4IR, the Future of Work, and the Role of Regional Cooperation

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Outline

• Megadrivers of the future of work
  • Technology, climate change, globalisation, ageing

• Impacts of COVID-19 on work
  • Economy, workers, vulnerable populations

• Big data for the 4IR labour market
  • Capabilities and challenges

• Policy discussion: Role for Regional Cooperation
Megadrivers of the future of work
Megadriver of the future of work

Transistor count per integrated circuit

CO2 emissions in APEC

Adjusted labour share in APEC (% of GDP)

Pop’n change by age group in APEC (2010 = 100)
COVID-19: Impact on Labour Market

The COVID-19 pandemic has had a significant impact on enterprises and workers, affecting what work is available and how it is conducted.

- **Total Employment**
  Employment in the services sector decreased by 1.5%. Decline of 5.7% for industry driven in large part by the impact on manufacturing. The agriculture sector exhibited a slower decline driven by transitions from services and industry due to layoffs.

- **Occupation and Skill levels**
  ‘Clerical support workers’, were most impacted by COVID-19 in terms of the decrease in employment growth which declined by 7.1%. Includes customer service clerks, receptionists and bank tellers.

- **Unemployment and Inactivity**
  Unemployment increased from 4.0% to 5.1% corresponding to 15 million more unemployed. Reduce working hours estimate decreased equival. of 99 million FTE jobs.

- **Informality and Status in Employment**
  Around 510 million people of the total employed population in 2019 are estimated to be either own-account workers or contributing to family work have been disproportionately impacted by the COVID-19.

Source: Detecon APAC analysis
COVID-19: Impact on Labour Market

Vulnerable groups and women have been disproportionately impacted in the labour market by the COVID-19 pandemic.

- **Asian-Australians** experienced twice the drop-in hours worked compared to the rest of the Australian population.
- **Canada**, Indigenous persons (e.g., First Nations, Inuit and Métis) were more likely to be adversely affected by the pandemic.
- **New Zealand**, COVID-19 highlighted how the Maori population are more likely to have job instability and lower wages; affected disproportionately because of employment in sectors such as tourism, construction and manufacturing.

- **Women** accounted for more than half of the change in employment (54%) in 2020 across the APEC economies, despite accounting for around 44% of all employment.
- COVID-19 pandemic may have seen a reversal of much of the gender equality achieved over recent decades, including for female participation in the labour market.
- A study found that school closures were more likely to result in women working less hours than men.
4IR problems need 4IR data

<table>
<thead>
<tr>
<th>Need real-time, granular data</th>
<th>Generate data</th>
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<tbody>
<tr>
<td>• Policymaking</td>
<td>• Social media</td>
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<td>• Labour, education, digital economy, crisis response</td>
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<td>• Closing skills gaps</td>
<td>• LinkedIn, FB, Twitter</td>
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<td>• ALMPs</td>
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<td>• Social protection</td>
<td>• BG, Glassdoor</td>
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<td>• Research and monitoring</td>
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<td>• Grab, Uber, Deliveroo</td>
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<td>• Online learning platforms</td>
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<td>• Coursera, EdX, Udacity</td>
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### Traditional labour market data vs big data

<table>
<thead>
<tr>
<th>Type of data</th>
<th>Years of data</th>
<th>Ease of time series analyses</th>
<th>Data representativeness</th>
<th>Compatibility across geographies</th>
<th>Real-time data access</th>
<th>Regular taxonomy updates</th>
<th>Data granularity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional labor market data</td>
<td>~50</td>
<td>High</td>
<td>Apply statistical sampling methods and weights</td>
<td>✓</td>
<td>×</td>
<td>×</td>
<td>Low</td>
</tr>
<tr>
<td>Big data</td>
<td>~10</td>
<td>Medium</td>
<td>Captures digitized labor market; can benchmark against public data to gain insight</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>High</td>
</tr>
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Big data is fast

Figure 3.5 Australia percent change in job postings over time

Change in job postings compared to January 2020

Source: EBG analysis.
Big data is granular
Big data is promising, but challenging

• High up-front costs

• Require specialised technical skills
  • Clean, deduplicate, prepare → analyse data

• Challenging to merge with traditional/existing data and taxonomies
  • E.g., Census, HH surveys, administrative data, disbursement data

• Need data visualisation and communication skills
Policy discussion

MEGADRIVERS OF CHANGE, COVID-19

"LET'S DO BUSINESS AS USUAL"
Policy discussion

• Megadrivers of change + COVID-19
  • Highly dynamic economies
  • Ever-increasing productivity and efficiency
  • Increased job and income uncertainty
  • Increased dissonance between institutions and reality

• More technology is needed, not less
• Promote economic dynamism, but address uncertainty
• Utilise big data: start small then scale up
  • Enable data partnerships with academia, private sector, los
  • Importance of regional cooperation
Policy discussion: Role for Regional Cooperation

• Capacity building and information sharing
  • Develop effective social protection systems
  • Develop skills; ensure access to digital infrastructure
  • Design efficient labour market regulations and LMIS

• Address cross-border FOW issues
  • Dispute resolution mechanisms
  • Portability of social protection (contributions and benefits)
  • Recognition of skills and credentials

• Promote a tripartite approach
  • Develop an inclusive approach to policy discussions
Find out more


Big Data for the Labour Market: Sources, Uses and Opportunities