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What makes youth become NEET? Evidence from Russia

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ABSTRACT

This article addresses the issue of socio-demographic attributes of NEET status (dropping out of employment, education or training for young people between 15 and 24 years old) in Russia, and presents an investigation of the impact of education on falling into NEET for the first time. Whilst existing studies on Russian NEETs provide a general descriptive insight into NEET status, little is known about the role of education in NEET-types formation. The empirical analysis was based on the micro-data of the Russian Labour Force Survey (LFS) by the Federal State Statistics Service for 1995–2017, and the Russia Longitudinal Monitoring Survey Higher School of Economics (RLMS-HSE) for 2000–2017. Gender-specific multinomial logit analyses and dynamic multinomial logit panel regressions empirically support the heterogeneous nature of Russian NEETs confirming the human capital framework. They show that higher education does not provide a universal safety net from NEET status in Russia. While risks of NEET-inactivity are mainly concentrated among those who have primary or vocational education, NEET-unemployment in Russia is associated with higher education. Results contribute to the ongoing discussion about the changing rates of return for higher education and the saturation of the Russian labour market with university graduates.

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1. Introduction

The smooth transition of young people from study to work is one of the hot policy issues in all developed and transition countries. As birth rates continue to decline, youth unemployment exceeding 2–3 times the overall average levels is worrisome (OECD 2015, 2016). However, the conventionally measured unemployment rate has the total labour force size as the denominator, ignoring large non-participation and inflating unemployment estimates. Many young people are engaged in full-time education or training and, therefore, are legitimately out of the labour force. In this context, the variable counting those young people who are not in employment, education or training – the so-called NEET group – emerges as an alternative to the conventional definition of unemployment (Tamesberger and Bacher 2014).

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At the same time, internal heterogeneity is one of the main features of the NEET youth. For example, for women dropping from the education system and labour market can be a temporary phase of the life cycle associated with childbirth. This type of out of labour force NEETs generally dominates the structure of NEET-inactivity in European countries where the ratio of those who are out of employment and education is low (Eurofound 2016). There are also young people who voluntarily decide to take some time off for hobbies or travelling (Furlong 2007). However, NEET status can also be a result of various constraints associated with access to jobs and higher levels of education in a particular society. For example, in Greece, Italy, Spain and Ireland, who were severely shaken by the Great Recession during the late 2000s and early 2010s, the majority of NEETs consists of unemployed NEETs facing problems in the school-to-work transition, and 'desperate' inactive NEETs who already gave up searching for a job (Carcillo et al. 2015; Eurofound 2016).

In this respect, the NEET rate is usually regarded as the indicator of youth exclusion, i.e. 'joblessness' (OECD 2010), 'youth left behind' (Scarpetta, Sonnet, and Manfredi 2010) and obstacles in the transition from school to work (OECD 2013). Negative consequences for future life trajectories are associated with poorer chances of finding permanent employment, a higher risk of poverty and lower levels of well-being (Coles et al. 2002; Eurofound 2012; Wadsworth, 2013). It can also lead to problems with physical and mental health, increase the propensity for criminal activities (OECD 2010), substance abuse (Coles et al. 2002) and lower the level of trust in social institutions (Alfieri et al. 2015).

Russia is not on the map of rigorous NEET studies, though the issue of school to work transition remains quite relevant. Existing studies of Russian NEET youth are mostly descriptive (Varshavskaya 2016a; Blinova and Vyalshina 2016; Zudina 2019) and discuss general trends in NEET dynamics and characteristics. As a result, there are no detailed investigations of the impact of education on NEET status, which would contribute to the existing discussion on the human capital of NEETs using Russian data.

This paper aims to fill this gap using the most comprehensive data set of the Russian Labour Force Survey (LFS) for the period of 1995–2017. These results are then compared to the data of the Russia Longitudinal Monitoring Survey Higher School of Economics (RLMS-HSE) for 2000–2017, which widens our understanding of the NEET youth due to the panel structure of the data and additional variables included and provides a kind of robustness check of the results received using the Russian LFS.

2. How young people become NEET: a short literature review

Almost immediately after its introduction into statistical practice, the NEET term became subject to serious methodological critique which highlights the risks of taking researchers' attention away from the vulnerabilities of youth unemployment (see, e.g. Furlong 2006; Elder 2015). The very term NEET emphasizes what young people *are not*, and so does not capture the diverse range of situations and challenges that they face (Yates and Payne 2006). One section of NEETs consist of the unemployed who want to find a job, while the other is those who are out of the labour force for different reasons (Eurofound 2012). Some inactive NEETs have children or other family members that they need to care for, while others can have some physical disabilities or could not find a job and became

desperate in searching for employment. Those who decided to take a short break from education and work are also NEETs, but this latter group is usually small (Eurofound 2012). Another important issue of heterogeneity is the diversity of ages of the NEET youth. NEETs at the age of 16 are high school drop-outs while NEETs at 24 can be those who received higher education and faced problems trying to enter the labour market. That is why NEET indicators are often calculated for age groups of 15–19 and 20–24 separately.

The structure of NEETs understood as a particular combination of various NEET types reflects the specifics of employment and educational opportunities in a given country. For instance, in Germany, Austria and Denmark, the ratio of NEET youth is generally low and it mainly consists of the out of labour force NEETs who have family responsibilities or health problems. Contrary to that, in countries with turbulent economic conditions like Greece, Italy, Spain and Ireland, where NEET rates are high, NEET-unemployment and 'desperate' NEET-inactivity are the most common types of NEET. Countries of Eastern Europe are also characterized with high NEET-rates, but, compared to Southern Europe, they have higher shares of NEET-inactive young mothers (Eurofound 2016).

Despite the diversity of possible reasons for NEET status (see, e.g. Tamesberger and Bacher 2014), the conceptualization of NEET youth was mainly carried out within the framework of human capital theory. The economic model of intergenerational transmissions of socio-economic status from parents to children, which was introduced in Becker and Tomes (1986) and later described as the intergenerational inheritance of worklessness in Solon (2004), asserts that human capital is the principle transmitter of incomes across generations. Heckman and Carneiro (2003) argue that the dynamic process of human capital accumulation starts long before formal schooling and depends on family background. Using empirical data, Caspi et al. (1998) showed that early personal and family characteristics determine labour market outcomes since they restrict the accumulation of human capital and directly affect one's ability to enter employment and remain in this state. Applying this theoretical approach, entry into the NEET group can occur because of the initial socio-economic inequality among families to invest in various skills of their children.

Empirical studies of the NEET youth generally support this human capital framework. They show that low levels of education or its poor quality, exclusion or suspension from school, and migrant status, are associated with a higher probability of becoming a NEET, as well as poor physical or mental health, substance abuse, teenage pregnancy, early marriage, and early childbirth (Coles et al. 2002; Eurofound 2012; Kelly and McGuinness 2013; Carcillo et al. 2015; Mirza-Davies 2015; Baggio et al. 2015). At the same time, various family characteristics related to 'ill-being' (unemployed parents or parents with low levels of education, single parent or large families, low household incomes, poor housing, living in small, rural or remote settlements) also contribute to becoming a NEET (Bynner and Parsons 2002; Britton et al. 2011; Eurofound 2012; Dixon 2013).

3. Background information about the analysed time period

The present article discusses the period from 1995 to 2017, which covers almost the entirety of Russia's transitional stage and multidirectional macroeconomic shocks (the initial period of transition to a market system, the 1998 Russian financial crisis, economic

growth of the 2000s, the consequences of the financial crisis of 2007–2008, and the fall in the oil prices in 2014). During the tough years of transition from the command to the market economy, the number of currently enrolled students of university-level institutions became almost twice as large as it was in the late Soviet years. In the new economic conditions, with its structural changes and variety of new jobs, economic returns to professional education have increased (Gimpelson and Kapeliushnikov 2017). The demand for such education has also risen, pulling young people into tertiary educational institutions. From 1990 to 2010, the number of students in universities increased by 2.6 times, from 2.8 to 7.4 million (Gimpelson and Kapeliushnikov 2017), as youth employment was declining – from 17% in 1995 to 6% in 2015 among 15–19 years old, and from 65% to 50% among 20–24 years old (Trud i zanyatost' v Rossii 2003; Trud i zanyatost' v Rossii 2015).

Higher education became an almost mandatory requirement of employers in the 2000s, increasing employment rates of graduates and shortening the period of the job search (Avraamova et al. 2006). As a result, the ratio of workers with the highest formal educational credentials in the labour market has risen – from 16% of all employed in the late 1980s to 26% by the early 2000s. The expansion was even more significant for the graduates of technical colleges that are classified as short-cycle tertiary education – from 24% to 36%. During 2000–2015, the educational upgrading of the employed population continued, and over 37% of Russian workers have either a complete or incomplete higher education, and approximately 35% have some college education (Gimpelson and Kapeliushnikov 2017). As higher education may have reached its expansion limit, and rates of return have been declining since 2009 (Melianova et al. 2020), the combination of study and work brings substantial additional benefits to graduates compared to those who did not have labour market experience during education (Roshchin and Rudakov 2014; Varshavskaya 2016b).

On the other hand, family background largely determines the risks of youth's social exclusion. Higher levels of income deprivation in rural areas and regional differences in labour markets and educational infrastructure shape the inequality of young people's access to employment and different types of education (Prakhov 2016; Bessudnov, Kurakin, and Malik 2017; Walker 2018). The introduction of the Unified State Examination (the USE) in 2009 was aimed at increasing the accessibility to higher education for young people. However, family income disparity and lack of cultural capital create unequal opportunities for additional preparation for admission. It results in enrolment into the so-called 'less selective' universities, generally offering education programmes of low quality and low chances for good jobs for its graduates (Prakhov 2016). 'Marketization' of tertiary education with the emergence of private universities and colleges, part-time and distance learning sector, and expansion of the educational programmes on a fee basis, also brought a big variation in the quality of university degree (Walker 2010; Prakhov 2016). Hence, the growth of higher education institutions simultaneously raised inequality in labour market opportunities (Konstantinovskiy 2017).

Vocational education in Russia is generally associated with low performance, and there is a serious mismatch between the qualification of graduates and skills necessary for job holders (Avraamova et al. 2006). Technical college education is mainly regarded as an insufficient transitory step to the almost obligatory higher education. Rates of return to vocational education in Russia are 3–5 times lower than to higher education as the

gaps between higher education and vocational education are increasing. However, they show similar dynamics with corresponding peaks and declining co-movement of its slopes (Melianova et al. 2020). Low-educated young people are also among those who experience the majority of risk connected with finding informal employment (Gimpelson and Zudina 2011).

Existing studies on the Russian NEET youth show that their structure is constantly dominated by those whose connection to the labour market is the weakest – individuals who are out of the labour force (Blinova and Vyalshina 2016; Varshavskaya 2016a; Zudina 2019). NEET status is largely associated with low levels of education, rural settlements and the absence of labour market experience, which make the analysis of those who dropped out of education and the labour market even more important. There are no special inquiries on the subject dedicated to the role of education in Russia, and we try to fill this gap. The present paper analyses the heterogeneity of Russian NEETs and investigates the socio-demographic factors of this state, with special attention to the education level.

4. Data and methods

4.1. Data source

The present study follows the international tradition of NEETs research and analyses the basic source of labour force statistics in Russia – the micro-data from the Russian LFS for 1995–2017. The LFS is a household cross-section survey, constructed according to International Labour Organization (ILO) guidelines and conducted quarterly by the Federal State Statistical Service, Rosstat, and since September 2009 – monthly, using large, nationally and regionally representative samples (about 270,000 people per year for the quarterly data collection, and about 800,000 people per year for the monthly data collection).

In order to conduct a robustness check of the results received for the Russian LFS data, we turn to the data of the RLMS-HSE for 2000–2017. This is a household panel survey, conducted annually since 1992, by the North Carolina Population Centre at Chapel Hill in collaboration with various Russian research organizations, among them the National Research University Higher School of Economics (HSE University).[1] RLMS-HSE is a unique source of information about the Russian economy and society due to its panel character and wide scope of indicators, including those that are not covered by state statistics. It is based on a nationally representative sample of 4000 households and, starting from 2000, the survey was based on a multi-stage probability sample.[2] On average, each wave of RLMS-HSE for 2000–2009 collected information from 12,000–15,000 respondents. In 2010, the sample was expanded by 50%. Individual and household questionnaires include a vast array of indicators characterizing socio-demographic and employment characteristics, health, social benefits, pension schemes, work and life satisfaction, household income and consumption.

4.2. Measurement of NEET

In the LFS data, all young people between 15 and 24 years old were grouped as follows, based on their labour market behaviour at the time of the survey. The definitions

of employment, NEET-unemployment and NEET-inactivity, followed the standard statistical guidelines of ILO and Eurostat:

(1) Students: not employed who attend school or university.
(2) Employed: employed individuals, including those who combine study and work.
(3) Unemployed NEETs: non-students who did not have a job, were searching for one and were ready to start working once they found one.
(4) Out of labour force NEETs (inactive NEETs): individuals, who are not attending school or university at the time of the survey, did not have a job and were not searching for one.

In RLMS-HSE data for 2000–2017, all young people aged 15–24 were grouped into the same four categories as in the LFS data.

4.3. Data-sets for analysis, variables and statistical methods

Table 1, in the Supplementary materials, depicts the summary statistics for the LFS samples of youth between 15 and 24 years old in 1995–2017, with a number of observations per wave ranging between more than 27,000 in 1995 to 134,000 in 2017. By 2017, the share of NEET youth in Russia among young people aged 15–24 years was about 12%, which corresponds with the average European rates (Mirza-Davies 2015). Levels of NEET-unemployment were relatively low for the most part, falling from 8.8% in 1995 to 4.4% in 2017. The decline of NEET-inactivity – from 10% in 1995 to 8% in 2017 – was less distinctive. The only periods of growth in NEET-rates can be attributed to a modest reaction to different macroeconomic downturns – 1997/1998 (deterioration of the macroeconomic situation resulted in the 1998 Russian financial crisis), 2009 (as part of the Great Recession) and 2015/2016 (negative consequences of the rapid dynamics of oil prices). The general decline of both NEET and employed youth (from 41% to 25%) is explained by the significant increase in the share of young people in education: from 40% in 1995 to 62.5% in 2017. This corresponds with Rosstat data about the dynamics of the coverage of youth by educational programmes (Rossiyskiy statisticheskiy ezhegodnik 2016). Levels of NEET-unemployment rates were always smaller than NEET-inactivity rates, reflecting the major features of Russia's adjustment mechanism to the macroeconomic shocks, characterized by the flexibility of working hours and wages and not by mass layoff rates (Gimpelson and Kapeliushnikov 2013).

The structure of the labour market statuses of Russian youth according to the panel data of RLMS-HSE, is presented in Table 2 in the Supplementary materials, together with the number of observations per wave. The ratios and their dynamics are generally in line with the LFS data.

In order to analyse the socio-demographic factors of NEET, multinomial logit models for six different waves of LFS data (1995, 2000, 2005, 2010, 2015 and 2017) were estimated for the first time, examining the relative influence of the characteristics. Average marginal effects were assessed using the Stata command 'Margins', based on the delta method. The models were estimated separately for men and women since the ratios and the structure of NEET differ across genders (Eurofound 2012). The labour market status indicator, whose values include the employed, students, and two separate types of NEETs (NEET-

unemployed and NEET-inactive), is a nominal dependent variable. A set of conditioning variables contains age, educational level, marital status, settlement type and a federal district. The variable of education in the LFS data refers to the educational level received by a respondent at the time of interview in a particular year. He or she may, sometime later, return to school or university. However, at the moment of the survey, NEET youth by definition, are not studying. The variable has six[3] values, varying from tertiary to primary level: university, technical college, vocational education, upper secondary education, lower secondary education and primary education. According to previous studies, it was assumed that risks of NEET in Russia are strongly associated with lower educational levels.

Household characteristics, including the area of residence, are also important factors of becoming NEET (Bynner and Parsons 2002). Great disparities in inequality rates and educational environment between urban and rural areas influence differences in life chances in Russia (Elder et al. 2015). In this respect, settlement type can be treated as evidence of family socio-economic opportunities as rural youth should be more prone to becoming NEET than urban one.

The estimation of dynamic multinomial logit models conducted separately for men and women using panel data of RLMS-HSE for 2000–2017, followed the general methodology presented in (Ranzani and Rosati 2013). Coefficients of the models were used as the basis for the simulations of choice probabilities of a particular labour market status, which is a dependent variable with four different values (the base category was students). The set of controls[4] contains indicators that are also included in LFS models (age, educational level, marital status, settlement type, federal district) and variables that are absent in LFS data – natural log of household income[5] per household member, official disability status[6] which is used as a proxy to health conditions, year dummies, and lagged labour market status in a previous year. Household income and disability status are treated as controls characterizing the possible vulnerability of youth.

5. Results

Estimation of multinomial logit models on LFS data shows that among men, risks of NEET-unemployment and NEET-inactivity increase with age and are concentrated in rural areas (Table A1 in the Appendix). Marital status does not change the probabilities of NEET-unemployment, while NEET-inactive men are mostly unmarried.

In 1995, young men with different educational levels experienced almost the same risks of being NEET-unemployed, which can be attributed to the turbulent character of the transitional economy. However, in 2000, higher education and incomplete university education were associated with the lowest probabilities of NEET-unemployment compared to upper-secondary level. This dynamic can be explained by the increase in the rates of return for higher education – 'higher education wage premium' – which rewarded new knowledge and skills needed for the transforming economy and its emerging sectors (Sabirianova Peter 2003; Tan et al. 2007). The signs of saturation with a high-qualified labour force became apparent with time and rates of return declined (Lukyanova 2010). In 2005 and 2010, young people with upper secondary education had significantly lower probabilities of being NEET-unemployed, while university education, technical college education and lower secondary education were associated with approximately

the same risks. In 2015 and 2017, university graduates and young people with vocational education and technical college education were more prone to NEET-unemployment than young men with other educational levels. Contrary to this, for NEET-inactivity rates, young men with primary education, lower secondary education and vocational education are, on the whole, much more likely to become inactive NEETs than those with a university degree or upper secondary level.

For women, by 2017 relative risks of NEET-unemployment became more evenly distributed across different ages and included even those who are 18–21 years. Women who live in rural areas are significantly more prone to being NEET-unemployed. Marital status for most of the period was not a significant factor of their NEET-unemployment. In 1995–2017, higher NEET-unemployment risks for women were associated with university education, technical college and vocational education, while other educational levels accumulated much lower probabilities. However, between 1995 and 2005, risks for women with higher education were declining, and the changes in the effects of higher education with time can be described as U-shaped because its size in 2015–2017 was similar to the 1995 level. The probabilities of NEET-unemployment for women with technical college and vocational education in 1995–2017 were increasing.

As expected, married women are significantly more likely to become inactive NEETs (13–16%), which corresponds with the traditional division of labour in Russia. A rural settlement type also contributes (2–4%) to NEET-inactivity. The effect of age on NEET-inactivity in 1995 has a U-shape since 15–17 years old and 22–24 years old women had the same probabilities of NEET-inactivity, while those in between are significantly much less prone to this state. Later, the risks of NEET-inactivity became concentrated among 24 years old. For most of the period, the probabilities of NEET-inactivity are higher for women with technical college education, vocational education, lower secondary and primary education, rather than for women who graduated from university or those with upper secondary level. Major risks are attributed to women with primary education whose probabilities of NEET-inactivity are generally 12–27% higher than that of women with upper secondary education.

Table A2 and Table A3 in the Appendix present the results of dynamic multinomial logit models on RLMS-HSE data for 2000–2017, which characterize the transitions into different types of NEETs.

They generally confirm the analysis of Russian LFS data. Marriage is a significant factor of NEET-inactivity of women and is insignificant for NEET-unemployment for both sexes. Risks of NEET-inactivity increase in rural settlements and villages, and are higher among those who have low levels of education, namely – vocational training. It corresponds with the results received on the basis of LFS data. At the same time, young people who completed secondary school have the lowest probabilities of NEET engagement of any kind. High household income per capita significantly lowers the probabilities of NEET-unemployment and NEET-inactivity, which corresponds with the general framework of human capital investment theory presented above. In accordance with the research literature, disability status is an important factor of NEET-inactivity in Russia. Analysis of RLMS-HSE data also confirms that higher education is associated with greater risks of NEET-unemployment.

6. Discussion and conclusion

The analysis presented above demonstrates for the first time that the story about Russian NEETs has two parts dedicated to human capital formation. The first one is devoted to inactive NEETs. Higher education provides some kind of a safety net from NEET-inactivity because its risks are mainly concentrated among those who have primary or vocational education and could not compete for a job in the labour market. NEET-inactive young women may consequently choose to devote their time to family, which goes in line with previous findings that social class is among the main determinants of early family formation in Russia (Roberts et al. 2003), or their early motherhood becomes an obstacle to continuing education. Although the ratios of inactive NEETs with the incomplete school are small at the moment, they normally represent the most vulnerable category of NEETs, coming from low-income families and staying outside the labour market much longer than their peers (Rumberger and Lamb 2003).

The other part of the story is about the unemployed NEETs, who entered the labour market and experienced difficulties finding a job. Regression estimations conducted on Russian LFS and RLMS-HSE data show that tertiary education does not bring any prominent decrease of NEET-unemployment risks. A growing share of the labour force with higher education and an oversupply of graduates with university degrees is a global phenomenon. The rapid expansion of higher education produces high-skilled workers whose employment prospects become more uncertain than previously (Nunez and Livanos 2010). Greater risks are usually attributed to countries with high rates of tertiary attainment and graduates of liberal arts and bachelor courses (Barone and Ortiz 2011). However, the rates of return to higher education and employment levels of university graduates, in general, are not expected to fluctuate much over time, because the demand for higher skills also tends to rise (Psacharopoulos and Patrinos 2018). Russia provides an interesting case in this respect with its generally low levels of NEET-youth and declining rates of return to higher education. The latest estimate of the returns to higher education is about 8%, which is below the EU average of about 10% and the global average of 15% (Psacharopoulos and Patrinos 2018). This comes both as a result of the expansion of access to university degrees and the decrease in the rates of return among older generations (ILO 2020).

Devaluation of higher education as a means of success in the labour market among youth is also specific to labour markets with a difficult transition from study to work, caused either by a structural (education-qualification) mismatch between youth labour supply and demand (Macedonia, Egypt) or by a temporary macroeconomic crisis (Greece, Spain, Italy) (Bardak, Maseda, and Rosso 2015). In the Russian case, risks of NEET-unemployment can be the signal of a mismatch between the qualifications of graduates and skills necessary for the labour market, due to the increasing supply of graduates with a higher education received in universities of poor quality (Walker 2010; Konstantinovskii and Popova 2015; Roshchin and Rudakov 2016). Young university graduates in general have lower unemployment rates than those with a vocational and technical college education, but the difference is not great (ILO 2014). Employers are reporting skills shortages (especially, in soft, non-cognitive, skills), and the large variation in wages of university graduates reflects the heterogeneity of their human capital quality, as a degree itself is no longer the only signal of worker's productivity for prospective

employers. Institutional transformation of admission to universities and the introduction of the USE instead of high school and university-specific exams in Russia were aimed at increasing the accessibility to higher education. However, student choice is still influenced by the level of parental education, family income and size of investments in pre-entry coaching (Prakhov 2016). Together with the presence of 'less selective' universities, it results in the heterogeneity of abilities of university graduates and to the heterogeneity of their opportunities for competition for better jobs, and significant formal 'overqualification' for the ones that they finally manage to find (ILO 2014). High wage flexibility (as a particular feature of the Russian labour market) with low wage floors and a large pool of unregulated jobs absorbs the young labour force of any quality. Costs of this employment include low wages and poor quality jobs that are taken by those who could not compete for better ones – including graduates of 'less-selective' universities. Both vertical and horizontal education-job mismatch negatively impact earnings (Kyui 2010; Rudakov et al. 2019), and positive returns to higher education are undermined by the prevalence of youth employment in occupations exposed to high job turnover, atypical forms of employment and lower wages (service and sales workers, crafts and workers in elementary occupations) (ILO 2014). At the same time, some part of higher NEET-unemployment risks among university graduates can also be related to high reservation wages that also prolong the duration of their search for better jobs (ILO 2014; Krueger and Mueller 2014). Technical college education, in turn, is still regarded as insufficient by employers which result in higher levels of unemployment among graduates and their general qualification mismatch, as well as low rates of return to this educational level (Melianova et al. 2020).

Social policy recommendations resulting from the analysis lie at the intersection of the supply and demand sides of the labour market. The first one is related to the improvement of vocational education, career and educational guidance, the introduction of experimental active programmes providing work experience and skills development which would help to integrate young people into the labour market. Low-income families require more targeted financial and advisory support from the state, which would enable them to provide better educational opportunities for their children. In the post-COVID-19 labour market, this could be even more important given that many have lost their jobs and are not able to help their children any longer.

The demand side of the problem, in turn, suggests the general improvement of the characteristics of the business climate and increase in the rate of job creation at small and mid-size enterprises which accumulate the majority of youth employment.

Notes

1. The Institutional Review Board at The University of North Carolina at Chapel Hill has approved the study on 20 March 2019, No. 96-0478.
2. See https://www.cpc.unc.edu/projects/rlms-hse and https://www.hse.ru/en/rlms/ for the detailed description of the data including sampling procedures, general attrition rates and list of academic publications based on the RLMS-HSE data.
3. In 1995–2008 the classification of educational levels in Russian LFS, in accordance with the Federal Law on Higher and Postgraduate Education, also included the so-called incomplete higher education, describing the withdrawal from the university without a degree. A new amendment to the Federal Law from 27 October 2007 abolished the concept of incomplete higher education.

4. The values for RLMS-HSE variables are presented in Table 2 in the Supplementary materials.
5. Constructed as the sum of all financial revenues received by a household in a given month deflated with the regional consumer price index.
6. Demianova (2018, 4) provides the following definition of official disability status in Russia:

> assigned to persons with stable impairments and limitations in their daily activities according to special assessment procedure by the State Medical and Social Assessment Service. Disability status is used to entitle persons with disability to disability pensions and other public social support measures.

In the present study, a dummy variable of disability status described those with disability of any of I-III disability groups, as well as those having child disability.

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References

Alfieri, S., A. Rosina, E. Sironi, E. Marta, and D. Marzana. 2015. "Who Are Italian Neets? Trust in Institutions, Political Engagement, Willingness to be Activated and Attitudes Toward the Future in a Group at Risk for Social Exclusion." *Rivista Internazionale di Scienze Sociali* 130 (3): 285–306. Vita e Pensiero. Pubblicazioni Dell 'Universita'. Cattolica del Sacro Cuore.

Avraamova, E. M., I. B. Gurkov, G. Yu. Karpukhina, A. G. Levinson, M. V. Mikhaylyuk, E. A. Polushkina, and O. I. Stuchevskaya. 2006. Trebovaniya Rabotodateley k Sisteme Professional'nogo Obrazovaniya, edited by T. L. Klyachko and G. A. Krasnova, 18–80. Moscow: MAKS Press.

Baggio, S., K. Iglesias, S. Deline, J. Studer, Y. Henchoz, M. Mohler-Kuo, and G. Gmel. 2015. "Not in Education, Employment, or Training Status Among Young Swiss Men. Longitudinal Associations with Mental Health and Substance Use." *Journal of Adolescent Health* 56: 238–243.

Bardak, U., M. Rubal Maseda, and F. Rosso. 2015. Young people not in employment, education or training (NEET): An overview in ETF partner countries. Accessed May 29 2019. http://www.etf.europa.eu/web.nsf/pages/NEET_ETF_partner_countries

Barone, C., and L. Ortiz. 2011. "'Overeducation among European University Graduates: A Comparative Analysis of its Incidence and the Importance of Higher Education Differentiation'." *Higher Education* 61 (3): 325–337.

Becker, G., and N. Tomes. 1986. "Human Capital and the Rise and Fall of Families." *Journal of Labor Economics* 4 (3): S1–S39.

Bessudnov, A., D. Kurakin, and V. Malik. 2017. "Kak Voznik i Chto Skryvaet mif o Vseobshchem Vysshem Obrazovanii." *Voprosy Obrazovaniya/ Educational Studies Moscow* 3: 83–109.

Blinova, T., and A. Vyalshina. 2016. "Molodezh' vne Sfery Obrazovaniya i Zanyatosti: Otsenka Sel'skogorodskikh Razlichiy." *Sociologicheskie Issledovaniya* 9: 40–49.

Britton, J., P. Gregg, L. Macmillan, and S. Mitchell. 2011. *The Early Bird … Preventing Young People from Becoming a NEET Statistic*. Department of Economics and CMPO, University of Bristol. Report commissioned by Praxis. Accessed December 23 2017. http://www.bris.ac.uk/media-library/sites/cmpo/migrated/documents/earlybirdcmpo.pdf.

Bynner, J., and S. Parsons. 2002. "Social Exclusion and the Transition from School to Work: The Case of Young People Not in Education, Employment, or Training (NEET)." *Journal of Vocational Behavior* 60: 289–309.

Carcillo, S., R. Fernández, S. Königs, and A. Minea. 2015. *NEET Youth in the Aftermath of the Crisis: Challenges and Policies. OECD Social, Employment and Migration Working Papers*, 164. Paris: OECD.

Caspi, A., B. R. E. Wright, T. E. Moffitt, and P. A. Silva. 1998. "Early Failure in the Labor Market: Childhood and Adolescent Predictors of Unemployment in the Transition to Adulthood." *American Sociological Review* 63: 424–451.

Coles, B., S. Hutton, J. Bradshaw, G. Craig, C. Godfrey, and J. Johnson. 2002. *Literature Review of the Costs of Being 'not in education, employment or training' at Age 16–18*. Research Report no 347. Nottingham: Department of Education and Skills. Accessed December 23 2017. http://dera.ioe.ac.uk/4619/1/RR347.pdf.

Demianova, A. 2018. Employment of Disabled People in Russia in the Context of Digital Economy. NRU HSE. Series 'Science, Technology, Innovation' No. 91/STI/2018.

Dixon, S. 2013. *Not in Employment, Education or Training: The Long-term NEET Spells of Young People in New Zealand*. Report of Ministry of Business, Innovation and Employment. MB 12658. Accessed December 23 2017. http://thehub.superu.govt.nz/publication/not-employment-education-or-training-long-term-neet-spells-young-people-new-zealand-pdf.

Elder, S. 2015. "What Does NEETs Mean and Why is the Concept So Easily Misinterpreted?" Technical Brief No.1 (ILO Employment Policy Department, Youth Employment Programme). Accessed December 23 2017. http://www.ilo.org/wcmsp5/groups/public/%40dgreports/%40dcomm/documents/publication/wcms_343153.pdf.

Elder, S., V. Barcucci, Y. Gurbuzer, Y. Perardel, and M. Principi. 2015. *Labour Market Transitions of Young Women and men in Eastern Europe and Central Asia*. Geneva: ILO.

Eurofound. 2012. *NEETs – Young people not in employment, education or training: Characteristics, costs and policy responses in Europe*. Luxembourg: Publications Office of the European Union. Accessed December 23 2017. https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1254en.pdf

Eurofound. 2016. *Exploring the Diversity of NEETs*. Luxembourg: Publications Office of the European Union. Accessed May 29 2019. https://www.eurofound.europa.eu/publications/report/2016/labour-market-social-policies/exploring-the-diversity-of-neets.

Furlong, A. 2006. "Not a Very NEET Solution: Representing Problematic Labour Market Transitions among Early School-Leavers." *Work, Employment and Society* 20 (3): 553–569.

Furlong, A. 2007. "The Zone of Precarity and Discourses of Vulnerability. NEET in the UK (Comparative Studies on NEET, Freeter, and Unemployed Youth in Japan and the UK)." *The Journal of Social Sciences and Humanities. Education* 381: 101–121.

Gimpelson, V. E., and R. Kapeliushnikov. 2013. "Labor Market Adjustment: Is Russia Different?." In *The Oxford Handbook of the Russian Economy*, edited by S. Weber, and M. V. Alexeev. Oxford: Oxford University Press.

Gimpelson, V., and R. I. Kapeliushnikov. 2017. Age and Education in the Russian Labour Market Equation. IZA DP No. 11126. Accessed October 13 2020. https://www.iza.org/publications/dp/11126/age-and-education-in-the-russian-labour-market-equation.

Gimpelson, V. E., and A. A. Zudina. 2011. '"Neformaly' v Rossiyskoy Ekonomike: Skol'ko ikh i kto oni?" *Voprosy Ekonomiki* 10: 53–76.

Heckman, J., and P. Carneiro. 2003. Human Capital Policy. NBER Working Paper No. 9495 (National Bureau of Economic Research). Accessed December 23 2017. http://www.nber.org/papers/w9495.pdf.

ILO (International Labour Organization) 2014. *Jobs and Skills for Youth: Review of Policies for Youth Employment of the Russian Federation*. Geneva: ILO.
ILO (International Labour Organization) 2020. *Global Employment Trends for Youth 2020. Technology and the Future of Jobs*. Geneva: ILO.
Kelly, E., and S. McGuinness. 2013. The Impact of the Recession on the Structure and Labour Market Success of Young NEET Individuals in Ireland, Working Paper No. 465. (The Economic and Social Research Institute (ESRI), Dublin). Accessed December 23 2017. https://www.econstor.eu/bitstream/10419/100256/1/768215021.pdf.
Konstantinovskii, D. L., and E. S. Popova. 2015. "'Molodezh', Rynok Truda i Ekspansiya Byschego Obrazovaniya." *Sotsiologicheskie Issledovaniya* 11: 37–48.
Konstantinovskiy, D. L. 2017. "Expansion of Higher Education and Consequences for Social Inequality (the Case of Russia)." *Higher Education* 74: 201–220. doi:10.1007/s10734-016-0043-7.
Krueger, A. B., and A. I. Mueller. 2014. A Contribution to the Empirics of Reservation Wages. NBER Working Paper Series. No 19870.
Kyui, N. 2010. *Returns to Education and Education-Occupation Mismatch Within a Transition Economy. Empirical Analysis for the Russian Federation*. Université Panthéon-Sorbonne (Paris 1), Centre d'Economie de la Sorbonne.
Lukyanova, A. 2010. "Otdacha ot Obrazovaniya: Chto Pokazyvayet Meta-Analiz." *HSE Economic Journal* 3: 326–348.
Melianova, E., S. D. Parandekar, H. A. Patrinos, and A. Volgin. 2020. Returns to Education in the Russian Federation: Some New Estimates. Policy Research Working Paper 9387, World Bank, Washington, DC. Accessed October 13 2020. https://openknowledge.worldbank.org/handle/10986/34473.
Mirza-Davies, J. 2015. NEET: Young People Not in Education, Employment or Training, House of Commons briefing paper No 06705. Accessed May 21, 2015. http://hdl.voced.edu.au/10707/367808.
Nunez, I., and I. Livanos. 2010. "Higher Education and Unemployment in Europe: An Analysis of the Academic Subject and National Effects." *Higher Education* 59: 475–487. doi 10.1007/S10734-009-9260-7.
OECD. 2010. *Off to a Good Start? Jobs for Youth*. Paris: OECD. Accessed December 23 2017. http://dx.doi.org/10.1787/9789264096127-en.
OECD. 2013 *'How Difficult is it to Move from School to Work?', Education Indicators in Focus No. 13*. Paris: OECD. Accessed December 23 2017. http://dx.doi.org/10.1787/5k44zcplv70q-en.
OECD. 2015. Youth Unemployment Rate (Indicator). Accessed December 23 2017. http://dx.doi.org/10.1787/c3634df7-en.
OECD. 2016. *OECD Employment Outlook 2016*. Paris: OECD. Accessed December 23 2017. http://dx.doi.org/10.1787/empl_outlook-2016-en.
Prakhov, I. 2016. "The Barriers of Access to Selective Universities in Russia." *Higher Education Quarterly* 2: 170–199.
Psacharopoulos, G., and H. A. Patrinos. 2018. "Returns to Investment in Education: A Decennial Review of the Global Literature." *Education Economics* 26 (5): 445–458.
Ranzani, M., and F. Rosati. 2013. The NEET Trap: A Dynamic Analysis for Mexico. Understanding Children's Work (UCW) Project Working Papers.
Roberts, K., G. I. Osadchaia, K. V. Dsusev, V. G. Gorodianenko, and J. Tholen. 2003. "Economic Conditions, and the Family and Housing Transitions of Young Adults in Russia and Ukraine." *Journal of Youth Studies* 6 (1): 71–88.
Roshchin, S. Yu., and V. N. Rudakov. 2014. "Sovmeshcheniye Uchëby i Raboty Studentami Rossiyskikh Vuzov." *Voprosi Obrazovaniya* 2: 152–179.
Roshchin, S. Yu., and V. N. Rudakov. 2016. "Vliyaniye "Kachestva" Vuza na Zarabotnuyu Platu Vypusknikov." *Voprosy Ekonomiki* 8: 74–95.
Rossiyskiy statisticheskiy ezhegodnik. 2016. Osnovnyye indikatory obrazovaniya. Rosstat. Accessed December 23 2017. http://www.gks.ru/bgd/regl/b16_13/Main.htm.

Rudakov, V., H. Figueiredo, P. Teixeira, and S. Roshchin. 2019. "The Impact of Horizontal Job-Education Mismatches on the Earnings of Recent University Graduates in Russia," IZA DP No. 12407. Accessed 13 October 2020. http://ftp.iza.org/dp12407.pdf.

Rumberger, R. W., and S. P. Lamb. 2003. "The Early Employment and Further Education Experiences of High School Dropouts: a Comparative Study of the United States and Australia." *Economics of Education Review* 22: 353–366.

Sabirianova Peter, K. 2003. Skill-Biased Transition: The Role of Markets, Institutions, and Technological Change. IZA Discussion Paper No. 893 (Institute for the Study of Labor (IZA), Bohn. Accessed May 29 2019. http://ftp.iza.org/dp893.pdf.

Scarpetta, S., A. Sonnet, and T. Manfredi. 2010. Rising Youth Unemployment During the Crisis: How to Prevent Negative Long-term Consequences on a Generation?, OECD Social, Employment and Migration Working Paper No 6 (OECD). Accessed December 23 2017. http://www.oecd.org/employment/youthforum/44986030.pdf.

Solon, G. 2004. "A Model of Intergenerational Mobility Variation Over Time and Place." In *Generational Income Mobility in Europe and North America*, edited by M. Corak, 38–47. Cambridge University Press.

Tamesberger, D., and J. Bacher. 2014. "NEET Youth in Austria: A Typology Including Socio-Demography, Labour Market Behaviour and Permanence." *Journal of Youth Studies* 17 (9): 1239–1259.

Tan, H., Y. Savchenko, V. Gimpelson, R. Kapelyushnikov, and A. Lukyanova. 2007. Skills Shortages and Training in Russian Enterprises. HSE Working Paper WP3/2007/06.

Trud i zanyatost' v Rossii. 2003. Rosstat. Accessed December 23 2017. http://www.gks.ru/bgd/regl/B03_36/Main.htm.

Trud i zanyatost' v Rossii. 2015. Rosstat. Accessed December 23 2017. http://www.gks.ru/bgd/regl/b15_36/Main.htm.

Varshavskaya, E. Ya. 2016a. "'Uspeshnost' Perekhoda 'Ucheba-Rabota': Dlya Kogo Doroga Legche?." Sotsiologicheskie Issledovaniya, 2: 39–46.

Varshavskaya, E. Ya. 2016b. "'Rossiyskaya NEET-Molodezh': Kharakteristiki i Tipologiya." *Sociologicheskie Issledovaniya* 9: 31–39.

Wadsworth, J. 2013. Youth and the UK Labour Market. Growing up in Recession Britain – a MISOC event presenting new research. Presentation materials.

Walker, C. 2010. "Classed and Gendered 'Learning Careers': Transitions from Vocational to Higher Education in Russia." In *Politics, Modernisation and Educational Reform in Russia: From Past to Present (Oxford Studies in Comparative Education, 20, 1)*, edited by D. Johnson, 99–120. Oxford: Symposium Books.

Walker, C. 2018. *Youth and Social Exclusion in Russia: A Scoping Study for the World Bank*. Moscow: TANI.

Yates, S., and M. Payne. 2006. "Not So NEET? A Critique of the Use of 'NEET' in Setting Targets for Interventions with Young People." *Journal of Youth Studies* 9 (3): 329–344.

Zudina, A. 2019. "The NEET Youth in the Russian Labor Market." Mir Rossii 28 (1): 140–160. Accessed May 29 2019. doi:10.17323/1811-038X-2019-28-1-140-160.