The Future of Work: International Trends

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OECD
The risk of automation may be exaggerated (though many jobs will change)

Jobs at risk of automation and significant change

- High risk of automation
- Significant risk of change
Most countries have seen increases in employment rates

Employment-to-population ratios, age 15-64

<table>
<thead>
<tr>
<th>Country</th>
<th>1996</th>
<th>2016 or latest year available</th>
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<tbody>
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<td>Italy</td>
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<td>Mexico</td>
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<td>Germany</td>
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</table>
The platform economy remains small (and is growth stagnating?)

New platform vacancies
May 2016 to February 2018
28-day moving average, May 2016=100

Source: Kässi, O. & Lehdonvirta, V. (2016), Online Labor Index.
Jobs created are not the same as those disappearing: labour markets are polarising

Percentage point change in share of total employment (OECD average), 1995 to 2015

- Low skill
- Middle skill
- High skill

France  United Kingdom  Germany  United States  Canada  Japan
Non-standard employment has risen in some countries

Temporary employment as a share of total employment
Inequality has risen in most advanced countries

Gini coefficient of the distribution of household disposable income
Does policy need a paradigm shift?

Skills. Lifelong learning: from rhetoric to reality.
Many workers do not have the right skills for the new jobs

Problem-solving skills in Technology-Rich Environments
Percentage of the working-age population (aged 15/16-64)

- Lacks basic skills to fulfill simple tasks (Level 1 or below)
- Failed ICT core or had no computer experience
Own-account workers benefit least from training

Percentage of adults who participated in adult education and training during year prior to the survey, by firm size

- More than 50 people
- 1 to 50 people
- Own-account workers
Some policy options

- Retention and advancement schemes
  - *E.g. Germany*

- Individual learning accounts
  - *E.g. Compte Personnel de Formation in France*

- Lifelong guidance
  - *E.g. career guidance voucher in Flanders (Belgium)*

- Training targeted at new forms of work
  - *E.g. Bridge to Employment in San Francisco*
Does policy need a paradigm shift?

Skills. Lifelong learning: from rhetoric to reality.

Regulation. Balancing flexibility with security.
“Few problems in the law have given a greater variety of application and conflict than the cases arising in the borderland between what is clearly an employer-employee relationship and what is clearly one of independent entrepreneurial dealing”

- US Supreme Court (1944)
Some policy options

- Providing better guidance on how to classify workers
  - E.g. US DOL guidance related to independent contractors and joint employment
- Strengthen labour inspectorates
  - E.g. Portugal’s labour market reforms
- Making it easier for workers to litigate
  - E.g. reversing burden of proof (proposal in Taylor Review)
- Reducing incentives to take up new forms of work
  - E.g. Integrating self-employed into social protection system (Austria)
- Introduce a third category of worker
  - E.g. TRADE in Spain
- Improve working conditions for non-standard workers
  - E.g. minimum number of hours and/or pay for reporting time + requiring advance notice of work schedules
Does policy need a paradigm shift?

**Skills.** Lifelong learning: from rhetoric to reality.

**Regulation.** Balancing flexibility with security.

**Social protection.** Repairing or replacing the safety net?
Many non-standard workers slip through the (social safety) net

Statutory access to social protection for the self-employed

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<thead>
<tr>
<th></th>
<th>Old age</th>
<th>Invalidity</th>
<th>Parental benefits</th>
<th>Sickness benefits</th>
<th>Accidents at work</th>
<th>Unempl. benefits</th>
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Source: Spasova et al. (2017).
Many non-standard workers slip through the (social safety) net

Statutory access is not the same as effective access

55% The share of self-employed (15-64) in the EU at risk of not being entitled to unemployment benefits

38% The share of self-employed (15-64) in the EU at risk of not being entitled to sickness benefits

46% The share of self-employed women (15-49) in the EU at risk of not being entitled to maternity benefits

Source: EC (2016): “Non-standard employment and access to social security benefits”
Some policy options

- Adjust rules and thresholds to cover more workers (and allow for interrupted contribution records)
  - E.g. Unemployment benefit in Denmark
- Extend existing schemes to non-standard workers
  - E.g. Benefit for carers of dependent persons in Norway
- Design specific schemes for non-standard workers
  - E.g. Künstlersozialversicherung for artists in Germany
- Make social protection more portable
  - E.g. Latvia’s individualised social insurance system
- Rely more on non-contributory schemes
  - E.g. Basic income pilot in Finland
Does policy need a paradigm shift?

**Skills.** Lifelong learning: from rhetoric to reality.

**Regulation.** Balancing flexibility with security.

**Social protection.** Repairing or replacing the safety net?

**Social dialogue.** Rebuilding or reinventing?
Traditional collective bargaining institutions are under pressure

Trade union density

% 60

Canada
United Kingdom
Germany
United States
France

0 10 20 30 40 50 60
Some policy options

• Encourage social partners to come up with their own solutions
  – *E.g. Independent Drivers Guild (New York City)*
  – *E.g. IG Metall in Germany*

• Allow for alternative ways of strengthening workers’ voice
  – *E.g. Turkopticon; Dynamo; coworker.org*

• Ensure the right to freedom of association and extend the right to collective bargaining where appropriate
  – *E.g. dependent contractor category in Canada*
The 4th Industrial Revolution is well underway

Mobile broadband penetration rates

Internet usage trends

Annual shipments of multipurpose industrial robots

Share in AI patents (2010-2015)

Source: International Federation of Robotics
But so are other mega-trends…

The world has become more integrated

In some countries, populations are ageing rapidly

Share of business sector jobs sustained by consumers in foreign markets

Change in working age population 2015=100

USA (+10%)
Canada (+6%)
France (+1%)
Germany (-23%)
Italy (-23%)
Japan (-28%)
The risk of automation is highest for low-skilled low-paid workers

<table>
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<tr>
<th>Highest risk in <strong>routine jobs</strong> with low skill and education requirement BUT low risk applies to a broad range from professionals to social workers</th>
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<tr>
<td>Automation mostly affects <strong>manufacturing industry and agriculture</strong> BUT some service sectors are highly automatable too.</td>
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<tr>
<td>The risk of automation falls monotonically with <strong>hourly wages</strong></td>
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<td>The risk of automation also falls with <strong>educational attainment</strong></td>
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<td>No evidence of <strong>polarisation or rising risk at the high end</strong>: automation risk declines with skills, education and hourly wages</td>
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<td><strong>Young people</strong> are the most at risk of automation, followed by older workers, with disappearing student jobs and entry positions.</td>
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The adoption of new technology is not inevitable

In which areas is the application of robots most/least acceptable?

Source: Eurobarometer.
The platform economy: A (very) simple typology

Work on-demand via platforms
E.g. ride-hailing, delivery, accommodation

Online gig work (“crowdsourcing”)
E.g. click work, freelancing
There is a strong international dimension to the online gig economy

Countries buying online labour are not the same as countries supplying online labour

Source: Oxford Internet Institute, Online Labor Index.
The slowdown in wage growth was widely spread

Percentage-point difference in the average annual growth rate of nominal earnings of full-time wage and salary workers between 2000-07 and 2007-16
The labour share has fallen in many countries

Percentage point changes in the labour share over the 1995-2013 period, excluding the primary, housing and non-market industries
Abstracting away from population ageing, tenure is declining in most countries.

Change in average tenure, 2000-2015

Change in Tenure (years)

-1 -0.5 0 0.5 1 1.5 2

AUS CAN USA GBR FRA DEU KOR ITA

Total
Abstracting away from population ageing, tenure is declining in most countries.

Change in average tenure, 2000-2015

Change in Tenure (years)

Effect of population ageing

Total
Abstracting away from population ageing, tenure is declining in most countries

Change in average tenure, 2000-2015

Effect of decreasing job-stability within age groups  Effect of population ageing  Total

Change in Tenure (years)

AUS  CAN  USA  GBR  FRA  DEU  KOR  ITA
“One machine can do the work of fifty ordinary men.
No machine can do the work of one extraordinary man.”

Elbert Hubbard
The least skilled benefit less from training

Percentage of adults who participated in adult education and training during year prior to the survey, by level of literacy proficiency

- Below level 1
- Level 4/5

Turkey
OECD average
Spain
Canada
United States
Finland
Chile
Non-standard employment is not new

OECD Average

<table>
<thead>
<tr>
<th>Type of Employment</th>
<th>Percentage</th>
<th>OECD Average</th>
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</thead>
<tbody>
<tr>
<td>Self-employment (as % of total employment)</td>
<td>15.6%</td>
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<tr>
<td>Part-time employment (as % of total employment)</td>
<td>16.1%</td>
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<tr>
<td>Temporary employment (as % of all employees)</td>
<td>13.5%</td>
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</table>
Tax and benefit systems do a better job at reducing inequality in some countries than in others.

Gini coefficient before and after taxes and transfers

- Chile
- Mexico
- Canada
- United States
- Brazil
- Spain

Before taxes and transfers vs. After taxes and transfers.
Funding better social protection may require additional resource mobilisation

Total tax revenue as a % of GDP
These trends bring challenges for labour relations

Trade union density
Percentage of employees

2016 or latest year (↑)
1985 or closest year

United States, Mexico, Brazil, Canada, Argentina
These trends bring challenges for labour relations (cntd)

Collective bargaining coverage
Percentage of employees with the right to bargain

United States  | Mexico  | Canada  | Argentina | Brazil

| 2016 or latest year (↗) | 1985 or closest year |

- United States: [Value]
- Mexico: [Value]
- Canada: [Value]
- Argentina: [Value]
- Brazil: [Value]
The OECD Future of Work Initiative

Employment Outlook 2019

Policy workshops

Policy briefs

Analytical work
The OECD Future of Work Initiative

www.oecd.org/employment/future-of-work/

Future of work

What's new

- New OECD collaborative PhD opportunity at Royal Holloway, University of London (Dec 2017)
- Upcoming Seminar - Labour Relations in the Future World of Work (11 Dec)
- "Unprecedented Unpredictability": Remarks by Angel Gurría (Nov 2017)
- Announcing the 2017-18 Future of Work Fellows (Nov 2017)