

Keynote: Regional/Rural Workforce Transitions for Post-COVID-19 Resilience

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1. Introduction

COVID-19 has exposed systemic, community and vulnerabilities with large-scale global impacts across all segments of society, affecting large and diverse population cohorts in many ways (Babacan et al., 2020., Babacan & Gopalkrishnan, 2021). It has resulted in high social and economic costs, disrupting all aspects of the business world, surpassing traditional disaster management and insurance capabilities.

Since World War II, the conventional economic thinking of a trade-off between equity and economic growth has been established (Benner and Pastor, 2016). Stemming from the Work of economist Simon Kuznets, some level of inequality is seen as necessary for economic growth--which, once triggered, follows a natural cycle of wealth accumulation at the top that eventually *trickles down* to lift up the poor. He theorised per capita income, and income inequality rise as certain sectors of the economy benefits from new forms of economic growth. This approach has led to the acceptance of inequality as both a natural by-product of growth as well as a necessary factor to *spur* growth (Benner and Pastor, 2016). Referred to as the 'cult of growth' (Pilling, 2018), economic growth has been the primary goal of policy over the last seven decades where the measures of economic success have been based on rising national income and gross domestic product (GDP) and increasing profits (Ramos and Hynes, 2019). The growth paradigm has produced a powerful and widely shared notion that growth is desirable and limitless. However, this idea has increasingly come under scrutiny, with the global pursuit of economic growth being criticised for deepening wealth and social disparities and threatening the ecological basis for human civilisation (Macekura, 2020, Spash 2020, Jacobs and Mazzucato, 2016).

The pandemic has intensified the way we think about global challenges. Humanity now faces a 'triple conjuncture' of global crises: climate change and ecological breakdown; a systemic crisis of global capitalism; and the current global Coronavirus pandemic (Gills, 2020). The implications of COVID-19 in going forward are vast, and there are calls, from different sectors, for a rethink of how economic and social activities are organised (OECD, 2020; Spash, 2020) and a critique of the growth model of economics. Rather than simply

revert to 'business as usual' post-COVID-19, the desire for change to be resilient has been termed '*build back better*' and '*build broader*' (WRI, 2020; OECD, 2020). The questions arise of 'build better for whom' and how we progress to systems that are inclusive and ecologically sustainable (Chmutina and Cheek, 2021).

The impacts of the pandemic are not experienced uniformly. They are amplified by social and economic vulnerabilities, labour market structures, precarious employment in some industries, and pre-existing inequities (Babacan et al., 2021, Spash, 2020). Research and data from around the world demonstrate that work and workforce are critical factors in economic development and that substantial inequalities prevail in the areas of access to work and work quality. Some of the key areas are identified as the "segmentation among workers, according to geographical location (between countries and between workers in urban and rural areas), sex and age" (ILO, 2020:12). Work and occupations are structured and evolve and replicate and reinforce existing inequalities. The International Labour Organisation estimates that people of working age who are employed are 57% of the global population, with 39% out of the labour force. However, there is significant underutilisation of workers such as those who would like to work more paid hours (time-related underemployment), and people out of employment who would like to work but whose personal situation or other factors prevent them from actively searching for a job. ILO (2020:18) estimates that 473 million, or 14% of the extended labour force, are underutilised. The nature of the labour markets is precarious, with approximately 61% of workers in the informal sector with only 39% in the formal sector in 2020 (ILO, 2020:19). The global unemployment rate is approximately 7%, with higher rates of unemployment for women and young people (ILO:2021a:2). work is intricately linked with income and livelihoods. One in five workers lives in extreme poverty with a daily per capita income below US\$1.90 (ILO 2020:19).

There is a major connection between financial/resource loss (often due to loss of employment) and wellbeing (Buckingham-Howes et al., 2019; Lowe et al., 2015). Studies indicate that financial or resource loss in disasters (also

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relevant to pandemics) and socioeconomic adversity is associated with changing behaviour patterns such as post-traumatic stress disorder symptoms, increased drug and alcohol use, reduced spending on consumption due to insecurity, anxiety, mood disorders and depression (Buckingham-Howe et al., 2019; Cohen et al., 2019). Moreover, the impacts of financial distress persist in the medium to long term. They can impede recovery efforts through multiplier effects in local economies with significant impacts on the small business sector (Buckingham-Howes et al., 2019).

The flow of economic vulnerability and insecurity impacts a broad spectrum of factors and is interrelated with aspects such as regional location, gender and crisis/disasters. Employment, livelihoods, participation in the labour market and workforce are pivotal in all discussions of post-COVID-19 recovery. The workforce is critical for economic recovery as well as providing livelihoods for people. Workforce challenges are very different in regional/rural areas. Focusing on rural/regional resilience, this talk explores regional workforce transitions for developing transformative economic resilience in the post-COVID-19 era. Utilising research conducted by the author, the chapter explores the importance of workforce transitions in regional/rural areas as an enabler for future resilience and post-COVID-19 recovery.

2. Regional/Rural Vulnerability and Economies in Transition

Regional/rural economies in Australia have undergone significant structural change and adjustment in the last three decades. Economies also have distinct characteristics and diverse strengths and needs and have been experiencing economic change at different magnitudes, speeds and intensities. A number of factors have driven these major structural shifts, including increasing and rapid exposure to global markets, poor terms of trade and fluctuations in financial markets, technological change, environmental concerns and changing consumer demands (Babacan et al., 2019). Economies going through transition often also experience reallocating the key components of production, such as land, labour and capital. Rural/regional policies aim to address a wide range of challenges in rural communities in the 21st century. Although the emphasis of regional/rural policy objectives is debated, at the broader level, they coalesce around key outcomes of increased economic development, improved quality of life and strengthened social cohesion. Contemporary rural/regional policies have focused on reducing disparities between regions, providing access to services and supporting declining economies. Traditionally, the focus has been on economic development, efficiency and infrastructure development (Babacan & Dale, 2019).

An analysis of the impact of change in Australia reveals a number of factors (i) poorly managed exposure of communities to the global market forces (Gray and Lawrence 2001); the closure of public services (Alston 2005, and Beer *et al.* 2003); the greater emphasis on the development of institutional frameworks and structures that encourage direct private sector investment (Haughton *et al.* 2003); and the impact of capabilities development on regional competitiveness (Productivity Commission 2017). Numerous budget decisions and interventions have taken place on an issue-by-issue basis (e.g. drought, water, infrastructure etc.), but this has not been based on a strategic framework but on a

piecemeal basis in response to arising issues (Beer 2007; Babacan & Dale, 2019).

Drawing from an example of regional/rural Queensland, Australia, we note a number of dimensions of rural/regional economies, which are significant factors for post-COVID-19 recovery. The regional/rural population constitutes approximately one-third of the population, and 29 % of Queensland's workforce is located in regional/rural areas.

- Population movements: The coastal areas of Queensland are booming while there is a decline in inner and remote areas. This is also accompanied by the outmigration of younger people to major cities (in search of work or lifestyle)
- In the older workforce, the proportion of workers in the age group 45-65 years higher, e.g. Cairns 51.8% compared to Brisbane 44%
- Higher Unemployment levels with an average Queensland unemployment level of 4.5% compared to regional/rural areas, e.g. Qld Outback 11.1%, Yarrabah 45.7%, Cairns 6.7% (ABS, 2022). Unemployment is higher for particular demographic groups such as youth and Indigenous communities.
- Lower education levels: In 2021- 35.8 % in major cities have Bachelor's Degrees compared to 16-17 % in outer regional & remote (ABS, 2022). The level of high school completion in regional/remote Queensland is lower than the state and national average. Research shows a clear relationship between location and educational outcomes in Australia (Mitchell Institute 2015).
- High levels of disadvantage: The Socio-Economic Index for Area (SEIFA) is a scale based on a range of factors such as income, education and resources that enable a ranking of disadvantages in different areas. The SEIFA index for regional/rural areas shows high levels of disadvantage, often linked with remoteness
- Indigenous workforce participation lower: Employment participation for Indigenous communities was 50.8 % compared to 74.7% non-Indigenous)
- Employment in the regions is concentrated in several industries, including Health Care and Social Assistance, Retail Trade, Public Safety and Administration, Education and Training, Construction, Accommodation and Food Services. In some regions, there is dependence on mining, often with boom-and-bust cycles impacting on employment. The industries contributing to the gross regional product are, in many cases, not large employers in the regions, e.g. agriculture
- The increase in jobs in the future will be in high skills jobs. The National Skills Commission has identified that four services industries are projected to provide more than three-fifths of the total projected employment growth in the next five years Health care and social assistance; accommodation and food services; professional, scientific and technical services; and education and training
- 9 in 10 new jobs are projected to require post-school education in the next five years. Over the last several decades, there have been large changes in the skill composition of employment, with consistent growth in employment of high-skill workers and a decline in the share of middle-skill workers and low-skill workers (CEDA 2015). This trend will continue with 90% of new jobs over the next five years predicted to

need education beyond school, and some jobs will need more training than they previously required (Department of Jobs and Small Business 2019).

- Employers in regional areas face challenges in recruitment and retention of the workforce, including suitable candidates for each vacancy, skills gaps, labour shortages, career pathways and employment conditions as key challenges
- Lower ratio of digital literacy capabilities and slower technology take-up (ABS, 2022; NSC, 2022a, b; Qld Treasury, 2022; Jobs Queensland, 2018, 2019; Babacan et al., 2019; Department of Jobs and Small Business, 2019; Becker et al., 2015; CEDA, 2015).

These are major challenges for regional communities, industries and policymakers. The concerns are expressed in nuanced ways, as identified in the research (see Babacan et al., 2019, 2020, 2021). The words of on research participants aptly voice the workforce challenges in the context of regional Queensland:

“There are major changes taking place. Some things that come to mind are climate change, digital and technological change, environmental protection and sustainability, changing consumer demand for green, ethical and traceable products, including animal welfare, shifts in global market forces and changes in local community demographic. Now there are the impacts of the pandemic. There is a need to address the workforce implications of these for rural communities” (research participant).

Many of Queensland’s regional/rural economies are undergoing transition, albeit at a different pace across industries (Job Queensland 2018). These can present as vulnerabilities and opportunities for change for post-COVID-19 resilience. The implications of transitioning economies for workforce development, changing industries’ needs, and providing equitable livelihood outcomes in regional/rural areas are significant.

3. Disruptions: Changing Future of Work

The processes of globalisation have enabled capital to be globally mobile, dis-embedded from place and nation, shrinking space and time. Globalisation relates to the ‘global enmeshment’ of money, people, ideas, images, values, and technologies which flow much swifter across the world (Hurrell and Woods 1995). Accelerating processes of economic globalisation have fundamentally reshaped the organisation of the global economy towards much greater integration and functional interdependence through cross-border economic activity. Global production networks are organisational platforms through which actors in these different national or regional economies compete and cooperate for a larger share of the creation, transformation, and capture of value through transnational economic activity (Coe and Yeung, 2015). The resulting structural adjustments to the economies lead to the reallocation of the key components of production, such as land, labour, and capital (Babacan et al., 2019; Beer, 2015), with varying “speed, magnitude and severity” across different industries (Jobs Queensland 2018: 7). This alters where and how businesses are conducted (Schwartz et al. 2019).

The global processes of contemporary capitalism are accompanied by significant technological change, referred to as

the ‘Fourth Industrial Revolution (or Industry 4.0) (AlphaBeta 2017). The First Industrial Revolution used water and steam, the second used electric power for mass production, the third used electronics and information technologies, and the fourth used digital and biological spheres of artificial intelligence, robotics and automation, cloud and blockchain technology and big data (Schwab, 2016). Several key trends drive future economic development:

- Digital Economy- digital platforms are penetrating all aspects of society and economy with digital connectivity and significant exchange of goods and services worldwide. The key features of the digital economy are asset-lightness, as cloud and ICT applications reduce the need for hardware and renting; network effects such as platform economy; mega data and data analytics used for predicting consumer behaviour, product/service development and managing workers; and mobility of businesses and workers to conduct business irrespective of location (ILO, 2021b; OECD, 2014; Graham, 2019). Digital economy and platforms are having a profound impact as they reorganise markets and work arrangements, affecting competition and challenging regulatory models, thereby altering the rules of the game (Kenney et al., 2021; Kenney and Zysman, 2016).

- Sharing Economy-where, there is less need for ownership of material goods and more focus on access (e.g., music, films), leading to a new way of organising economic activity that supplants the traditional corporate-centred mode (Sundararajan, 2016).

- Platform Economy- Changing nature of companies, with fragmented ecosystems and a large number of companies with brokerage roles, working irrespective of place using online market platforms and acting as intermediating organisations (van Dijk et al., 2018; Kenney et al., 2021). There has been a concentration of platform companies which shapes what happens in the digital economies and yields significant global power (Donner and Locke, 2019);

- Disruptions to the nature of work– increasing automation and machine learning impacting the nature of work and a decline of jobs that can be automated. The workforce is increasingly divorced from companies and places, and there is less need for permanent employees. There is an increased need to work globally, remotely and virtually (Baldwin, 2018). All of these result in an increasingly flexible and growing casualised workforce with little income and job security and increased use of contract labour or freelance as against permanent jobs (Schwartz et al., 2019).

The contemporary reorganisation of work centres around what work will be automated (nature of work), what the skills needed (nature of the workforce) and where work will be performed (nature of the workplace) (Schwartz et al., 2019). Widespread disruption to labour markets is anticipated as companies aim to harness new technologies to achieve production efficiency and reduce labour costs (Graham, 2019; Frey and Osborne, 2017; Doogan, 2009). As aptly pointed out by Friedman (2019) “what’s going on is that work is being disconnected from jobs, and jobs and work are being disconnected from companies, which are increasingly becoming platforms” (Friedman cited in Schwartz et al., 2019:3). The WEF survey of employers identified 50% of

companies expect that automation will lead to some reduction in their full-time workforce by 2022, based on the job profiles of their employee base today. (WEF 2018: viii). The World Economic Forum (WEF 2018: viii) estimates that the human-machine composition of tasks will shift from 71% human-29% machine in 2018 to 58% human-42% machine in 2022, and in some areas such as data processing, the ratio for machines is expected to be as high as 62%. OECD (2019: 3) identifies that 14% of existing jobs will disappear, with a further 32% will be radically altered as tasks are automated. The impacts of automation vary across countries; e.g., the Committee for Economic Development Australia (CEDA) research found that 40% of jobs in Australia are likely to be susceptible to computerisation and automation in the near future (CEDA 2015). Other studies suggest that automation and digitalisation will not impact whole industries but some jobs or aspects of job tasks (Arntz et al. 2016). Some identify that it will change the jobs and the way we do existing jobs (AlphaBeta 2017). Referring to this concept as 'augmentation', the WEF (2018:10) concludes that in the near- or medium-term timeframes, their analysis suggests that work currently performed by humans will be augmented by machines rather than being replaced by total automation.

The new processes of the Fourth Industrial revolution are disrupting markets and labour relations, transforming social and civic practices, and affecting democratic processes (van Dijk et al. 2018). Van Dijk et al. (2018) argue that these represent intense struggles between competing ideological systems and contesting societal actors—market, government, and civil society—asking further as to who is or should be responsible for anchoring public values and the common good in platform digital societies. The key question of distribution and sustainability remain fundamental issues in post-COVID-1p recovery in the context of technological change. However, the impacts of technology are depoliticised and made seem inevitable (Graham, 2019). Brynjolfsson and McAfee (2014) argue that the 'bounty' of technological change will not be 'spread', and the new technological era brings major risks of widening inequality, as automation substitutes for labour across the entire economy, the net displacement of workers by machines might exacerbate the gap between returns to capital and returns to labour. The future of work, access to work, and income opportunities will be one of the main challenges of the fourth industrial revolution. Labour market transformation, with more tenuous connections between employers and workers which, has given "rise to new employment relations characterised by a much greater sense of precariousness and insecurity" (Doogan, 2009:3). This is represented by a decline of traditional industries with a replacement of 'contingent economy' where work is temporary, part-time, casual and based on flexible contracts (Doogan, 2009). Bonoli (2007) suggests that there are new social risks in the post-industrial labour markets, with increased poverty and instability being experienced by new social groups.

As with any change process, while there are challenges, there are also opportunities. Digital labour platforms are expected to offer new markets for businesses and more income-generating opportunities for workers, including those who were previously outside the labour market (ILO, 2021). The WEF survey of employers revealed that 38% of businesses expect to extend their workforce to new productivity-enhancing roles, and more than a quarter expect automation to lead to the creation of new roles in their enterprise (WEF 2018: viii). New occupations are and will be emerging, such as 3D Printing Designers, Software Engineers, Social Media Experts, Machine Learning and User Experience Specialists, Data Processing, and other internet-related jobs

(Frey & Osborne, 2017; WEF 2018). The ability to capitalise on new employment opportunities is multi-factorial and will be impacted by existing structural inequalities. As argued by Ingram (2021:4), "digital jobs require more education. Expanding the use of digital can widen income disparity between individuals and countries, with the gains from digital accruing to those at the top of the pyramid". The ability to train for emerging jobs is a major concern for many. For example, in a study of the workforce in rural regions in Queensland (Australia), Babacan et al. (2019) found that there was a considerable concern, not about change or disruption, but whether the regional and rural areas would be 'left behind as they would not be able to 'train in time' and would face the challenges of digital exclusion in rural areas. There is an implication of these disruptive changes for workforce development in rural and regional areas. Traditional approaches have been to 'attract, develop and retain' the workforce in rural/regional areas (Babacan et al., 2019). This is drastically altered, in the context of global competition for skilled talent and use of technologies for work, to a model of "access, curate, and engage workforces of all types" (Schwartz et al. 2019:4). How well the rural/regional employers be able to alter their workforce models in the face of technological disruptions is emerging as one of the major new challenges.

4. Decarbonisation, Green Economies and Just Transitions

Climate change is one of the greatest ecological events of our time. Scientists continue to give dire warnings about climate change amidst major global debate about the nature and extent of climate change. The Intergovernmental Panel on Climate Change (IPCC) argues that "human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history" (IPCC, 2015:2).

Post COVID-19, there is growing recognition that the impacts of economic expansion on the environment cannot be alleviated by market forces or technological progress alone (Bennett, 2020; Spash, 2020). The current ecological crisis invites an examination of current growth-based economic models as the root cause of unsustainable consumption patterns and production practices (Weidmann et al., 2020). This will require a break free from anthropocentrism toward ecocentrism and developing ecological and economic ethics with principles such as de-commodifying nature, Earth jurisprudence, commitments to non-human aspects of the planet, limits to growth, and equity and social justice (Washington & Maloney, 2020).

Terry (2009:6) reminds us that climate change should not be viewed in a vacuum and that it takes place "in the context of other risks, including economic liberalisation, globalisation, conflict, unpredictable government policies, and risks to health". Climate change has influenced food and water security, incidence of disease, and livelihoods. While climate change is negatively affecting the whole of humanity, the impacts are not equally distributed. As pointed out by International Panel on Climate Change (IPCC), "climate change will amplify existing risks and create new risks for natural and human systems. Risks are unevenly distributed and are generally greater for disadvantaged people and communities in countries at all levels of development" (IPCC 2015:13). The Paris Agreement in

2015 identified the need for just transitions and included the following statement in their preamble: “Taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities ...” (Paris Agreement, 2015).

It is accepted that climate change disproportionately affects the world’s poor, the majority of whom are women and children (Babacan, 2022; Alam et al., 2015). There is a need to examine ‘just transitions’ to decarbonised economies as climate change can become embroiled in economic displacement, unemployment, externalities, and human rights concerns (Sovacool et al., 2021).

Climate change can be considered a threat multiplier – exacerbating existing stresses on rural industries and communities and adding new ones (CCA, 2016). The Climate Council of Australia (2016) identified that regional/rural communities in Australia are disproportionately affected by the impacts of climate change, and the systemic disadvantages experienced are likely to worsen. While there are challenges, there are also opportunities. As we are reminded, “Job losses are not an automatic consequence of climate policies, but the consequence of a lack of investment, social policies and anticipation” (Rosemberg, 2010:125). The United Nations identifies several impacts of climate change mitigation strategies on jobs. These include job creation and the demand for labour in the expansion of low carbon-intensive industries; job substitution as a result of the shift to more efficient systems; job elimination as particular high carbon industries are phased out; job redefinition as existing skills are transformed similar jobs in the green economic (UN, 2020). The Global Commission on Economy and Climate estimates that a new climate economy could deliver US\$26 trillion in economic benefits by 2030 (Global Commission, 2018), while the International Labour Organisation estimates that 18 million jobs around the world are linked to green economies (ILO, 2018). In Australia, the Clean Energy Council of Australia estimates that the current pipeline of renewable energy investment could create over 50,000 new jobs and inject over \$50 billion worth of investment to revitalise economic activity in regional/rural communities as a recovery initiative post-COVID-19 (Clean Energy Council, 2020).

Green economies and industries are in their infancy across the world and in Australia. For this reason, workforce planning has not emerged effectively in these early initiatives across the industry. Part of the reason is the fragmented governance, planning and lack of cross-jurisdictional coordination across the regions (Babacan et al., 2019). There is also a mismatch between education providers and regional industry needs (Babacan et al., 2019). However, it is critical to note that the workforce, with relevant skills aligned with green and circular economies, is a critical enabler in the transition to a decarbonised economy. Capitalising on the benefits of green economies will require an urgent assessment of the suitability of the workforce’s existing qualifications/skills/knowledge (linked to industry, investment and infrastructure planning) to determine skills shortfalls, gaps and upskilling required for green economies.

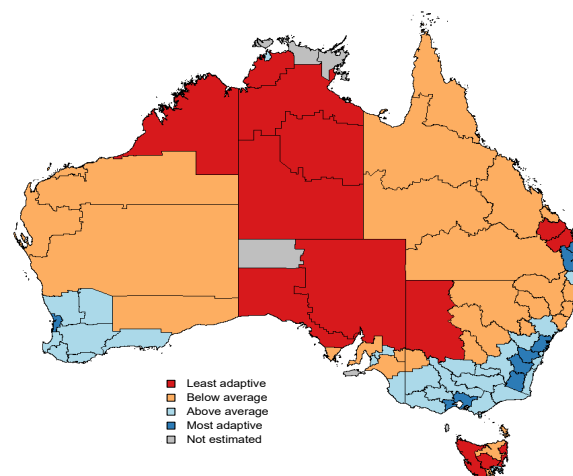
5. Transformative Resilience and Adaptive Capacity

The COVID-19 pandemic has created deep and lasting damage to our societies’ social and economic fabric. Developing an effective framework to address COVID-19 is

complex and will involve making choices about resources and actions for the short and long term (Babacan et al., 2020). Much effort has gone into recovery and adaptation. Some fundamental principles need to be used to guide response and recovery efforts. As noted by Hogan & Drew (2020:3), “recovery must be about doing high impact interventions and high return investments, as well addressing inequalities and weaknesses in capacities and capabilities that will constrain recovery. It must be about investing in ‘people and places and making the most of our social, cultural and regional diversity.”

Resilience is defined in many ways. It refers to “the capacity of given places to resist shocks, recover from unexpected events and sustain a long-term developmental growth path” (Di Caro, 2017: 94). resilience is often linked with vulnerability, absorption of shock and thriving under uncertainty. Resilience is not only about coping with adversity but to be able to thrive and maximise the full potential of communities and individuals. Social capital, social cohesion, sense of belonging and community spirit, trusted sources of information, ability to collaborate, diversity of economic and other resources available to the community, governance and institutions are key factors in resilience (Kulig et al., 2013, Dale et al. 2014). At the individual level, it is about being adaptive, having hope, having the capability to imagine and innovate, and the capacity to respond to opportunity (Nemeth & Olivier, 2017). Adaptive capacity is distributed across systems, relationships and organisations (Babacan et al., 2020). In that sense, resilience, adaptive capacity and innovation “should not be viewed as a singular, isolated trait of a person, family, or community, but rather as a broader and multifaceted capacity” (Masten & Motti-Stefanidi, 2020:5).

How well a place or region can adapt is complex. A study into the adaptive capacity of regions showed a strong correlation between low levels of adaptive capacity and remoteness (Productivity Commission 2017). Factors that contribute to adaptive capacity are linked to education, skills, levels of income, employment, health, access to infrastructure and services, and natural resources. Alarmingly, most of rural and regional Queensland falls below average adaptive capacity, as illustrated in Figure 1.



The Climate Council of Australia identified that regional/rural communities are adapting to the impacts of

Figure 1- Adaptive Capacity, Source: Productivity Commission 2017:11

climate change, but there are limits and costs. Adaptation to cope with climate change may be relatively incremental, and more substantial adaption requires significant change to the production system (CCA, 2016). As much of the rural/regional

Australian economy is made up of small businesses and farms, transformational adaptive changes may be risky and expensive, and there is a need to look at innovative ways to address climate change adaption (CCA, 2016).

The adaptive capacity of the workforce in regional/rural areas is also strongly constrained. Babacan et al. (2019) identified critical challenges of mismatch between employer needs and lack of agility in education systems to respond to changing industry skills requirements. Access and pathways to education are more constrained for students studying in rural/regional areas, often with outmigration of young people for education and a lower proportion of completion of higher skill qualifications. The Senate Select Committee on Jobs for the Future of Regional Areas (2019) noted that “People living in the regions will require an increasing level of technical skills and professional knowledge to take advantage of the jobs that may be available in the regions. As part of this, workers will be expected to be more technologically adept as digital technologies and automation become increasingly integrated into working environments” (Commonwealth of Australia, 2019:23). However, the digital and technological challenges impinge on flexibility to access training and re-training as well as participate effectively in the digital economy (Babacan et al. 2021a).

OECD (2014:6-7) identifies a useful framework for strengthening different types of capacities:

- Absorptive capacity: The ability of a system to prepare for, mitigate or prevent negative impacts, using predetermined coping responses in order to preserve and restore essential basic structures and functions. This includes coping mechanisms used during periods of shock.
- Adaptive capacity: The ability of a system to adjust, modify or change its characteristics and actions to moderate potential future damage and to take advantage of opportunities so that it can continue to function without major qualitative changes in function or structural identity.
- Transformative capacity: The ability to create a fundamentally new system so that the shock will no longer have any impact. This can be necessary when ecological, economic or social structures make the existing system untenable.

It is this transformative capacity that is critical for addressing ecological and inclusive economic resilience. If there is to be a better build, then the focus of effort for resilience needs to be transformative approaches to systems, processes and capacities.

6. Conclusion

It is well known that the COVID-19 pandemic has important distributional and generational effects that amplify pre-existing social inequalities (Bonaccorsi et al., 2020). Given the challenges of environmental sustainability and climate change transitions, digital and technological change, global interconnectivity and competition for talent, workforce development will need to be rethought. The key question of distribution and sustainability remain central tenets in post-COVID-19 recovery. Investing in the workforce will enable immense social and economic benefits for resilience and

sustainability in the long term. There are major risks in the post-COVID-19 long-term recovery for the workforce in rural and regional areas, such as skills and labour shortage in the regions; inadequate timely training and re-training for existing workers into new jobs; lack of ability to capitalise on opportunities in new green industries; loss of productivity; casualisation and insecurity of employment; reduced quality and standard of living and working poverty; and technology-induced unemployment and underemployment. Addressing these key workforce issues is a fundamental aspect of economic recovery and resilience.

There is a need to manage recovery and structural adjustment processes better, and we need to examine transitions from past industries such as manufacturing, textile and automotive to learn from past errors and achievements. Successful regional economic development has been founded on the skills and capacities of institutions and stakeholders to collectively work together and drive change. Transitioning requires effective planning, coordination and investment. It requires the collaboration of a wide range of stakeholders and capacity building towards a successful long-term transition to resilient workforce development.

Addressing future policy and regulatory challenges for the future of work requires a more in-depth understanding of the fragmentation impacts of work, changing employer arrangements and workplaces, and workers' conditions across different regional/rural locales. The overall risks for employment security and conditions will need to be a major focus of policymakers, and enforcement of the principles of international conventions relating to work, labour and human rights, gender, and discrimination is vital in the post-COVID-19 era.

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