Senate Standing Committee on Education and Employment

QUESTIONS ON NOTICE
Additional Estimates 2016 - 2017

Outcome 2 - Workplace Relations and Economic Strategy

Department of Employment Question No. EMSQ17-003979

Senator Marshall provided in writing.

Question

Automation of jobs and the gig economy

What is the department's assessment of the impact automation and new technology will have on the Australian workforce and labour market in coming years?
How many jobs does the department believe will be made obsolete by automation in the next 15 years?
Has the department actually done modelling or research to find out how many jobs may be lost to automation?
What advice has the department provided to the government about how to manage the impact of automation and technology removing Australian jobs?
What funding in the department is dedicated to finding out what kinds of jobs will disappear due to automation and what jobs may replace them?
What is the department's estimate about the number of sharing economy jobs or portion of the workforce engaging in those jobs in 10-15 years?
The Tomorrow's Digitally Enabled Workforce report indicated 44 per cent of jobs are at high risk of computerisation and automation. How many jobs does that translate to in Australia?
Does the Department have a plan to counteract that, or help adjust to that? What are these plans?
Does the Department agree with the report's idea that the "ideal job within a large organisation" may not be a reality for many job seekers in future?
How well placed does the Department think the Australian workforce is to adopt "entrepreneurial skills and aptitudes" needed to compete in that environment?
Has the Department made any recommendations or requests to government about these changes?
The report said the Department of Employment has forecasts for existing jobs to 2019. Are those forecasts available?
Has the Department begun forecasting for new types of jobs?
Has the Department begun forecasting for jobs beyond 2019?
Does the Department have plans to activate the workforce in order to cope with technological change? Especially in older cohorts?

Answer

The Department of Employment considers that any estimates regarding the future of work and job automation should be approached with caution as they are only estimates. All estimates are strongly reliant on the assumptions made in each publication to develop that particular analysis.

The department does not produce modeling on the impact of automation and new technology.

Modelling done for the Tomorrow's Digitally Enabled Workforce report was based on the assumption that automation will directly substitute for labour and result in job loss. In practice, employers are unlikely to automatically substitute technology for labour unless there is a direct financial benefit for their businesses. The study also does not attempt to quantify jobs that may be created in the future. The estimate does not make any allowance for offsets by new jobs. The report itself acknowledges this:

"While such estimates of looming job losses certainly attract attention, they are only a part of the jobs and technology story. Technology complements as well as substitutes for human labour, and commentators are prone to overstate the potential substitution and understate the potential complementarity."

One example cited in the report is from the banking sector. The numbers of bank tellers in Australia declined by 50,000 between 1995 and 2005 with the introduction of automated teller machines. However, by making the banking industry more productive, technology created opportunities to sell a greater range of services. During the same time period the number of financial brokers, dealers and advisers rose by a similar amount.

In a similar example, the number of workers in traditional printing trades declined by 17,000 between 1994 and 2014. At the same time, the number of graphic designers rose by 35,000. Automation in the printing industry caused a shift away from repetitive, mechanical work and towards more skilled and creative work.

The department provided a grant of $239,500 GST exclusive to the CSIRO to support the Tomorrow's Digitally Enabled Workforce research report. Automation was one of several areas of interest in the research.

The department incorporates its knowledge of labour market issues and trends into its policy advice to government across existing responsibilities. For example, in developing the program Employability Skills Training for young people, the department recommended including digital literacy as a core skill for work in response to the increased role of computerisation across the workforce.

The department produces annual employment projections by industry, occupation, skill level and region for the following five years. The latest projections are for the five years to November 2020 and are available on the Labour Market Information Portal (LMIP) at www.lmip.gov.au/default.aspx?LMIP/EmploymentProjections.

Only the most recent employment projections are available on the LMIP. However, previous projections (including those for the five years to November 2019) are available on request.

Projections for the five years to May 2022 are scheduled to be released in August this year.

The department's projections of employment by occupation are based on the ABS Australian and New Zealand Standard Classification of Occupations (ANZSCO), which were released in 2006. New occupations that are not captured by this classification are not separately identified by the department's projections.