reported an improvement in the conditions for ECE after 2013, when the reform of preschool education was initiated (Abankina et al. 2018).

A well-developed system of public kindergartens is an integral part of modern Russian society. Nowadays women often stop maternity leave early, only 9.4% mothers were on parental leave for more than three years (Gizatullina, Zimova, 2019). Kozina (2010) concluded that the “male breadwinner” model has become practically obsolete for modern Russia, as the share of mothers’ income in total household income averages 42%. The coverage of preschool education in Russia is very high and is increasing. In 2016, 66.5% of children attended kindergarten. Considering children aged 3–6 years, this number increases to 83% (Abankina et al. 2017). Cheap state-funded kindergartens (less than 40 USD per month) provide universal full-day childcare programs, and unlike

those systems of many Western countries these services are eligible to all families up to 60 hours per week, regardless of parental income. For example, in the UK free childcare services for 3–4 year-olds range from 15–30 hours per week (Green et al. 2021). The Russian ECE system is more comprehensive in comparison with similar ones in the US, Europe and China. Russian families can send 3–6-year-olds to a public kindergarten for up to 12 hours per day, five days a week.

As most preschoolers in Russia attend public kindergartens, their starting points in ECE are equal. They spend most of the day in a similar environment, therefore, educational differences between preschoolers are mainly formed during homeschooling and attending paid classes. These two types of education can be termed extra activities (EA) in ECE. This requires the attendance of educational programs besides the traditional child-parent communication at home and they go beyond the formal program of kindergarten (Sizova, Korenkova 2020). In this study, EA includes paid additional classes in kindergarten or other educational centers at the discretion of parents; paid lessons at home with professionals (e.g., a tutor or nanny); free lessons at home with parents (or other family members) that require their active participation.

Traditionally childcare services in Russia are provided by government agencies, and private care was underdeveloped until recent years (Sukhova 2011). However, over the past five years, large and medium-sized cities have seen active growth in the ECE private service sector. The sphere of additional education and leisure for preschoolers is becoming more and more attractive for business. According to the Federal Statistical Service, from 2015 to 2017 the number of private organizations providing supplementary preschool education programs increased by almost 78% (from 8,166 to 14,547 organizations). Along with traditional classes in foreign languages, sports and creative activities (dance, music etc.), classes in robotics and programming have appeared (Poplavskaya et al. 2018). The joint development of parents and children is becoming especially popular, for example, yoga for mother and child and creative workshops for the whole family (Bulganina et al. 2019).

The emergence of new companies providing educational services reflects the growing demand from parents. Modern kindergarten education seems to be insufficient for some categories of parents. Two features are important for understanding the ongoing processes in Russian ECE: the monetization and professionalization of childcare. First, well paid service becomes a new power in preschool education. The willingness of parents to pay has become an important factor in the accumulation of human capital. Private classes are much more expensive than public kindergartens. As center-based services are developed unevenly in different parts of the country, the cost of the EA also varies, from more affordable in residential areas of cities to very high expensive for brand new activities in city centers. Even accounting for this variation, the cost of regular classes in private centers is significantly higher than the average monthly payment for attending a public kindergarten.

Second, the professionalization of preschool education has become a more visible in recent years. Chernova and Shpakovskaya (2016) found that competition in the labor market leads to the reduction of parental authority. This phenomenon is expressed in the transmission of traditional family functions from parents to experts. However, Kosyakova and Yastrebov (2017) argue that the outsourcing of educational services is more typical for high SES families. In this regard, it remains unknown how professionalization affects rational choice in less affluent families. Although it has been recognized that in general the low SES of families affects their strategies in ECE, how parents make decisions on EA remain unclear. Research suggests that in Russia the families' attitudes to EA are largely determined by cultural orientations and the value attitudes of the parents; not only by the amount of social and material resources (Poplavskaya et al. 2018).

Parents need make choices on educational expenditure much earlier than before. Does parental involvement in Russian families act as a countervailing force to compensate for the lack of financial capital? Or are poorer parents forced to spend more time at work in order to pay for EA for their children? As the concept of family engagement is still not fully explained, it is of interest to examine how it reveals itself in Russian families. This study investigates the effect of income level on parental investment in ECE. The study tested two hypotheses:

1. Poor and low-income families spend less on EA.
2. Following the commercialization of ECE, children from poor and low-income families are less involved in EA.

In the following section the two hypotheses are tested empirically using results of an online survey.

2. Methods

2.1 Data collection

Both qualitative and quantitative methodology was used in the research. Data for this study were drawn from the online survey conducted in spring of 2020. Based on the dataset the study estimates how much different SES families pay for EA in ECE and identified the motives for their choice.

The respondents were asked to participate in the survey anonymously through an online google form. The study used a closed question questionnaire. Due to its format, the questionnaire provided automatic data collection according to specified criteria. Based on the number of children of the required ages in Russia and the total population of million-plus cities, the general population for the study is around 1,600,000 households. Using the snowball method, n=260 respondents from different regions. The study involved parents of children aged from 3 to 7 years old, living in 15 cities

with populations over one million people. The sample is representative. Data validity is around 95% and the confidence interval is 6%.

2.2 Survey instrument

The objectives of the study determined the questions that were asked (see the appendix). The first part of the survey concerned the general socio-economic situation of the family and consisted of 8 questions about family composition, income and children's ages. The second part assessed the amount of money spent on the children's preschool education, including kindergarten itself and EA. The third part contained multiple choice questions regarding parent's views on the importance of various aspects of EA in ECE.

2.3 Data analysis

The data analysis was divided into three stages following the three parts of the questionnaire. First, I investigated the economic situation of the family, measured the average per capita household income, and divided respondents into categories: poor, low and middle-income families (PF, LIF and MIF respectively). In the second stage, I determined the amount of money spent on ECE and EA. It helped to identify the correlation between the family SES and expenditure. In this stage, I checked the first hypothesis of the study: PF and LIF spend less on EA. In the third stage, I examined the types of EA for preschoolers and identified the motives for parental decisions. I checked the second hypothesis of the study: that children from PF and LIF are less involved in EA.

The variables in the study were household size, total monthly income, monthly spent on ECE as a whole and EA separately (including kindergarten, non-home based activities, babysitting services), and the cost per hour of EA. Respondents included single-parent families (15%), families with two children (31%) and families with three or more children (22%). Average monthly household income ranges from 480 USD to 3,000 USD. Average monthly expenses for ECE start at 1,000 RUB for poor families and can reach 50,000 RUB for wealthier categories. Costs for EA ranged from 500–35,000 RUB per month. Before analysis, the dataset was checked for missing data and outliers. The data were then analyzed using a comparative model with control of variables. All parents in the study had at least one child aged 3–7 years old. The age of 7 years corresponds to when a child normally completes preschool in Russia. Children are usually sent to the first grade of elementary school at the age of at least 6.5 on September 1. The lower limit of 3 years old was chosen because, although the age of enrollment in nursery groups and part-time groups is 1.5 years, due to objective and subjective factors, children usually begin to attend such groups in the kindergarten at 2.5 or 3 years old. Another reason is that paid classes in early development groups are mostly targeted at children from the age of 3. Some respondents did not report the presence of children of the required age. These responses

were excluded from the analysis. In sum, the dataset for the first stage of the study includes 223 answers, 182 for the second, and 207 for the third.

3. RESULTS

3.1. The economic situation of the family

The dataset for the first stage of the study includes 223 answers. Based on these, I calculated the average household income. Then, regarding the number of family members living together, I determined the average per capita income (PCI) for each family. Using PCI, I identified families that can be classified as poor. According to the national classification, 19.4 million people in Russia live below the poverty line of monthly incomes of 11,160 RUB (160 USD) (2020, HSE Monitoring). Those families in the survey with PCI \$160 or were designated as poor families (PF).

Second, I have identified low- and middle-income families. Classification for the middle class is not consistent either abroad or in Russia. There are various approaches to determining the boundary in the average PCI of low and middle-income families. For this study I have taken an average PCI of 36,000 RUB per month, which reflects different approaches. I classified those respondents with the average PCI above the poverty line, but not over 36,000 RUB (500 USD) as representatives of the low-income families (LIF), over 36,000 RUB as middle-income families (MIF).

According to various classifications, families with a total income per month of over 250,000 RUB (or with a PCI of 99,000 RUB) are classified as rich in Russia. In this study, 51 families have a total income over 215,000 RUB (3,000 USD), but there were only a few respondents who had an average PCI of over 100,000 RUB. I did not distinguish a separate category for rich families and included them in the category of MIF.

The 223 families were divided by income level into three categories: PF, n=16 (7%), LIF n=114 (51%) and MIF n=93 (42%).

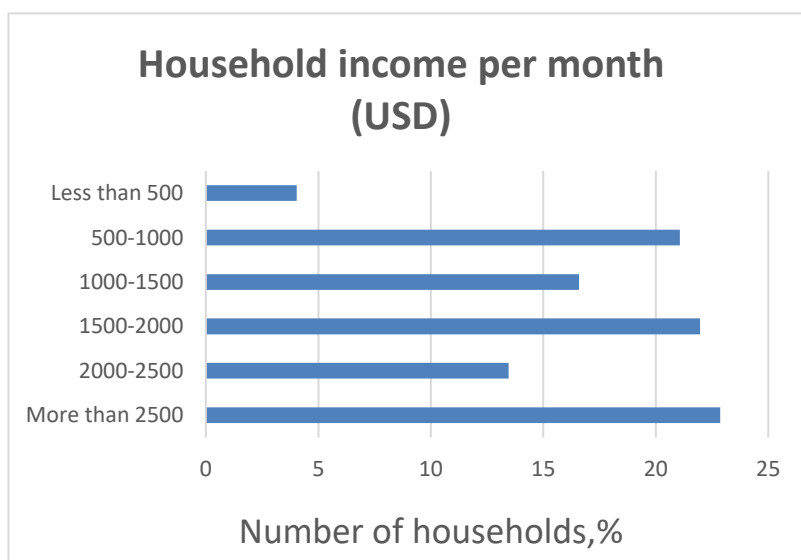


Fig.1. Household income per month.

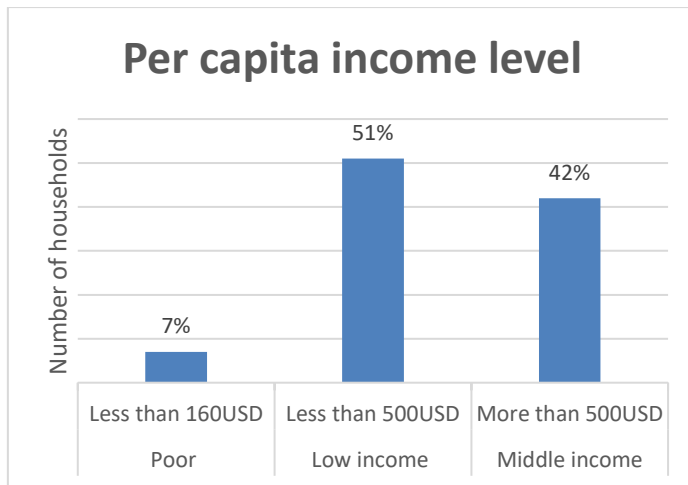


Fig.2. Per capita family income level.

3.2. Expenses for early childhood education

Here I present the results of the second part of the survey concerning parental investment in ECE, assessing the amount of money spent on children’s preschool education, including kindergarten and EA inside and outside the kindergarten. By separating economic classes, I analyzed the education spending of each group. This showed the relation between economic status and ECE investment. I tested the first hypothesis of this study: PF and LIF spend less on extra EA.

The first part of the survey asked questions not directly related to the money they spent on education. However, these questions help to assess the overall cost structure for child education and care.

How often do you use the help of relatives in raising a child? The results show that help from relatives (normally grandparents) is substantial. More than half of respondents use grandparents care at least 1–2 times a week. Even for MIF this percentage is almost the same (49%). PF use the help of relatives most of all: 38% “use help a lot” (only 20% of MIF do so). About 30% of MIF do not use the help of relatives at all (compared to 13% of PF). As we can see, there is an inverse correlation between family income and the involvement of relatives in raising children.

Do you use babysitting or nanny services? The responses demonstrate that this type of service is not popular in Russia. Do not use such services: 100% of PF, 91% of LIF, 69% of MIF. Only 11% of MIF use babysitters for full-day (over 30 hours per week) and 21% use for shorter arrangements. This may illustrate the persistence in Russia a well-developed preschool education system, which allows parents to work without using these services. It also shows that traditional forms of upbringing within the family (without the involvement of professionals) remain dominant. In less affluent families, care for small children is carried out using the personal time of parents or relatives. So, the level of parental involvement in these families is higher.

How much money do you spend per child per month? This question asks parents to sum all spending on their child (babysitter, kindergarten, EA, toys, paid phone or computer apps, sport and leisure activities), but do not include spending on food and clothing. The amount spent per child per month in PF averages 5,750 RUB (range 3,500–8,000 RUB), LIF 13,083 RUB (10,500–15,666 RUB), MIF 26,016 RUB (22,495–29,538 RUB).

How much do you pay for kindergarten per child per month? Based on the reports, I have defined which kindergarten the child is attending. The payment for a public kindergarten in Russia is fixed, in all regions of Russia it ranges from 1,900 to 2,700 RUB per month (Abankina et al. 2017). The results show that 53% of the children attend a public kindergarten, 27% a private one, and about 20% do not attend at all. The higher the family’s income, the more likely the child is to attend a private kindergarten or stay at home. Among MIF, 28% of children do not attend kindergarten, 39% go to a public kindergarten, 33% go to a private one. This also explains the difference in the monthly payment for kindergarten: PF 1,718 RUB; LIF 7,210 RUB; MIF 11,311 RUB.

How much do you spend on extra activities per child per month? Without dividing by income level, total money spent on EA per child per month is from 5,176 to 12,055 RUB. PF spend 1,906 RUB (range 938–2,875 RUB), LIF 7,272 RUB (4,298–10,246 RUB), MIF 11,344 RUB (7,409–15,280 RUB). We can see MIF spend on average almost 6 times more than PF on EA. But the difference between LIF and MIF is significantly less, the increase in spending is about 65%. This may show that LIF value the importance of investing in EA, or it can be assumed that there is a certain reasonable limit to their investment in child development. Even wealthy families do not consider it necessary to pay more than this amount.



Fig. 3. Extra activities fee in different families

How much do you pay on average per hour of classes? The results show that families with lower incomes pay less per hour of class: PF 437 RUB, LIF 706 RUB, MIF 1,048 RUB. Such a range in prices could be associated with the organizations that provide the services. The prices for EA services in small and medium-sized businesses are usually higher as they are more focused on MIF. The prices for paid classes in kindergartens and urban cultural centers are lower because of subsidies from state, regional or local authorities. In order to develop the child, poorer families are more motivated to find more affordable activities.

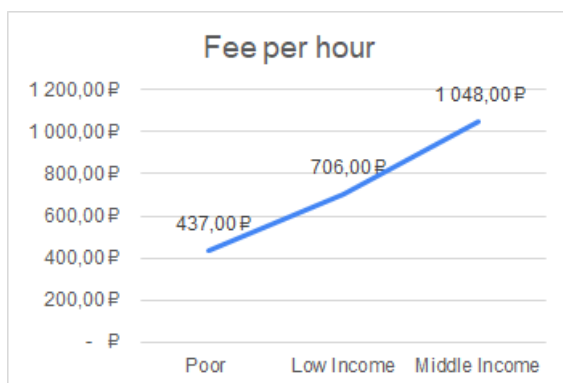


Fig. 4. Fee per hour per class

The results of the second stage of the study make it possible to test the first hypothesis. They show that there is a positive correlation between income and investment in ECE. The lower the family income, the less parents pay for EA. However, the hypothesis was not completely correct. LIF showed a relatively high level of spending on a child's education. Even families with PCI below the poverty-line reported that their children still attend paid classes. A deeper understanding of the parents' motives when paying for EA was obtained at the third stage of study, where I investigated the priorities and values of parents toward EA.

3.3. Parental views on additional education

The responses in the third part of the survey covered parents' views on the importance of various aspects of extra activities for their kids. The results show whether children from PF and LIF are less involved in EA.

What types of additional education does your child receive outside the kindergarten system? The following options were offered: nothing, personal online lessons with a tutor, tutoring at home, school preparation classes, foreign language classes, paid apps for phones or computers, free apps for phones or computers, sport classes, creative activities (singing, theater, modeling, painting), is educated by babysitter or relatives at home.

Sports, creative activities and traditional home education are most popular for children from MIF and LIF. For PF free apps are the most popular and "nothing" accounts for 27%, which could

relate to the financial status of PF. PF evaluated school preparation classes, family education and sports highly and are more likely than the other two categories of parents to send their children to school preparation classes (PF 27%, MIF and LIF 20% each).

The answers for MIF and LIF were very similar overall. This shows that parents from these two categories have much in common in their views on additional ECE. The exception was foreign language courses, which are more popular with MIF (28% vs. 15%).

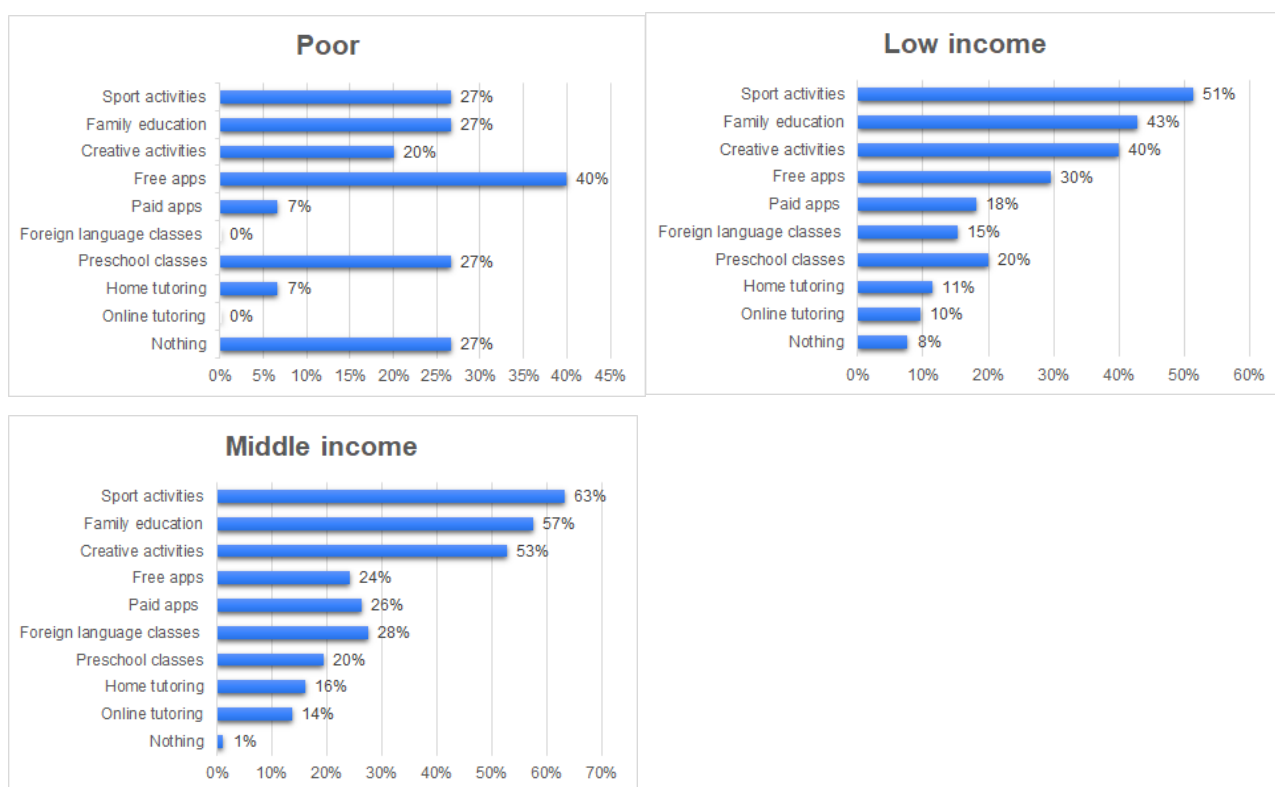


Fig. 5. Types of extra activities for child in different families.

What is most important when choosing extra activities? The following options were offered: sport activities; creative activities; encouraging the desires of the child; foreign language, arithmetic, reading, etc.; professional education; family education; let the child enjoy their childhood; activities in kindergarten; one type of activity is enough; will learn everything at school.

All families agree on the importance of a child’s attending creative and sports sections, these two answers were the most popular in all families. Sports are valued most of all by LIF (73%). The third most popular answer was “To encourage child desires” (55% of all respondents overall). From all three categories, PF are less likely to encourage the child’s choice (47%). Hence, we can conclude these children are more guided by parental choice.

The development of cognitive skills (“Language, arithmetic, reading, etc.”) is most valued by LIF 46% compared to MIF 36%.

The answers confirm the professionalization in ECE. LIF and MIF rate professional education higher than home education. LIF more than PF and MIF indicated the need for a professional approach to EA. This could be attributed to a lack of parental time for home activities. These families still recognize the importance of the child’s intellectual development because only a small proportion of LIF (18%) spoke about the uselessness of EA. They choose a compromise path in EA: although limited financially, they are still willing to pay for ECE and consider it important for their children’s future.

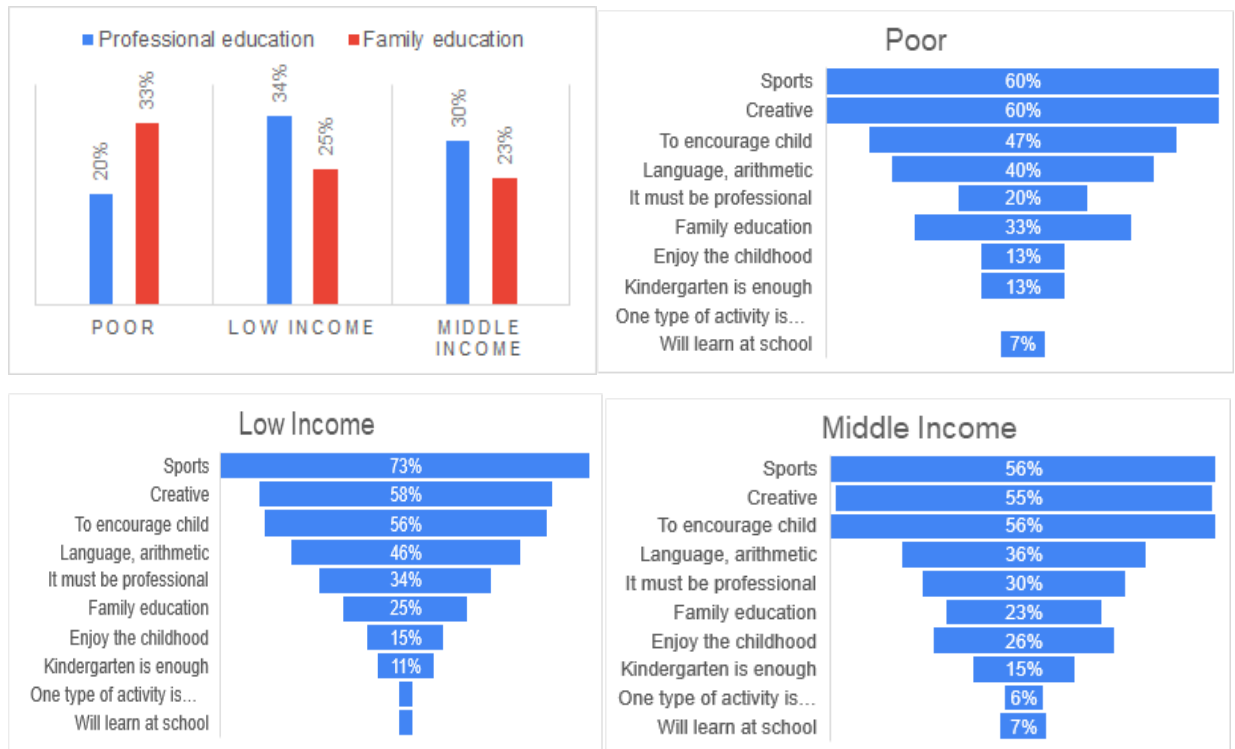


Fig. 6. Parental views on extra education.

PF are more in favor of home education than professional, which is likely related to financial constraints. However, this requires more involvement of family members in ECE. The answers about the need for EA showed that there are 5 times more positive responses than negative ones (the same ratio as in LIF). Most PF understand the importance of investing in ECE, so they find ways to compensate for their lack of resources.

Many MIF do not consider EA to be important. They said that the child “should enjoy childhood”, “gets optimal development in kindergarten”, or the child “will learn everything at school”. There were twice as many responses among MIF to support EA (128 positive vs 57 negative answers). This can be explained by the higher level of parental confidence in the future and their ability to support their children in case of their educational failure.

The respondents were also asked: *Why did you choose these activities?* One of the 12 multi-choice responses was “this is an investment in the future”. Only 13% of PF, compared to 44% of LIF, and 59% of MIF chose this answer. These results suggest that more affluent parents perceive education as an extra investment. Less wealthy families (especially PF) concentrate on solving immediate problems: how to maintain children’s health through sport, make him ready for school entry, improve cognitive skills for good performance in school.

The results presented in this part did not support the second hypothesis of the study. Based on the answers of the respondents, it cannot be justified that children from less wealthy families receive less education. The results suggest different ways of and views on investing in ECE, but do not support the idea of underestimating the value of EA among LIF and PF.

4. Discussion

This study investigated the interrelation between family income level and investments in ECE. Based on the previous studies, two hypotheses were constructed: 1. PF and LIF spend less on EA. 2. Children from PF and LIF are less involved in EA in ECE.

The main findings from this study suggest that the first hypothesis is true for poor families. In line with previous research (Heckman 2011; Shpakovskaya 2015; Schlee et al. 2009), the results indicate that there is a positive correlation between income and investment in ECE. The lower the family income, the less parents spend on EA. However, the data for LIF do not support this. The difference in expenses for EA between LIF and MIF is not significant—the increase in spending for MIF is about 68% (7,300 RUB vs 11,300 RUB). This shows that LIF value ECE, but having financial constraints, they, like PF, choose more affordable activities for children.

There is a linear relationship between family income and spending on ECE. For each of the three categories of families, spending increases by an average of 100%. Considering only the costs of EA, such a linear relationship was no longer observed. PF spend on average 6 times less than MIF, and 4 times less than LIF. These results are consistent with past research, however, there are several additional factors that also influenced parental investment in ECE. The results suggest different ways and different views on investing in ECE, but do not support the idea of underestimating the value of extra ECE in PF and LIF. Children in PF are much less likely to attend paid classes; they still do so, although the average cost of classes per hour is 2.5 times lower than that paid by MIF. In order to develop the child, families with lower incomes look for more affordable activities.

Testing the second hypothesis of the study, I expected to find evidence for the prevalence of paid services in ECE. However, results do not support this. Findings from this study suggest that traditional forms of children's education within the family (i.e., without the help of professionals) remain dominant within PF. The education of preschool children is carried out by parents or relatives.

Being limited financially, PF find ways to compensate for their lack of financial resources. In line with the findings of Shpakovskaya (2015), the results of this study confirm the professionalization of ECE. But I found that the prevalence of paid classes in home activities is not significant. From the survey, 34% of LIF and 30% of MIF respondents indicated that ECE should be professional, and 25% and 23% respectively reported that EA should be family based. This finding does not support the second hypothesis. I found no evidence that the professionalization and commercialization of educational services reduces the participation of children from poorer families in ECE. Rather, the findings indicate the existence of different strategies in ECE in different categories of families. Based on financial opportunities, parents try to find a balance between money and home-based engagement. In doing so, they choose paid, subsidized or free EA.

Finally, the survey results provide new insights into parental views on investing in ECE. Most of the respondents from PF admit the importance of EA, but they do not treat it as an investment in their children's future. This may mean that PF concentrate on solving more immediate problems. They spend more rationally. Having fewer financial resources, they pay only for what they consider most necessary, with an emphasis on the development of cognitive skills (especially school preparation classes). Parents from LIF choose a compromise: being limited financially, they are still willing to pay money for EA, realizing its importance for the future. Interestingly, many of the wealthiest respondents do not consider EA to be important. This could be explained by a higher level of parental confidence in the future and their ability to support their children in case of educational failure.

Although this investigation provides insights into the relationship between family income level and investment in ECE, it also has some limitations. First, due to the small sample sizes, the findings cannot be generalized to the Russian population. There were small shares of poor and rich families in the survey—most of the respondents were categorized by the author as low or middle-income families. This study did not take into account regional income differentiation. The investigation was based on samples from a survey with just 260 respondents from cities with populations of over one million, which limits the transferability of the findings to other economic contexts. Incomes of residents of such cities in Russia are, on average, higher than those of other regional centers and rural areas. So, further research is necessary for a deeper understand poor families' practices in ECE, especially for residents of small towns and villages, where the availability of EA is less. It is important to establish whether parental involvement in PF and LIF can compensate for the negative impact of income level on ECE. It is also necessary to investigate how LIF organize activities for their children at home: how much time they spend, what methods and materials are used,

what skills are developed. Research in this area might be helpful for organizing educational work with parents on early development issues.

Second, although the survey groups were quite variable, including single-parent families (15%), families with two children (31%) and families with three or more children (22%), the study did not take into account the impact of family composition on educational practices. It would also be important in future research to investigate the impact of the number of children or the absence of one of the parents on ECE.

To address the commercialization and professionalization of ECE, there is an urgent need for cost-effectiveness studies to be conducted in market services in ECE. It is necessary to compare the quality of the paid services provided in the private and public sector. Such an assessment would help families make better use of limited financial resources.

Despite these limitations, our study provides valuable insights into the parenting strategies of different socio-economic groups in Russia and fills a gap in existing research. Our analyses showed a correlation between family income and the ECE strategies they choose for their children. Data for this study were drawn from the online survey conducted by the author in spring of 2020 among 260 parents. This dataset made it possible to estimate how much different income families spend on EA in ECE and identify the motives of their choices. The author found that the families with the lowest income invest significantly fewer financial resources in ECE than the families with low and middle incomes. However, it was shown that even poor families still find opportunities to pay for additional activities for their children. It was also found that financial constraints lead parents to find other options for ECE. First, they use the help of relatives and other family members most in the ECE and do more ECE activities at home. Second, they try to find the most affordable EA, for example, cheaper classes at kindergartens or municipal cultural centers. An analysis of the preferences and motives of parents in ECE did not confirm that children from poor families are less involved in center-based classes. The reports of respondents from such families show that parents value the importance of paid classes. However, such spending is perceived not as an investment in the future, but as a necessary expense for the child's enrollment in primary school.

Appendix A. Questionnaire.

Russian families' perspective on early childhood education and care (3–7 year-olds).

1. What city do you live in?
2. How many family members are living together (having a joint household, including children)?
3. How many children are in your family (aged 0-18 years)?

4. How old is your first child?
5. How old is your second child?
6. How old is your third child?
7. What is your monthly income (including any pre-tax incomes of all household members)?
8. Are you paying a mortgage or rent for an apartment?
9. How much extra money do you receive per month for childcare (parental leave or other social allowance for childcare, alimony, money from a second parent or relatives)?
10. Do you use babysitting services?
11. How do you assess the help of relatives in raising a child?
12. How much money do you spend per child per month?
13. How much do you pay for kindergarten per child per month?
14. How much do you spend per month on extra activities?
15. Will these costs change in a year?
16. How much do you pay on average for 1 hour of classes?
17. What types of additional education does your child receive outside the kindergarten system?
(Multiple choice)
 - nothing
 - personal online lessons with a tutor
 - tutoring at home
 - school preparation classes
 - foreign language classes
 - paid APPs for PC and cellphone
 - free APPs for PC and cellphone
 - sport classes
 - creative activities (vocals, theater studio, modeling, painting)
 - educated by babysitter or relatives at home
18. What are you guided by when choosing extra activities? (Multiple choice)
 - advices from friends and family members;
 - intuition;
 - child's choice;
 - need for extra activities for a successful future;
 - lack of personal time to engage;
 - other kids are attending classes too;
 - paid kindergarten classes are very convenient;

- online classes save both time and money;
- it is must have for school readiness;
- it is an investment in the future;
- there is never too much lot of knowledge and skills;
- should leave free time for the child to communicate with parents and peers.

19. What is most important for you the area of ECE? (Multiple choice)

- sport activities;
- creative activities;
- encouraging the desires of the child;
- foreign language, arithmetic, reading, etc.;
- center based education;
- home based education;
- let him enjoy the childhood;
- activities in the kindergarten program is enough;
- one type of activity is enough;
- will learn everything at school.

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