Technology, Jobs and the Future of Work in Australia

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Introduction

Economies and societies have evolved for generations through innovation and technological change. Though there are some clear ways in which this current wave of automated technologies marks a change from those that preceded it. The explosion of new data gathering devices with big data technologies allow huge volumes of data to be collected, stored and analysed. New innovations in computing and automation use large databases of past decisions to inform real-time judgements, performing non-routine human tasks previously not amenable to machine-aided production.

But despite the capacity of technological investment to revolutionise economies and how we produce and work, real-world data suggests that this has not been the outcome in Australia—at least in an aggregate sense. Similar projections of increased demand for hard technical skills work does not reflect the evolution of employment in Australia where public services-dominated industries like healthcare and education have increased their share. In a country highly vulnerable to extreme weather events (as seen with the recent bushfire crisis), digital technologies are unlikely to be the most important driver of change in the world of work. Work is being increasingly reorganised on a part-time, insecure basis. And since technology is neither autonomous, nor neutral, and instead reflects the concerns and priorities of those actors sponsoring their investment, employer-implemented surveillance technologies and exploitative gig platforms are becoming troubling markers of the modern digital workforce.

This report provides a summary of these major trends in technology and work in Australia. It has been compiled for the 4th JILPY Tokyo Comparative Labour Policy Seminar 2020. The first section of the report documents the major trends impacting on the Australian labour market, including the pace of technology implementation in production, and the increasing prevalence of insecure work. The second section assesses Australia's system of labour regulations and protections in light of ongoing changes to the organisation of work and asks, are they fit for purpose? Finally, the report concludes with recommendations for revitalising the framework of labour regulations and the collective bargaining system in Australia.

Part 1. Technologies at work in Australia

The evolution of employment

Despite sensationalist claims of mass labour displacement from new technologies, technological change has never produced long-lasting mass unemployment. The application of new technologies to enhance productivity has been occurring for hundreds of years, interacting and evolving with jobs and industries over time. Labour-displacing impacts have been generally offset partly by the growth of new jobs associated with the development, production, and operation of those technologies (such as the modern software developer or AI specialist), and partly by the rise of new industries where productive labour is not impacted by the new technologies (such as teachers and healthcare workers). Technologies create both reimagined and altogether new jobs. Through investment in new technologies, economy-wide efficiencies are generated that can be harnessed to shift our productive labour into more abstract, complex, and high-human input work. Accordingly, the nature of direct labour in many human and personal services today has not been drastically changed by the advent of new technologies.

The evolution of jobs through, and in tandem with technological change is evident in the changing occupation mix in Australia. Professionals and community and personal services occupations have increased their share of total employment by 9- and 5-percentage points, respectively from 1986 through 2019 (see Figure 1). Occupations within these groupings (like teachers, disability care workers, healthcare professionals and engineers) typically perform more abstract, cognitive work with high-level social skills. On the other end, increased use of machinery and computer technologies in logistics, administration and construction sectors are reflected in declining employment shares since the 1980s for technicians and trades (-4%), machinery operators and drivers (-2%), labourers (-4%), and clerical and administrative workers (-4%). Policy decisions to retrench the manufacturing sector and shift the Australian economy away from a goods-producing, to a services economy have exacerbated this trend.

Demographic changes like the ageing population, the continued growth of dual-income households, rising women's workforce participation, and increased demands for both public and private services will strongly influence future employment growth in Australia—likely a greater impact on future jobs than technological change. Table 1 presents data from five-year employment projections (by industry and occupation) prepared by the Federal Department of Employment, Skills, Small and Family Business (ESSFB) for 2019 through May 2023. These projections show that for the foreseeable future, public-service-dominated industries like healthcare and education will form the vast majority of projected jobs growth—with a further 250,000 jobs and



Source: Author's calculations from ABS Catalogue 6291.0.55.003, Table 7; 1986 figure calculated as annual average. 2019 data for February.

Figure 1. Change in employment by occupation (as proportion total employment), 1986-2019

| Industry | Percentage of total employment (Feb 2019) | Projected new jobs 5 yrs. to 2023 | Top hiring occupations* | |
|--|---|---|---|--|
| Health care and social assistance | 13% | 250,300 | Aged and disabled carers; Registered nurses; Child carers | |
| Construction | 9% | 119,000 | Construction managers | |
| Education and training | 8% | 113,000 | Education aides; Primary school teachers | |
| Professional, scientific, and technical services | 9% | 107,000 | Software and applications programmers | |

Table 1. Projected highest job growth industries to 2023

Source: Author's calculations from Department of Employment, Skills, Small and Family Business (2018) employment projections from May 2018 to May 2023.

Note: *Top hiring occupations are those projected to experience strongest growth within highest employment growth industries.

| | Projected | Number of jobs | Percentage of | |
|-------------------------------------|------------------|----------------------|--------------------|--|
| Job roles | employment level | projected to decline | employment decline | |
| | May 2023 | in 5 yrs. to 2023 | 2018–2023 | |
| Personal assistants and secretaries | 75,172 | -19,381 | -20.5% | |
| Office administrators | | | | |
| and program | 221.241 | -12.592 | -5.4% | |
| administrators | , | , | | |
| | | | | |
| Machine and | | | | |
| stationery plant | 156,353 | -5,843 | -3.6% | |
| operators | | | | |
| Farmers and farm managers | 155,721 | -4,529 | -2.8% | |
| Clerical and office support workers | 82,662 | -1,040 | -1.2% | |

Table 2. Projected occupations with largest employment decline to 2023

Source: Author's calculations from Department of Employment, Skills, Small and Family Business (2018) employment projections from May 2018 to May 2023.

Note: Top hiring occupations are those projected to experience strongest growth within highest employment growth industries.

100,000 jobs added to these industries in the next four years, respectively. Close to 120,000 jobs will be added to construction, and employment in professional, scientific and technical services is projected to add around 100,000 jobs to 2023. Conversely, more routine, process-focused administrative and managerial occupations like personal assistants and secretaries, and office managers are projected to face the biggest declines in total employment in the four years to 2023 (see Table 2). This reflects the increased adoption of automated technologies that make administering business processes cheaper and more efficient.

Digital technologies are often presented as a polarising force in labour markets, shielding workers with high-level technical skills (who receive higher pay) from the negative impacts of automation, while exposing those without high-level technical skills to less secure employment and lower pay. However, the shift in the occupational composition of employment in Australia towards services runs counter to this claim. Many jobs typically considered non-knowledge-intensive or "low-skill" (a mistaken, demeaning term) have been insulated by the impacts of automation. Employment shares have increased in community and personal services occupations, which are not typically considered skill-intensive. Hence widespread assumptions that "high-skill" workers will benefit from automation, while "low-skill" workers will be displaced, are incorrect. Remuneration rates are much more likely to reflect social beliefs about the value of that work, as well as the prevailing industrial relations infrastructure that allows workers to lift the quality and compensation of their work, rather than their skill level.

Technology and jobs: The evidence so far

While new technologies could be implemented in certain enterprises, industries, or occupations impacting on the quantity and composition of employment in these sectors—there is no evidence that this is occurring across the Australian economy in any aggregate sense. In fact, Australia has developed a perverse problem of decelerating investment in technology since 2012 (in both tangible capital, such as machinery and equipment, and intangible capital such as computer software and other intellectual property) (see Figure 2). Since 2012 when several large resource mines and LNG plant projects reached completion, real business capital spending



Source: ABS Catalogue 5625.0. Table 3b.

Figure 2. Business capital spending 2012–2020

has plunged dramatically by more than one-third from \$46 billion to around \$26 billion in 2020. This suggests employers are far from galloping toward a capital-intensive, automated future; their willingness and/or capacity to undertake major capital investments appears to have moderated.

If new technologies were facilitating the replacement of workers, we would observe the current stock of capital in effect becoming larger relative to the labour inputs in production. Labour-saving technologies would need to displace or reduce labour inputs and push an increase in the ratio of capital to labour in production. However, expansion in the size of the workforce in Australia has outpaced new capital spending in recent years with the current stock of installed capital (net of regular ongoing depreciation) failing to keep pace with new hiring; the aggregate ratio of capital to labour in production has actually been falling since 2015 (see Figure 3).

A deteriorating ratio of capital to labour in production is revealing of an economy losing new productive capacity. Consequently, more output with fewer workers is placing breaks on productivity growth. Figure 4 shows that far from an explosion in productivity growth directed by widespread automation, real labour productivity growth in the 2010s has been slower than for any decade-long period since the 1980s. More startling, in recent years productivity growth has shifted into reverse: since 2017 the amount of real output produced by the typical Australian worker has been declining.

While remarkable developments in new technologies like artificial intelligence (AI) have the capacity to transform the world of work, the visible deceleration of capital accumulation and productivity growth provides evidence that this capacity has not translated into tangible outcomes. In fact, Australia's meagre investment record reflects real structural economic weakness, including an underdeveloped value-added industrial base, an oversized role for small business, and over-reliance on extractive resources industries (which tends to require less capital investment after operations are established and exhibit falling productivity rates over time as resources are depleted). Worryingly, Australia was recently ranked 93 out of 133 countries on economic complexity measured by diversity of exports (Harvard University Growth Lab 2019). Low economic complexity carries significant risks for economies seeking to resource green transitions in a changing world, and high risks when world demand for primary resources falls. Another indicator of a weakening economy is the poor innovation record of Australian businesses. Research and development (R&D) went backwards for the



Source: Author's calculations from ABS Catalogue 5204.0, Tables 63. Excludes dwellings.

Figure 3. Ratio of net fixed capital per worker, Australia, 2000-2019



Source: Author's calculations from ABS Catalogues 5206.0, Table 2, and 6202.0, Table 1.

Figure 4. Labour productivity growth by decade

first time in history in 2015–16 equalling only 1.9% of GDP—down on 2.11% in 2013–14 and well below the OECD average of 2.4% (OECD 2019a). Decline in R&D spending is stifling innovation and leading to growth in unproductive firms. Lagging rates of capital investment in production has been associated with the expansion of large numbers of low-wage jobs in relatively low-productivity private sector services industries.

Precarious work

Much of the hype surrounding new technological trends has not considered the real-world employment relations in which technological investment takes place. Work is a fundamentally social undertaking, and the nature of the relationships between people working (or not) is a crucial determinant of the quantity of work available, and the quality of that work. Changes in work organisation and employment relations in Australia are having a greater impact on jobs than developments in automation and artificial intelligence. In particular the institution of standard employment established in the post-war era (full-time, permanent work with normal entitlements like sick and holiday leave, and superannuation) has been eroding with more jobs becoming part-time and more insecure. Indeed, less than half of Australian workers now fill one of these traditional full-time positions with the majority now in part-time, casual, and nominally independent or self-employed jobs (see Table 3).

Almost one in three jobs in Australia are now part-time—one of the highest rates of part-time work in the industrialised world. Part-time jobs accounted for almost half of all employment growth between 2013 and 2018 and the majority of these jobs were casual, with lower pay than existing jobs (Henderson and Stanford 2018). Growth of part-time work is motoring growth in insufficient-hours work; almost one in three part-time workers (over 1 million workers) are seeking more hours. While around 2% of the workforce needed more hours work in the mid-1970s, almost 9% of the workforce were underemployed in 2019.¹ But statistical measures of employment continue to mask growing underemployment since only one hour of paid work meets the standard definition of employment.

Persistent underemployment, structural unemployment, declining labour force participation (particularly

^{1.} ABS Labor Force. Catalogue 6202.0.

| | Number (million) | Share employment |
|-----------------------------------|---------------------|------------------|
| Full-time permanent employee | 6.391 | 49.8% |
| Full-time casual employee | 0.785 | 6.1% |
| Part-time employee | 3.507 | 27.3% |
| Owner-managers, with employees | 0.757 | 5.9% |
| Owner-managers, no employees | 1.397 | 10.9% |
| Total | 12.837 | 100% |

| Table 5. Shale of workers by lob caledor | Table 3. | Share | of | workers | bv | iob | categor | v |
|--|----------|-------|----|---------|----|-----|---------|---|
|--|----------|-------|----|---------|----|-----|---------|---|

Source: ABS Catalogue 6333.0. August 2019.

among young workers and once-full-time-working males), and the high rates of discouraged workers who have given up looking for jobs (over 1 million people²) are symptoms of a demand-constrained economy failing to generate sufficient work for all who need it. Research by Stanford, Henderson and Grudnoff (2019) found there was only enough work available in Australia's labour market between 2013–18 to keep half the working-age population employed on a full-time-equivalent basis; only 19.8 hours of work were available per week for each working-age person. An inadequate quantity of work for Australia's growing population underpins worsening underutilisation rates since the global financial crisis in 2008. Underutilisation carries significant social and economic costs for those excluded from paid work, and wider economic costs from reduced incomes, consumption spending, and government revenues.

No statistical indicator can fully capture the extent of insecure work. Nevertheless, past research confirms that across a range of indicators (including part-time job share, incidence of casual work, hours of work, and earnings in insecure jobs), insecure work has become more prevalent (Carney and Stanford 2018). Spare capacity in the labour market functions in a negative feedback loop with job quality, driving down remuneration and the conditions of work. This is because when a growing number of workers are seeking a diminishing number of jobs, employers can more easily act on their preferences for a flexible, irregularly deployed workforce. One pernicious form of flexible work is growth in independent contracting though "sham contracting" arrangements that allow employers to avoid all costs associated with hiring employees. While no official data exists on the scale of this problem, business statistics identifies approximately 1.4 million non-employing businesses at June 2018, with an annual exit rate three times higher than the average for real employing businesses;³ some of these may be genuinely conducting a business, but the high "turnover" rate appears consistent with high-level precarity among self-employed and "gig" workers.

The reappearance of pre-20th Century on-call contingent "gig" work occupies the worst end of the shamcontracting spectrum. "Gig" work is characterized by digital mediation of piece-work tasks, performed ondemand, and compensated through digital platforms run by large companies (Stanford 2017). There are no official statistics on the prevalence of gig work in Australia but a recent survey undertaken for the Victorian

^{2.} ABS Catalogue 6226.0.

^{3.} ABS Catalogue 8165.0. Table 13.

government's Inquiry into the On-Demand Workforce in 2019 (McDonald et al. 2019) found 7% of working Australians had used a digital platform in the past 12 months to access work; of these workers, around 40% were either heavily or partially reliant on incomes derived from digital platforms to meet their living costs. These estimates surpass earlier estimates from Minifie (2016)—who found around 0.5% adults regularly performed work on or through a digital platform—and Deloitte Access Economics (2017)—who found around 1.5% of the population earned money from some digital platform during 2015–16.⁴

The organisation of work on an irregular and insecure basis is a product of social relationships in work. Growing inequality between employers and employees has increased the power of employers to set the terms and conditions of work, including how technologies are implemented in the workplace (discussed in part 2 of the report). By understanding the social and regulatory dimensions of work organisation, we gain a deeper understanding of the more everyday nefarious uses of technology affecting jobs beyond the more-hyped automation and robotisation narratives.

Electronic monitoring and digital surveillance technologies are a product of growing labour market power imbalances. Digital workplace monitoring allows employers to intensify work pace to extract more labour effort by lifting the intensity of production cycles. But surveillance to increase work discipline is an especially damaging mis-use of technology since it alters the trade-off between providing positive incentives to increase work effort (through measures like higher wages, employee voice mechanisms and higher-trust employment relations), and negative punishments to increase work effort (the threat of discharge). Investment in worker surveillance can hence encourage wage suppression as employers' management models become focused on using "sticks" rather than "carrots" to elicit high performance from employees. A survey by the Centre for Future Work in 2018 found digital forms of work monitoring are being used in a large majority of Australian workplaces; 70% of those currently working had one or more methods of electronic or digital surveillance operating in their workplace—with an average of 3.2 different types of surveillance in use (Henderson, Swan and Stanford 2018). The most common forms of digital surveillance were employer monitoring of web browsing (43% of all current working), and monitoring the contents of emails (38%). Nearly three-quarters of Australian workers believed surveillance technologies reduced worker privacy and around 60% said it reduced trust in the workplace. Predictably then, a majority thought the use of surveillance reduced the quality of and pleasure in their jobs—a counterintuitive development given the significant body of evidence (particularly in human resources research) associating job satisfaction with major firm-level benefits including reduced turnover, reduced absence, and improved performance and productivity (Smeaton et al. 2014).

Widespread use of digital surveillance in Australian workplaces to police labour effort runs counter to the standard hype about technological innovations revolutionising work. Like the rise of precarious, digitally mediated on-demand "gig" work, the use of surveillance technologies by employers has much more to do with unequal social relationships around work, in general, and the growing imbalance in bargaining power between workers and employers in particular.

Part 2. A labour regime under strain

Precarious work has thrived in Australia as workplaces have become smaller and more fragmented. Major factors behind more fragmented or "fissured" workplaces (Weil 2017) include decline in capital-intensive goods-producing industries, increased contracting out practices (including of government-funded social services), the rise of new technologies mediating work, and chronic unemployment and underemployment. But a crucial factor behind growth in precarious work practices has been the failure of the regulatory regime to prevent them.

^{4.} The study included the sale of assets and other non-labour revenue-generating activities.

The major regulatory levers in Australia are the minimum wage, the National Employment Standards (NES), the Modern Awards system (legal documents outlining minimum pay and conditions across industries and occupations), and the enterprise bargaining system. Together these levers wield a significant influence on the quality of jobs across the country.

But Australia's system of labour market regulation is under significant stress. New digital business models like Uber increase the scope for businesses to hire labour outside their normal responsibilities as an "employer." Minimum wage laws and collective agreement coverage often exclude labour hire workers and contractors who can be employed on inferior pay and conditions to employees performing the same work. The limiting individual rights framework of the major industrial relations legislation— the Fair Work Act (FW Act)—and weakened compliance systems (due largely to unions no longer undertaking their traditional pay and conditions compliance roles) has led to widespread breaches—even for those workers who should be legally covered. This has culminated in the epidemic of wage theft documented across established Australian businesses and franchise-based businesses in recent years (Fitzpatrick 2019). Employer practices of undercutting minimum pay rates for salaried full-time employees have flourished whereby limited restrictions on weekly working hours in the NES and many Awards have allowed employers to avoid compensation for overtime (Professionals Australia 2019).

Labour laws have been passive or inconsistently applied by regulators unwilling or incapable of extending new protections for workers outside of traditional labour standards. Three major cases have tested the application of regulatory standards for non-standard "gig" workers, assessing whether workers were employees. In December 2017, the Fair Work Commission (FWC) dismissed an Uber driver's claim of unfair dismissal because the driver had control of working hours (rather than Uber)—one criterion that the FWC assessed essential for establishing presence of an employment relationship. In November 2018, the FWC ruled that Foodora had in fact unfairly dismissed a delivery rider. Unlike in the Uber cases, the FWC found that the company had a significant degree of control over workers' hours though rostering practices, finding the delivery riders employees and not contractors. Recently in June 2019, company control over work hours again influenced an investigation undertaken by the compliance regulator—the Fair Work Ombudsman—that examined a range of evidence (such as contracts, work time records, interviews with drivers and Uber, banking records, and pricing schedules) and determined no employment relationship existed between Uber and its drivers.

One crucial indicator of pressure on Australia's labour regime is the dramatic decline in the collective bargaining system—particularly in the private sector. The number of workers in the private sector covered by an active enterprise agreement (EA) has plunged by almost 30% since 2013 (or 600,000 less workers) (see Figure 5). Measured as a percentage of the total workforce, active EAs now cover just 11% of private sector workers (down from 22% in 2013).⁵ Changes in firm structure and increased competition have weakened the effectiveness of enterprise-level bargaining, but severe restrictions on the capacity of unions to organise, campaign and bargain on behalf of workers have undoubtedly played a major role. Deliberate and sustained anti-union policy measures operational in Australia include extra-political bodies that police union activity, limitations on workplace entry, restrictions on industrial action among the harshest in the OECD; and prohibitions of traditional membership preferences (through full legal protection for free-riding). Consequently, union membership has declined for several decades from over 50% of all employees in the 1970s, falling to just under 15% in 2017 (and below 9% in the private sector).⁶

The FW Act also imposes limitations on the content employees and employers can negotiate on and include in agreements. Should new digital workplace technologies be implemented, crucial operational matters such as

^{5.} Author's calculations from AGD Trends in Enterprise Bargaining Report and ABS Catalogue 6291.0.55.003. Annual averages.

^{6.} ABS. Catalogues 6310.0 and 6333.0.



Source: Quarterly. Attorney-General's Department. Historical data. June Quarter 2019, federally registered EAs only.

Figure 5. Private sector employees covered by current enterprise agreements, 2000–2019

design and implementation pace cannot be coordinated through collective agreement negotiations (nor other productivity-enhancing improvements like work organisation and skills and training). There is growing recognition among labour advocates and unions that Australia's highly decentralised enterprise-level bargaining system is incapable of extending bargaining rights, coverage, and regular wage increases to an increasingly fragmented workforce. Peak union body— the Australian Council of Trade Unions—is presently campaigning for scope reform to allow sectoral- or industry-level bargaining.

Erosion of traditional regulatory supports for work has clearly been a major factor in the deceleration of wage growth in Australia, which has fallen to annual averages of around 2% per year—the slowest sustained pace since WW2.⁷ Decline in EA coverage has increased the number of workers whose wages and conditions are determined directly by minimum standards set by the FWC; 21% of all employees had their pay set by Award minimums in 2018—5-percentage-points higher than 16% in 2012.⁸ Since Modern Awards were designed to be arbitrated wage and conditions "floors" to enterprise bargaining, FWC review cycles remain lengthy bureaucratic exercises that provide limited opportunity for collective action to encourage increases in low wages. Moreover, the FWC have been hesitant to amend wage schedules, amending only allowances and entitlements in line with workplace change. The growing gap between Award rates and prevailing industry rates in many industries presents an ongoing threat to the security of wages, particularly for workers in professional occupations.

By undermining bargaining power across the labour market (particularly among low-wage workers), growth in nominally independent unregulated labour generally weakens efforts by labour advocates to improve work conditions for those insecure work arrangements already legal within current labour laws —including casual, temporary, and labour hire work. Despite this challenge, some small signs of progress have appeared in recent years. The FWC agreed to introduce a new model term into minimum labour laws in 2018 allowing

^{7.} ABS Catalogue 6345.0. Wage Price Index. The WPI measures wage trends for a fixed 'bundle' of jobs over time; it captures a 'pure' measure of inflation in the price of a given basket of labour, but misses the effect of compositional change in the labour market over time and in hours worked.

^{8.} ABS Catalogue 6306.0. All employees (not including owner-managers).

casual, fixed-term and labour hire employees with regular hours to request conversion to permanent positions.⁹ The Queensland and Victorian state governments have introduced labour hire licencing schemes that impose minimum wage and safety law compliance as conditions on labour hire firms to obtain licences.

One redeeming element of the Australian labour law regime is the robustness and comprehensive protection provided to all workers under Work Health and Safety (WHS) laws. Internationally recognised as the gold-standard in WHS legislation, the model Act (adopted across all states except Western Australia and Victoria) establishes rights to safe work environments for any person undertaking paid productive labour—hence, adopting the much broader classification of "worker," rather than "employee" (the more limiting scope within industrial laws). Worker representation is also protected through health and safety representative roles and committee structures. Despite the strength of the legislation, real enforcement of standards by state-level health and safety regulators is often inconsistent, passive, and under resourced. Inspection programs and enforcement strategies are not well developed for gig workers, labour hire, home-based work, and franchise arrangements (ANU 2019). In a region recording ever-hotter days and more extreme weather events, the WHS regime will predictably come under pressure as employers liable for workplace safety (and associated costs of workers ceasing work or amending duties) attempt to diminish that liability. Scope mismatch between WHS and industrial laws and the inconsistent employer liability settings could underpin future industrial conflict in an economy increasingly impacted by climate change events.

Conclusion and recommendations

The whole framework of minimum standards and collective bargaining in Australia requires urgent reform to protect the quality of work in a changing economy where precarious work and new business models (including those fuelled by new digital technologies) continue to grow. Without action to modernise and strengthen the labour regime, more workers will be forced to negotiate with employers in an increasingly unequal, insecure, oversupplied labour market. Some important priorities include:

- Legislative changes to ensure that existing standards (including minimum wages, national employment standards, and collective bargaining systems) are extended to all workers. The disruptive nature of platform-based business models requires a more ambitious approach to labour regulation. Stewart and Stanford (2017) offer a range of reform options including clarifying or expanding definitions of "employment;" introducing a new category of "independent worker;" overhauling traditional definitions of "employee" by creating a more expansive definition of "worker;" and reconsidering the definition of an "employer."
- A systematic revitalisation of the industrial relations regime to improve opportunities for collective representation. This should include measures to facilitate normal union workplace access; removal of restrictions on industrial action; provisions to allow unions to fund collective bargaining through more sustainable membership incentives including bargaining fees or closed shops; expansion of permissible agreement content to allow workers to negotiate on the implementation of new workplace technologies; and expanding bargaining scope to the sectoral or industry level to improve bargaining power, agreement coverage, promote wages growth and support fairer distributional outcomes.

A stronger collective bargaining system can coordinate the implementation of technologies to ensure they enhance job opportunities and working conditions, and allow workers to protect themselves from their more demeaning and exploitative applications (such as electronic monitoring and surveillance). Some best practices that can be coordinated through collective bargaining include:

^{9.} See 4 yearly review of Modern Awards decision on casual and part-time employment: [2017] FWCFB 3541.

- Ample notice to affected workers of planned technology changes with rights to workers and their unions to bargain on issues related to that change.
- Retraining rights for affected workers to undertake new positions.
- Transition supports for workers affected by technological change who elect to exit the firm to enter retirement or move to new jobs.
- A reoriented Awards system towards providing higher-wage benchmarks that boost wages and entitlements across all industries and occupations. Declining collective bargaining coverage has left more Australians dependent on these baseline instruments—mistakenly treated as minimum wage "safety nets." Wage setting in Awards should be released from the quagmire of administration, and opportunities created for collective worker influence and input during review periods.
- Finally, the worrying widespread prevalence of electronic and digital monitoring and surveillance in Australian workplaces requires specific reforms to protect workers. In addition to strengthening collective bargaining rights to support workers' efforts to negotiate the terms of digital monitoring and evaluation, more consistent legal privacy protections are needed, and additional requirements placed on employers to provide assurances that existing employment security rights are being observed.

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