The Problem of Social Inclusion and Evaluation of Adult Literacy in Russia

Popov, Dmitry; Kuzmina, Yulia

Preprint / Preprint
Arbeitspapier / working paper

D.Popov[1], *Y.Kuzmina*[2]

The Problem of Social Inclusion and Evaluation of Adult Literacy in Russia

Abstract

In the paper Russian results of the Programme for the International Assessment of Adult Competency (PIAAC) are analyzed and compared to the data from the OECD countries. In the focus of the research is the concept of "participation in society" proposed by the developers of the PIAAC. The results show that "social inclusion" and "success" measured in the PIAAC through peoples' individual achievements are not always connected with high level of competence in Russia. There is a large proportion of people in the group of respondents with the lowest level of literacy, who are "included" and "successful" (at least according to formal criteria). This distinguishes Russia from the OECD countries with developed economies.

1. Introduction

Adult literacy is a topic, which has received very little attention from Russian researchers due to an absence of valid and representative data. However, once the OECD's Programme for the International Assessment of Adult Competency (PIAAC) was introduced in Russia, the situation began to change. A number of hypothesis and concepts, on which the said program as well as its predecessors IALS and ALL [OECD 1997, OECD 2000] are based, ought to be carefully tested in different countries including Russia.

In this article, we address one of these hypotheses, which suggests that the level of people's literacy in contemporary society is directly related to their socio-economic success and achievements. In particular, two international studies on adult competence [OECD 1997, OECD 2000] have demonstrated the connection between literacy and a wide range of socio-economic characteristics for various developed countries. According to this approach, people who lack a certain level of literacy are at risk from being excluded from the society in certain ways. The

[1] Dmitry S. Popov, senior researcher at National Research University Higher School of Economics (Moscow, Russia). E-mail: dmitry_popov@sociolog.net

[2] Yulia V. Kuzmina, Analyst at National Research University Higher School of Economics. E-mail: papushka@mail.ru

PIAAC is relies on this assumption. The architecture of the PIAAC's international testing, as its developers see it, should provide an opportunity to make claims with high certainty over to the extent to which certain groups of citizens are integrated into modern society [Schleicher, 2008].

The PIAAC's developers state, that the program is supposed to measure the level of adults' competency in reading, math and problem-solving in a technology-rich environment. It is in these areas that the key information-processing skills are formed, which are required to perform at work as well as in civil society, and to acquire education [OECD, 2013, p.56]. Reading literacy, which is the focus of this article, follows PIAAC's definition as "the ability to understand, evaluate, use and engage with written texts to participate in society, to achieve one's goals, and to develop one's knowledge and potential" [OECD, 2013, p.61].

This article uses PIAAC's measurements of adult literacy in Russia for the first time. Relying on PIAAC's data, in this paper we attempt to tackle the questions on to whether low level of competency leads to "social exclusion" in Russia. We analyze the extent to which competencies, measured in PIAAC, are related to the economic and social achievements of people in Russia? We examine whether people with low-level competencies in Russia can be full members of society and the chances for them to end up without high-quality education, job, or steady income.

The indicators, which can serve as criteria of measuring the extent of a person's social inclusion is quite complex. We have selected several criteria: involvement in educational environment (having a bachelor's degree or higher, and participation in various educational programs), having a paid job and competitiveness in the job market, self-evaluation of health, and attitudes towards the Russian government and society. Our choice of estimation parameters is related to the programme developers' perception of literacy in the contemporary society.

Several elements of the PIAAC programme are crucial to finding the answers to these questions. One of the key objectives of the programme was to ascertain the relationship between a set of skills (competency) and overall economic and social achievements such as success (personal, working, social). Since "success" or at least one of its elements implies "social inclusion", we use this research perspective to answer the questions that this article originally poses. We also note that the PIAAC provides a more accurate measurement of human capital

compared to the measurement that uses the standard indicators of education, length of employment history, and professional classification [Schleicher, 2008].

In order to test the hypothesis on the relationship between levels of literacy and social inclusion, it should be established as to whether people with low levels of competency are excluded from society (do not have good education, are not engaged in paid work, or actually are included in public relations to a lesser extent), whereas people with a high level of functional literacy are effectively included in the society.

We should emphasize that the results of this study is specific to Russia and may vary for other countries. Whilst countries participating in the PIAAC can be compared, they should be analyzed separately due to their economic and social environments. It is this approach that allow us to come closer to solving one of the key objectives of PIAAC, which contributing to the effective implementation of social policy.

2. Competency-based Approach in the PIAAC. Literature Review.

The international comparative studies of child competency (PISA) and adult competency (ALL, IALS, PIAAC) implemented at the initiative of the OECD have become so well-known over the past decades that they are considered to be a standard, a benchmark for international empirical projects in the education field. In these projects, literacy is defined as the ability to apply certain skills in real life situations. This approach to literacy assessment is usually referred to as the competency-based approach. In this case, competency is the result of applying knowledge, skills, and experience in practice [Podolsky, Popov, 2013]. There is another definition, according to which competency is understood as a system of knowledge, skills, and abilities that are necessary or sufficient for succeeding at a given activity or a task [Weinert, 2001].

The concept of “competency” is central to the empirical studies that concentrate on the problem of workforce development and education productivity. Although this term has been used by researchers for several decades, since the early 2000s it became particulary popular in the field of education research and the other interrelated disciplines [Weinert, 2001; Csapo, 2004; Rychen & Salganik, 2001, 2003; Sternberg & Grigorenko, 2003].

PIAAC is a longitudinal project launched by OECD in 2008; the main data of the first round were made available to researchers in late 2013. Collecting Russian data was made possible by the Higher School of Economics that implemented the project in Russia. PIAAC's international technical project report provides quite a detailed account of preparing the sampling procedures and conducting the fieldwork [OECD, 2013 (1)]. We nevertheless consider it necessary to highlight some details pertaining to the study and the Russian data.

PIAAC is a programme aimed at assessing skills and competencies of adult population aged 16-65 years, employed and unemployed, living in the cities and towns of 24 countries, including Australia, Austria, Belgium, the UK, Germany, Netherlands, Denmark, Ireland, Spain, Italy, Canada, Cyprus, the Netherlands, Norway, Poland, Russia, Slovakia, the USA, Finland, France, the Czech Republic, Sweden, Estonia, South Korea, and Japan. At present time, the second round of the project was initiated; existing tools will be used to measure competency in Greece, Israel, Indonesia, Lithuania, Kazakhstan, New Zealand, Singapore, Slovenia, Turkey, and Chile. The second round's data are going to be available after 2016.

Two main components have been developed for the implementation of the programme – a battery of test tasks and a questionnaire. The battery of test tasks is designed to assess the level of reading literacy, mathematical literacy, and the ability of problem solving in technology-rich environments, which, from the standpoint of the programme's creators, forms the basis of personal and professional growth [OECD, 2013]. PIAAC involves collecting basic data on demographic characteristics and people's education as well as retrospective information on employment, career breaks, jobs changes, participation in social support programs, both formal and informal training programs. This allows to assess the mechanisms through which acquisition or loss of skills occur.

PIAAC highlights the key competencies (synonymous with the concept of "basic skills"), which, according to the programme's developers, enable an adult to function effectively in the modern world, coping with most life situations. These key competencies comprise reading literacy, mathematical literacy, and the ability to solve practical problems in technology-rich environment[3].

[3] In order to measure problem-solving abilities, computer simulations of office applications were developed, which led to some restrictions: respondents must necessarily have the skills to work with a personal computer. As a result, solving problems in technology-rich environment was tightly tied to the computer platform, and only 48%

Based on the analysis of the results, PIAAC's creators have discerned 5 levels of literacy development [for more details, see OECD, 2012].

Creators of the programme for adolescent literacy assessment, PISA, which was based on a methodology similar to that of PIAAC, believe that respondents who do not reach level 2 of literacy development are in the "risk group" as the achievement of level 2 of literacy is a prerequisite for full inclusion into modern society [OECD, 2014, p.68]. PIAAC's developers adopted a far more cautious position, noting that levels of literacy rather play a descriptive role and help in understanding and interpretation of the results, showing what kinds of tasks respondents of a given level are able to solve. At the same time, they emphasize that these results should not be treated as formal criteria determining, say, one's chances to gain access to higher education or to participate in the modern economy [OECD, 2013, p. 61]. However, given the mentioned similarity between PISA's and PIAAC's approaches, such caution is motivated by political rather than scientific reasons.

3. Fieldwork and sampling

Geography of the Russian stage of the study is quite wide; testing has been carried out in all federal districts of the Russian Federation. The regions were distributed among the districts in proportion to their population: Belgorod Oblast, Tula Oblast, Tver Oblast, Kursk Oblast (Central Federal District), Vologda Oblast, Pskov Oblast, Republic of Karelia (Northwestern Federal District), Republic of Tatarstan, Saratov Oblast, Republic of Mordovia, Nizhny Novgorod Oblast (Volga Federal District), Rostov Oblast, Krasnodar Krai, Astrakhan Oblast, Volgograd Oblast (Southern Federal District), Tyumen Oblast, Kurgan Oblast (Ural Federal District), Novosibirsk Oblast, Krasnoyarsk Krai, Altai Krai, Kemerovo Oblast (Siberian Federal District), Khabarovsk Krai (Far Eastern Federal District).

The sampled population was formed through multi-step selection on the basis of the existing stratification of the general population on a number of characteristics. These characteristics include: the type of region, the type of inhabited locality, the type of area, and the type of household. Current address databases were created for each locality in the sample, and the addresses were

of respondents managed to solve such problems in Russia. In addition to that, a three-level scale was developed for the area of "problem-solving" that was significantly different from the assessment of reading and mathematical literacy. Therefore, PIAAC's test results for the ability to solve practical problems require separate examination, and we do not use them in this article.

further grouped (with regard to proportions of the type of areas – central, remote, medium), and the purpose of the households participating in the study was defined. Given the proportion of non-response identified during the preliminary stage (field test) in 2010, the size of the sample address database was 9640 households.

The study included the selection stage (screening), during which the interviewer (recruiter) selected respondents in accordance with the sample address database in a particular household. One or two respondents could be selected in the same household, depending on the total number of adults living in that particular household. The interviews were conducted at the respondent's place of residence (interviews could be conducted at the research company's office or in a specially equipped room if the respondent so desired).

All the interviews and tests were carried out via computer-assisted personal interviewing (CAPI). Those respondents who were inexperienced in using computer or for whatever reason refused to undergo the computer testing were offered the paper version of the test. The average time for completing the questionnaire was 1 hour, the time for completing the test block seriously depended on a particular respondent and, on average, lasted for 45 minutes to 2-3 hours.

The number of respondents in Russia was 3892 people. The sample is representative for the whole territory of Russia except for Moscow and Moscow region. The study was carried out in Moscow and Moscow region as well, but in this region several computer tests did not perform as planned. Following the results of the inspection, the special commission concluded that in the current situation the data for Moscow and Moscow region have to be removed from the international database. Representativeness of the data for the rest of Russia is retained.

3. Variables and analysis

In this article, we regard reading literacy as the main indicator of competency or functional literacy. This is a key indicator that is present in all international literacy tests and also strongly correlates with mathematical literacy (correlation coefficient 0.87 in the OECD countries).

To solve the problems set, two groups of respondents were selected in each country based on their achievements in literary functional literacy tests. The first group was made up of respondents who scored no higher than level 1 in one of the two mentioned tests (i.e., those who, according to the developers of the programme, lack the skills required for normal functioning in society); the second group consists of the most competent respondents who scored levels 4 and 5 on the PIAAC scale. In order to account for possible differences between these groups, which may be caused by age-related characteristics and age-related features (opportunity to get education, retirement, health, etc.), only the respondents aged 26 to 60 years were left in the sample for the analysis. In most of the countries, this age group is the most socially active, by 26 years people have an opportunity to obtain an education and enter the labor market.

These two groups' important characteristics that can be the criteria for evaluating a person's "inclusion" in social and economic relations are compared. It has to be pointed out that none of these criteria in themselves are sufficient to make judgments as to the degree of one's social inclusion. However, given that the majority of the selected criteria reveal significant differences between the groups of people with high and low levels of competency, it can be concluded that there is a connection between the level of competency (as PIAAC understands it) and social inclusion.

The following variables have been selected as the possible criteria for "social inclusion":

1. Level of education. Two levels of education corresponding to the Russian analogues of lower secondary and lower and higher education were selected;
2. Participation in formal and informal additional educational programs;
3. Place in the labor market:
    a. Has a paid job (for the last year preceding the time of the survey and for the last 5 years) or not;
    b. Degree of qualification (for those who have a job);
    c. Level of remuneration. To compare the two groups, a "monthly income" (in deciles) variable has been selected, which allows to compare salaries in each group and country.
4. Subjective feelings concerning social inclusion:
    a. Job satisfaction

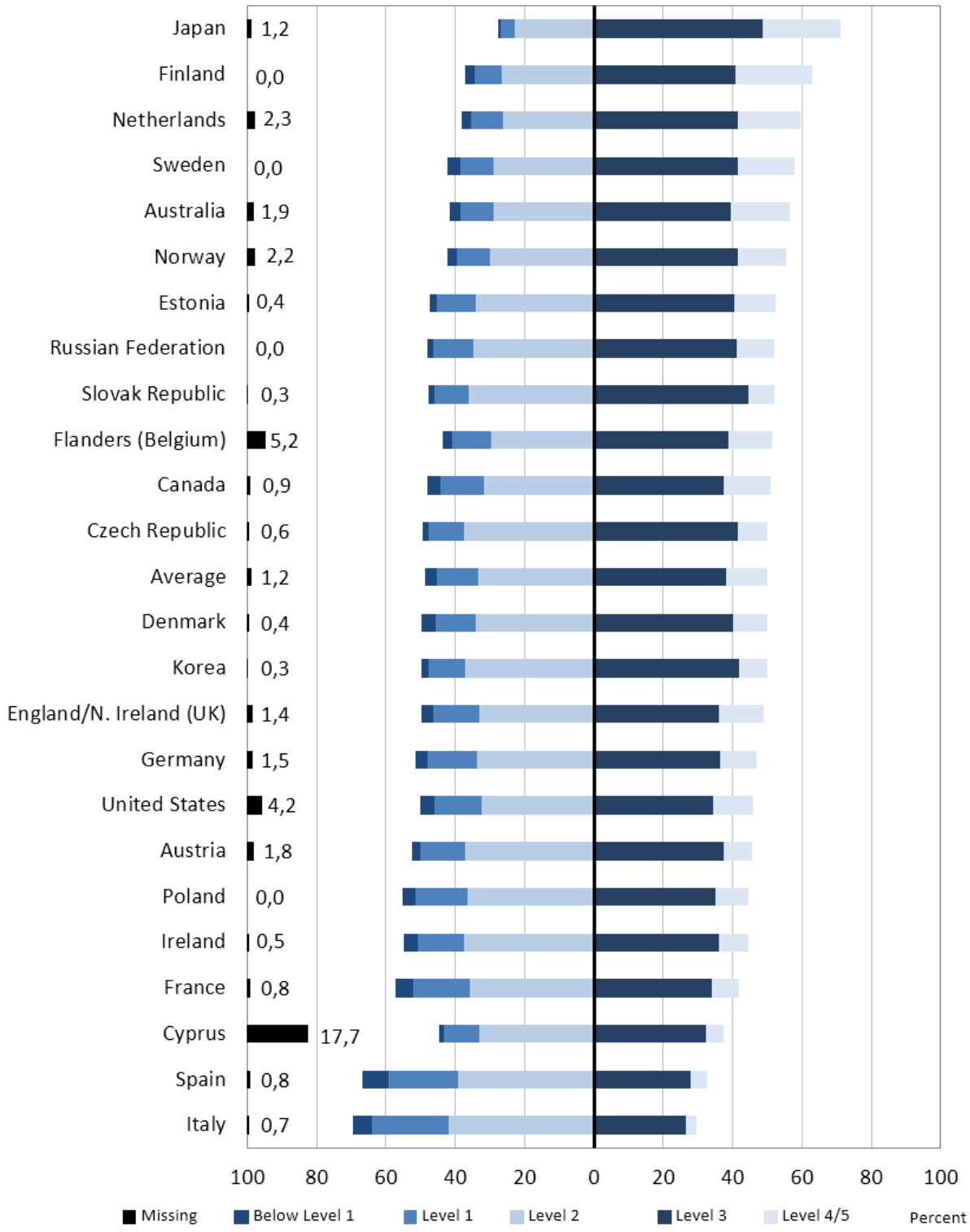
b. Self-rated health
c. Value judgments: level of trust/distrust to people, attitude towards the government.

The analysis was performed using the IDB Analyzer V.3 that was specifically designed for the analysis of data from international comparative studies. The program uses specially created variables for weighting data and calculating the standard error of measurement. Using the standard error allows to evaluate the significance of differences between the groups.

4. Results

Test scores of the Russian Federation's citizens in PIAAC are slightly above the OECD's average as shown in Fig. 1, in which countries are ranked by their citizens' level of literacy – from the highest (Japan) to the lowest (Italy). As you can see, all the participating countries have fairly large groups of people who failed at the tests as well as of those who have performed at a high level.

*Figure 1. Literacy proficiency among adults. Percentage of adults scoring at each proficiency level in literacy**



* The figure [OECD, 2012] is adapted and supplemented with the Russian data

When running the comparison for this article, results of the Republic of Cyprus were not taken into account for a number of reasons. In particular, in the data collected, tests results for 17.7% of respondents were not suitable for the analysis. In addition to this, Cyprus is not a member of OECD, whereas the article performs the comparison of Russia and the countries belonging to this organization.

The comparison revealed significant differences between the groups of "weak" (not higher than level 1) and "strong" (levels 4 and 5) respondents in all countries with regards to the objective characteristics and self-assessment in the selected age group (26 to 60 years). We are going to consistently look at these differences and offer a number of explanations and comments.

4.1 Education

In education, we consider three indicators:

- level of existing formal education (comparison between the countries is made possible through the use of the international classification system for education, UNESCO: International Standard Classification of Education, ISCED);

- participation in formal and informal educational programs over the past year;

- willingness to participate in educational programs.

Distributions for these parameters are shown in Table 1 in the Appendix.

Among the respondents who got the lowest scores on the PIAAC test (level 1 and below), in Russia a large proportion of people has a higher education diploma, which distinguishes our country from the OECD countries. For example, in the group of people with low levels of literacy in Russia, 53.4% have a higher education, which contrasts with the corresponding results for the OECD countries. The comparable figure for the United States is 8.1%, for Germany – 10.3%. Estonia is closer to us than the other countries; the former Soviet republic has 18.5% of people who received poor results on the literacy test and have a higher education. This result, on the one hand, does not allow talking about the citizens with low levels of literacy as being socially "excluded" because they were unable to acquire a formal – in various senses of this word – higher education. On the other hand, though, it is necessary to emphasize that a significant portion of those who have a higher education in Russia turned out to be semiliterate people.

In this case, as expected, among the Russian respondents with a high level of reading literacy, the proportion of people with a higher education is bigger (75.8%) than among those who have low levels of literacy. A considerable proportion of the respondents in Russia – 46.6% – with poor results on the PIAAC test have an incomplete secondary education (or a lower level of training). Respondents with a high level of competency in Russia do not significantly differ in the level of formal education obtained from similar groups in the OECD countries (75.8% of higher education diploma holders in Russia and 75.6% on average in the OECD countries).

Another important indicator – participation in educational programs over the past year - also significantly differs in the groups of respondents with high and low levels of literacy. In all countries, representatives of the "weak" group are much less likely to participate in programs of formal and informal education than the "strong" ones. On average, 32.5% of the "weak" group and 77.4% of the "strong" group in the OECD countries said that they had participated in additional educational programs over the past year. *In Russia, the level of participation in education for adults aged 25-60 years is much lower compared to the OECD countries. We also observe that among the respondents with low levels of literacy in Russia educational activity is on about the same level as it is in similar groups in the OECD countries, whereas the highly literate Russians are far behind compared to the OECD countries.* Only 21.1% of the respondents from the Russian sample were involved in the formal and informal additional educational programs during the last year. Moreover, only 17.8% of the Russians with low literacy and 26.1% of those with high literacy participated in such programs. In other words, the implication is that the "gap" in this indicator between the "strong" and the "weak" groups is significantly smaller than it is in the OECD countries. Bridging the gap between the "strong" and the "weak" groups in Russia is due to poor performance in the "strong" group. While there are countries comparable to Russia with regards to the number of those who participate in additional educational programs (Poland – 19.6%, Italy – 15.8%, Slovakia – 11.9%) in the "weak" group, in the "strong" Russian group the number of those who participate in additional educational programs is much smaller than in the other countries (Poland – 69.5%, Italy – 63.2%, Slovakia – 68.1%).

Thus, in comparison with the OECD countries, the Russian respondents with a high level of competency are much less likely to participate in additional

educational programs. Moreover, these differences cannot be fully explained by the lack of opportunities to participate in such programs in Russia. *Among those who did not take part in additional education in the past year, Russia has far fewer people who express desire to participate in such programs.* Analysis of the responses to the question of whether the respondents would like to participate in additional educational programs (but were unable to do so due to various reasons) shows that the "strong" group in Russia has the lowest percentage of those who said that they would like to participate in such programs among all the countries participating in PIAAC – 15.7%. On average, the number of those who want to improve their education but for some reason are unable to do so at the moment in the OECD countries is much higher: 26.5% in the total sample, 16.8% in the group with low literacy and 40.3% in the group with high literacy.

Given the above facts, there is some doubt that a group of people with low literacy would necessarily be "on the sidelines" and completely excluded from social life. At least we do not see people who could not get any education, and more than a half were able to get a higher education diploma in this group. On the other hand, these people either failed to meet their aspirations associated with getting a quality education or else their aspirations in obtaining a diploma were associated not only with professional training, but with other latent factors.

We should also note a very different by its nature situation in the group of people with high literacy. In Russia, people in this group have the same level of formal education compared to the OECD countries – however, a much smaller part of them continues their education or is committed to continuing it. We have nevertheless found that the difference between the most and the least advanced groups by this criterion in Russia is not as significant as it is in the other countries, which occurs exactly due to the relatively lower educational activity of the Russians with high literacy.

4.2 Work

For our research of working activity, we have selected several indicators: employment rate, type of employment corresponding to position in the labor market and requiring a certain level of qualification, level of remuneration.

In our analysis of employment, we have considered the following parameters:

- whether the respondent had a paid job in previous 12 months and 5 years;

- how the respondent defines their employment status;

- type of employment;

- level of remuneration.

Table 2 in the Appendix shows the percentage of those respondents who themselves define their current status as “unemployed”. From these data, 8% of respondents consider themselves unemployed in the age group of 26 to 60 years in the OECD countries on average; the Russian data do not differ from those of OECD (7.9%). *The numbers of unemployed respondents in the groups with low literacy in Russia and the OECD countries are not significantly different, whereas in the “strong” group the number of unemployed respondents in Russia is higher than in the OECD countries* – 12.1% and 4%, respectively. Unlike most of the countries, in Russia the difference in employment rates between the “weak” and the “strong” groups is not significant.

According to the responses given to the question about having a paid work in previous 12 months and 5 years, Russian representatives of the “strong” group mention the lack of job more often than their counterparts in the OECD countries. 17.2% of respondents with high literacy in Russia said that they did have a paid job during the past year, 10% said that they did have a paid job in the past 5 years. In the OECD countries, these figures are 6.7% and 3%, respectively.

Thus, the differences in employment rates between the “strong” and the “weak” respondents are significantly lower in Russia than in the OECD countries. Representatives of the “strong” group in Russia find themselves “excluded” from labor relations more often than their counterparts in the OECD countries. In addition to this, we do not see a dramatic fall in the employment rate if we compare the group of Russians with low literacy and the group of highly literate ones.

Russia also differs from the OECD countries in terms of respondents’ distribution by the type of employment. There exist 4 types of employment in PIAAC: skilled, semi-skilled “white collar”, semi-skilled “blue collar”, and elementary. On the whole, the share of those engaged in skilled labor was almost equal in the samples of the OECD countries and Russia (44.9% in Russia and 44.2% in the OECD countries) — see details for all the countries in Table 4, Appendix. But the differences between the “weak” and the “strong” groups in our country in terms

of these indicators are smaller than in the other countries. *Russians with low literacy are more likely to be engaged in skilled work than their counterparts in the OECD countries, whereas in the group of highly literate Russians the proportion of those who are engaged in such work is much smaller compared to the other countries*. Russia has the highest (compared to the rest of the countries participating in PIAAC) percentage of respondents with low literacy but engaged in skilled work – 38.7%. For example, the proportion of respondents in a similar group in Germany is only 10.6%, while the average for the OECD countries is 15.9%. Things are completely different when comparing the groups of respondents with high scores on the PIAAC test. In Russia, highly skilled jobs are occupied by 51.8% of the respondents from this group, whereas in Germany it is 80.1%, and the average for the OECD countries is 75.8%.

The portion of those who occupy low-skilled positions in the labor market and show a good level of literacy in the OECD countries is 1.4%, which approximately corresponds to the Russian figure. But the number of people who are engaged in low-skilled work in the group of respondents with low literacy is much greater the OECD countries than in Russia – 21.1%.

As for remuneration, it is worth noting that the Russian sample contains the smallest number of the respondents who have a monthly income in the top decile – 2.8%, whereas in the OECD countries this figure is 11.3% (see Table 3 in the Appendix). The greatest differences concern highly literate people. While on average 25% of the representatives of the "strong" group in the OECD countries have incomes in the top decile, in Russia it is only 43%. But perhaps the most important result we can observe is that *the difference in incomes between the respondents with high and low levels of literacy in Russia is much smaller than in the OECD countries*. In the OECD countries, the share of the respondents who receive the highest level of salary in the mentioned groups on average differs by 20%, in Russia, in contrast, it is less than 4%. This peculiarly characterizes the labor market. Aside from that, the desire of many Russians to get a formal degree regardless of education's quality becomes clear.

Thus, according to the work-related criteria, the differences between the "strong" and the "weak" groups in Russia is significantly smaller than in the OECD countries, mainly due to lower figures for the representatives of the "strong" group. The same applies to all the characteristics considered — employment rate, type of employment, and level of remuneration. The differences between the

groups of Russians with low literacy and high literacy are not significant enough to speak about deprivation of the former or their exclusion from social relations.

4.3 Subjective feelings concerning social inclusion

We consider a number of subjective indicators showing the respondents' attitudes towards other people and showing their own assessment of participation in social and governmental processes. These indicators seem important in terms of social "inclusion". In this case, direct comparisons between the two countries are quite risky, because we have to be culturally sensitive. Nevertheless, we can state that the difference between the "weak" group and the "strong" group within countries is rather stable (see Tables 5 and 6 in the Appendix).

The following indicators are in the focus of our attention:

- job satisfaction;

- trust to others;

- self-rated health.

Job satisfaction is one of the most significant indicators of "inclusion" in socio-economic relations. *Among the Russians with a high level of literacy, there are much less people who are fully satisfied with their jobs than their counterparts in the OECD countries on average. Russian respondents with low literacy are more likely to be satisfied with their jobs than their more educated fellow citizens, and the rate of job satisfaction for this group is average by the standards of the OECD countries.* On average, in the OECD countries the number of people who are completely satisfied with their jobs is 27.6%, while in Russia it is 17.5%. However, among the OECD countries, this figure varies quite strongly and, like other subjective measures, appears to depend on cultural traditions.

26.6% of Russians in the group of those who were able to solve only level 1 tasks or lower are completely satisfied with their jobs (the average figure for the similar group in the OECD countries is 25.8%). Whereas only 13.5% of the respondents with high level of literacy in our country are completely satisfied with their jobs, the average analogous figure for the OECD countries is 28.8%. If we look at the countries in which the total figure for job satisfaction is close to the Russian

figure, in their “strong” groups the number of such respondents is significantly greater than it is in Russia: Spain – 21.5%, Italy – 24%, Estonia – 23%, the Czech Republic – 21.5%.

In Russia, the members of the “strong” group express mistrust to others more frequently than those in the OECD countries, whereas respondents with low literacy trust others about as much as their counterparts in the OECD countries on average. 72.2% of Russian respondents with high level of literacy agree with the statement “If you're not careful, other people will take advantage of you”, while in the OECD countries the analogous figure is only 48.3%. In the “weak” group in Russia, the share of the respondents who agree with this statement is similar to the proportion in the OECD countries (78.1% in Russia, 78.7% in the OECD countries).

In Russia, there is practically no difference with regards to the assessment of their health between the groups of respondents with high and low levels of literacy. While the level of self-rated health in Russians with low literacy corresponds to the average figure for the OECD countries in the same group, for people with high competency this figure is significantly below the average figure for the OECD countries. In Russia, 12.6% of the respondents with high literacy rated their health as excellent, in the OECD countries this figure is 20.9%. The representatives of the “weak” group were also less likely to rate their health as perfect than those in the OECD countries, but the differences are less pronounced (6.7% in Russia, 11.1% in the OECD countries).

We should note that by the most subjective criteria of social inclusion, the differences between the “strong” and the “weak” groups in Russia are much smaller than in the OECD countries, mainly due to weaker performance of the “strong” group’s representatives compared with their counterparts in the OECD countries.

5. Discussion

Let us return to the issues raised at the beginning of this paper. Does the low level of competency indeed lead to “social exclusion” and “failure” in Russia? The hypothesis on “failure” or “social exclusion” in the Russian context is only partly confirmed. Yes, there is a significant difference between the groups of Russians with low and high measured literacy. However, a significant number of people with minimal (level 1 or below on the PIAAC scale) competency are holders of

higher education diplomas and have good positions in the labor market, and self-reported health does not differ in the most and the least literate groups that much – about 5% with statistical error taken into account.

This notwithstanding, our analysis shows that – against the background of the OECD countries – not so much the Russians with low literacy find themselves in the "risk zone", but rather those who scored high on the tests. This, however, means not falling out of or being excluded from society, but lagging behind the most developed economies. In comparison with the OECD countries, our highly literate specialists are "deprived" by the majority of the considered indicators, such as education and desire to learn, employment and position in the labor market, level of remuneration, job satisfaction, and health.

A detailed and comprehensive review of how to interpret this situation will require additional studies, probably carried out in a different, qualitative, methodology. Yet still, we already would like to highlight a number of hypotheses formulated on the basis of available data and allowing us to interpret the results of PIAAC in Russia.

First of all, the last two decades in our country are marked by an intense wave of mobility. On the one hand, the population, and especially the youth, move to the cities from villages and small towns, where the effective integration into new social space, as well as the "hosting" side, demand from them to have a special token, a marker indicating their suitability and ability to socialize in new circumstances and conditions. A higher education diploma becomes such marker. In other words, higher education becomes a sort of "admission ticket" to the city and plays the function of ensuring people's entry into the space of megacity. In this context, the existing higher education system has proven unable of providing programs of the same high level. With increasing accessibility of higher education, higher education programs are becoming more different, more heterogeneous in quality, where the word "quality" refers both to the content of these programs and their role in people's lives. This is partly why a large number of those who showed poor results on the literacy test have a bachelor's degree or higher. In this situation, the formal criteria by which the quality of education is usually measured do not adequately reflect the actual level of knowledge and competency of the formal diplomas' holders. At the same time, studies show that more than 80% of university graduates do not work according to their specialty,

but getting a higher education diploma still yields an increase in income [Gimpelson, Kapelyushnikov et al. 2009].

On the other hand, megacity residents who previously occupied (or had the opportunity to claim only) low-skilled positions in the labor market also perform mobility. Using their advantages in language proficiency compared with migrants from the former Soviet Union, especially from Central Asia, and the knowledge of the current situation, they receive a higher education diploma and move into another segment to join “white collars” and qualified professionals. Hence the low percentage of the respondents identified in the segment of low-skilled labor. Since the sample was based on selecting households, workers with low language proficiency who occupy those very low-skilled jobs today were simply unavailable due to the fact that a) they often live separately in special dormitories; b) even if they lived in apartments, they were almost impossible to interview because of their distrust of authorities, polling procedures, poor language skills, and often semi-legal status.

Secondly, at the same time the landscape of the labor market is changing. The already mentioned mobility coupled with the poor quality of professional training force employers to develop specific approaches to searching for employees. Quite often these approaches are associated with poor quality of professional training that the candidates who apply for positions in the labor market demonstrate. Frequently being aware of their potential employees’ lack of competency, the employer is still forced to hire such candidates under the shortage of human resources, sometimes counting on introducing algorithmization and simplification to their operations. In this case, the least-trained workers are offered special training due to the need of maintaining minimally acceptable professional level. In comparison with the OECD countries, this very segment — people with low competency— is distinguished by relatively high activity in the field of additional education, whereas in the more educated groups of Russians the educational activity is markedly lower.

Furthermore, the distribution by type of employment (skilled, semi-skilled “white collar”, semi-skilled “blue collar”, and elementary) is somewhat skewed in our country. In our view, this is partly due to the employers’ strategy in the clearly scarce labor market (both in terms of potential employees’ number and their competency, not determined by whether they hold a formal diploma). On the one hand, a higher education diploma is often required or wished for even at those

vacancies where it is not really a must-have. This reflects not only the inability to control the quality of acquired education, but also the devaluation of higher education due to its mass character, availability, and often its poor quality. At the same time, the employers are seeking to increase the attractiveness of positions through formally moving them to another, more qualified segment.

Dramatic changes of the 1990s have seriously damaged scientific and knowledge-intensive areas. In the changed conditions of the new economy, a number of mass occupations became particularly popular, while no one was able to prepare staff for them to the necessary extent and with consistently high quality. Aside from that, during this period the values of our compatriots seriously changed; the Russians consider particularly important power, wealth, achievement, whereas the values included in the category of "openness to change" are much less important [Magun, Rudnev 2013]. As a result, the position's status and profitability may well outweigh the interesting and innovative content of a job.

Finally, it is worth pointing out on its own that within the PIAAC framework, Russia showed no significant difference in literacy between the young and the older generations, as it is the case in the OECD countries, where the young demonstrate higher levels of skill. We should also note a certain polarization in the group of young Russians aged 25-34 years: 37.2% (SE = 4.5) of them fall into one of the least competent categories, whereas 30.5% (SE = 3.7) have high scores at levels 4 and 5. In the group of more experienced Russians aged 55 to 60, only 10.6% (SE = 2.2) have shown results at level 1 or below, and 15.4% (SE = 2.2) coped with all the test tasks, demonstrating high level of literacy. The lack of a significant difference in literacy between the people of different ages in Russia leads us to two hypotheses:

1) Decrease in literacy with age in Russia does not occur due to specific inclusion and demand for people of older generation and the availability of effective educational programs for adults;

2) Decreasing literacy is happening, but it is not noticeable against the background of deteriorating educational outcomes of younger generations as well as increasing heterogeneity of educational programs' quality.

Testing these hypotheses is likely to require additional studies, but the likelihood of the second one to be true seems much higher, given that so far there are no large-scale programmes aimed at improving adult literacy that are implemented

at the state level in our country. However, special attention at the state level should be paid to the existing issues that are clearly present both in the OECD countries and in our country.

A way of tackling the identified challenges would be creating a large-scale programme for adult education or training with ambitious yet achievable goals, with general objectives and a systematic approach. The detailed plan for such a programme is still to be elaborated, although its main parameters — primarily the need to focus on the segment of skilled workers with initially high literacy — become apparent. Given the above context, while working on this programme one must be prepared to deal not only with the technical steps of its implementation, but also with gradual work on increasing the attractiveness of knowledge and “meaningful” positions in the labor market, since the increase in competency does not that clearly manifests itself in income. This question is ideological rather than economic, but it has a key value in the modernization of the economy.

References

Csapo, B. (2004). Knowledge and competencies. In J. Letschert (Ed.), The integrated person. How curriculum development relates to new competencies (pp. 35-49).

Magun V., Rudnev M. Basic human values of Russians: both different from and similar to other Europeans / Working papers by NRU Higher School of Economics. Series SOC "Sociology". 2013. No. WP BRP 23SOC 8.

OECD, 1997. Literacy Skills for the Knowledge Society: Further Results from the International Adult Literacy Survey. Paris: OECD Publishing, 1997.

OECD, 2000. Literacy in the Information Age: Final Report of the International Literacy Study. Paris: OECD Publishing, 2000.

OECD, 2012. Literacy, Numeracy and Problem Solving in Technology-Rich Environments Framework For The OECD Survey Of Adult Skills. Paris: OECD Publishing, 2012

OECD, 2013 (1). Technical Report of the Survey of Adult Skills (PIAAC). Paris: OECD Publishing, 2013

OECD, 2013. OECD Skills Outlook 2013. First Results from the Survey of Adult Skills. Paris: OECD Publishing, 2013

OECD, 2014. PISA 2012 Results: What Students Know and Can Do Student Performance In Mathematics, Reading And Science, Volume I, 2014.

Rychen, D. S., & Salganic, L. H. (Eds.) (2003). Key competencies for a successful life and a well-functioning society. Gottingen, Germany: Hogrefe & Huber.

Rychen, D. S., & Salganik, L. H. (Eds.). (2001). Defining and selecting key competencies. Seattle: Hogrefe & Huber Publishers.

Sternberg, R. J., & Grigorenko, E. (Eds.). (2003). The psychology of abilities, competencies, and expertise. New York: Cambridge University Press.

Weinert F.E. Concept of competency: a conceptual clarification // Rychen D.S., Salganik L.H. (eds). Defining and selecting key competencies. Seattle: Hogrefe & Huber Publishers, 2001. P. 45–65.

Gimpelson V.E., Kapelyushnikov R.I., Karabchuk T.S., Ryzhikova Z.A., Bilyak T.A. Vybor professii: chemu uchilis' i gde prigodilis'? (Choice of profession: what did they study and where did they eventually apply themselves?) // The Economic Journal of the Higher School of Economics, 2009, 13(2). Pp. 172—2172013.
Popov D. S., Podolsky O. A. Naskol'ko kompetentny sovremennyye vzroslyye: mezhdunarodnaya perspektiva (How competent are modern adults? An international perspective) // Education Policy, 2012.
Shlyaykher A. PIAAC: novaya strategiya otsenki kompetentsiy vzroslykh (A new strategy for assessing adult competencies) // Educational Matters. Moscow: Higher School of Economics, 2010. No. 1. Pp. 90–115.

APPENDIX

Table 1. Differences in obtained education and participation in additional educational programs between the respondents with high and low levels of reading competency. Standard error is given in parentheses.

Countries	Have incomplete secondary education (or lower)			Have a bachelor's degree or higher			Participated in formal and informal additional education in the past year			Wanted to participate in the programs, but were unable to do so		
	low	high	total	low	high	total	low	high	total	low	high	total
Austria	44.8% (2.7)	1.3% (0.8)	17.5% (0.4)	3.5% (0.8)	55.6% (2.8)	20% (0.2)	29.4% (2.6)	76.4% (2.8)	52.3% (0.8)	11.9% (1.6)	32.5% (2.9)	21.3% (0.7)
Belgium	43.7% (2.5)	0.3% (0.3)	14.3% (0.6)	8.5% (1.3)	84.5% (1.8)	41.8% (0.8)	27.6% (1.8)	69.8% (2.1)	52% (0.9)	8.2% (1.3)	26.2% (2.4)	18.5% (0.6)
Canada	37.3% (1.4)	0 (0)	10.7% (0.3)	26.5% (1.2)	83.5% (1.5)	54.2% (0.5)	34.3% (1.4)	81.3% (1.4)	61% (0.6)	20.5% (1.2)	45.1% (1.7)	33.2% (0.6)
Czech Republic	29.7% (3.5)	0 (0)	9.1% (0.6)	3.7% (1.7)	69.7% (3.9)	21.7% (0.4)	35.7% (3.9)	78.3% (3.2)	53.7% (1.3)	7.6% (1.9)	36.2% (4.1)	17.9% (1)
Denmark	49.8% (2.1)	3.5% (1.5)	18.7% (0.6)	13.2% (1.1)	78.9% (2.6)	42.3% (0.6)	45% (1.9)	88.8% (1.7)	70% (0.7)	23.4% (1.7)	48.3% (2.5)	36% (0.8)
Estonia	29.3% (1.7)	0.7% (0.4)	11.5% (0.4)	18.5% (1.7)	76.3% (1.9)	43% (0.7)	35.4% (2)	83% (1.5)	55.9% (0.8)	22.4% (1.8)	50.4% (2.6)	33.7% (0.6)
Finland	34.8% (3)	1.7% (0.5)	11.1% (0.5)	13.9% (2.3)	74.5% (1.5)	45.6% (0.6)	41.4% (3.1)	85.9% (1.2)	71% (0.7)	19.3% (2.6)	43.7% (1.6)	32.8% (0.8)
France	52.5% (1.4)	2% (0.7)	23.4% (0.5)	7.1% (0.7)	85.8% (1.8)	31.6% (0.3)	23.3% (1.2)	64.8% (2.3)	38.9% (0.7)	15.1% (1.2)	27.1% (2.4)	20.6% (0.6)
Germany	32.8% (2.2)	0.3 (0.2)	9.8% (0.5)	10.3% (1.4)	73.2% (2.5)	34.9% (0.7)	29.6% (2)	83.3% (2.1)	55.8% (1.1)	19.9% (2)	47.5% (2.8)	31.2% (0.9)
Ireland	59.3% (1.8)	1.3% (0.9)	24.7% (0.2)	9.7% (1.2)	80% (2.8)	36.5% (0.4)	32.7% (2.1)	79.6% (2.3)	53.2% (0.8)	27.4% (1.6)	41.5% (2.9)	31.9% (0.8)
Italy	74.6% (1.6)	3.7% (2.5)	48.5% (0.8)	4.7% (0.6)	66% (4.6)	15.5% (0.3)	15.8% (1.4)	63.2% (5.4)	27.3% (1.1)	9% (1.2)	50.7% (6.9)	17.7% (1)
Japan	35.7% (4.9)	1.6% (0.5)	8.6% (0.5)	5.3% (2)	78.1% (1.3)	50% (0.4)	27.3% (4.4)	58.5% (1.6)	45.2% (0.9)	7.6% (2.9)	26.3% (1.6)	20.8% (0.7)
Korea	53.7% (2.4)	0.3% (0.3)	15.3% (0.5)	6.1% (1.2)	84.2% (2)	43.1% (0.1)	24.6% (1.9)	81.7% (2.6)	52.4% (0.9)	23.4% (2.2)	53.6% (3.4)	34.2% (0.8)
Netherlands	67.6% (2.6)	3.3% (0.7)	25.9% (0.8)	7.6% (1.6)	71.3% (1.8)	36.1% (0.7)	44% (2.6)	81.5% (1.6)	67.8% (0.8)	12.9% (1.8)	33.1% (1.9)	24.8% (0.7)
Norway	43.5% (2.6)	3.9% (0.9)	19.7% (0.6)	16% (1.8)	80.3% (2.1)	42.4% (0.6)	53.5% (2.7)	79.6% (1.6)	68% (0.7)	19.8% (2.6)	36.6% (2.2)	27.7% (0.8)
Poland	22.3% (1.9)	0 (0)	9.3% (0.5)	5.1% (0.9)	83.4% (2.7)	30.7% (0.7)	19.6% (1.9)	69.5% (3.1)	38.7% (0.8)	5.3% (0.9)	34.3% (3.4)	12.6% (0.6)

Russia	**11.6% (2)**	**3.5% (1.4)**	**4.7% (0.7)**	**53.4% (3.6)**	**75.8% (3.5)**	**67.8% (1.4)**	**17.8% (2.6)**	**26.1% (4.7)**	**21.1% (1.7)**	**5.7% (0.7)**	**15.7% (2.6)**	**9.1% (0.7)**
Slovakia	52.7% (2.7)	0.2% (0.2)	14.8% (0.6)	4.2% (1)	51.5% (4.7)	22.4% (0.8)	11.9% (1.8)	68.1% (3.8)	35.8% (0.9)	3.5% (0.9)	28.1% (3.3)	10.6% (0.5)
Spain	74.7% (1.2)	3.5% (1.4)	44.2% (0.3)	9.4% (0.9)	83.6% (3.2)	33.8% (0.6)	38.2% (1.3.)	82.9% (2.8)	49.1% (0.8)	25% (1.2)	47.7% (4.4)	32.7% (0.7)
Sweden	48% (2.9)	1.1% (0.5)	16.4% (0.6)	14.1% (1.6)	71.4% (2.1)	34.6% (0.5)	44% (2.9)	84.1% (1.7)	69.3% (0.8)	27.4% (2.7)	46.2% (2.1)	34.6% (0.9)
UK	51.9% (1.9)	2.4% (0.9)	22.9% (0.7)	17% (1.6)	73.5% (1.7)	41.2% (0.7)	38.7% (2.4)	80.3% (1.9)	58.8% (1)	17.4% (1.9)	39.3% (2.3)	26.1% (0.9)
USA	35.8% (1.7)	13.7% (2.2)	10.2% (0.4)	8.1% (1.1)	81.3% (2.5)	40.9% (0.5)	36.9% (2.4)	84.4% (1.9)	61.2% (1.2)	26.3% (2.1)	52% (2.6)	38% (1)
Average for the OECD countries	46.4% (0.5)	1.5% (0.2)	18.4% (0.1)	10.1% (0.3)	75.6% (0.6)	36.3% (0.1)	32.5% (0.5)	77.4% (0.6)	54.2% (0.2)	16.8% (0.4)	40.3% (0.7)	26.5% (0.2)

Table 2: Differences in employment rates between the respondents with high low and literacy. Standard error is given in parentheses.

Countries	Identify themselves as unemployed at the time of the survey			Have not had a job over the past year			Have not had a job over the past 5 years		
	low	high	total	low	high	total	low	high	total
Austria	11.2% (1.6)	3% (1.4)	4.8% (0.4)	25.6% (1.9)	4.8% (1.5)	13% (0.6)	14.3% (1.8)	1.9% (0.9)	6.7% (0.4)
Belgium	6.5% (1.1)	1.1% (0.5)	3.6% (0.3)	27.8% (1.8)	3% (0.8)	11.9% (0.2)	19.5% (1.6)	1.3% (0.5)	6.9% (0.3)
Canada				25.7% (1.2)	6% (1)	12.3% (0.4)	17% (1.1)	1.7% (0.5)	6.3% (0.3)
Czech Republic	8.7% (2)	2.7% (2)	5.7% (0.2)	26.1% (3.6)	3.1% (1)	13.8% (0.6)	17.2% (2.8)	1.8% (0.8)	6.3% (0.5)
Denmark	13% (1.5)	2.9% (1)	7.9% (0.5)	28.3% (1.9)	4% (1.4)	11.6% (0.5)	19.4% (1.9)	1% (0.6)	6.1% (0.4)
Estonia	10.9% (1.1)	1.8% (0.6)	8.1% (0.4)	24.9% (1.9)	4.4% (0.9)	13.5% (0.5)	14.6% (1.4)	1% (0.4)	6.4% (0.3)
Finland	12% (2.2)	3.7% (0.6)	6.8% (0.5)	38.3% (3.3)	5.2% (0.8)	12.2% (0.6)	25.6% (3.1)	1.2% (0.4)	5.9% (0.5)
France	12.9% (1)	7% (1.6)	10.2% (0.3)	27.5% (1.2)	8.9% (1.5)	16.6% (0.4)	18.3% (1.2)	3.6% (1.1)	9% (0.3)
Germany	11.9% (1.6)	2% (0.6)	5.5% (0.4)	26.3% (2)	6.3% (1.1)	13.4% (0.6)	20% (1.9)	3.4% (1)	8% (0.5)
Ireland	19.1% (1.7)	5.9% (1.3)	12.8% (0.5)	45.1% (2.5)	8.3% (1.8)	26.6% (0.7)	31.4% (2.5)	2.8% (1.1)	13.6% (0.6)
Italy	19.7% (1.8)	4.2% (2.3)	14% (0.7)	32.2% (1.9)	6.5% (2.7)	25.8% (0.7)	23.2% (1.8)	4.3% (2.7)	18.8% (0.7)
Japan	11.5% (3.3)	3.9% (0.7)	3.9% (0.4)	20.9% (4.2)	14% (1.3)	14.7% (0.4)	14.9% (3.7)	9% (1)	9.8% (0.5)
Korea	4.9% (1.3)	6.2% (1.7)	3.7% (0.3)	22.5% (2.1)	13.6% (2.1)	18.8% (0.6)	18.6% (2)	5.5% (1.5)	13.4% (0.5)
Netherlands	12% (1.7)	4% (0.9)	4.8% (0.4)	34.9% (2.8)	4.3% (0.8)	13.4% (0.5)	26.6% (2.8)	1.3% (0.5)	9.2% (0.5)
Norway	6% (1.4)	1.9% (0.6)	3.2% (0.3)	27.4% (2.5)	3% (0.8)	10.2% (0.5)	20% (2.2)	1.5% (0.6)	5.6% (0.4)
Poland	16.1% (1.8)	5.5% (1.8)	10.9% (0.6)	34.5% (1.9)	7.1% (1.5)	22.8% (0.6)	26.4% (1.8)	2.1% (0.8)	14.5% (0.5)
Russia	**16% (4)**	**12.1% (3.1)**	**7.9% (0.7)**	**27.6% (3.2)**	**17.2% (4.2)**	**21.9% (1.4)**	**18.9% (3.6)**	**10% (5.7)**	**9.9% (2.1)**
Slovakia	31.6% (2.6)	8.3% (2.2)	12.8% (0.6)	48.1% (2.9)	14.3% (2.8)	20.6% (0.8)	37.2% (2.8)	8.7% (2.3)	11.9% (0.6)
Spain	27.5% (1.4)	9.4% (2)	20.6% (0.6)	35.5% (2.2)	12% (2.6)	23.8% (0.6)	19.3% (1.4)	7.4% (2.2)	12.4% (0.6)
Sweden	13.6% (2.1)	2.2% (0.7)	5.5% (0.5)	34.2% (2.6)	1.2% (0.5)	9.7% (0.6)	24% (2.8)	0.5% (0.3)	6.2% (0.6)
UK	15.2% (1.5)	3.2% (0.8)	6.9% (0.3)	33.3% (1.7)	5.5% (0.9)	16.6% (0.4)	25.3% (1.9)	2.4% (0.6)	10.1% (0.4)
USA	15.2% (1.7)	2.1% (0.6)	8.3% (0.5)	30.4% (2.5)	5.1% (1)	15.8% (0.8)	18.8% (1.5)	1.5% (0.7)	8.4% (0.6)
Average for the OECD countries	14% (0.4)	4% (0.3)	8% (0.1)	30.9% (0.5)	6.7% (0.3)	16% (0.1)	21.5% (0.5)	3% (0.3)	9.3% (0.1)

Table 3: Differences in the level of remuneration (per month) between the respondents with high and low levels of literacy. Standard error is given in parentheses.

Countries	Bottom decile			Top decile		
	low	high	total	low	high	total
Austria	10.7% (2.1)	5.1% (1.6)	7.1% (0.5)	1.4% (0.6)	28.3% (3)	9.8% (0.5)
Belgium	17.2% (2.4)	3.5% (1.1)	7.8% (0.5)	2.7% (0.8)	24.6% (2.4)	11.2% (0.6)
Canada	6.8% (0.9)	3.9% (0.7)	5.5% (0.3)	6.1% (1)	23.5% (1.7)	12.4% (0.5)
Czech Republic	4.8% (1.5)	10.3% (4.3)	4.6% (0.8)	3.1% (1.3)	23.6% (4.4)	10.2% (0.8)
Denmark	5.2% (1.1)	3.9% (1.2)	4% (0.4)	2.9% (0.8)	24.3% (2.4)	12.2% (0.5)
Estonia	6.9% (1.4)	6.1% (1.1)	8.1% (0.4)	7.1% (1.5)	21.1% (2.2)	11.8% (0.6)
Finland	8.9% (2.5)	5.7% (0.8)	5.8% (0.4)	6% (2.3)	14.3% (1.3)	10.5% (0.5)
France	14.8% (1.3)	3.4% (1.1)	8.2% (0.4)	2.2% (0.5)	27.6% (2.6)	9.1% (0.4)
Germany	13.2% (1.8)	3.6% (1.1)	6.7% (0.4)	2.6% (1.1)	32% (3)	11.2% (0.7)
Ireland	13.9% (2)	3% (1.1)	7.4% (0.7)	1.5% (0.6)	23% (3.1)	10% (0.7)
Italy	9.6% (1.8)	18.4% (5.9)	10.1% (0.8)	8.5% (1.7)	25.3% (4.5)	8.3% (0.6)
Japan	12.9% (4.1)	4.6% (0.7)	6.2% (0.5)	8% (3.3)	17.6% (1.6)	11.7% (0.6)
Korea	12.7% (2.2)	3.4% (1.1)	7% (4)	5.8% (1.3)	28.7% (3.3)	11.4% (0.6)
Netherlands	8.1% (1.6)	2.2% (0.7)	3.7% (0.4)	2.9% (1.2)	18.2% (1.5)	11.1% (0.6)
Norway	8.9% (2.2)	4.1% (0.8)	4.2% (0.4)	2.6% (1.2)	20% (1.8)	11.1% (0.5)
Poland	10% (1.8)	2.4% (1.2)	6.1% (0.5)	8.1% (1.6)	40.4% (1.6)	16.2% (0.9)
Russia	**11.1% (3.4)**	**7.8% (2.4)**	**10.7% (2)**	**0.5% (0.3)**	**4.3% (2.3)**	**2.8% (0.6)**
Slovakia	20% (3.8)	4.5% (1.5)	7.6% (0.5)	3.3% (1.4)	21.5% (4.1)	11.6% (0.6)
Spain	11.5% (1.4)	3.7% (1.7)	8.2% (0.6)	4.5% (1)	29.5% (4)	10.7% (0.7)
Sweden	12.3% (2.6)	5.3% (0.9)	6.1% (0.5)	3.7% (2)	18.3% (1.6)	10.7% (0.6)
UK	11.4% (1.9)	4.5% (1.3)	7% (0.6)	2.4% (1)	29.2% (2.6)	13.2% (0.6)
USA	9.9% (1.9)	4.4% (1.2)	6.3% (0.5)	4.5% (1.2)	33.2% (3.2)	11.9% (0.9)
Average for the OECD countries	10.9% (0.5)	4.3% (0.3)	6.6% (0.1)	5% (0.4)	25% (0.7)	11.3% (0.1)

Table 4: Differences in the professional status between the respondents with high and low levels of literacy (among those who had a job in the last year). Standard error is given in parentheses.

Countries	Skilled work			Semi-skilled "white collar" work			Semi-skilled "blue collar" work			Elementary work		
	low	high	total	low	high	total	low	high	total	low	high	total
Austria	13% (1.8)	78.4% (2.8)	43.7% (0.9)	28.4% (2.4)	12.9% (2.4)	26.5% (0.9)	32.6% (3.1)	6% (1.8)	21.6% (0.8)	26% (2.4)	2.8% (1.2)	8.3% (0.5)
Belgium	15.3% (2.1)	80.1% (2.1)	49.8% (0.9)	26.9% (2.5)	15.6% (1.9)	23.6% (0.7)	30.5% (3.1)	3.8% (1)	18.2% (0.7)	27.3% (2.7)	0.5% (0.4)	8.4% (0.5)
Canada	25.5% (1.5)	84.3% (1.4)	56.9% (0.7)	28.6% (1.5)	9.4% (1.1)	20.6% (0.5)	31.1% (1.7)	4.9% (0.7)	16.8% (0.4)	14.8% (1.1)	1.5% (0.5)	5.7% (0.3)
Czech Republic	20% (3.8)	71.6% (4.6)	37.9% (1.2)	17.5% (2.3)	19.5% (3.8)	22.9% (1.1)	41.6% (4.1)	7.5% (2.9)	32.5% (1.1)	20.9% (4.2)	1.4% (1.1)	6.7% (0.6)
Denmark	19% (1.9)	82.4% (2.5)	51.2% (0.8)	22.8% (2.2)	12.9% (1.9)	22.3% (0.6)	34.2% (2.4)	2% (0.8)	18.6% (0.5)	24% (2.3)	2.6% (1)	7.9% (0.5)
Estonia	23.6% (1.9)	81% (2.1)	47.4% (0.7)	17.1% (2)	10% (1.7)	17.3% (0.6)	42.8% (2.4)	8.1% (1.2)	28% (0.7)	16.5% (1.9)	0.9% (0.4)	7.3% (0.4)
Finland	13.1% (2.7)	70.5% (1.4)	45.4% (0.8)	22.7% (3.2)	17.9% (1.3)	25.5% (0.7)	45.3% (4.2)	9.4% (1.4)	23% (0.7)	18.9% (3.4)	2.2% (0.6)	6.1% (0.4)
France	17.2% (1.1)	80% (2.4)	42.4% (0.6)	22.6% (1.1)	14.5% (1.9)	24.9% (0.6)	35.7% (1.6)	4.8% (1.3)	22% (0.6)	24.5% (1.4)	0.7% (0.5)	10.8% (0.5)
Germany	10.6% (1.8)	80.1% (2)	40.6% (0.8)	32.6% (2.4)	14.5% (1.7)	29% (0.8)	36.2% (2.6)	4.6% (1.2)	23.2% (0.7)	20.6% (1.8)	0.8% (0.6)	7.2% (0.5)
Ireland	16.9% (1.8)	70.8% (2.5)	41.1% (1.1)	31.2% (2.8)	18.9% (2.6)	29.5% (0.9)	35.5% (2.9)	8.4% (1.7)	22% (1)	16.4% (2.2)	1.8% (0.8)	7.5% (0.5)
Italy	14.4% (1.6)	77.7% (5.2)	33.1% (0.9)	25.1% (2.8)	15.7% (4.5)	28.1% (1.1)	43.3% (2.7)	5.5% (2.6)	28.1% (1.1)	17.2% (2.2)	1% (0.8)	10.7% (0.9)
Japan	13.7% (4.1)	54.1% (2)	38.4% (0.9)	34.4% (5.7)	30.4% (1.8)	36.3% (0.7)	38.3% (5.8)	13.8% (1.5)	20.6% (0.9)	13.6% (3.9)	1.7% (0.5)	4.7% (0.4)
Korea	8.2% (1.4)	60.5% (3.1)	30.5% (0.8)	28.8% (2.6)	35% (3.1)	37.1% (0.9)	35.4% (2.9)	3.7% (1.3)	22.7% (0.7)	27.6% (2.3)	0.9% (0.6)	9.7% (0.5)
Netherlands	20.5% (2.9)	83.6% (1.6)	57.3% (0.7)	28.1% (2.7)	12.6% (1.4)	25.3% (0.8)	24.8% (2.5)	2.8% (0.7)	11.3% (0.5)	26.6% (2.8)	1% (0.5)	6% (0.4)
Norway	9.5% (2)	86.3% (1.7)	52.9% (0.8)	42.7% (3.6)	8.2% (1.4)	27.5% (0.8)	25.9% (3.1)	5.3% (1.1)	15.3% (0.7)	21.9% (3)	0.2% (0.2)	4.2% (0.4)
Poland	11.8% (1.7)	84.2% (2.4)	40.4% (0.8)	16.4% (2.3)	11.5% (2)	19.5% (0.7)	57.1% (2.5)	2.9% (1)	32.3% (0.7)	14.7% (1.8)	1.5% (1.1)	7.7% (0.5)
Russia	38.7% (4.3)	51.8% (4.7)	44.9% (1.3)	21.8% (3)	22.8% (4.3)	21.3% (1)	36.1% (4.3)	24.3% (3.9)	29.8% (1)	3.4% (1.5)	1.2% (0.8)	4.1% (0.3)
Slovakia	21.6% (3.7)	61.7% (4.1)	43.8% (1)	15.9% (3.1)	21.7% (3.4)	20.9% (0.8)	41.3% (3.5)	13.4% (2.8)	28% (0.9)	21.2% (2.4)	3.3% (1.7)	7.4% (0.5)
Spain	11.6% (1.3)	71.2% (4.3)	33.2% (0.9)	33.8% (2)	21.9% (3.9)	32.5% (0.9)	28.6% (1.7)	6% (1.9)	20.4% (0.6)	26% (1.7)	0.9% (0.9)	13.8% (0.6)
Sweden	13.7% (2.2)	80.2% (1.7)	49.6% (0.7)	35.8% (3.4)	12.2% (1.4)	25.9% (0.7)	32.4% (3.7)	6.8% (1.2)	20.4% (0.7)	18.1% (3)	0.8% (0.4)	4% (0.4)
UK	17% (2.2)	71.1% (1.8)	42.9% (0.9)	34.5% (3.5)	20.4% (1.7)	31.2% (0.9)	22.6% (2.3)	7.1% (1.3)	16.7% (0.7)	25.9% (2.8)	1.5% (0.8)	9.3% (0.6)
USA	16.9% (1.4)	82.3% (2.3)	50% (0.8)	35.8% (2.4)	13.6% (2)	26.3% (0.8)	27.8% (1.7)	3.6% (1)	16.5% (0.7)	19.5% (2.1)	0.6% (0.4)	7.2% (0.5)
Среднее по странам OECD	15.9% (0.5)	75.8% (0.6)	44.2% (0.2)	27.7% (0.6)	16.6% (0.5)	26.3% (0.2)	35.4% (0.7)	6.2% (0.3)	21.8% (0.2)	21.1% (0.6)	1.4% (0.2)	7.7% (0.1)

Table 5: Differences in job satisfaction (for those who had a paid job in the past year). Standard error is given in parentheses.

Countries	Entirely satisfied with their job		
	low	high	total
Austria	46% (3.1)	37% (3.3)	45.4% (0.9)
Belgium	34.6% (2.9)	41.9% (2.3)	38.6% (0.9)
Canada	24.6% (1.5)	33.5% (1.7)	28.2% (0.7)
Czech Republic	15.8% (3.4)	21.5% (4.1)	17.4% (1.2)
Denmark	46.5% (2.3)	52% (2.6)	48.9% (0.8)
Estonia	15.3% (1.6)	23% (1.8)	18.7% (0.5)
Finland	30.5% (3.8)	25.4% (1.4)	26.9% (0.9)
France	24.6% (1.7)	27.5% (2.2)	26.7% (0.5)
Germany	28.4% (2.3)	25.4% (2.1)	29.5% (0.8)
Ireland	31.4% (2.9)	22.4% (2.5)	24.6% (0.9)
Italy	18.9% (2)	24% (5.1)	20% (1.1)
Japan	18.9% (5.1)	7.1% (0.9)	8.5% (0.6)
Korea	10.1% (1.7)	14.7% (2.6)	10.7% (0.5)
Netherlands	23.4% (2.8)	31.2% (2.1)	28.6% (0.7)
Norway	41.5% (3.5)	50.7% (2.2)	49.3% (0.9)
Poland	15.4% (2.1)	29% (3.3)	20.2% (1)
Russia	**26.6% (4.1)**	**13.5% (2.3)**	**17.5% (1.3)**
Slovakia	10.3% (2.7)	16.3% (2.8)	21.7% (11.4)
Spain	14.8% (1.8)	21.5% (3.6)	17.2% (0.8)
Sweden	43% (4.1)	43% (1.7)	45.8% (0.9)
UK	23.6% (2.4)	24.9% (2.2)	27.6% (0.9)
USA	24% (2.3)	33.3% (2.2)	28.1% (1)
Average for the OECD countries	25.8% (0.6)	28.8% (0.6)	27.6% (0.2)

Table 6: Differences in the assessment of social relations and attitudes among the respondents with high and low levels of literacy *(% of respondents aged 25-60 who agreed with these statements)*

Countries	If you're not careful, other people will take advantage of you			I can trust only a few people			People like me have no influence on the government			Perfect health (self-rated)		
	low	high	total	low	high	total	low	high	total	low	high	total
Austria	82% (1.8)	43.7% (2.9)	69% (0.8)	76.7% (1.9)	50.8% (3.7)	69.5% (0.9)	67.9% (2.6)	43% (3.1)	59.2% (0.7)	13.2% (2.2)	28.6% (2.7)	20.9% (0.7)
Belgium	79.2% (1.7)	47.5% (2.6)	63.9% (0.7)	78.2% (2.1)	62.1% (2.3)	72% (0.8)	65.5% (2)	33% (2.2)	51.7% (0.8)	10% (1.4)	23.6% (1.9)	14.6% (0.6)
Canada	78.4% (1.3)	55.4% (1.7)	68.4% (0.5)	73.4% (1.3)	52.5% (1.8)	63.3% (0.6)	57.1% (1.4)	31.8% (1.5)	43.1% (0.6)			
Czech Republic	93% (1.5)	66.3% (4.3)	85.8% (0.9)	87.4% (2.2)	65% (4.2)	84.2% (1)	70.7% (4.1)	44.4% (4.8)	62.8% (1.4)	10.1% (2.6)	23.6% (4.2)	14.8% (0.9)
Denmark	67.2% (1.8)	17.8% (2.3)	38.4% (0.7)	59.3% (2.3)	22.4% (2.1)	37.8% (0.7)	45.6% (2)	20.7% (2.3)	29.3% (0.7)	14.4% (1.5)	25.3% (2.1)	20.8% (0.6)
Estonia	84.3% (1.3)	51.4% (2.3)	75% (0.5)	83.1% (1.8)	72.8% (1.9)	80.8% (0.5)	68.6% (1.6)	26.6% (1.8)	54.5% (0.6)	5.6% (0.9)	9.5% (1.2)	7.1% (0.4)
Finland	52% (3.1)	28.4% (1.5)	38.9% (0.7)	69.7% (3.1)	48.1% (1.5)	57.9% (0.8)	45.2% (3.6)	19.2% (1.3)	30.1% (0.8)	8.7% (2)	19.1% (1.2)	15.1% (0.6)
France	83.1% (1.2)	43.6% (2.6)	69.9% (0.7)	85.4% (0.9)	68.3% (2.3)	79.2% (0.5)	72.2% (1.4)	53.5% (2.4)	69.4% (0.8)	14.9% (1.2)	17.3% (2)	16.6% (0.5)
Germany	85.7% (1.6)	37.3% (2.4)	65.4% (0.9)	78% (2.1)	50.1% (2.7)	68% (1)	69.3% (2.6)	22.4% (2.3)	44.8% (0.9)	15.7% (1.7)	27.7% (2.1)	19.9% (0.7)
Ireland	85.7% (1.3)	63.8% (2.9)	75.5% (0.7)	83.4% (1.8)	62.7% (2.6)	77% (0.7)	69.2% (2.4)	37.8% (2.9)	57.9% (0.8)	16.9% (1.5)	32.3% (3.3)	25.4% (0.9)
Italy	88.9% (1.3)	58.4% (5.2)	82% (0.9)	85.4% (1.6)	70.6% (5.3)	81.8% (0.9)	81.7% (1.9)	54.2% (5.9)	71.3% (1.2)	12% (1.2)	18.2% (5)	14.8% (0.9)
Japan	46.1% (5.1)	25.7% (1.7)	31.7% (0.8)	68.1% (5.2)	65.7% (1.6)	69.6% (0.8)	57.2% (5.8)	36.4% (1.6)	47.2% (0.9)	3.1% (1.8)	7.2% (0.9)	6.9% (0.5)
Korea	83.1% (1.8)	69.5% (2.8)	74% (0.6)	74% (1.8)	69.5% (3)	72.6% (0.7)	54.5% (2.1)	28.1% (2.9)	39.4% (0.8)	3.3% (0.9)	3.9% (1.2)	3.9% (0.3)
Netherlands	79.3% (2.2)	35.5% (2)	54.4% (0.8)	72.8% (2.5)	40.6% (1.9)	55.2% (0.8)	59.3% (2.5)	22.4% (1.6)	37.5% (0.8)	5% (1.2)	25.9% (1.7)	17.7% (0.6)
Norway	75.4% (2.7)	35.1% (2.1)	52.3% (0.8)	72.4% (2.5)	36.2% (2.3)	53.3% (0.9)	54.2% (2.8)	16.9% (1.6)	33.9% (0.8)	12.3% (1.9)	24.5% (1.8)	16.9% (0.6)
Poland	89.2% (1.4)	66.7% (2.8)	85.3% (0.6)	79.5% (1.8)	52.4% (3.5)	74.5% (0.8)	59.9% (2.1)	28.2% (3)	50% (0.9)	3% (0.7)	10.7% (2)	5.3% (0.4)
Russia	78.1% (4.7)	72.2% (2.1)	76.3% (2)	71.8% (2.7)	59.6% (3.7)	70.9% (1.6)	43.2% (2.8)	16.1% (3.1)	28.8% (1.8)	6.7% (2.8)	12.6% (5.6)	6.3% (0.9)
Slovakia	85% (2.1)	76.8% (3.6)	85.7% (0.6)	83.5% (2)	72.6% (3.9)	85.2% (0.5)	78.6% (2.2)	46.1% (4.4)	68.3% (0.8)	7.6% (1.4)	12.7% (2.3)	9.8% (0.6)
Spain	80.2% (1.4)	48.2% (3.7)	69% (0.7)	73.5% (1.6)	57.6% (3.4)	67.9% (0.8)	65.5% (1.4)	45.4% (3.5)	61.5% (0.8)	11.1% (0.9)	15.8% (2.7)	13.7% (0.5)
Sweden	63.6% (2.7)	19.8% (1.7)	36.5% (0.9)	70.3% (2.4)	37.5% (2)	53.9% (0.8)	48.4% (3.5)	18.5% (1.4)	31% (1)	17% (2.5)	25.4% (1.8)	23.4% (0.7)
UK	85.5% (1.8)	58.3% (2)	74.5% (0.8)	82.1% (1.6)	54.9% (2.6)	71.1% (0.8)	63.2% (2.2)	28.5% (2)	46.8% (0.9)	21.2% (1.8)	29.9% (2.2)	22.4% (0.8)
USA	85.1% (1.8)	64.2% (2.4)	76.9% (0.8)	78.4% (2.3)	48.7% (2.9)	67.8% (1.1)	48.2% (2)	18.1% (3)	36.2% (1.1)	15.7% (1.5)	36% (2.7)	23.1% (1)
Average for the OECD countries	78.7% (0.5)	48.3% (0.6)	65.4% (0.2)	76.9% (0.5)	55.3% (0.6)	68.7% (0.2)	62% (0.6)	32.2% (0.6)	48.9% (0.2)	11.1% (0.4)	20.9% (0.6)	15.7% (0.2)

Table 7: Differences in the socio-demographic characteristics between the respondents aged 25 to 60 years with high and low levels of reading competency

Countries	Gender (females)			First generation immigrants			25-34 years old			55-60 years old		
	low	high	total	low	high	total	low	high	total	low	high	total
Austria	54.7% (2.6)	41% (2.2)	50.2% (0.3)	44.3% (2.7)	17.3% (2.5)	19.5% (0.6)	17.9% (1.8)	39.2% (2.9)	25.8% (0.3)	17.7% (1.6)	1.6% (0.7)	12% (0.3)
Belgium	50.6% (2.1)	36.5% (2.1)	49.2% (0.2)	25.8% (2.1)	2.2% (0.8)	7.6% (0.4)	14.6% (1.5)	40.9% (2.4)	24.7% (0.3)	27.4% (2)	4.2% (1)	15.3% (0.4)
Canada	50.4% (1.2)	45.4% (1.6)	50% (0.1)	49.6% (1.5)	16.7% (1.5)	29.1% (0.4)	18.4% (1.2)	37.5% (1.7)	27.7% (0.1)	18.5% (1.1)	7.6% (0.8)	14.1% (0.3)
Czech Republic	57.6% (3.2)	46.8% (4.5)	49.9% (0.4)	7.5% (2.5)	6.1% (2.5)	4.9% (0.7)	17.8% (2.8)	53.6% (4.3)	30.5% (0.6)	20.1% (3.3)	3.6% (1.7)	13.5% (0.6)
Denmark	45.2% (2.1)	45.1% (2.4)	49.7% (0.2)	38.1% (1.4)	5.6% (0.9)	12.3% (0.2)	21% (1.5)	41.8% (2.6)	25.4% (0.2)	18.1% (1.2)	3.2% (0.6)	12.9% (0.3)
Estonia	49.9% (2.2)	50.7% (2)	51.8% (0.2)	27.7% (2)	4.4% (1)	15% (0.5)	21.7% (1.8)	46.1% (2.1)	29.8% (0.3)	20.2% (1.5)	5.5% (0.9)	13.6% (0.4)
Finland	41.4% (3.5)	51.2% (1.6)	49.3% (0.5)	30.2% (2.5)	1.2% (0.4)	5.7% (0.2)	13.9% (2.2)	42.8% (1.5)	27.7% (0.4)	32.5% (0.8)	3.3% (0.6)	16.3% (0.4)
France	50.7% (1.2)	51% (2.4)	51.4% (0.2)	30.9% (1.2)	3% (1.1)	14.5% (0.3)	15.9% (1.2)	49% (2.5)	26.7% (0.2)	23.1% (1.1)	4.5% (0.9)	14.7% (0.3)
Germany	51.7% (2.2)	39.1% (2.3)	49.3% (0.2)	35.4% (2.2)	6.3% (1.8)	16.9% (0.8)	17.8% (1.6)	37.6% (2.6)	23.9% (0.3)	14.4% (1.6)	3.9% (1.2)	13.6% (0.4)
Ireland	50.8% (2)	38.4% (2.8)	51% (0.5)	23.5% (1.9)	16.4% (2.2)	19.7% (0.9)	23.8% (1.5)	43.4% (3)	32.8% (0.4)	18.3% (1.4)	3.8% (1)	10.9% (0.4)
Italy	46.4% (1.7)	40.9% (5.8)	50.8% (0.6)	15.9% (1.8)	3.4% (3)	8.7% (0.7)	20.9% (1.5)	43.6% (6.5)	25.7% (0.4)	14.1% (1.4)	0.8% (0.6)	11.3% (0.5)
Japan	40.8% (5)	46.6% (1.7)	50.5% (0.5)	3.9% (2.3)	0	0.2% (0.1)	16% (3.9)	32.3% (1.4)	26.3% (0.3)	37.6% (3.9)	6.1% (0.8)	13.2% (0.4)
Korea	55.7% (2)	36.8% (2.9)	49% (0.4)	3.9% (0.9)	0	1.2% (0.2)	7.7% (1.2)	51.4% (2.9)	26.4% (0.2)	25.1% (1.7)	2.9% (1.1)	11.6% (0.1)
Netherlands	51.5% (2.6)	42.2% (1.8)	50.4% (0.2)	51.4% (2.5)	4.5% (1.1)	14.9% (0.4)	16.9% (2.2)	38.4% (1.8)	25.4% (0.4)	26.7% (2.3)	3.9% (0.7)	13.9% (0.5)
Norway	48.5% (2.8)	40.2% (2)	48.9% (0.3)	50.5% (2.7)	7.4% (1.3)	15.2% (0.6)	29% (2.4)	36% (2.2)	28.1% (0.3)	17.2% (2)	4.6% (0.9)	12.2% (0.4)
Poland	41.1% (1.9)	55.5% (3.1)	50.6% (0.2)	0%	0.4% (0.4)	0.1% (0)	23.8% (1.7)	50% (3)	32.6% (0.4)	19.1% (1.5)	5.2% (1.6)	14.2% (0.5)
Russia	41.5% (4.2)	56.6% (5.2)	52.2% (0.2)	7.8% (3.7)	6.3% (3.5)	4.8% (1.1)	37.2% (4.5)	30.5% (3.7)	31.9% (0.3)	10.6% (2.2)	15.4% (2.2)	13.8% (0.2)
Slovakia	46.6% (2.3)	47.3% (3.3)	49.1% (0.2)	0.8% (0.4)	0	1.5% (0.3)	29.4% (2.2)	42.7% (3.7)	31.3% (0.4)	20.1% (2)	2.7% (1.1)	14.4% (0.4)
Spain	51.8% (1.4)	35.8% (3.9)	49.8% (0.2)	23.6% (1.2)	7.6% (2.4)	13.1% (0.3)	19.2% (1.1)	34.1% (3.5)	26.9% (0.4)	22.4% (1.3)	2.8% (1.4)	13.1% (0.4)
Sweden	52.1% (2.6)	45.5% (1.8)	49.4% (0.3)	70% (2.4)	6.3% (1)	20.3% (0.4)	23.7% (2)	35.6% (1.6)	27.4% (0.4)	16.1% (1.8)	5.5% (0.8)	12.6% (0.5)
UK	48% (2.1)	43.2% (2.3)	50.2% (0)	33.8% (2.8)	10% (1.8)	16.6% (0.7)	25.2% (1.8)	34.3% (1.9)	28.8% (0)	16.4% (1.6)	7.7% (1.4)	12.1% (0)
USA	52.9% (1.6)	45.8% (2.7)	51.6% (0.4)	41.8% (2.9)	8% (1.5)	17.1% (0.7)	23.2% (1.8)	36.2% (2.2)	28.3% (0.4)	17.4% (1.2)	9% (1.1)	13.2% (0.5)
Average for the OECD countries	49.2% (0.5)	44.2% (0.6)	50.1% (0.1)	28.9% (0.5)	6% (0.3)	12.1% (0.1)	19.9% (0.4)	41.3% (0.6)	27.7% (0.07)	21.1% (0.4)	4.4% (0.2)	13.3% (0.1)