European Centre for the Development of Vocational Training

Cedefop country fact sheet

Adult population with potential for upskilling and reskilling

Poland

Country fact sheets originate from the comparative analysis presented in Cedefop's 2020 study *Empowering adults through upskilling and reskilling pathways. Volume 1: adult population with potential for upskilling and reskilling*.

Due to data limitations, part of the analysis could not be performed at country level. The fact sheets are intended to stimulate reflection on whether the groups with the most potential for upskilling, according to the analysis conducted, are in line with defined national priorities. Analysis underpinning the country fact sheets could also be replicated using national data to overcome some of the limitations of the EU comparable data sets used.

Disclaimer

This fact sheet contains UK data and analysis based on research conducted before the United Kingdom's exit from the European Union on 31 January 2020. EU averages or other statistical parameters including the UK reflect the situation in the European Union before 31 January 2020 and should not be considered as representative of the situation in the EU thereafter. In this context 'EU-28' refers to the 28 EU Member States prior to 31 January 2020.

This fact sheet has neither been edited nor proofread by Cedefop's editing service.

Further information:

http://www.cedefop.europa.eu/en/events-and-projects/projects/adult-learning

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Introduction

Due to data limitations, analysis of the low-skilled has been generally carried out using educational attainment levels or type of occupation ([1]). However, as discussed in Cedefop (2017), this approach fails to capture the complexity of the low-skilled phenomenon. Educational attainment does not take into account different types of skills, abilities and factors that can result in low-skilled status, especially among adults: long-term unemployment and/or disengagement from the labour market, skill obsolescence due to ageing, rapid technological change, product/process innovation, changes in production processes and/or work organisation, skills mismatch and socioeconomic factors, such as migrant background and gender.

Further, this narrow conceptualisation fails to capture the role of other knowledge, skills and competences gained outside formal education environments, such as those acquired through training, informal learning and work experience.

Within this context, and in line with Cedefop (2017), Cedefop's study *Empowering adults through upskilling and reskilling pathways. Volume 1: adult population with potential for upskilling and reskilling* adopts a definition of low-skilled status for adults which moves beyond educational attainment, to embrace the different dimensions comprising the overall skills and competences of adults.

This broader conceptualisation of low skills looks at three skills dimensions:

(a) educational attainment level;
(b) computer and digital skills;
(c) cognitive skills: literacy and numeracy.

It also includes adults with medium and high education levels, working in elementary occupations, as a proxy for people in potential risk of skill obsolescence and skill loss ([2]).

For the purpose of the analysis underpinning this fact sheet, adults are people aged from 25 to 64. EU 28+ refers to the 28 EU Member States, plus Iceland and Norway.

Boxes 1 and 2 illustrate the main definitions and the source of information of the different skill domains used for the analyses.

([1]) Dieckhoff, 2008; Eurofound, 2008.

([2]) Several studies show that job-worker mismatches induce cognitive decline with respect to immediate and delayed recall abilities, cognitive flexibility and verbal fluency (De Grip et al., 2008; Kureková, Haita and Beblavý, 2013; Kureková et al., 2013).

Box 1. **Concepts of low skills used in the analysis: definition and source**

Educational attainment level:

- low education refers to people who have successfully completed, at most, international standard classification of education (ISCED) levels 0-2 or ISCED 3c programmes lasting less than two years. ISCED 2011 is the reference international classification for organising education programmes and related qualifications by levels and fields:
  - ISCED 0: pre-primary education;
  - ISCED 1: primary education;
  - ISCED 2: lower secondary education;
  - ISCED 3: upper secondary education.

  [Source of data used: European Union Labour Force Survey (EU LFS) 2016 anonymised microdata for research].

Digital skills:

- never used computer: refers to people who declare of having never used a computer [Source of data: Eurostat community statistics on information society (CSIS) 2015 anonymised microdata for research; CSIS 2014 for Iceland];
- low use of internet: refers to people who last used the internet more than three months prior to the survey interview or who have never used the internet [Source of data: CSIS 2015 anonymised microdata for research; CSIS 2014 for Iceland];
- below basic digital skills: among those people with last use of the internet less than three months prior to the survey interview, individuals who have carried out activities in, at most, one of the four digital competence dimensions surveyed: information, communication, content-creation and problem-solving [Source of data: CSIS 2015 anonymised microdata for research];
- low digital skills: refers to people who have either low use of the internet or below basic digital skills [Source of data: CSIS 2015 anonymised microdata for research];
- low problem-solving in technology-rich environments: refers to people who scored less than 241 points in PIAAC (i.e. below level 1 on the proficiency scale ranging from level 1 to level 3 of OECD PIAAC). Problem-solving in technology-rich environments is defined as 'using digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks'. [Source of data: PIAAC 2012; 2015 public use files].

Cognitive skills:

- low literacy refers to people who scored less than 226 points in PIAAC (i.e. at most, level 1 on the proficiency scale ranging from below level 1 to level 5 of OECD PIAAC). Literacy refers to the ability to understand, evaluate, use and engage with written texts to participate in society, achieve one's goals, and develop one's knowledge and potential. [Source of data: PIAAC 2012; 2015 public use files];
- low numeracy refers to people who scored less than 226 points in PIAAC (i.e. at most, level 1 on the proficiency scale ranging from below level 1 to level 5 of OECD PIAAC). Numeracy refers to the ability to access, use, interpret and communicate mathematical information and ideas in order to engage in, and manage the mathematical demands of, a range of situations in adult life. [Source of data: PIAAC 2012; 2015 public use files];
- low cognitive skills: refers to people with low literacy and/or numeracy (see above) [Source of data: PIAAC 2012; 2015 public use files].

At risk of skill loss:

- medium-high educated at risk of skill loss: refers to people who have medium and high educational attainment levels and work in elementary occupations (international standard classification of occupations ISCO-08, group 9). Where, medium education is defined as having completed ISCED 3 programme of duration of two years or more or ISCED level 4 (post-secondary education), and high education is defined as having completed ISCED levels 5-8 (tertiary education). ISCED 2011. [Source of data used: EU LFS 2016 anonymised microdata for research].

Source: Cedefop.

Box 2. **Data sources**

EU LFS 2016 anonymised microdata for research ([3])
The Eurostat-European Union labour force survey provides robust information for all the 28EU+ countries on labour market conditions and characteristics of low-educated adults and jobs. It contains data on a wide range of sociodemographic characteristics of individuals including education (ISCED) and training participation (in the four weeks before the survey interview), as well as on employment status and employment characteristics of the main job, including occupation (ISCO).
https://ec.europa.eu/eurostat/web/microdata/labour-force-survey

CSIS 2015 anonymised microdata for research ([4])
The Eurostat Community statistics on information society survey provides information on access and use of information and communication technologies (including computer use, internet access, digital competences) by households and individuals aged 16 to 74 in the EU-28+. It contains background information on gender, age, education level, employment status, occupation (manual vs non-manual job). CSIS 2015 covers the EU-28+ countries, apart from Iceland. CSIS 2014 have been used for Iceland.
https://ec.europa.eu/eurostat/web/microdata/community-statistics-on-information-society

PIAAC 2012; 2015 public use files – anonymised microdata ([5])
The Programme for the international assessment of adult competences (OECD PIAAC) contains information on cognitive skills (literacy and numeracy), problem-solving in technology-rich environments, computer experience, level of education (ISCED) and training, as well as, on a range of demographic, economic and social variables, including occupations (ISCO). PIAAC covers in total 21 countries of the EU-28+:

- 18 surveyed in round one (2012): AT, BE, CY, CZ, DE, DK, EE, ES, FI, FR, IE, IT, NL, NO, PL, SE, SK, UK;
- three surveyed in round two (2015): EL, LT, SI.

Hence, the following EU-28+ countries are not covered by this survey: BG, HR, HU, IS, LU, LV, MT, NO, PT, RO. Some other countries did not participate in the assessment of proficiency in problem-solving in technology-rich environments: CY, ES, FR and IT.
http://www.oecd.org/site/piaac/

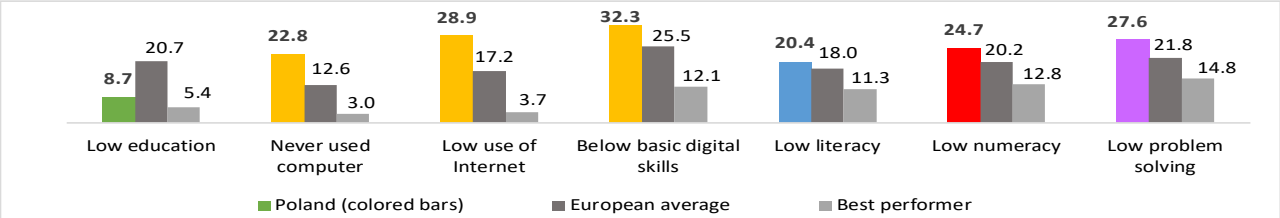
Source: Cedefop.

([3]) Eurostat, a.
([4]) Eurostat, b.
([5]) OECD, a; b.

How many adults at risk of low skills?

In Poland the incidence of low skills among adults is higher than that observed on average in the EU28+ countries in all the skills domains considered (except for educational attainment) (Fig. 1). On the other hand, Poland has a relatively low share of adults with low educational attainment levels when compared to the EU 28+ unweighted average.

Figure 1 – Incidence of low skills among adults aged 25-64 by type of skills (%)

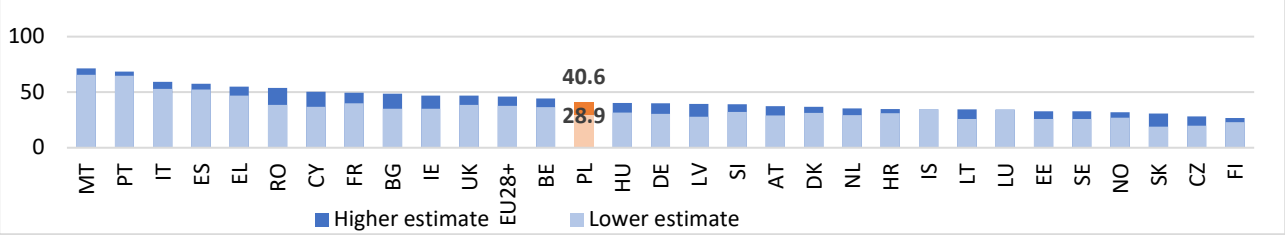


Note: European average: unweighted average of EU28+ countries for which data are available. Best performer countries (those with reliable data) with the lowest share of low-skilled adult population aged 25-64. Best performer: Low education (LT), Never used computer (NL), Low use of Internet (FI), Below basic digital skills (LU), Low literacy (FI), Low numeracy (CZ), Low problem solving in technology-rich environments (NO)

Estimation of the adult population with potential for upskilling and reskilling

In Poland the share of adult population with potential for upskilling and reskilling is estimated to range between 28.9% and 40.6% of the total adult population, that is to say from 6 to 8.4 million adults, depending on the measure of digital competences considered.

Figure 2- Adults aged 25-64 with potential for upskilling and reskilling (%), EU28+



Note: Population with potential for upskilling (estimate): adults with either: low education; low digital skills (higher estimate) or never used computer (lower estimate); low literacy and/or low numeracy; as well as medium-high educated (ISCED2011 level 3 2-year+ to level 8) at risk of skill loss, working in elementary occupations- ISCO08 level 9). For countries not surveyed by PIAAC (BG, HR, HU, IS, LU, LV, MT, PT, RO), low cognitive skills (low literacy and/or low numeracy skills) is assumed to be equal to the average level observed in surveyed countries. EU28+: population weighted average.

Who are the adults most at risk of low skills?

Due to data limitation and reliability, identification of the groups of adults most at risk of low skills, and by skill dimension, could be performed only by labour market status (unemployed, inactive and employed) and by age groups (young adults aged 25 to 34, adults aged 35 to 54 and older adults aged 55 to 64). When data were available and reliable at country level, in the country factsheets, this analysis was complemented by analysis by gender and country of origin.

The risk of being low-skilled has been calculated using the four indicators illustrated in box 3.

Box 3. **Measures of low skills used in the analysis**

(a) **the absolute risk of low skills**, calculated as the simple share of individuals with low skills among those of the same sociodemographic subgroup ([6]). It represents the incidence of low skills in the subgroup population;

(b) **the relative risk of low skills,** calculated as the share of low-skilled adults in the sociodemographic subgroup (absolute risk) over the share of low-skilled among the whole adult population aged 25 to 64 in the country ([7]). It compares the incidence of low skills in the subgroup to the incidence of low skills in the total adult population of the country. Values above/below 100 indicate that the risk of low skills is higher/lower for the subgroup than the average risk observed for the total adult population of the country;

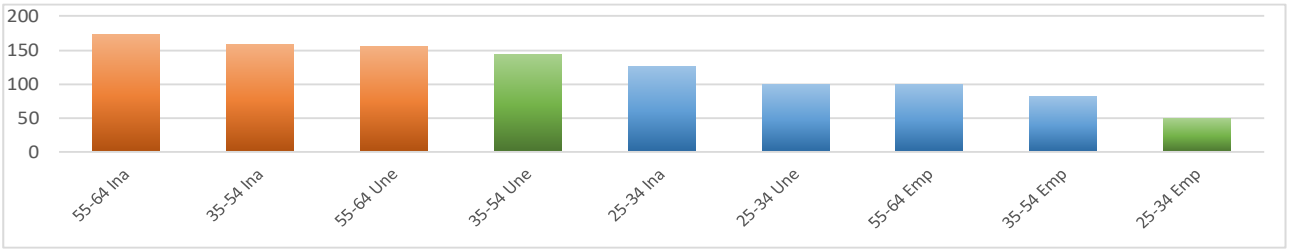
(c) **the low skills composite index**, calculated as the arithmetic mean of the relative risk of low skills in education, digital skills, literacy and numeracy. It provides the average risk of low skills in the four domains analysed. Again, values of the index above/below 100 indicate a higher/lower than average risk;

(d) **the relative performance index of low skills**, calculated as the relative risk of low skills within the country over the relative risk of low skills observed on average in the EU-28+ for the same sociodemographic subgroup ([8]). It compares the relative performance in terms of low skills of the subgroup in the country to the relative performance of the subgroup in the EU-28+ as a whole. Values above 100 indicate that the relative risk of low skills registered by the subgroup within the country is higher than the one registered by the same subgroup on average in the EU-28+. As opposite, values below 100 indicate a lower relative risk.

Source: Cedefop.

In Poland low skills are particularly high among adults in the older age groups and among unemployed and inactive. Inactive aged 55-64 and 35-54 and unemployed aged 55-64 show on average the highest share of low skills in all domains considered: education, digital skills (i.e. low use of Internet or below basic digital skills), literacy and numeracy (Fig. 3).

Figure 3 – Low skills composite index*, Poland



(*) Low skills composite index: calculated as the arithmetic mean of the relative risk of being low skilled in four domains: Low Education; Low Digital skills; Low literacy, Low numeracy. For each skill domain, the relative risk is calculated as the share of low skilled in the socio-demographic group over the share of low skilled among adults aged 25-64 in the country. Values of the index below 100 indicate a lower than average risk; values above 100 indicate higher than average risk.
Source: Eurostat, a [2016]; Eurostat, b [2015]; OECD, a; b.

([6]) Absolute risk of low skills calculated as:
(low skilled population) ij/(total population)ij; where subscript i refers to subgroup and j to country.

([7]) Relative risk of low skills calculated as:
{[(low-skilled population)ij/(total population)ij]/[(low-skilled population)i/(total population)i]}x100; where subscript i refers to subgroup and j to country.

([8]) Relative performance index calculated as: [(relative risk of low skills) ij/ (relative risk of low skills) iEU28+] x 100; where subscript i refers to subgroup, j to country and EU28+ to European average.

Unemployed adults

Among the unemployed, those aged 55-64 and 35-54 report a higher risk in all the skills dimensions considered, and particularly in cognitive (literacy and numeracy) and in digital skills, where they also perform worse than the EU 28+ average (Tab. 1).

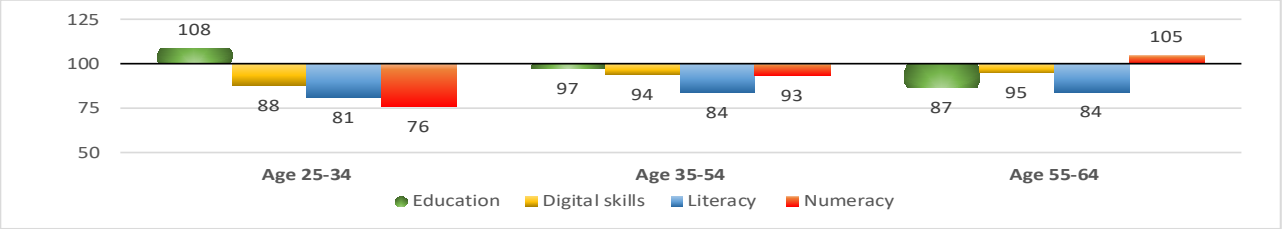
Table 1- Unemployed adults: absolute risk of being low skilled by age and type of skill, Poland

Age	Education	Digital skills	Literacy	Numeracy
55-64	14,0	96,1	27,0	44,1
35-54	14,4	81,4	27,8	36,3
25-34	11,8	49,0	18,6	24,2
Total pop 25-64: Country average	8,7	61,2	20,4	24,7
Total pop 25-64: European average	23,2	43,0	20,8	24,3

Note: European weighted average: Education (EU28+); Digital skills (EU28, NO); Literacy and Numeracy (AT, BE, CY, CZ, DE, DK, EE, EL, ES, FI, FR, IE, IT, LT, NL, NO, PL, SE, SI, SK, UK).

Unlike the absolute risk, the **relative performance index** of low skills (Fig. 4) highlights country critical areas (those above 100) for socio-demographic groups as compared to the performance they register on average across the EU 28+. In Poland, for instance, unemployed young adults (25-34) have a higher relative risk of having low education as compared to the relative risk observed on average by the same group in the EU 28+, while unemployed aged 55-64 present a higher relative risk of having low numeracy.

Figure 4 – Unemployed adults: relative performance index of low skills by age and type of skill, Poland



Note: **Relative risk of low skills within the country over the relative risk of low skills observed on average in EU28+ for the same socio-demographic group.** Values of the index below/above 100 indicate that the relative risk of low skills for the specific socio-demographic group in the country is lower/higher as compared to the relative risk for the specific socio- demographic group in the EU 28+ average.

Inactive adults

Among inactive adults, those aged 55-64 and 35-54 are most at risk of low skills in all the skill dimensions considered. Both groups perform poorly especially in digital skills and numeracy, when compared to the risks registered on average in the country and at EU 28+ level (Tab. 2).

Table 2- Inactive adults: absolute risk of being low skilled by age and type of skill, Poland

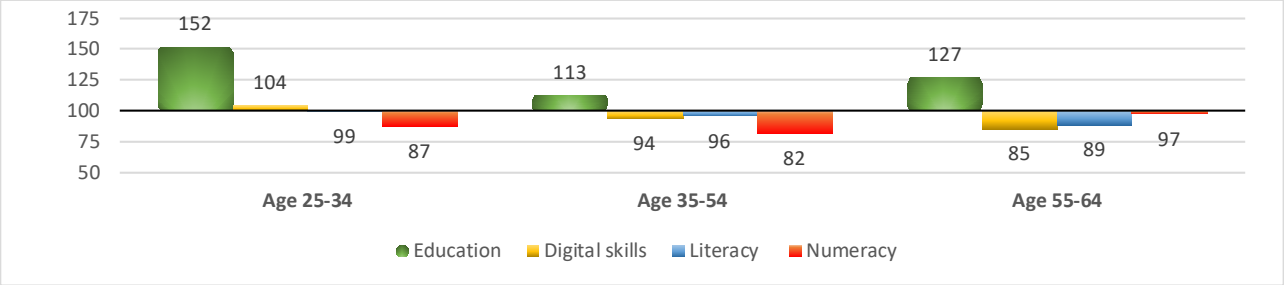
Age	Education	Digital skills	Literacy	Numeracy
55-64	19,7	92,0	30,9	42,2
35-54	18,2	82,0	30,3	37,0
25-34	17,2	50,2	22,7	29,0
Total pop 25-64: Country average	8,7	61,2	20,4	24,7
Total pop 25-64: European average	23,2	43,0	20,8	24,3

Note: European weighted average: Education (EU28+); Digital skills (EU28, NO); Literacy and Numeracy (AT, BE, CY, CZ, DE, DK, EE, EL, ES, FI, FR, IE, IT, LT, NL, NO, PL, SE, SI, SK, UK).

Unlike the absolute risk, the relative performance index of low skills (Fig. 5) highpoints country critical areas (those above 100) for socio-demographic groups as compared to the performance

they register on average across the EU 28+. In Poland, for instance, inactive adults of all age groups have a higher relative risk of having low education as compared to the relative risk observed on average by the same groups in the EU 28+.

Figure 5 – Inactive adults: relative performance index of low skills by age and type of skill, Poland



Note: **Relative risk of low skills within the country over the relative risk of low skills observed on average in EU28+ for the same socio-demographic group.** Values of the index below/above 100 indicate that the relative risk of low skills for the specific socio-demographic group in the country is lower/higher as compared to the relative risk for the specific socio- demographic group in the EU 28+ average.

Employed adults

Employed adults aged 25-34 and 35-54 show a lowers risk of being low skilled than the average risk registered in the country (Tab. 3)**. On the contrary adults aged 55-64** present a higher risk of having low digital skills than the ones registered on average in the country and at EU 28+ level. The risk of low skills is instead relatively low among young employed adults aged 25-34.

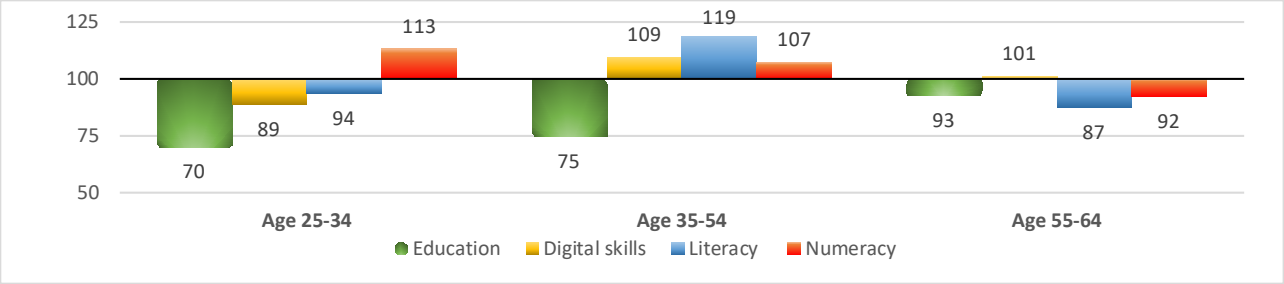
Table 3- Employed adults: absolute risk of being low skilled by age and type of skill, Poland

Age	Education	Digital skills	Literacy	Numeracy
55-64	8,0	70,1	20,0	24,4
35-54	4,9	56,3	19,5	21,3
25-34	3,3	28,5	11,1	16,5
Total pop 25-64: Country average	8,7	61,2	20,4	24,7
Total pop 25-64: European average	23,2	43,0	20,8	24,3

Note: European weighted average: Education (EU28+); Digital skills (EU28, NO); Literacy and Numeracy (AT, BE, CY, CZ, DE, DK, EE, EL, ES, FI, FR, IE, IT, LT, NL, NO, PL, SE, SI, SK, UK).

The **relative performance index** of low skills (Fig. 6) highlights country critical areas (those above 100) for socio-demographic groups as compared to the performance they register on average across the EU 28+. In Poland, for instance, employed adults aged 35-54 have a higher relative risk of having low digital skills, numeracy and literacy as compared to the relative risk observed on average by the same group in the EU 28+, while young employed adults aged 25-34 have a higher relative risk of having low numeracy as compared to the relative risk observed on average by the same group in the EU 28+.

Figure 6 – Employed adults: relative performance index of low skills by age and type of skill, Poland



Note: **Relative risk of low skills within the country over the relative risk of low skills observed on average in EU28+ for the same socio-demographic group.** Values of the index below/above 100 indicate that the relative risk of low skills for the specific socio-demographic group in the country is lower/higher as compared to the relative risk for the specific socio- demographic group in the EU 28+ average.

Box 4 – Risk of low skills among adult women

In Poland, women account for approximately 50% of the adult population with low education and low numeracy, for 54% of the adult population with low digital skills, and for 44% of the adult population with low literacy.
Among adult women, the absolute risk of low skills is higher for digital skills (62%) as compared to the other skill dimension considered. However, when compared to the average risk (relative risk of low skills) women show an average risk of low having low digital skills and a lower risk of low skills in all the other skill dimensions considered.

The breakdown by employment status shows that the relative risk of low skills is higher among women out of the labour force (inactive) and among unemployed women in all the skill dimensions considered. Low skilled inactive adult women represent between 21% and 33% of the low skilled adult population, depending on the skill dimension considered.

Females aged 25-64	**Low education**		**Low digital skills**		**Low literacy**		**Low numeracy**	
Absolute risk of low skills among fem 25-64 (%)	8.5		61.6		17.6		25.3	
Relative risk of low skills: total fem 25-64	98	(49.2)	101	(53.6)	86	(43.5)	98	(50)
Relative risk: unemployed fem 25-64	117	(2.1)	112	(4.4)	102	(2.9)	123	(3.5)
Relative risk: inactive fem 25-64	204	(32.6)	135	(23)	119	(20.5)	133	(22.9)
Relative risk: employed fem 25-64	44	(14.4)	81	(26)	65	(20)	77	(23.5)

(Incidence of low skilled females 25-64 on total low skilled population in %)

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