



Setting Europe on course for a human digital transition

New evidence from Cedefop's ESJS2

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Powering the European digital transition
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Strengthening skills intelligence for Europe



2nd European skills and jobs survey

Digitalisation and skill mismatch

Key ESJS2 insights for EU VET policy

- What do EU+ workers do at work?
- What digital skills are needed in EU+ jobs?
- Pandemic impact on new digital technology take-up?
- Is digitalisation breeding skill gaps and mismatches?
- Do EU+ workers engage in enough CVET?

The digital transition requires **a skills revolution**



Covid 19 pandemic and the digital transformation

Compared to pre-pandemic, more use of...

46%
Digital communication tools

39%
Digital technologies for some work tasks

36%
Online job-related learning



Skills digital transformation and skill mismatches

13%
Basic digital skill gap

35%
Changing tasks/skill needs

63%
Upskilling potential

40%
Mismatched skills

Skill underutilisation is marked in low digital jobs

HIGH MISMATCH

Hungary
Greece
Latvia
Lithuania
Ireland
Cyprus
Spain
Italy

HIGH VERTICAL/ LOW HORIZONTAL

France
Malta
Portugal
Sweden
Norway
Estonia
Iceland

LOW VERTICAL/ HIGH HORIZONTAL

Czechia
Slovakia
Poland
Croatia
Bulgaria
Belgium
Austria

LOW MISMATCH

Slovenia
Romania
Germany
Netherlands
Denmark
Luxembourg
Finland

28%

Overqualified

12%

Underqualified

35%


Field mismatch

55%

Overskilled


Learning potential in digital skills is vast despite modest digital skill demand

Cedefop Digital Skills Intensity (DTI) index, EU+ countries


Low

Internet browsing, email, social media	20%
Write or edit text	28%
Use spreadsheets	38%



Medium

Use specialised software	50%
Prepare presentations	60%
Advanced spreadsheets	74%



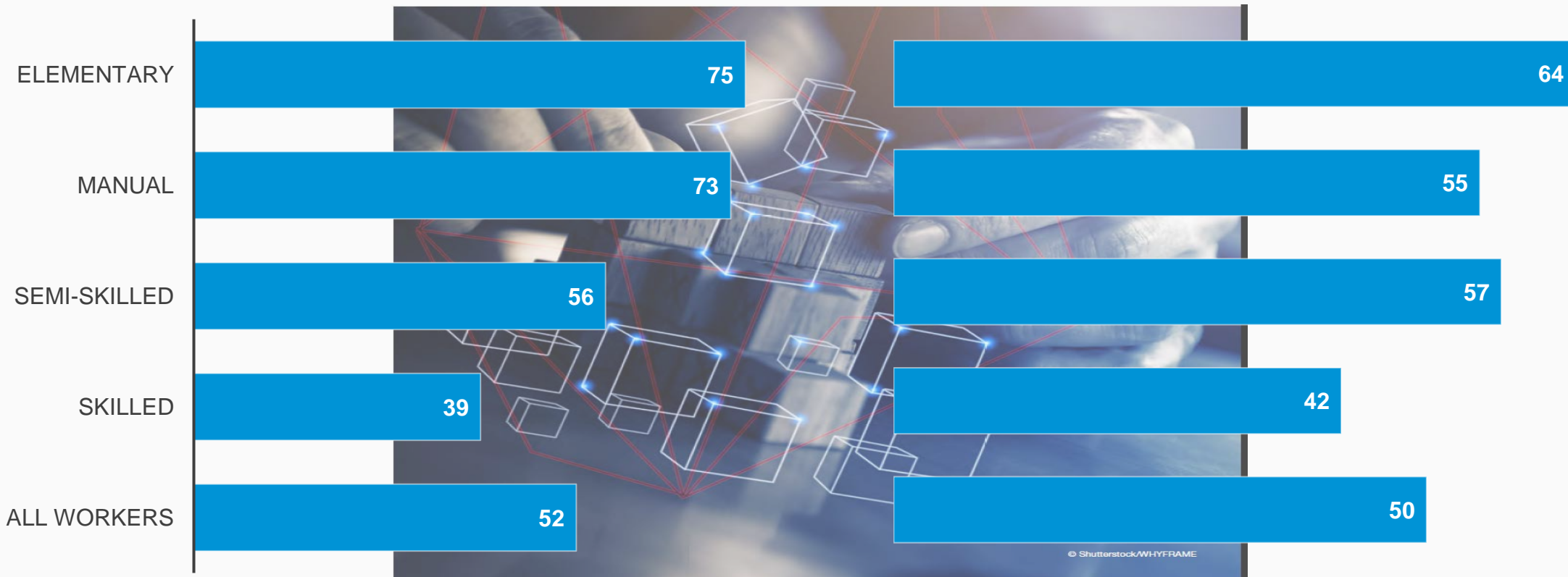
High

Manage or merge databases	81%
IT systems, hard/software	87%
Programme or code	92%

EU skill mismatches sustained by poor job design

Low skill needs

Low job complexity



Despite extensive skill gaps, those who need **digital skills training** the most don't get it

EU+ population groups in need of digital skills training ...

Females

Low educated

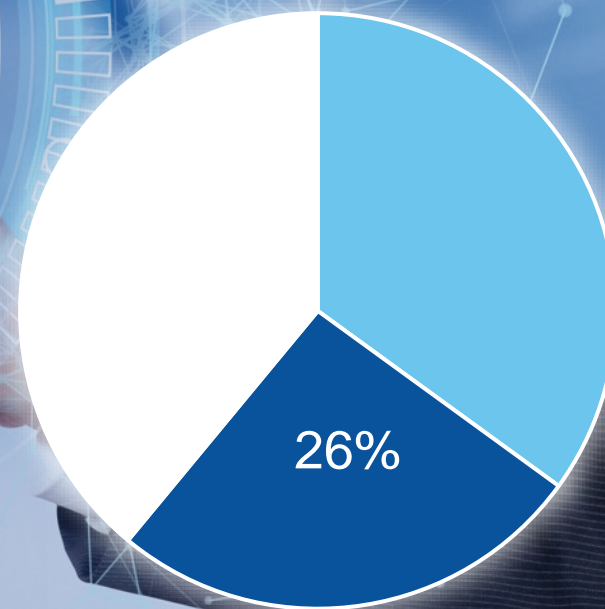
Lower skilled jobs

Routine, manual work

Temporary contracts

SMEs

Rural areas



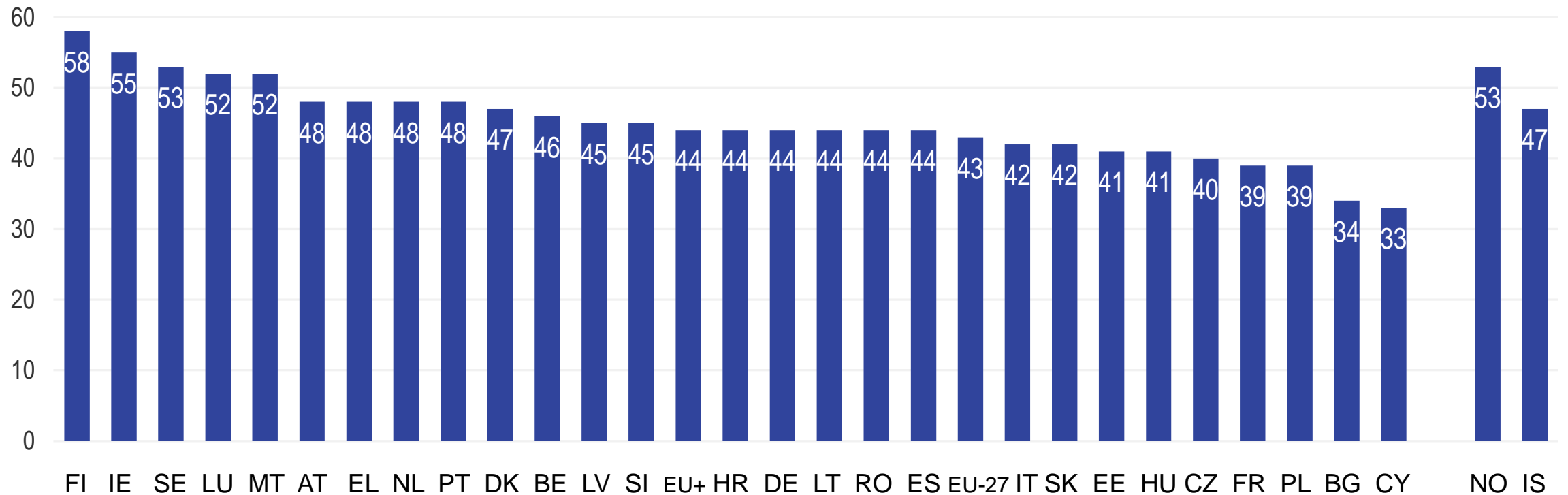
% EU+ workers who did digital skills training

Digital upskilling in EU jobs is unequal

35% of EU+ adult employees had to learn to use new digital technologies to do their main job in 2020-21

ESJS2: In the last 12 months, did any of the following changes take place in your workplace?

New digital technologies i.e. new computer systems/computer devices/computer programmes (Total, %)

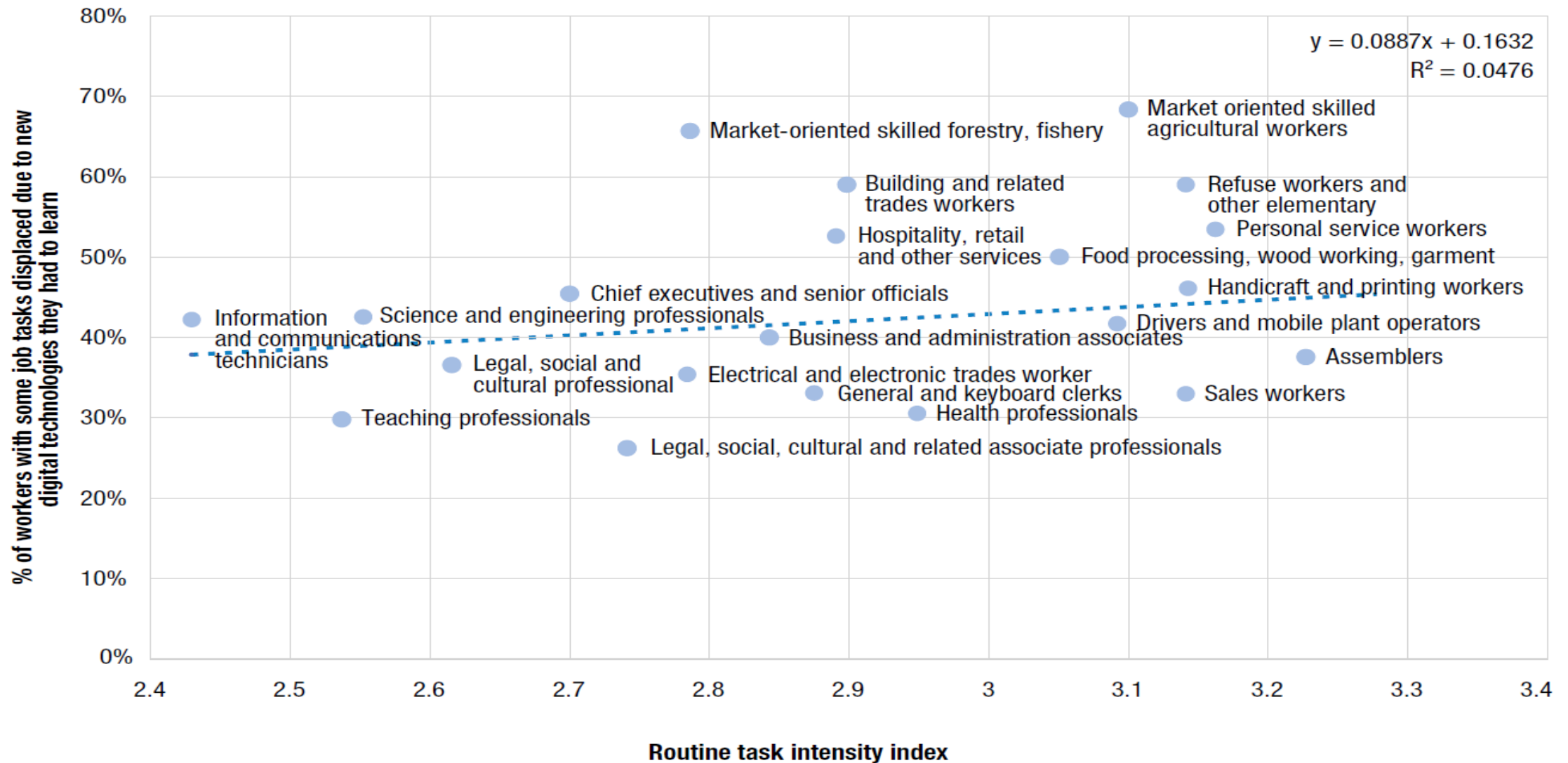


Policy challenges of the digital transition

- (Some forms of) digital technology increase work routinisation & job insecurity
- Non users oblivious to automation risks & low technology acceptance
- Skill underutilisation linked to less digitalisation at work



Routine jobs susceptible to task automation



COVID-19
shocks and resilience



MODEST
(digital) skills demand



UNTAPPED
learning potential



INDUSTRY
5.0



TACKLE DIGITAL DIVIDE IN EU

- Promote digital readiness in low-skill jobs and among low-skilled adults
- Facilitate remote work and learning for all
- Showcase good pandemic business practices

JOB RE-DESIGN

- Human-machine complementarity
- Work innovation
- Digital infrastructure investment
- Tackle algorithmic (mis)management
- Skills ecosystem stakeholder dialogue

TARGETED CVET

- Prioritisation and customisation by different skill needs/gaps
- (Informal) digital skills recognition
- Overcome information gaps
- Systematic approach to CVET design and delivery

PREPARING FOR FUTURES OF WORK

- Challenge technological determinism
- Map trends and future developments
- Place sustainability and worker well-being at core of human machine age

ESJS2 online tool



29
countries
EU-27 plus
Norway and
Iceland

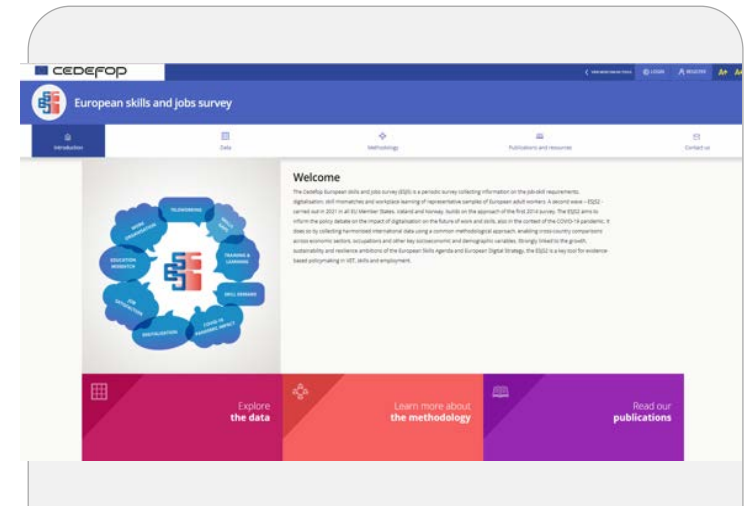
46 213
EU+
adult workers

Representative
data
of EU+
labour markets

More
than
80
indicators

COMPARATIVE EU+ INFORMATION ON

- Skill demands
- Work organisation
- Remote work
- Digitalisation and automation
- Skill gaps and mismatch
- Training and learning for work
- Covid-19 pandemic impact



<https://www.cedefop.europa.eu/en/tools/european-skills-jobs-survey>

ESJS2 online tool

DATA

Covid-19 pandemic impact

Job loss/underemployment

- ② Impact of COVID-19 on work

Remote work

- ② Work away from employer premises

Social distancing

- ② Less time working physically with other people

Digital communication

- ② Use of digital communication tools

Digital technologies

- ② Use of digital technologies for job tasks

Digital learning

- ② Online learning for job

Digitalisation / technological change

Digital upskilling

- ② New computer software or programs
- ② New digital machines at work
- ② New digital technologies at work (software and machines)

Skill mismatch

Education requirements

- ② Qualifications needed for job

Vertical qualification mismatch

- ② Mismatch of qualification with job

Horizontal qualification mismatch

- ② Mismatch of field of study with job

Skill underutilisation

- ② Underuse of skills at job

Remote work/teleworking

Remote work (incidence)

- ② Remote work

Remote work (frequency)

- ② Frequency of work remote

Remote work (use of computers)

- ② Teleworking

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ESJS2 online tool

Questions

- + Covid-19 pandemic impact
- + Digital skills demand
- + Skill demand
- Skill mismatch
- + Education requirements
- Vertical qualification mismatch
- Mismatch of qualification with job
- + Horizontal qualification mismatch
- + Skill underutilisation
- + Work organization
- + Remote work / teleworking
- + Digitalisation / technological change
- + Training and learning
- + Skill gaps
- + Job satisfaction

Mismatch of qualification with job

Full question title: Education completed compared to education required by job (ISCED 8 levels)

BREAKDOWN BY: Country Occupation Sector Gender Age Education

View data for: EU27 | View data for answer: Higher level of education than job required

Breakdown by country

Question: Mismatch of qualification with job | Answer: Higher level of education than job required | Breakdown: By country

Country	Rate (%)
LT	38%
ES	37%
CY	35%
HU	34%
IE	34%
LV	33%
SE	32%
EE	32%
FI	32%
LU	31%
LT	31%
IT	30%
DE	28%
DK	28%
PL	28%
SK	28%
SI	27%
AT	27%
FR	26%
BE	26%
PT	26%
RO	25%
GR	25%
HR	25%
MT	25%
SK	25%
PL	25%
CZ	25%
SI	24%
BE	23%
FR	23%
NL	16%

Questions

- + Covid-19 pandemic impact
- + Digital skills demand
- + Skill demand
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- Vertical qualification mismatch
- Mismatch of qualification with job
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View data for answer: Higher level of education than job required

Breakdown by occupations

Question: Mismatch of qualification with job | Answer: Higher level of education than job required | Scope: EU27 | Breakdown: By occupation

Occupation	Rate (%)
Managers	22.0%
Professionals	21.0%
Trades workers	25.0%
Operators and assemblers	32.0%
Service and sales workers	35.0%
Clerks	29.0%
Elementary workers	39.0%
Associate professionals	26.0%
Farm and related workers	29.0%

CEDEFOP

Access by country, gender, age, education, sector and occupation

Thank you



For more information

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