



SKILLS MATTER: FURTHER RESULTS FROM THE SURVEY OF ADULT SKILLS

LITHUANIA

Key results

- Adults in Lithuania show above-average proficiency in numeracy and average proficiency in literacy compared with adults in the OECD countries participating in the survey.
- Lithuania is one of the two participating countries where men and women show similar proficiency in numeracy and literacy.
- Young adults in Lithuania have higher proficiency in literacy than on average across all participating countries and economies.
- A large proportion of adults in Lithuania show low proficiency in problem-solving in technology rich environments.
- Lithuania has one of the largest shares of workers who have higher literacy skills than those required for their jobs.

The Survey of Adult Skills

The Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), provides a picture of adults' proficiency in three key information-processing skills:

- literacy – the ability to understand and respond appropriately to written texts
- numeracy – the ability to use numerical and mathematical concepts
- problem solving in technology-rich environments – the capacity to access, interpret and analyse information found, transformed and communicated in digital environments.

Proficiency is described on a scale of 500 points divided into levels. Each level summarises what a person with a particular score can do. Six proficiency levels are defined for literacy and numeracy (Levels 1 through 5 plus below Level 1) and four are defined for problem solving in technology-rich environments (Levels 1 through 3 plus below Level 1).

The survey also provides a wide range of information about respondents' use of skills at work and in everyday life, their education, their linguistic and social backgrounds, their participation in adult education and training programmes and in the labour market, and other aspects of their well-being.

The Survey of Adult Skills was conducted in Lithuania from 1 April 2014 to 31 March 2015.

Some 5 093 adults aged 16 to 65 were surveyed.

Adults in Lithuania show average proficiency in literacy, above-average proficiency in numeracy, and below-average proficiency in problem solving in technology-rich environments compared with adults in participating OECD countries.

Some 6.2% of adults in Lithuania attain the two highest levels of proficiency in literacy (Level 4 or 5), below the average of 10.6% of adults in participating OECD countries. At Level 4, adults can integrate, interpret and synthesise information from complex or lengthy texts that contain conditional and/or competing information (for more details on what adults can do at each proficiency level, see the table at the end of this note). **Some 34.6% are proficient at Level 3 in literacy** compared to 35.4% of adults in participating OECD countries. Adults performing at this level can understand and respond appropriately to dense or lengthy texts, and can identify, interpret, or evaluate one or more pieces of information and make appropriate inferences using knowledge text structures and rhetorical devices.

Some 9.6% of adults in Lithuania attain Level 4 or 5 in numeracy compared with the average of 11.3% of adults across participating OECD countries. At Level 4, adults understand a broad range of mathematical information that may be complex, abstract or found in unfamiliar contexts. **Some 32.2% attain Level 3 proficiency in numeracy,** similar to the average across participating OECD countries. At this level, adults have a good sense of number and space; can recognise and work with mathematical relationships, patterns and proportions expressed in verbal or numerical form; and can interpret and perform basic analyses of data and statistics in texts, tables and graphs.

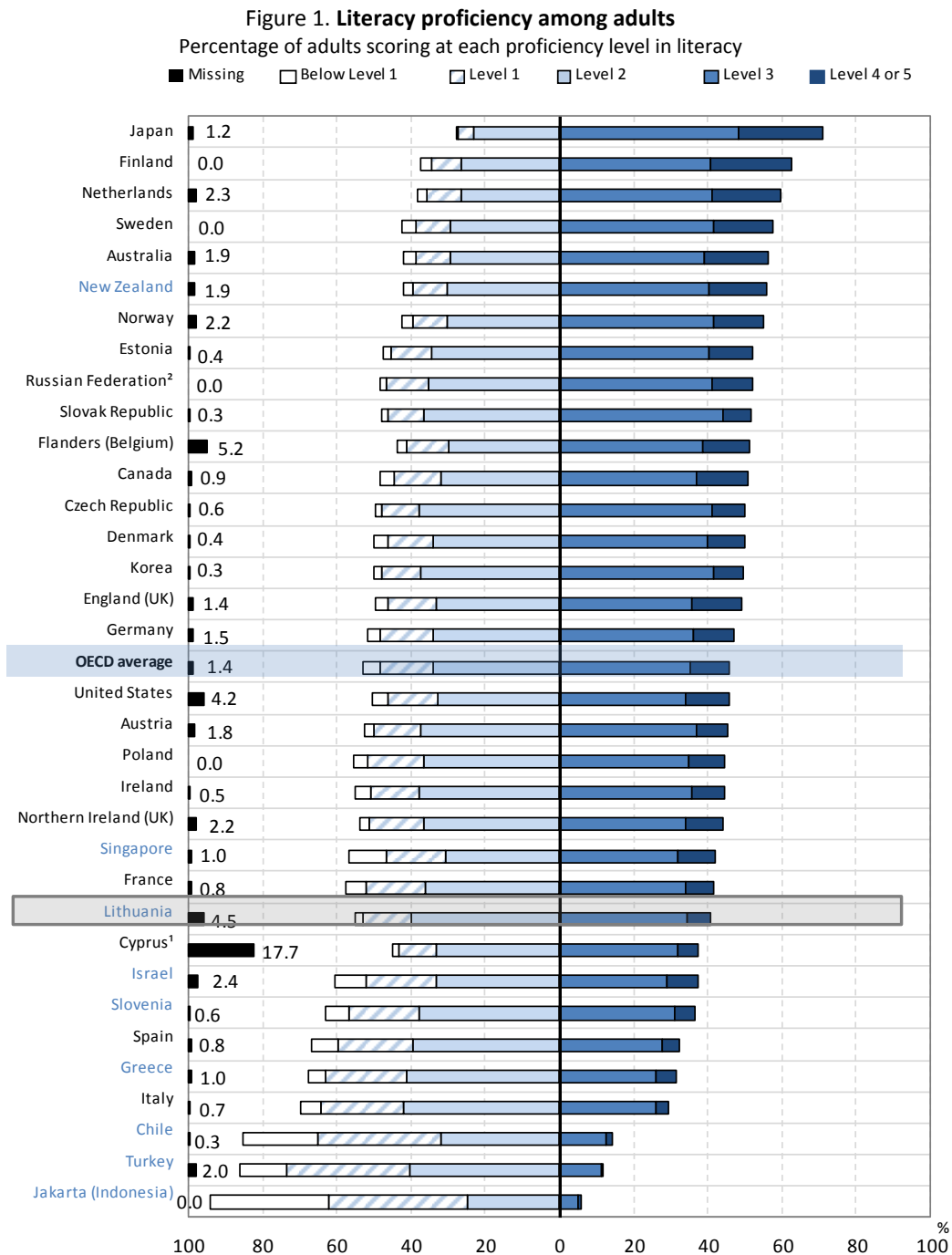
Some 2.1% of adults are proficient at Level 3, the highest proficiency level, in problem solving in technology-rich environments (compared to an average of 5.4% of adults in participating OECD countries), **while 15.6% attain proficiency Level 2** (compared with the average of 25.7%). Adults at Level 3 can complete tasks involving multiple computer applications, a large number of steps, and the discovery and use of ad hoc commands in a novel environment. At Level 2, adults can complete problems that involve a small number of computer applications, and require completing several steps and operations to reach a solution.

Fewer adults have low literacy and numeracy skills in Lithuania than do adults, on average, in other OECD countries.

Some 15.1% of adults attain only Level 1 or below in literacy (compared with the OECD average of 18.9%) **and 17.4% attain Level 1 or below in numeracy** (compared with the OECD average 22.7%). At Level 1 in literacy, adults can read brief texts on familiar topics and locate a single piece of specific information identical in form to information in the question or directive. In numeracy, adults at Level 1 can perform basic mathematical processes in common, concrete contexts, for example, one-step or simple processes involving counting, sorting, basic arithmetic operations and understanding simple percentages.

Compared to adults in other participating countries, Lithuanian adults have low computer familiarity and skills, and have low levels of skill at problem-solving in technology-rich environments.

Some 20.9% of adults (compared with 14.7% of adults in OECD participating countries) **indicated that they had no prior experience with computers or lacked basic computer skills, and 54.6% score at or below Level 1 in problem solving in technology-rich environments.** This total of 75.5% is above the average and among the highest percentage of all participating countries/economies – similar to those in Chile and Turkey. At Level 1, adults can use only widely available and familiar technology applications, such as e-mail software or a web browser, to solve problems involving few steps, simple reasoning and little or no navigation across applications.



Note: Adults in the missing category were not able to provide enough background information to impute proficiency scores because of language difficulties, or learning or mental disabilities (referred to as literacy-related non-response).

1. Note by Turkey:

The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the “Cyprus issue”.

Note by all the European Union Member States of the OECD and the European Union:

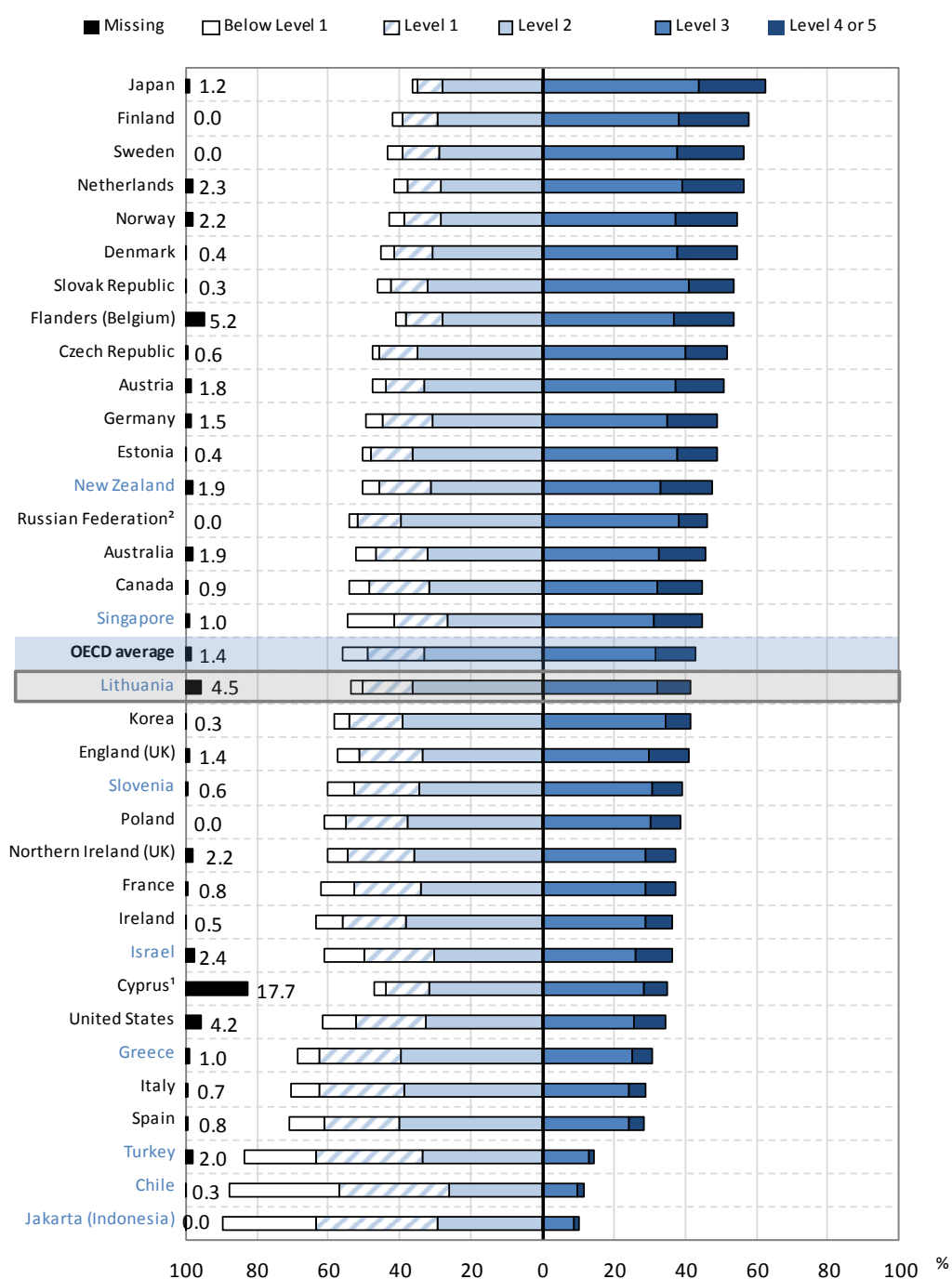
The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Countries and economies are ranked in descending order of the combined percentages of adults scoring at Level 3 and at Level 4 or 5.

Source: Survey of Adult Skills (PIAAC) (2012, 2015), Table A2.1 (<http://dx.doi.org/10.1787/888933366458>).

Figure 2. Numeracy proficiency among adults

Percentage of 16-65 year-olds scoring at each proficiency level in numeracy



Note: Adults in the missing category were not able to provide enough background information to impute proficiency scores because of language difficulties, or learning or mental disabilities (referred to as literacy-related non-response).

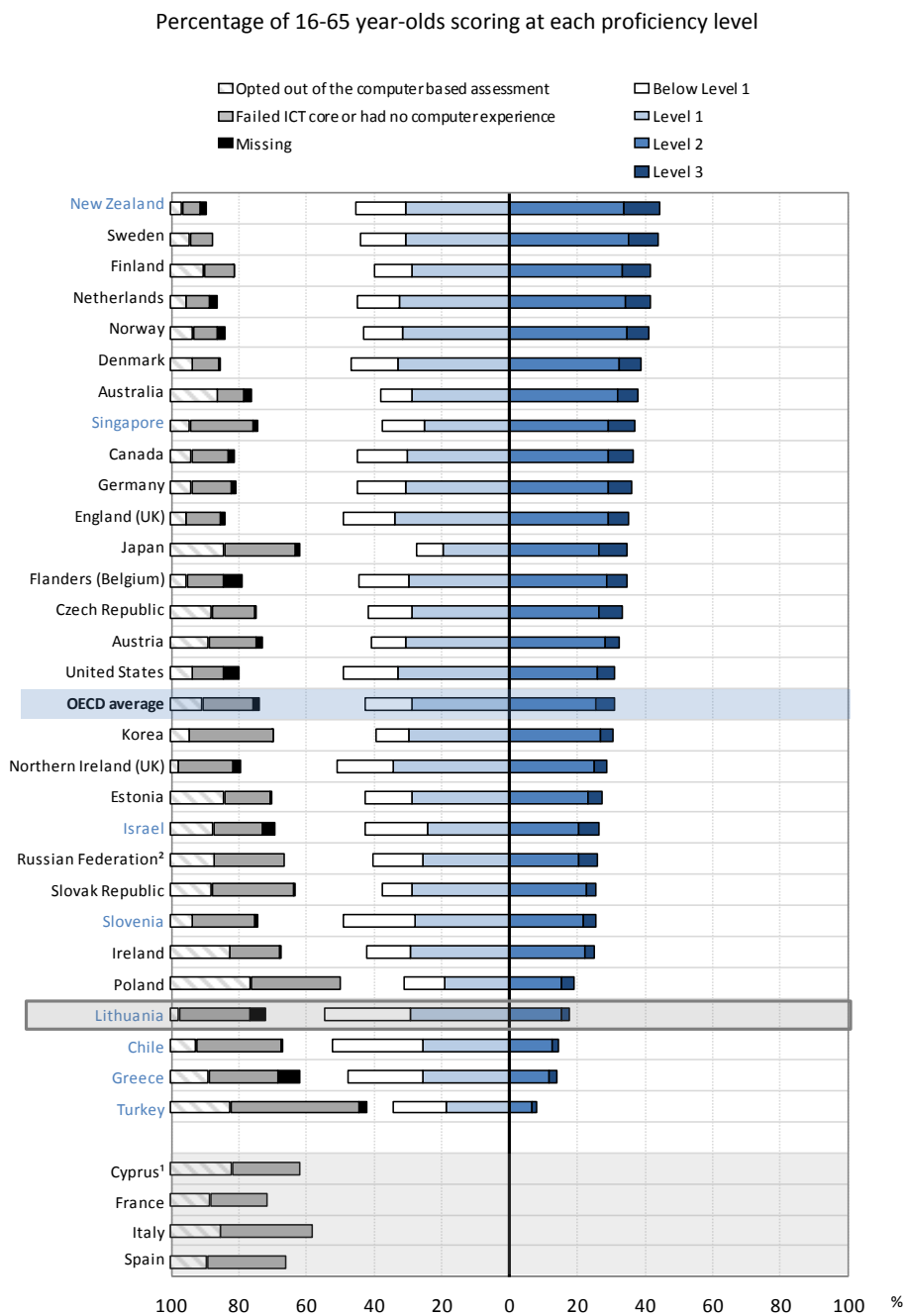
1. See note 1 under Figure 1.

2. The sample for the Russian Federation does not include the population of the Moscow municipal area.

Countries and economies are ranked in descending order of the combined percentage of adults scoring at Level 3 and at Level 4 or 5.

Source: Survey of Adult Skills (PIAAC) (2012, 2015), Table A2.4 (<http://dx.doi.org/10.1787/888933366458>).

Figure 3. Proficiency in problem solving in technology-rich environments among adults



Notes: Adults included in the missing category were not able to provide enough background information to impute proficiency scores because of language difficulties, or learning or mental disabilities (referred to as literacy-related non-response). The missing category also includes adults who could not complete the assessment of problem solving in technology-rich environments because of technical problems with the computer used for the survey. Cyprus¹, France, Italy, Jakarta (Indonesia), and Spain did not participate in the problem solving in technology-rich environments assessment. Results for Jakarta (Indonesia) are not shown since the assessment was administered exclusively in paper and pencil format.

1. See note 1 under Figure 1.

2. The sample for the Russian Federation does not include the population of the Moscow municipal area.

Countries and economies are ranked in descending order of the combined percentages of adults scoring at Level 2 and at Level 3.

Source: Survey of Adult Skills (PIAAC) (2012, 2015), Table A2.6 (<http://dx.doi.org/10.1787/888933366458>).

Young adults (16-24 year-olds) in Lithuania have higher proficiency in literacy compared to the country's total adult population, and show above-average proficiency compared with young adults across participating OECD countries.

Young adults show similar literacy proficiency, on average, as their peers in Germany and New Zealand, and higher proficiency, on average, than young adults in Norway and the average participating OECD country.

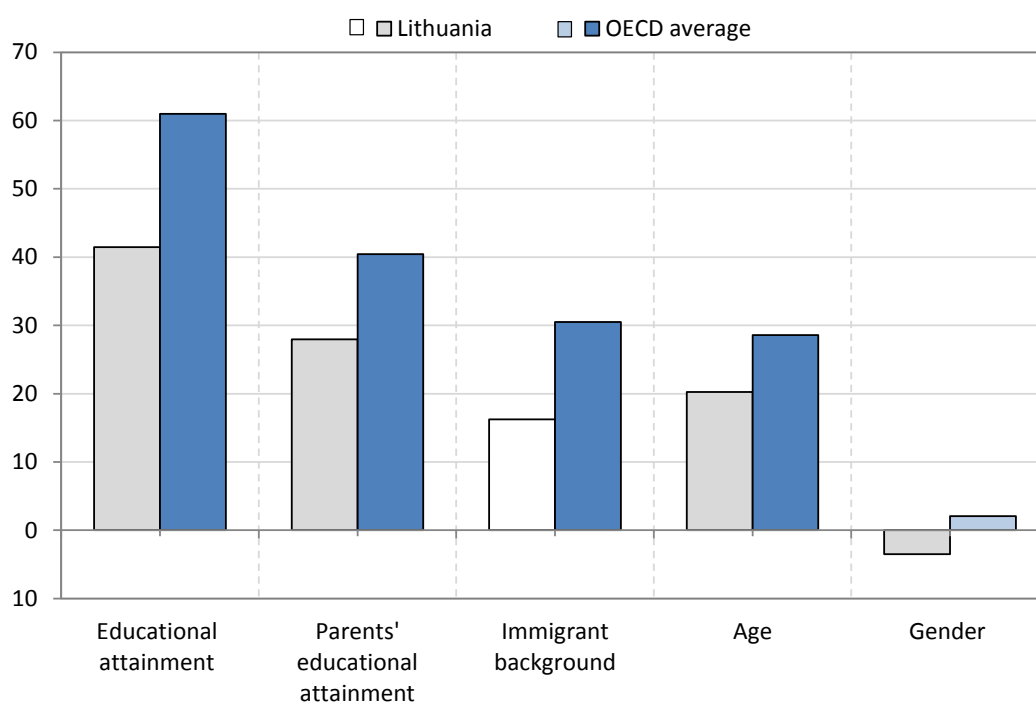
The relationship between adults' socio-demographic characteristics and proficiency is weaker than that observed in other countries.

In most countries, including Lithuania, there are differences in skills proficiency related to socio-demographic characteristics, such as age, level of education and social background. Differences in proficiency related to age, gender, immigrant background, educational attainment and parents' education are smaller in Lithuania than in most other countries.

Across participating countries/economies, proficiency peaks among 25-34 year-olds while the proficiency of 55-64 year-olds is generally the lowest of all age groups. In Lithuania, proficiency peaks earlier, around age 22.

Figure 4. Synthesis of socio-demographic differences in literacy proficiency

Difference in literacy scores between contrast categories within various socio-demographic groups



Notes: Statistically significant differences are marked in a darker tone. The estimates show the differences between the two means for each contrast category). The differences are: tertiary minus less than upper secondary (educational attainment), at least one parent attained tertiary minus neither parent attained upper secondary (parents' educational attainment), native born and native language minus foreign born and foreign language (immigrant background) and 25-34 year-olds minus 55-65 year-olds (age).

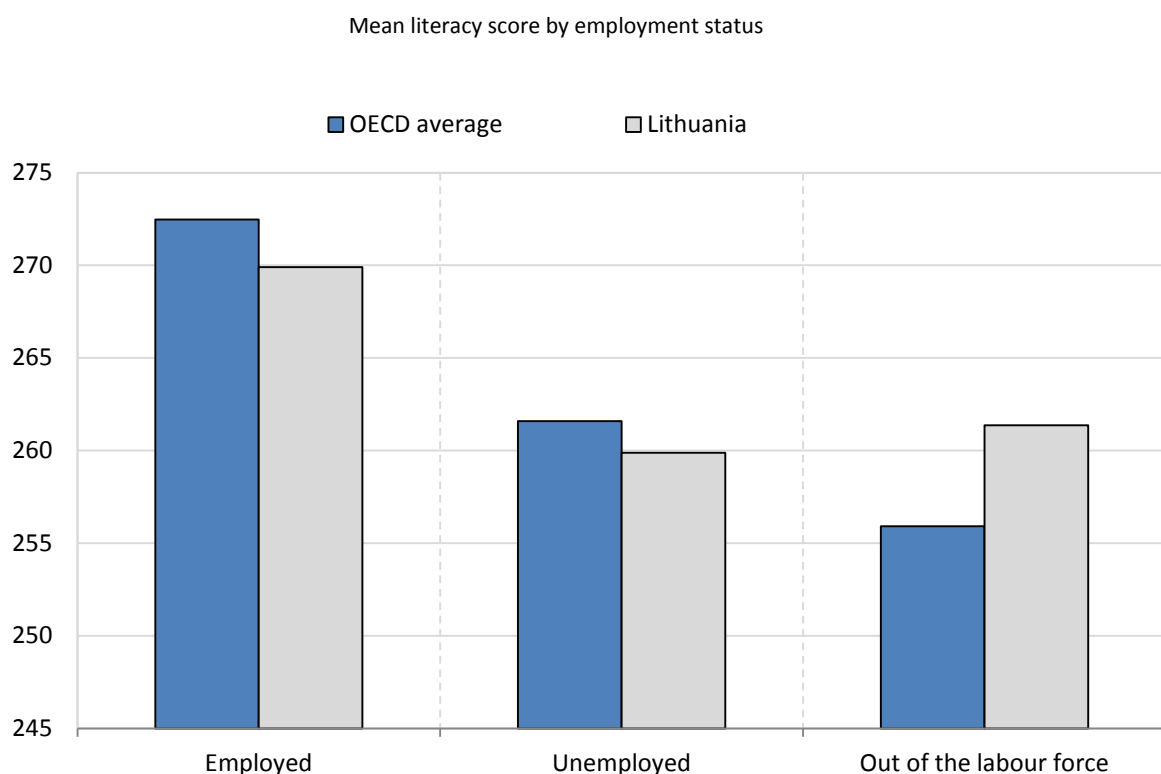
Source: Survey of Adult Skills (PIAAC) (2012, 2015), Tables A3.2(L), A3.5 (L), A3.9 (L), A3.12 (L) and A3.14 (L) (<http://dx.doi.org/10.1787/888933366463>).

On average across countries/economies, men have higher proficiency in numeracy than women. In Lithuania, by contrast, there is no gender difference in proficiency in either literacy or numeracy – and Lithuania, together with the Slovak Republic, is the one of the only two participating country with no gender-related differences in proficiency in both domains.

Higher proficiency in literacy and numeracy has a positive impact on labour force participation and wages.

In many participating countries/economies, there is a positive relationship between literacy proficiency and employment, and this is true in Lithuania too. In fact, the relationship between the two is among the strongest observed, along with that recorded in the Slovak Republic and Sweden.

Figure 5. **Literacy and employment status**

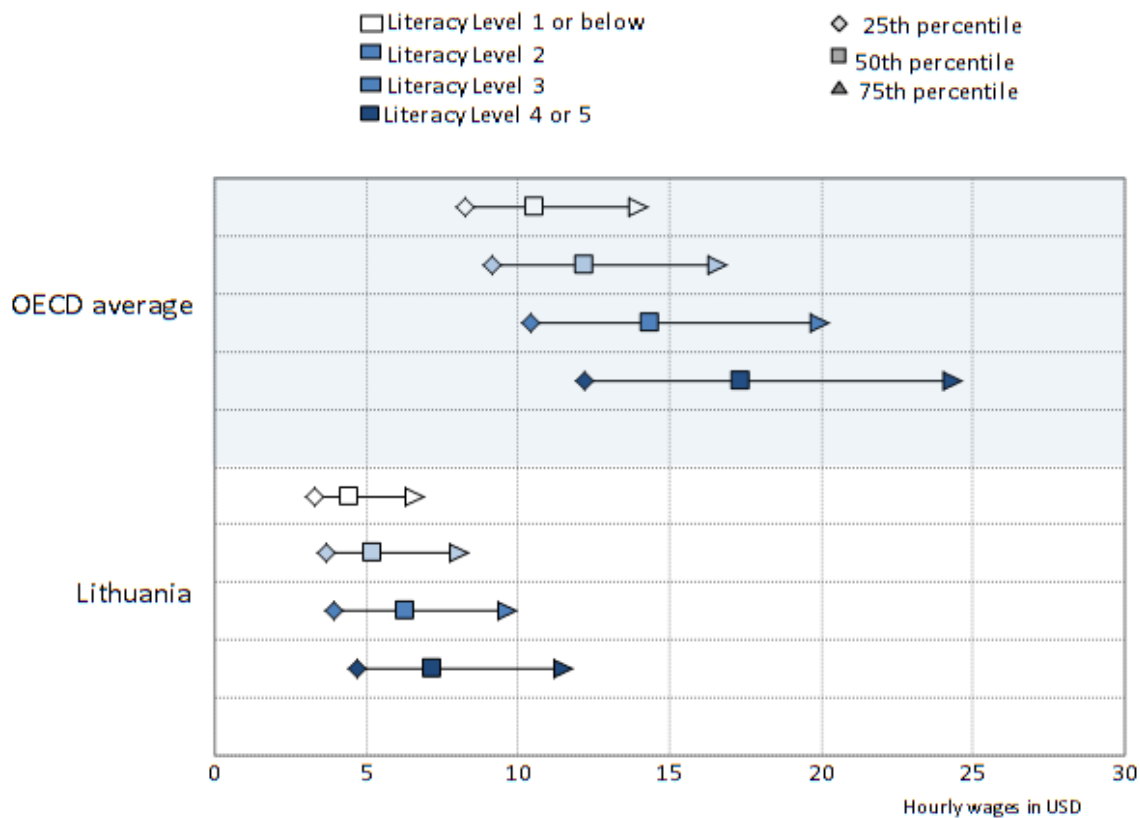


Source: Survey of Adult Skills (PIAAC) (2012, 2015), Table A5.1 (<http://dx.doi.org/10.1787/888933366489>).

Wages are also affected by proficiency in information-processing skills like literacy and numeracy. **In Lithuania, the best-paid workers who score at Level 4 or 5 in literacy earn about USD 4.9 more per hour than the best-paid workers who score at or below Level 1.** However, there is a slight overlap in the wage distributions at different levels of proficiency. For instance, in Lithuania, a median-paid earner with Level 2 proficiency in literacy earns slightly more, on average, than a low-paid worker with Level 4 or 5 proficiency.

Figure 6. **Distribution of wages, by literacy proficiency level**

25th, 50th and 75th percentiles of the wage distribution



Notes : Employees only. Hourly wages, including bonuses, in purchasing-power-parity-adjusted USD (2012).

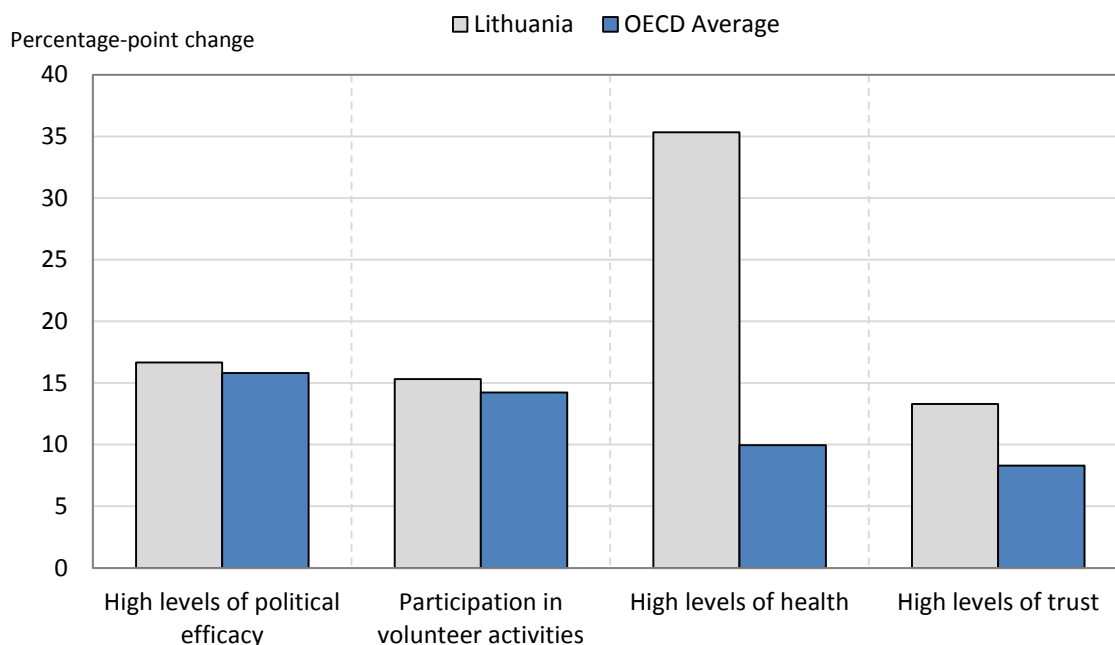
Source: Survey of Adults Skills (PIAAC) (2012, 2015), Table 5.3 (L) (<http://dx.doi.org/10.1787/888933366489>).

The link between higher proficiency in literacy and some social outcomes, such as trust in others, belief that one can have an impact on the political process, and participation in volunteer activities, is weaker in Lithuania than in most other countries; but the link with self-perceived health is among the strongest in the survey.

In Lithuania, adults who are proficient in literacy at or below Level 1 are more likely than adults with Level 4 or 5 proficiency to distrust others, believe they have little impact on the political process, not participate in volunteer activities and report poor health. In particular, adults in Lithuania scoring at Level 4 or 5 in literacy are over 35 percentage points more likely than adults scoring at or below Level 1 to report they are in good to excellent health.

Figure 7. **Literacy proficiency and positive social outcomes**

Difference between the percentage of adults with high proficiency (Level 4 or 5) and the percentage of adults with low proficiency (Level 1 or below) who reported high levels of trust and political efficacy, good to excellent health, or participating in volunteer activities



Note: All differences are statistically significant.

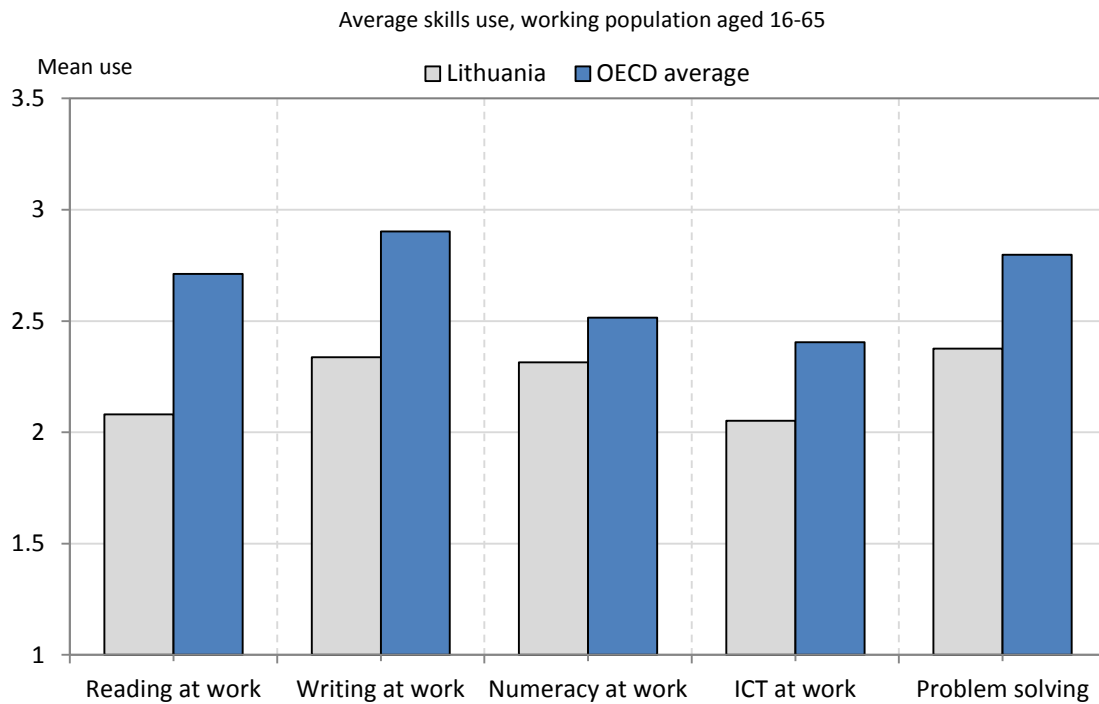
Source: Survey of Adult Skills (PIAAC) (2012, 2015), Table A5.14(L) (<http://dx.doi.org/10.1787/888933366489>).

Adults in Lithuania less likely than workers in other countries to use their skills and are more likely to say that their literacy skills exceed their jobs' requirements.

The survey collected information about the use of information-processing skills in the workplace. Linked with data about workers' proficiency in these skills, this information provides a picture of the match – or mismatch – between workers' skills and the tasks they are asked to perform in their jobs. Lithuanian workers read, write, work with mathematics, solve problems and use computers in their jobs less frequently than the average across OECD countries participating in the survey.

Workers in Lithuania are more likely to be mismatched than on average across the OECD. Around 18.1% of workers are more proficient in literacy than their job requires (overskilled). This is one of the largest proportions observed among the participating countries and economies. Around 4.6% of workers are less proficient than the minimum required for their job (underskilled). Overqualification is more common in Lithuania than on average across participating OECD countries: 26.5% of workers in Lithuania are overqualified compared to the average of 21.7%.

Figure 8. Information-processing skills used at work



Notes: For reading, writing, numeracy and ICT skills, skills use indicators are scales between 1 "Never" and 5 "Every day". Problem-solving skills use refers to respondents' answers to "How often are you usually confronted with more complex problems that take at least 30 minutes to find a good solution?". The set of possible answers also ranges between 1 "Never" and 5 "Every day".

Source: Survey of Adult Skills (PIAAC) (2012, 2015), Table A4.1 (<http://dx.doi.org/10.1787/888933366479>).

Key facts about the Survey of Adult Skills (PIAAC)

What is assessed

- The Survey of Adult Skills (PIAAC) assesses the proficiency of adults from age 16 in literacy, numeracy and problem solving in technology-rich environments. These skills are “key information-processing competencies” that are relevant to adults in many social contexts and work situations, and necessary for fully integrating and participating in the labour market, education and training, and social and civic life.
- In addition, the survey collects a range of information on the reading- and numeracy-related activities of respondents, the use of information and communication technologies at work and in everyday life, and on a range of generic skills, such as collaborating with others and organising one’s time, that are required of individuals in their work. Respondents are also asked whether their skills and qualifications match their work requirements and whether they have autonomy over key aspects of their work.

Methods

- The Survey of Adults Skills was conducted over two rounds of data collection.
- In the first round, around 166 000 adults aged 16-65 years in 24 countries were surveyed – Australia, Austria, Belgium, Canada, Cyprus,* the Czech Republic, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Japan, Korea, the Netherlands, Norway, Poland, the Russian Federation,** the Slovak Republic, Spain, Sweden, the United Kingdom and the United States. In all but three countries, data collection covered the entire national population. In Belgium, data were collected in Flanders; in the United Kingdom, data were collected in England and Northern Ireland (data are reported separately for England and Northern Ireland in the report). In the Russian Federation, the data do not cover the Moscow municipal area.
- Data collection for Round 1 of the Survey of Adult Skills took place from 1 August 2011 to 31 March 2012 in most participating countries. In Canada, data were collected from November 2011 to June 2012; and France collected data from September to November 2012.
- Nine countries took part in the second round of the assessment: Chile, Greece, Indonesia, Israel, Lithuania, New Zealand, Singapore, Slovenia and Turkey. A total of 50 250 adults were surveyed. In all countries except Indonesia the entire national population was covered. In Indonesia, data were collected in the Jakarta municipal area only.
- Data collection for Round 2 of the Survey of Adult Skills took place from April 2014 to end-March 2015. The duration of fieldwork varied from around 100 to 330 days, depending on the country.
- The language of assessment was the official language(s) of each participating country/economy. In some countries, the assessment was also conducted in widely spoken minority or regional languages.
- The target population for the survey was the non-institutionalised population of 16-65 year-olds residing in the country or region at the time of the data collection, irrespective of nationality, citizenship or language status. The achieved national samples ranged from a minimum of approximately 4 000 persons to a maximum of nearly 27 300 persons.
- The survey was conducted under the supervision of trained interviewers usually in the respondent’s home. The time taken to complete the questionnaire ranged between 30 and 45 minutes.

- After having answered the background questionnaire, the respondent completed the assessment either on a laptop computer or by completing a paper version using printed test booklets, depending on the respondent's computer skills. Respondents could take as much or as little time as needed to complete the assessment. On average, respondents took 50 minutes to complete the cognitive assessment.
- Identical instruments were used in Rounds 1 and 2 of the survey. The one exception was in Jakarta (Indonesia) where, since only paper-based instruments were used, additional test items were added to the paper-based instruments used in the other countries.

Comparing the results of countries/economies in Round 1 and Round 2

Identical data-collection instruments and methodology were used in Rounds 1 and 2 of the survey. The one difference is that data collection for Rounds 1 and 2 occurred some three years apart. The difference in reference dates for the two rounds of the study is unlikely to have an impact on the proficiency of the adult populations in Round 1 countries/economies compared to that of adults in Round 2 countries/economies. However, data were collected at different points in the economic cycle in the two rounds; this may have some effect on the relationships observed between proficiency and labour market outcomes and jobs characteristics, in particular, in the countries/economies in the two different rounds.

Notes

* See note 1 under figure 1.

** The data from the Russian Federation are preliminary and may be subject to change. Readers should note that the sample for the Russian Federation does not include the population of the Moscow municipal area. The data published, therefore, do not represent the entire resident population aged 16-65 in Russia but rather the population of Russia excluding the population residing in the Moscow municipal area.

More detailed information regarding the data from the Russian Federation as well as that of other countries can be found in the Technical Report of the Survey of Adult Skills, Second Edition (OECD, forthcoming).

References and further reading

OECD (forthcoming), *Technical Report of the Survey of Adult Skills, Second Edition*.

OECD (2016a), *Skills Matter: Further Results from the Survey of Adult Skills*, OECD Skills Studies, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264258051-en>.

OECD (2016b), *The Survey of Adult Skills: Reader's Companion, Second Edition*, OECD Skills Studies, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264258075-en>.

OECD (2016c), *Survey of Adult Skills (PIAAC) (Database 2012, 2015)*, www.oecd.org/site/piaac/publicdataandanalysis.htm.

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Proficiency levels: Literacy and numeracy

Level	Score range	Literacy	Numeracy
Below Level 1	Below 176 points	Tasks at this level require the respondent to read brief texts on familiar topics and locate a single piece of specific information. There is seldom any competing information in the text. Only basic vocabulary knowledge is required, and the reader is not required to understand the structure of sentences or paragraphs or make use of other text features.	Tasks at this level require the respondent to carry out simple processes such as counting, sorting, performing basic arithmetic operations with whole numbers or money, or recognising common spatial representations.
1	176 to less than 226 points	Tasks at this level require the respondent to read relatively short digital or print texts to locate a single piece of information that is identical to or synonymous with the information given in the question or directive. Knowledge and skill in recognising basic vocabulary, determining the meaning of sentences, and reading paragraphs of text is expected.	Tasks at this level require the respondent to carry out basic mathematical processes in common, concrete contexts where the mathematical content is explicit. Tasks usually require one-step or simple processes involving counting; sorting; performing basic arithmetic operations; and identifying elements of simple or common graphical or spatial representations.
2	226 to less than 276 points	Tasks at this level require the respondent to make matches between the text, either digital or printed, and information, and may require paraphrasing or low-level inferences.	Tasks at this level require the application of two or more steps or processes involving calculation with whole numbers and common decimals, percents and fractions; simple measurement and spatial representation; estimation; and interpretation of relatively simple data and statistics in texts, tables and graphs.
3	276 to less than 326 points	Texts at this level are often dense or lengthy. Understanding text and rhetorical structures is often required, as is navigating complex digital texts.	Tasks at this level require the application of number sense and spatial sense; recognising and working with mathematical relationships, patterns, and proportions expressed in verbal or numerical form; and interpreting data and statistics in texts, tables and graphs.
4	326 to less than 376 points	Tasks at this level often require the respondent to perform multiple-step operations to integrate, interpret, or synthesise information from complex or lengthy texts. Many tasks require identifying and understanding one or more specific, non-central idea(s) in the text in order to interpret or evaluate subtle evidence-claim or persuasive discourse relationships.	Tasks at this level require analysis and more complex reasoning about quantities and data; statistics and chance; spatial relationships; and change, proportions and formulas. They may also require understanding arguments or communicating well-reasoned explanations for answers or choices.
5	Equal to or higher than 376 points	Tasks at this level may require the respondent to search for and integrate information across multiple, dense texts; construct syntheses of similar and contrasting ideas or points of view; or evaluate evidence based arguments. They often require respondents to be aware of subtle, rhetorical cues and to make high-level inferences or use specialised background knowledge.	Tasks at this level may require the respondent to integrate multiple types of mathematical information where considerable translation or interpretation is required; draw inferences; develop or work with mathematical arguments or models; and critically reflect on solutions or choices.

Description of proficiency levels in problem solving in technology-rich environments

Level	Score range	The types of tasks completed successfully at each level of proficiency
No computer experience	Not applicable	Adults in this category reported having no prior computer experience; therefore, they did not take part in the computer-based assessment but took the paper-based version of the assessment, which does not include the problem solving in technology-rich environment domain.
Failed ICT core	Not applicable	Adults in this category had prior computer experience but failed the ICT core test, which assesses basic ICT skills, such as the capacity to use a mouse or scroll through a web page, needed to take the computer-based assessment. Therefore, they did not take part in the computer-based assessment, but took the paper-based version of the assessment, which does not include the problem solving in technology-rich environment domain.
“Opted out” of taking computer-based assessment	Not applicable	Adults in this category opted to take the paper-based assessment without first taking the ICT core assessment, even if they reported some prior experience with computers. They also did not take part in the computer-based assessment, but took the paper-based version of the assessment, which does not include the problem solving in technology-rich environment domain.
Below Level 1	Below 241 points	Tasks are based on well-defined problems involving the use of only one function within a generic interface to meet one explicit criterion without any categorical or inferential reasoning, or transforming of information. Few steps are required and no sub-goal has to be generated.
1	241 to less than 291 points	At this level, tasks typically require the use of widely available and familiar technology applications, such as e-mail software or a web browser. There is little or no navigation required to access the information or commands required to solve the problem. The tasks involve few steps and a minimal number of operators. Only simple forms of reasoning, such as assigning items to categories, are required; there is no need to contrast or integrate information.
2	291 to less than 341 points	At this level, tasks typically require the use of both generic and more specific technology applications. For instance, the respondent may have to make use of a novel online form. Some navigation across pages and applications is required to solve the problem. The task may involve multiple steps and operators. The goal of the problem may have to be defined by the respondent, though the criteria to be met are explicit.
3	Equal to or higher than 341 points	At this level, tasks typically require the use of both generic and more specific technology applications. Some navigation across pages and applications is required to solve the problem. The task may involve multiple steps and operators. The goal of the problem may have to be defined by the respondent, and the criteria to be met may or may not be explicit. Integration and inferential reasoning may be needed to a large extent.

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