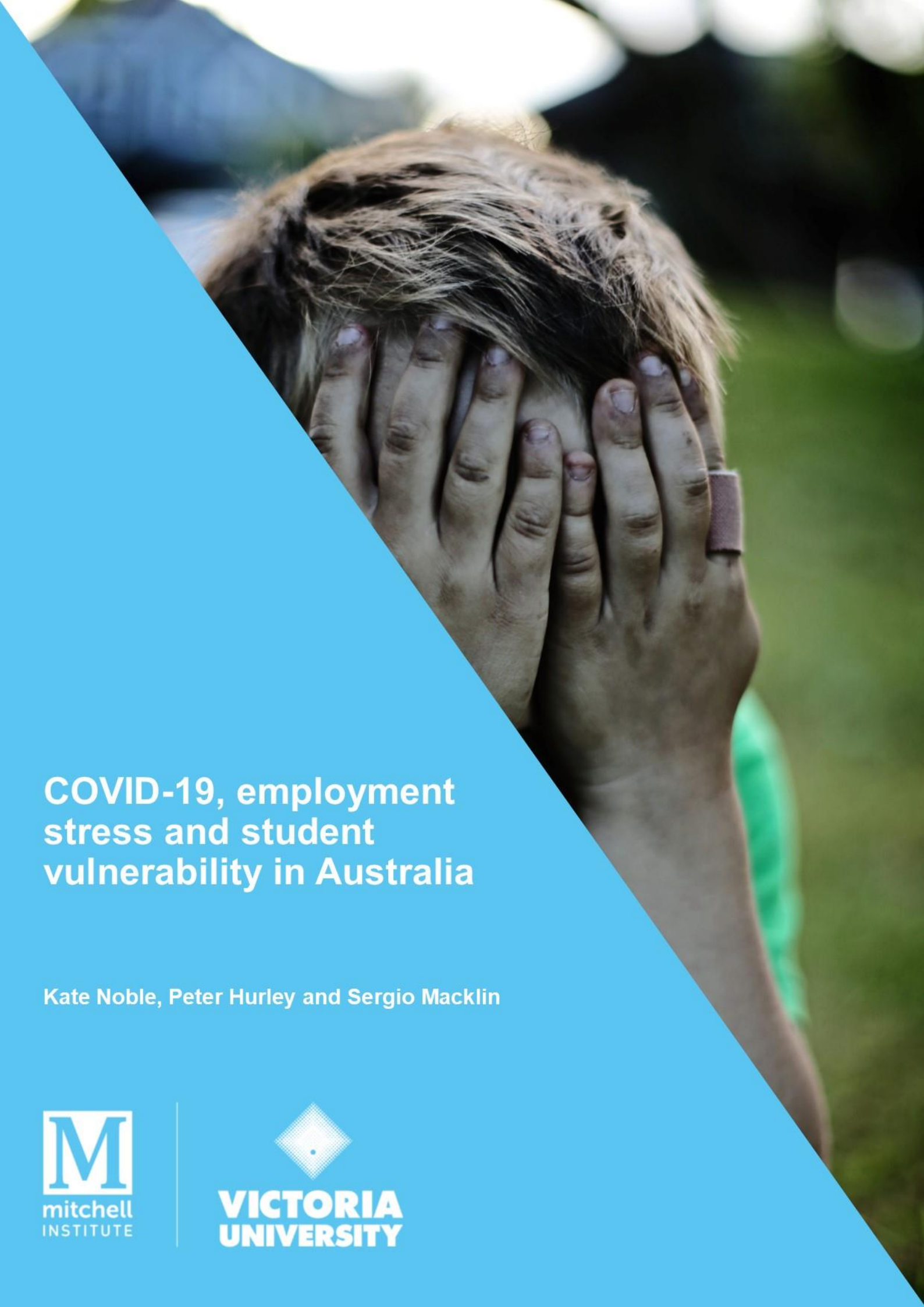

COVID-19, employment stress and student vulnerability in Australia

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The Mitchell Institute for Education and Health Policy at Victoria University is one of the country's leading education and health policy think tanks and trusted thought leaders. Our mission is to improve evidence-based health and education policy, to increase access and opportunities in education and health for all Australians.

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Overview

The number of potentially vulnerable children in Australia will increase significantly as a result of COVID-19 related unemployment and underemployment. Mitchell Institute modelling estimates that in 2020 around 1.4 million preschool- and schoolchildren are in families experiencing employment stress. This is up from 615,000 children in 2016 – a jump of around 130%.

This briefing reviews evidence on how this will affect children's wellbeing and educational outcomes. It outlines the critical role of schools and early childhood education and care (ECEC) providers in supporting children's development and learning, and reducing the risk of increasing inequality. New analysis combines the Australian Bureau of Statistics' census data with the Grattan Institute's unemployment modelling to examine how and where families and children are likely to be impacted by financial stress as a direct result of COVID-19.

The results are sobering. We estimate that the number of preschool- and schoolchildren living with employment stress in the family has more than doubled nationally, with many regions experiencing increases of 200-300%. Lower-income families will be hit hardest, but job and income loss will be felt across all socio-economic groups and regions. Even with measures in place to speed up economic recovery, reducing levels of unemployment and underemployment could be a slow process.

Job losses and reduced income will place significant financial stress on many families, with the potential to compromise parents' mental health and parenting capacity, reduce access to basic necessities and increase social isolation. Economic stress will compound other risk factors such as children's temporary disengagement from school as a result of closures and increased levels of anxiety and stress due to COVID-19.

This is a significant increase in the number of potentially vulnerable children in Australia, which could have long term implications for their health, learning and employment outcomes. During a prolonged period of economic recovery, labour market and social services responses will be critical. Schools and early learning services will also play a vital role. They will be on the front line in limiting negative impacts on children's learning and development.

However, our school and early education and care systems are not currently equipped to do this. Evidence shows that even before COVID-19, the education system wasn't working for many vulnerable students, and socio-economic disadvantage was the single biggest factor influencing educational success. Immediate support and longer-term reform is needed to equip schools and early learning providers with the resources and tools needed to meet this challenge.

How will COVID-19 impact parental employment?

The Australian Bureau of Statistics (ABS) estimated that 1.6 million Australians lost their jobs in the first week of April (ABS, 2020). Projections by the Grattan Institute suggest that this figure would rise to 1.9-3.4 million (Coates et al., 2020). The latest ABS data shows unemployment rising from 5.2% to 11.7% between March and April (adjusted to account for JobKeeper), and underemployment rising from 9.8% to 13.7% over the same period (ABS 2020). In just one month

the average weekly hours worked by all Australians reduced by 9.2% – one third more than the reduction measured following major recessions in the 1980s and 90s (Borland, 2020a).

COVID-19 is impacting employment in an unprecedented way. Traditional measures of unemployment and underemployment don't provide an accurate indication of levels of employment stress among the population in the current context (Borland, 2020b & Gittens, 2020). Many working parents on JobKeeper have had their household income reduced, and may face income and job losses in the future. Some working parents have experienced significant salary reductions and this is likely to become more widespread (Tadros & Wootton, 2020; Bonyhady & Patty, 2020). As a result, estimating and measuring unemployment, underemployment and economic stress is challenging.

This report defines employment stress as a significant change in employment status within the family, and includes joblessness in the family[1]. Our pre-COVID (2016) estimates are based on families likely to be experiencing employment stress as a result of at least one parent looking for work, or being underemployed. In the context of COVID-19, this category also includes parents likely to have lost their jobs or who are unable to work due to COVID-19 restrictions[2]. In addition to experiencing financial stress, these parents are experiencing an 'employment shock' as a result of losing work quickly and unexpectedly, which is likely to compound the stressful impact of joblessness (Collie, 2020).

There are other factors that we have not measured that are likely to be causing significant employment stress among families at this time. These include job insecurity, salary cuts or reduced hours. Impacts will be very different depending on individual families' specific circumstances. Some families may manage by drawing on their assets or finding alternative employment within a reasonable timeframe. With restrictions starting to ease, some families will be in recovery mode already. Others will have to make significant changes to reduce their household budgets, which may impact significantly on children. Families where both working parents face job or income loss will be impacted severely.

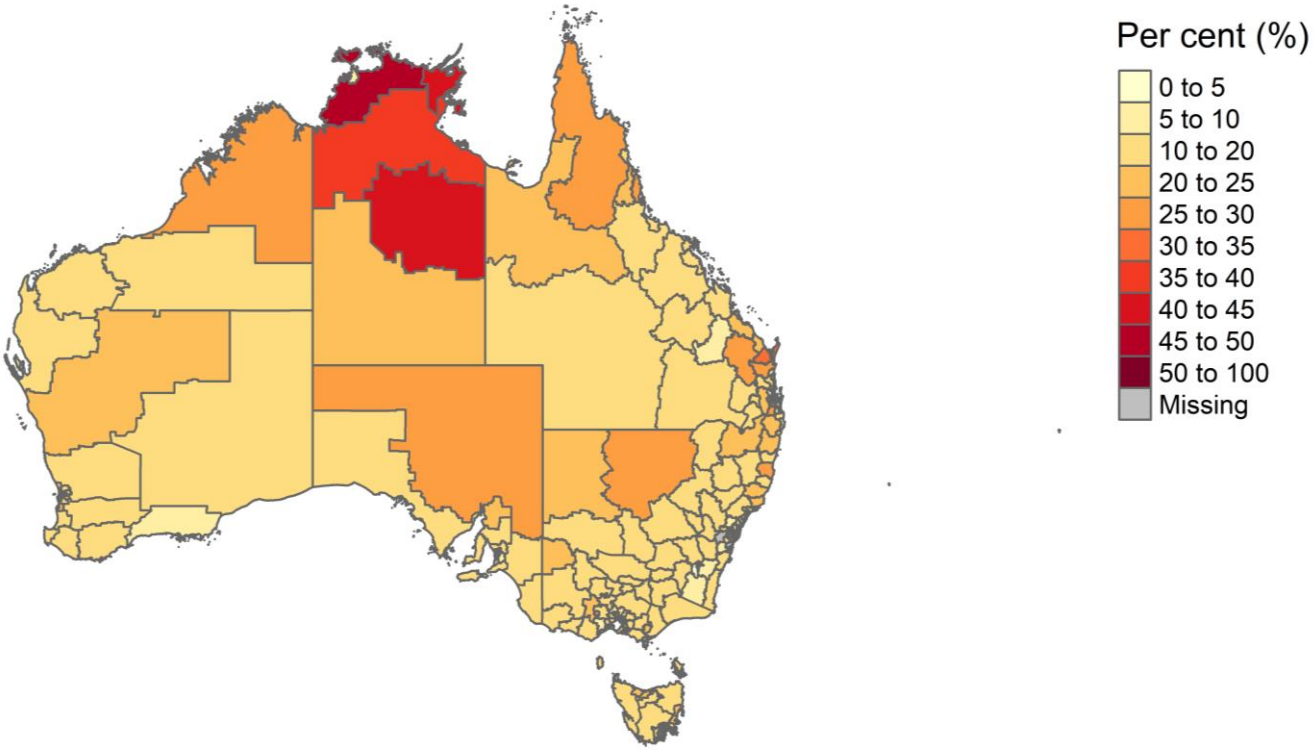
How many children will be affected?

Our modelling sought to understand how job losses would impact on children and families. Using projections by the Grattan Institute and Australian Bureau of Statistics data, we estimate that across the country, the number of school- and pre-school children affected by employment stress in the family has more than doubled as a result of COVID-19. Figure 1 shows the increase in the number of schoolchildren and pre-schoolers experiencing employment stress in the family. While around 615,000 children were experiencing employment stress in the family in 2016, this figure is now estimated to have risen to 1.4 million. This means an additional 780,000 children are likely to be experiencing employment stress in the family – an average increase of around 130% across the country.

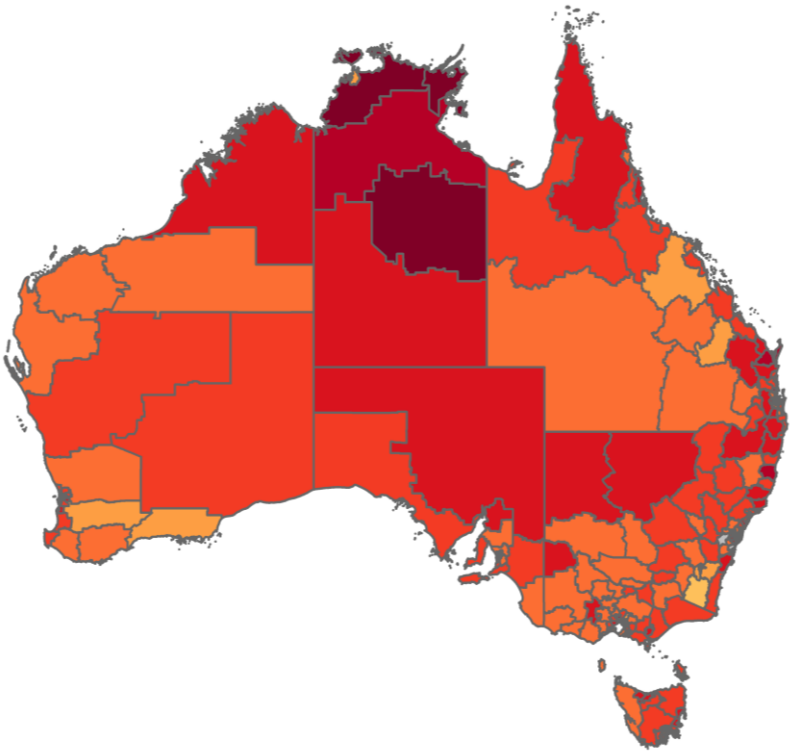
[1] For a full breakdown of which family employment situations are included in the 'experiencing employment stress' category, see the Glossary and Appendix A.
[2] Both the Mitchell Institute and the Grattan Institute's modelling focus on the second quarter of 2020, and models only impact on individuals' main job (noting some people may have more than one job). Modelling only assesses impact of shutdowns and spatial distancing – not job or income loss as a result of other factors (e.g. reduced demand from consumers). These estimates are approximate and subject to a high degree of uncertainty.

Figure 1: Percentage of school- and pre-school children with employment stress in the family

2016



2020 estimate



Source: Mitchell Institute analysis of ABS Census 2016 and Grattan Institute modelling of COVID-19 employment shock (ABS 2020a)

The substantial increase in the number of children living with employment stress has occurred across the country, although some areas have been harder hit[3]. Tables 1 and 2 list the regions that our modelling suggests will be most affected. Table 1 shows the 10 regions with the largest number of children likely to be experiencing employment stress, while Table 2 shows the 10 regions likely to be experiencing the largest percentage increases.

Table 1: Regions with the highest number of school- and pre-school children experiencing employment stress in the family[4]

Area (SA3)	2016	2020	Percentage increase
Wyndham (Melbourne)	8,121	16,400	102
Fairfield (Sydney)	10,354	15,600	51
Whittlesea - Wallan (Melbourne)	6,678	14,300	114
Wanneroo (Perth)	6,740	14,200	111
Tullamarine – Broadmeadows (Melbourne)	8,298	13,600	64
Bankstown (Sydney)	7,154	13,200	85
Brimbank (Melbourne)	7,293	12,700	74
Casey – South (Melbourne)	5,438	12,400	128
Campbelltown (Sydney)	6,802	12,300	81
Townsville (QLD)	6,027	12,200	102

Table 2: Regions with the largest increases of school- and pre-school children experiencing employment stress in the family

Area (SA3)	2016	2020	Percentage increase
Nillumbik - Kinglake (Melbourne)	759	3,800	401
Sutherland - Menai - Heathcote (Sydney)	1,251	6,000	380
Rouse Hill - McGraths Hill (Sydney)	494	2,300	365
Pittwater (Sydney)	710	3,300	365
Cronulla - Miranda - Caringbah (Sydney)	1,190	5,400	354
Hawkesbury (Sydney)	314	1,400	346
Warringah (Sydney)	1,925	8,400	336
Brisbane Inner - West	555	2,400	332
Molonglo (ACT)	40	170	325
Hobart Inner	496	2,100	323

All of these regions are located in metropolitan areas, and the majority are in capital cities. These cities contain a higher proportion of parents work in hospitality, retail and the arts – the industries where most job and income losses are occurring (Coates et al., 2020). Outer suburban areas have been particularly hard hit, and many of these places already faced high levels of disadvantage

[3] Figure 1 maps the increase in children experiencing employment stress by Statistical Areas Level 3 (SA3). SA3s are regions by clustering groups of communities that have similar characteristics.
[4] 2020 figures are rounded to the nearest 100 to reflect the fact that these are estimates subject to a higher degree of uncertainty compared with 2016 calculations.

prior to COVID-19. The Mitchell Institute's modelling also mapped children experiencing employment stress by territory and states' capital cities; these can be found at Appendix B.

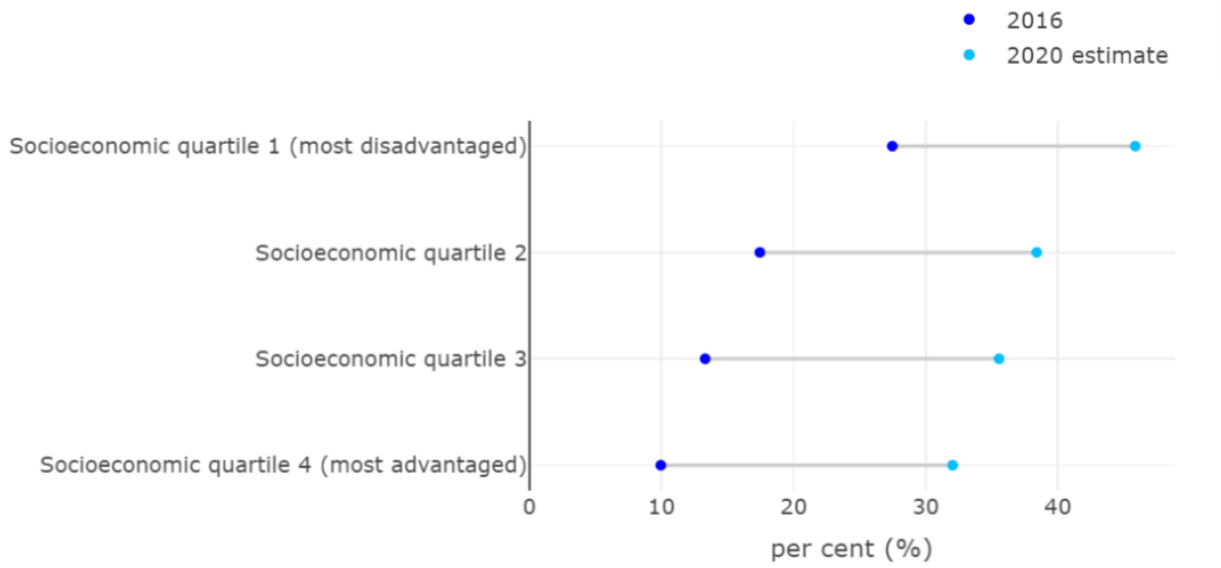
Damage is likely to be more limited outside of metropolitan areas. Working parents in many regional and remote communities are employed in industries that are less affected by COVID-19 restrictions, including agriculture and mining (Coates, 2020). However, many families in these areas will still be impacted, in regions that have higher levels of reliance on the most-affected industries. The 10 most affected regions outside of capital cities are shown in Table 3.

Table 3: Regions outside capital cities with the largest increases in school- and pre-school children experiencing employment stress in the family

Area (SA3)	2016	2020	Percentage increase
Queanbeyan (NSW)	725	2,800	286
Barwon - West (Geelong)	320	1,200	275
Biloela (QLD)	169	600	255
Surf Coast - Bellarine Peninsula (Geelong)	1,154	4,100	255
Southern Highlands (NSW)	767	2,600	239
Esperance (WA)	245	800	227
Snowy Mountains (NSW)	276	900	226
Gold Coast Hinterland (QLD)	307	1,000	226
Warrnambool (VIC)	884	2,800	217
Broadbeach - Burleigh (QLD)	887	2,700	204

In addition to geographic distribution, the Mitchell Institute analysis also explored how income loss is likely to be experienced by families in different socio-economic groups. Figure 2 illustrates how income loss will impact on already disadvantaged households, as well as more socio-economically advantaged households. There are clearly established links between socio-economic status (SES) and developmental and educational progress (Lamb et al., 2015). This analysis aims to better understand the socio-economic dimension of the problem to develop a deeper understanding of the likely impact on children's educational outcomes.

Figure 2: Change in percentage of school- and pre-school children experiencing employment stress by socio-economic quartile



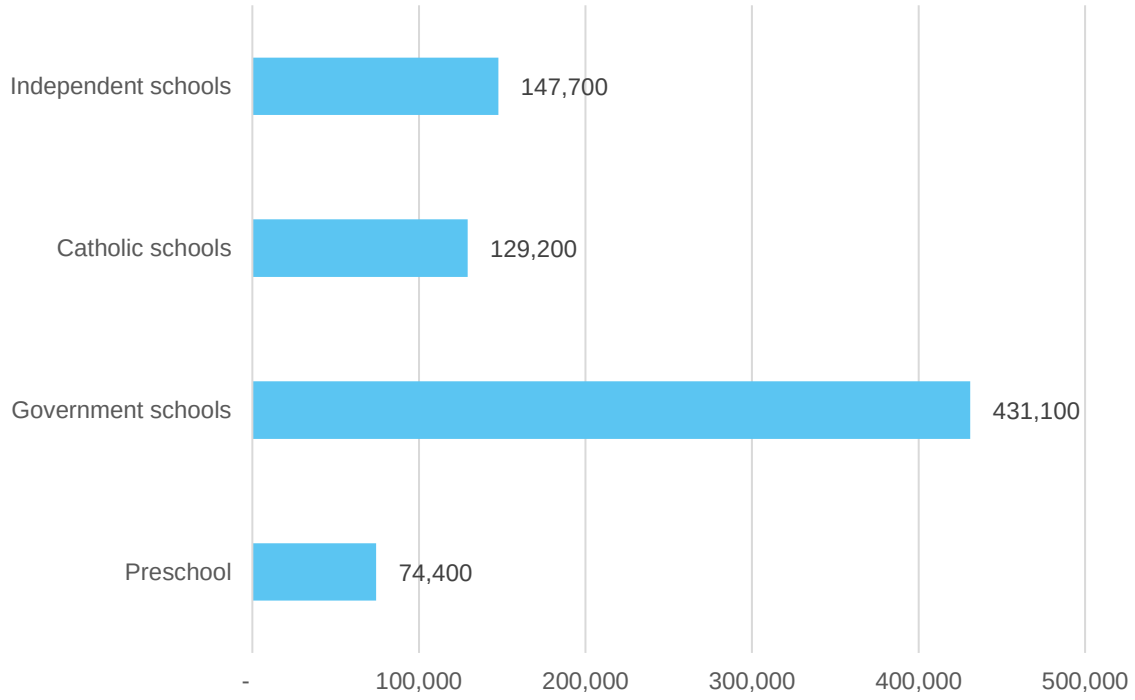
Source: Mitchell Institute analysis of ABS Census 2016 and Grattan Institute modelling of COVID-19 employment shock, and the ABS Index of Household Advantage and Disadvantage

Our modelling shows that preschool- and schoolchildren from lower socio-economic quartiles will be more severely affected by COVID-19. Nearly half of schoolchildren and pre-schoolers in the most disadvantaged quartile of households are likely to be experiencing employment stress this year, compared with just over a quarter in 2016. These households are expected to be more severely impacted because there is a higher percentage of parents from lower socio-economic groups working in the most affected industries.

In addition, there were more working parents from lower socio-economic backgrounds who were unemployed and looking for work prior to COVID-19. This means that families on lower incomes are more likely to be tipped into extreme hardship where the sole working parent loses their job, or faces reduced hours or a salary cut. JobKeeper will mitigate these effects while it remains in operation, but the effects of employment stress will still be experienced by many families, and the post-JobKeeper future is highly uncertain for vast swathes of working parents.

While lower socio-economic families will be affected more severely, the impact on higher socioeconomic families is also significant. The percentage of schoolchildren and pre-schoolers in the highest earning families experiencing employment stress has jumped from 10% in 2016 to around 30% in 2020.

Figure 3: **School- and pre-school children experiencing employment stress in the family because of coronavirus, by sector**



Source: Mitchell Institute analysis of ABS Census 2016 and Grattan Institute modelling of COVID-19 employment shock

Of approximately 780,000 schoolchildren and pre-schoolers estimated to be experiencing employment stress in the family following COVID-19, more than half attend government schools.[5] There are also large numbers of students in non-government schools who are likely to be adversely impacted by parental job loss.

Taken together, these charts show the profound impact of COVID-19 on working parents and their children across all socio-economic groups and all parts of the country. Families that were already struggling are now likely to be facing severe stress, with no indication that their situation will improve in the comings months. In addition, large numbers of Australian children who were not considered vulnerable in any way now meet the definition of 'at risk', due to parental job or income loss, combined with other negative impacts of living through a global pandemic.

Our modelling is approximate and indicative, and subject to a high degree of uncertainty. Nonetheless, it can assist in developing an informed understanding of the challenge, in order to develop optimal policy responses and practical solutions. Given that a great deal is known about the detrimental impact of financial stress and joblessness on families and children's educational and life outcomes, acting now to put protective and support measures in place within our education systems will be critical to limiting future damage.

[5] Due to the complexity of the preschool sector, and data limitations (see technical appendix for more information), preschool students are presented here as a single group, rather than disaggregated by provider type.

How will employment stress influence levels of child vulnerability?

Financial stress is a risk factor for vulnerability, though whether children are vulnerable depends on the presence of multiple risk factors. While definitions vary across government agencies and service providers, factors generally include 'family stressors such as economic hardship through unemployment, business failure, gambling or homelessness through to other factors such as family violence, alcohol and substance misuse, mental health problems, disability and parental history of abuse and neglect' (Victorian Government, 2013).

We contend that significant financial stress combined with the experience of living through a global pandemic, social isolation, and temporary disruption to education all constitute risk factors for vulnerability. Pandemic-related stress exists alongside the social and economic impacts that many Australian communities were already grappling with following a devastating bushfire season. While these factors in isolation would not necessarily result in a child being considered vulnerable or at risk, their cumulative effect means that large numbers of Australian children are now likely to fall into those categories (Brown et al., 2020).

Our modelling shows the extensive impact of COVID-19 on the lives of working parents and the massive number of preschool- and schoolchildren this impacts. Previously, there were pockets with higher numbers of children in families experiencing employment stress, particularly in outer-suburban areas. Our modelling suggests that the number of pre-schoolers and schoolchildren in families experiencing employment stress has exploded. This is occurring in all regions throughout the country on a scale that is unprecedented.

Impact on children's wellbeing, learning and development

Previous recessions in Australia and internationally have shown that increased unemployment can have significant negative impacts on families and children, with the effects worsening over extended periods of unemployment (Gray et al., 2009, Cantillon et al., 2017). Employment levels have taken several years to recover following previous recessions. The current recession is the result of many industries and workplaces temporarily closing as part of the policy response to COVID-19 (Coates, 2020); because the current recession has to a large extent been engineered and supported, the pace of recovery and re-employment is not easily compared to previous recessions.

What we do know is that the effects on involuntary parental unemployment on children will be significant. While losing a job for any length of time can cause financial stress and hardship for families, the effects of prolonged joblessness can be particularly severe (McLachlan et al., 2013). Evidence suggests parental unemployment is associated with children and young people having poorer outcomes in relation to health and wellbeing as well as education and development – and even later in life, in relation to employment.

Evidence related to health and wellbeing outcomes includes:

- A risk that parents' mental health and parenting can be compromised, which can negatively affect children's wellbeing (Gray et al., 2009 & Ström, 2003).
- Children living in jobless households are more likely to have poorer social-emotional wellbeing and who have a higher prevalence of conduct and emotional issues, particularly when joblessness persists (AIHW, 2017 & McLachlan et al., 2013).
- Compared to those who had never accessed income support, young people in families who have received intensive income support are more likely to engage in health risk behaviours and have health problems, such as asthma and depression (McLachlan et al., 2013 & Cobb-Clarke, 2010).
- Lack of employment is associated with greater social isolation, which can have a negative impact on children's wellbeing and development (Baxter et al., 2012).
- Food insecurity is more common among Australians without work, particularly those experiencing prolonged unemployment, and is associated with poor child nutrition, an increased probability of chronic disease and poorer academic achievement (Food Bank, 2019; Victorian Department of Education and Training, 2019 & Harris et al., 2017).
- Health and education are interrelated and correlative (Victorian Department of Education and Training, 2019). Compromised health outcomes due to parental employment stress can have negative repercussions for educational outcomes, and vice-versa.

Evidence related to educational and developmental outcomes includes:

- A strong correlation between a child's developmental outcomes and parental employment status, where children with no working parent have significantly worse development scores at age 4-5 years (McLachlan et al., 2013).
- Children in families experiencing job loss are around 15% more likely to repeat a grade at school, and this risk is greater for children whose parents have lower levels of education (Huff Stevens & Schaller, 2009).
- Adolescents are particularly vulnerable to the effects of parental job loss. High school students whose parents lose their job are more likely to leave school early and less likely to attend university (Kalil & Wightman, 2009 & Coelli, 2005). Their academic attainment is more likely to be compromised, compared with peers whose families are not experiencing employment stress (Lehti et al., 2019).
- The negative effects of parental job loss on children's educational outcomes are reduced in families where parents have higher levels of education (Huff Stevens & Schaller, 2009 & Lehti et al., 2019).
- Long-term parental unemployment may not significantly affect levels of student enrolment but is likely to impact negatively on academic performance and progress (Lehti et al., 2019). Parents' pessimistic attitudes towards work as a result of unemployment has been found to lead to reduced educational attainment among their children (Mooi-Reci, 2019).
- There may be a gendered element to the impacts of parental unemployment on children. Research has found a negative impact of paternal unemployment on the likelihood of

children pursuing higher education, but no similar effect for maternal unemployment (Lindeman, 2019).

Where parental unemployment is prolonged, longer term employment outcomes for children can include:

- Young people whose parents lose their job may have reduced earning capacity later in life and rely more on social safety nets (Oreopoulos et al., 2008).
- A lack of employed role models can have implications for young people's work habits and transition to work (Hand et al., 2011).

Some children are more vulnerable to sudden shocks in the labour market. Children from lower income families are more likely to be affected by parental unemployment than their peers in higher income families (Coelli, 2005), exacerbating the effects of existing disadvantage. In addition, single parent families and other single income families are more vulnerable to the negative impacts of sudden unemployment due to their reliance on one income.

Parents with lower levels of education are also more likely to be negatively affected by employment shocks, due to their jobs being more commonly exposed to shocks in the labour market and greater challenges in finding new work. As seen during other economic crises, one of the potential impacts of COVID-19 is an increase in rates of poverty among groups who already face high rates of poverty, thus exacerbating existing inequality in children and young people's outcomes (Cantillon et al., 2017).

Effect of COVID-19 policy responses

The effect of the pandemic, combined with policy responses necessary to protect public health, has already had a profound impact on where and how Australian students are learning, and their mental and physical wellbeing. These impacts are likely to be felt for months, and for some students, potentially years.

Most early childhood education and care providers and many preschools continued to operate throughout the shutdown period, following the federal government's temporary commitment to directly fund childcare through a combination of the Child Care Subsidy and JobKeeper payments. This means that the educational and developmental needs of many preschool children could be met, and parents with jobs could continue to work. Importantly, the most disadvantaged families, including newly unemployed parents, have been able to access early childhood education and care, at least while current measures remain in place.

Our school systems' responses have been much more fragmented, and for the past two months, most Australian students have undergone a seismic change in where and how they learn. Distance learning has presented huge challenges for schools, teachers and families, with many students and parents struggling to manage this process and remain engaged in learning (YouthInsight, 2020). While schools in most jurisdictions remained open to vulnerable children, the definition of vulnerability tended to be narrow (based on contact with child protection services).

Students are now learning at school in most jurisdictions and those jurisdictions in which remote learning is still operating have a timeline for school-based learning to resume. This will minimise disruption to learning that could have resulted from an extended period of home-based learning

(Lamb et al., 2020). But ‘fixing the problem’ of disruption and increased levels of vulnerability will not be solved by students simply returning to school; many children will remain vulnerable over the coming months, and potentially years.

Early learning providers and schools will be critical sites and resources for supporting vulnerable students through this period. But in order to do that effectively, additional short-term measures, combined with longer term reform focused on reducing educational inequality, will be pivotal. Some of these mechanisms will require structural change, and many early childhood education and care (ECEC) providers and schools will require additional funding.

Current needs-based school funding mechanisms largely won’t capture the additional vulnerability caused by COVID-19 related employment stress. While school funding works differently in different jurisdictions, the loading for socio-educational disadvantage is generally calculated by categorising parents’ occupations and combining this with their educational attainment to calculate the level of need and amount of funding a school will receive. In order to be captured in the unemployed category, the period of unemployment must be at least 12 months. The combination of the 12 month unemployment criterion and the significant lead time for funding to flow through to schools means that schools won’t receive any increase in funding due to parental unemployment until 2022 at best. Furthermore, households with two incomes where only one parent loses their job will not fall into the unemployed category. Also, families facing increased financial stress due to significantly reduced hours will not be captured under current funding mechanisms.

The quality of the data used to calculate needs-based funding may also not be sufficient to capture the increase in child vulnerability due to COVID-19 related parental employment stress. While data standards and collection practices vary somewhat from state to state, parental occupation data is often collected when a child is first enrolled in a school, rather than being regularly updated. In normal circumstances, authorities argue that the data remains reasonably accurate, with changes in jobs most likely to be within an occupation category (Rickard & Lu, 2014 & ACARA, 2015). However, during the current unprecedented circumstances, with one of the largest increases in unemployment in Australia’s history, the accuracy of this data could become compromised.

Given the large increase in children living in families under financial stress, it is critical that schools are encouraged to update all parental background information so that it accurately reflects current levels of socio-educational disadvantage following COVID-19. These efforts will be particularly critical in disadvantaged schools. Analysis has shown that these schools are more likely than affluent schools to have missing parental background data (Rickard & Lu, 2014). Monitoring of indicators of student vulnerability, including in relation to familial financial stress and employment, will enable a better understanding of need and more effective allocation or resources and support.

Funding mechanisms for preschools in some jurisdictions will provide additional subsidies to some families experiencing significant employment stress, though provisions vary across the country. The cost to families of other ECEC services is highly uncertain, with the federal government currently planning its transition out of emergency arrangements. Many of these services are already struggling financially to meet additional health-related costs (for example cleaning and social distancing). In addition to efforts in schools, it will also be critical to effectively monitor child vulnerability and provide support to those who need it most in ECEC services.

Can schools ‘snap back’ to normal?

Over the past months, many school students and families have struggled to remain productive, engaged and positive while learning from home. Nearly six in ten students have found distance learning more difficult than learning at school, and 18% of have found it a lot more difficult (YouthInsight, 2020). For many students, these challenges will reduce or disappear when they return to school, with increased access to support from teachers and peers as well as access to other key resources (Lamb et al., 2020). They will have had a unique insight into the experience of vulnerable learners, but they are likely to re-engage in their own learning fairly quickly and easily, as well as readjusting socially.

However, many vulnerable students will not ‘snap back’ to normal when they return to school. Some were already struggling with learning prior to COVID-19. And many more are likely to face serious challenges to their wellbeing and learning over the coming year, as the disruption to learning and engagement with school is combined with the impact of parental unemployment and uncertainty around economic recovery.

Compounding this challenge, many of the children most likely to be affected by increased parental unemployment or reduced work hours live in less educationally supportive environments. While returning to school will help mitigate some differences in young people’s homes that were exacerbated by COVID-19, such as the digital divide, other differences remain. Many children will need additional support for an extended period of time, and pre-existing levels of educational inequality show our school systems were already finding meeting the needs of socio-economically disadvantaged and vulnerable students challenging.

Schools serving Australia’s most disadvantaged communities often lack the resources and capacity to overcome the educational difficulties they face. Compared to Australia’s most affluent schools, low SES schools face greater teacher shortages, have fewer instructional resources and have lower quality physical infrastructure. The difference between our advantaged and disadvantaged schools is among the largest in the OECD (Cobbold, 2020; Cobbold, 2017 & Perry 2018).

In addition, Australia’s school systems are characterised by a high level of socio-economic segregation, with a high proportion of socio-economically disadvantaged students concentrated in disadvantaged schools (OECD, 2018). This creates a double-edged sword, where students from disadvantaged backgrounds are more likely to have less educationally supportive home environments, and more likely to attend schools that are not adequately equipped to support their needs.

Heightened employment stress in families and the disruption and anxiety caused by the pandemic could also make many more children vulnerable to health and wellbeing challenges. Given there is clear evidence that health and wellbeing are foundational to educational success, the added vulnerability caused by the pandemic is reemphasising and exacerbating the existing need to effectively support students’ health and wellbeing. Schools have a key role to play in meeting these needs. It will also be important to facilitate connections with external social and health services to bolster the capacity of schools and enable access to expert support that schools are not equipped to provide. Incentives and adequate staffing to organise and manage relationships between external services and schools will be critical to their success.

Under these circumstances, a return to 'schooling as usual' will not meet the developmental and learning needs of a huge new cohort of potentially vulnerable children. It will certainly not address pre-existing inequalities within the education system that were in many cases already contributing to differences in opportunities and outcomes.

An urgent injection of resources and capacity into schools that need it most will be vital in supporting students through the pandemic and the resulting 'once-in-a-century' economic shock (Senate Select Committee, 2020). These investments, in early learning as well as schools, are also likely to reduce the need for more expensive crisis services and increased social security spending later on (Teager et al., 2019).

What about early childhood education and care?

The ECEC sector faces a very different set of challenges compared with schools, and the policy responses to these challenges will have a significant effect on families and children using these services. Current arrangements to keep the sector viable and operational are temporary and unprecedented. These are currently being reviewed and a decision will be taken over the coming weeks as to whether existing provisions will be extended, or whether arrangements will be put in place to transition back to the pre-COVID funding system.

The near-collapse of this sector, combined with the growing body of evidence demonstrating its importance to children's development, learning and life outcomes, as well as its vital role in supporting labour market participation and the economy, presents a significant challenge to policy-makers. 'Snapping back' to previous arrangements is likely to cause significant access and affordability problems for families, particularly those experiencing reduced income. It would also leave the sector vulnerable to future shocks (Noble et al., 2020).

Serious consideration should be given to sector reform in the coming months to make it more secure and able to withstand shocks, and more affordable for parents. Identification and detailed analysis of options is beyond the scope of this paper. But it is worth noting the relative stability and capacity to respond within the school system to growing levels of vulnerability, compared with serious limitations of our ECEC sector. The Mitchell Institute will be exploring these issues in more detail over the coming months.

Policy recommendations

During a prolonged period of economic recovery, labour market and social services responses will be key. But in the meantime, schools and early learning services will be critical to limiting negative impacts on children's learning and development as we continue to navigate the immediate crisis. Urgent policy responses should:

- Ensure that families experiencing financial hardship are supported to access preschool and other early learning programs at low or no cost. With responsibility for funding and delivering early childhood education and care existing at all levels of government, this must be a shared governmental priority, with a strong focus on reducing the impact of disadvantage.

- Increase provision of social, health and economic supports in schools and ECEC providers, through improved linkages and incentivised collaboration between support services and educational institutions. It will be critical that schools and ECEC providers have an adequately skilled staff member tasked with brokering and managing connections with external support services.

- Increase student counselling and support for students during the final years of compulsory and secondary education, where students are more likely to disengage from education, particularly when experiencing unemployment in the family. Maximising students' ability to remain in education will reduce the risk of adolescents leaving school early, entering a depressed job market, and further increasing employment stress within the family.

- Monitor fluctuations in child vulnerability in schools and ECEC, to guide allocation of resources within jurisdictions' education systems and within schools on a rolling basis (in addition to allocation of needs-based funding on an annual basis). This could largely be achieved through existing data collection, which may require supplementation.

- Equip schools with the resources and training required to effectively implement a whole-of-school approach to health and wellbeing, embedding this focus at all levels of the education system, to proactively support students' health and wellbeing. Supporting teachers should also be a key element of this approach.

Schools and early childhood education and care services are also crucial elements of a longer term strategy to reduce the negative impact of COVID-19 on the education and life outcomes of Australian children, and limit the extent to which this worsens existing inequality. This strategy should also consider what and how our education systems have learned from a rapid transition in many cases to online learning and systematically integrate this in preparation for potential future disruptions. Long term, structural reform should:

- Develop a resilient, secure and sustainable ECEC system that provides all Australian children with quality education in the years before school. High quality early childhood education and care can mitigate and reduce levels of vulnerability, and ensuring widespread access will be critical to both social and economic recovery (Clinton, 2020 & AIHW, 2015).

- Build schools' and teachers' capacity to continue teaching and learning online and via other flexible modes of delivery to better manage future disruptions. Schools and teachers should be supported to share learning and resources developed during school closures. 'Snapping back' to pre-existing routines will fail to capitalise on the immense effort and innovation generated during this period, which education systems could benefit from.

- Focus more on student-centred learning and development of general capabilities, including resilience, creativity and problem-solving. Capabilities should be treated with the same importance as foundational skills such as literacy and numeracy. While Australia's Early Years Learning Framework (applied from 0–5 years nationally and 0–8 years in Victoria) does this well; there is considerable scope for improving this balance in our school systems.

- Address persistent inequality in funding arrangements for schools, which continue to allocate a disproportionate amount of funding to advantaged schools (Hurley et al., forthcoming & Rice et al., 2019).

- Reduce socio-economic segregation in Australian schooling, through policies designed to incentivise high quality leaders and teachers to work at disadvantaged schools. Reform should also address disparities in relation to funding, instructional resources and physical infrastructure.

Glossary

At risk of vulnerability: children experiencing one or several factors that may contribute to vulnerability. 'At risk' children may cope well with adversity or they may become vulnerable, with outcomes largely dependent on the nature of their experience and their access to resources (resilience, support networks, financial resources, etc.).

Disengagement: disengagement from education includes withdrawal from class and school activities, lack of involvement in learning, lack of a sense of school belonging and/or inappropriate or counterproductive behaviour at school.

Employment shock: the effect of one or both parents losing their job or being unable to work, at relatively short notice. The impact of employment shock is likely to be experienced by the family as a whole, though the experience of individual family members will be different.

Employment stress: the result of a significant change in employment status within the family, or at least one parent being jobless and looking for work. Appendix A shows the categories we have used to calculate levels of employment stress prior to COVID-19 and how we have calculated estimates for current levels of employment stress. Our estimates do not include a number of factors likely to be causing employment stress in families, including job insecurity, salary cuts and reduced hours.

JobKeeper Payment scheme: a temporary federal government subsidy for businesses significantly affected by COVID-19. Eligible employers, sole traders and other entities can apply to receive $1,500 per eligible employee per fortnight. Some categories of workers are not eligible, and payments are subject to tax. Employees receiving JobKeeper may be still working, or not currently working but still classified as employed.

Pre-schooler: a child who is enrolled in a preschool program, which is a structured, play based learning program, delivered by a degree-qualified teacher, aimed primarily at children in the year or two before they commence full-time schooling.

Socio-economic disadvantage: describes limited access to material and social resources, and limited ability to fully participate in society. Disadvantage is often measured by area, but can also refer to the specific circumstances of individuals, families, households or communities/areas.

Socio-economic quartile: the Index of Household Advantage and Disadvantage orders households from most to least disadvantaged, placing the lowest 25% of households in quartile 1 (most disadvantaged), through to the highest 25% of households in quartile 4 (most advantaged).

Socio-economic status (SES): the social and economic position of a given individual, or group of individuals, within the larger society. Socio-economic status is usually, but not always, conceived of as a relative concept and can be measured for the individual, family, household or community/area.

Statistical Level Area 3 (SA3): SA3s provide a regional breakdown of Australia, generally with a population between 30,000 and 130,000 people. In major cities, they represent local areas serviced by a major transport and commercial hub. In regional areas, they represent local areas served by a major regional city (with a population over 20,000). In rural and remote areas, they represent areas with a similar social and economic profile, often with a distinct regional identity.

Unemployment: where a person of working age is not in employment and has carried out activities to seek employment during the previous month, and is currently available to take up employment if provided with a job opportunity.

Underemployment: this category includes part-time workers who want to work more hours, and full-time workers who are working part-time hours for economic reasons (due to insufficient work being available or being stood down).

Vulnerability: the likelihood of harm from exposure to risk factors. While definitions vary, they generally operationalise risk factors including, but not limited to: exposure to economic hardship through unemployment, business failure, gambling or homelessness; exposure to family violence, alcohol and substance misuse; experience of or exposure to mental health problems; disability; and parental history of abuse and neglect. Our modelling of increased vulnerability looks at two key factors: employment stress in the family and the experience of living through a global pandemic, entailing significant anxiety and upheaval of structure and routines.

Appendix A: Methodology and limitations

Impact of employment stress on schoolchildren by socioeconomic status

We wanted to estimate the number of schoolchildren impacted by COVID-19 related economic stress, by socioeconomic status. To achieve this, we undertook an analysis of the industry employment profile of parents by their socio-economic status. We used Grattan Institute analysis to estimate the proportion of parents impacted by employment stress and then applied this to the number of schoolchildren by socio-economic quartile.

We used the following variables from ABS TableBuilder to estimate the number of parents impacted by employment stress:

- Labour Force Status of Parents/Partners in Families (LFSF)
- Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) Quartiles at SA3 Level (Area)
- Industry of Employment (INDP) - 1 Digit Level

We used the following variables from ABS TableBuilder to estimate the number of schoolchildren impacted by employment stress:

- Labour Force Status of Parents/Partners in Families (LFSF)
- IRSAD Quartiles at SA3 Level (Area)
- Type of Educational Institution Attending (TYPP)

Impact of employment stress on schoolchildren by location

We also wanted to estimate the number of schoolchildren impacted by COVID-19 related economic stress, by their place of usual residence. To achieve this, we undertook an analysis of the employment profile of parents according to their place of usual residence. We used Grattan Institute analysis to estimate the proportion of parents experiencing employment stress, and then applied this to the number of schoolchildren by location.

We used the following variables from ABS TableBuilder to estimate the number of parents impacted by employment stress:

- Labour Force Status of Parents/Partners in Families (LFSF)
- Statistical Areas 3 (SA3) – Place of usual residence
- INDP - 1 Digit Level

We used the following variables from ABS TableBuilder to estimate the number of schoolchildren impacted by employment stress:

- Labour Force Status of Parents/Partners in Families (LFSF)
- Statistical Areas 3 (SA3) – Place of usual residence
- Type of Educational Institution Attending (TYPP)

Calculating employment stress

This report uses the Labour Force Status of Parents/Partners in Families (LFSF) variable in ABS TableBuilder as the basis for calculating employment stress. This variable was coded in order to calculate pre- and post-COVID-19 employment stress as per the table below.

LSFS Category	2016 employment stress	2020 COVID-19 related employment stress
Couple family: Both employed, worked full-time		✓
Couple family: One employed full-time, other part-time		✓
Couple family: One employed full-time, other away from work		✓
Couple family: One employed full-time, other unemployed	✓	
Couple family: One employed full-time, other not in the labour force		✓
Couple family: One employed full-time, other labour force status not stated		✓
Couple family: Both employed, worked part-time		✓
Couple family: One employed part-time, other away from work		✓
Couple family: One employed part-time, other unemployed	✓	
Couple family: One employed part-time, other not in the labour force		✓
Couple family: One employed part-time, other labour force status not stated		✓
Couple family: Both employed, away from work		✓
Couple family: One away from work, other unemployed	✓	
Couple family: One away from work, other not in the labour force		✓
Couple family: One away from work, other labour force status not stated		✓
Couple family: Both unemployed	✓	
Couple family: One unemployed, other not in the labour force	✓	
Couple family: One unemployed, other labour force status not stated	✓	
Couple family: Both not in the labour force	✓	

Couple family: One not in the labour force, other labour force status not stated	✓	
Couple family: Both labour force status not stated		
One parent family: Employed, worked full-time		✓
One parent family: Employed, worked part-time		✓
One parent family: Employed, away from work		✓
One parent family: Unemployed	✓	
One parent family: Not in the labour force	✓	
One parent family: Labour force status not stated		
Other family		

Calculating employment stress resulting from COVID-19 restrictions

This report uses Grattan Institute analysis to estimate employment stress. The following multiples have been applied to industry level data from ABS TableBuilder in order to estimate the impact of COVID-19 on the employment status of parents.

Industry	Employment stress multiple
Agriculture, Forestry and Fishing	0.127
Mining	0.130
Manufacturing	0.209
Electricity, Gas, Water and Waste Services	0.136
Construction	0.195
Wholesale Trade	0.209
Retail Trade	0.333
Accommodation and Food Services	0.605
Transport, Postal and Warehousing	0.235
Information Media and Telecommunications	0.167
Financial and Insurance Services	0.126
Rental, Hiring and Real Estate Services	0.299
Professional, Scientific and Technical Services	0.108
Administrative and Support Services	0.172
Public Administration and Safety	0.148
Education and Training	0.359
Health Care and Social Assistance	0.257
Arts and Recreation Services	0.550
Other Services	0.411

Limitations

Limitations of the Grattan Institute modelling of job losses also apply to our analysis (for more detail see Coates et al, 2020). The Grattan Institute's modelling assumed that restrictions in place in April would, broadly speaking, remain in place for the second quarter of 2020. These are currently in the process of being lifted, which is likely to affect job loss numbers (Coates et al, 2020 & Jericho, 2020). Modelling does not take into account job losses resulting from reduced demand for products and services, or the effect of fiscal stimuli. As with the Grattan Institute modelling, our estimates are indicative and subject to a high degree of uncertainty.

Using the most up-to-date data from the ABS, which uses payroll info and breaks down job loss to date by industry, we calculated a more conservative 230,000 preschool- and schoolchildren are in a family experiencing job loss. However, this figure only includes those who have lost their job as at May 2020. It excludes anyone on JobKeeper or anyone who has been stood down, or had their hours reduced, or their wages cut. It also excludes future job losses, which the RBA has forecasted. This conservative calculation is useful to test our assumptions, but it underestimates actual levels of employment stress significantly.

Our decision to use the Grattan Institute modelling as the basis for our analysis is based on limitations of up-to-date labour force data; further projected job losses in June, and the need to understand the likely scale of the problem throughout 2020 in order to put effective measures in place to respond, in advance. The Grattan Institute modelling more closely aligns with other data, such as the 22.1% of household members experiencing stressors because of coronavirus and the 2.7 million workers adversely affected by the snap recession (ABS, 2020b & Gittens, 2020). We believe our estimates of 750,000-800,000 preschool and schoolchildren likely to be experiencing employment stress in the family are much closer to actual figures.

Our methods are unable to account for additional sources of employment stress to families, beyond job loss. There is evidence of widespread salary cuts and reduction of hours across many industries (Australian Government, 2020 & Tadros, 2020), which are also likely to cause varying levels of employment stress among families. With a number of sectors expecting imminent, major job losses as a result of lost revenue (Lane et al, 2020), many working parents who still have their jobs are likely to be experiencing a high level of job insecurity, and employment stress as a result.

Vulnerability in childhood is not a precise term, but there is a consistent requirement across all definitions that multiple risk factors must be present for a child to be considered vulnerable. Our modelling looks at two key factors: employment stress in the family and the experience of living through a global pandemic, entailing significant anxiety and upheaval of structure and routines. We have also calculated likely distribution across socio-economic groups, but our methods do not enable analysis of likely employment stress existing alongside other aspects of disadvantage.

Our analysis examined impact on preschool- and schoolchildren only, due to limitations of ABS data on which our modelling is based. Our analysis does not capture young children who are not enrolled in a preschool program, although they may attend other types of ECEC. However, it does capture many children attending long daycare, where they attend a preschool program at that service.

Appendix B: Children with employment stress in the family by jurisdiction (2016 and 2020)[6]

Figure 3: Australian Capital Territory

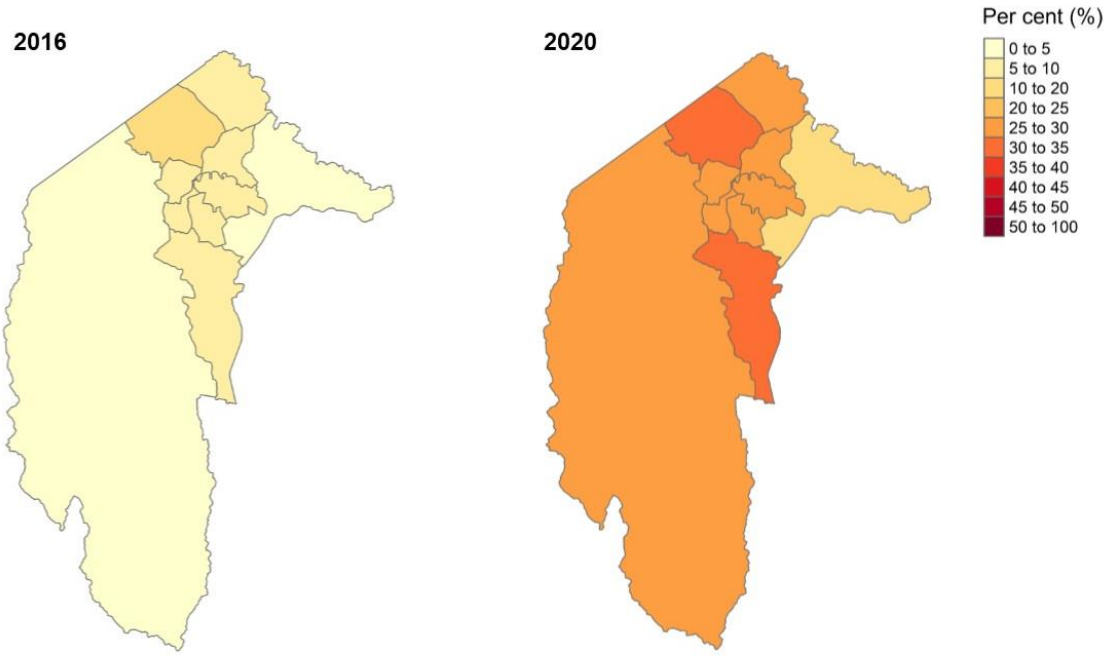
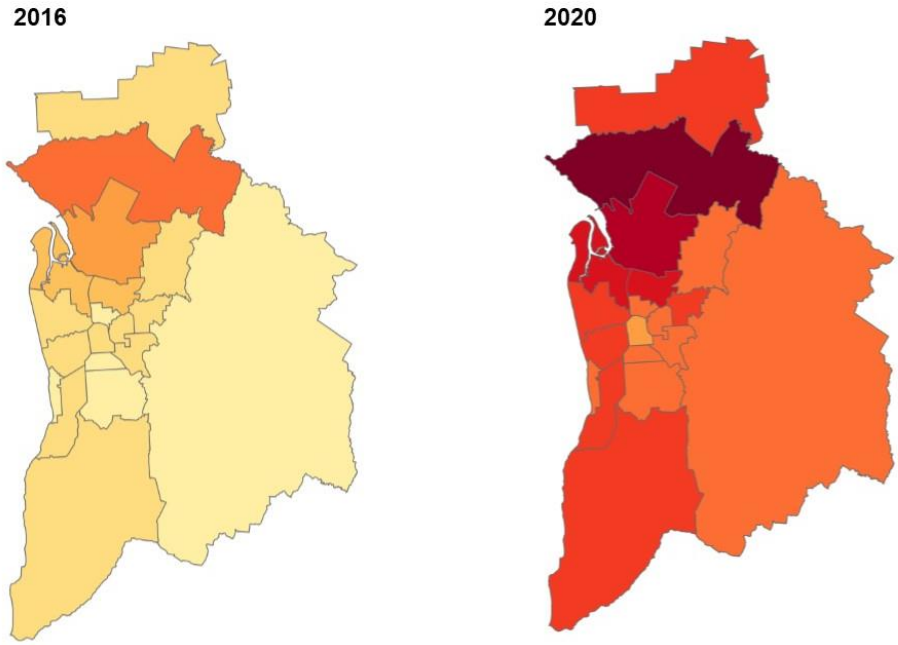


Figure 4: Greater Adelaide



[6] Greater Capital City Statistical Areas (GCCSAs), which represent the functional extent of each of state and territory capital cities, are mapped for capital cities in most jurisdictions, but due to smaller populations in the ACT, Northern Territory and Tasmania, those jurisdictions are mapped in full.

Figure 5: Greater Brisbane

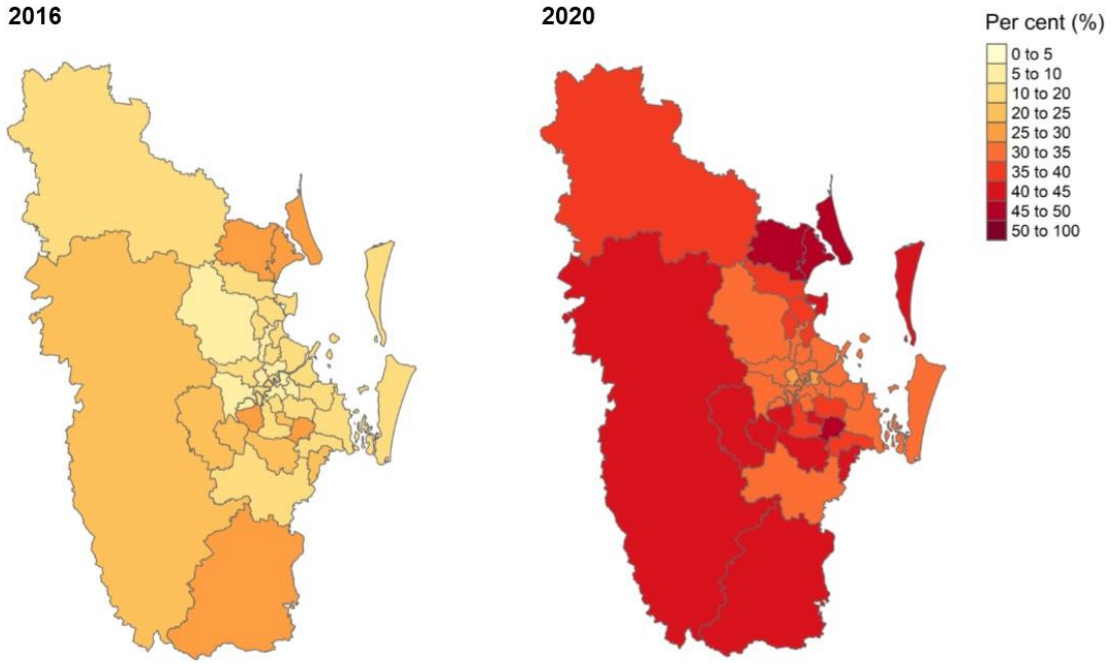


Figure 6: Greater Melbourne

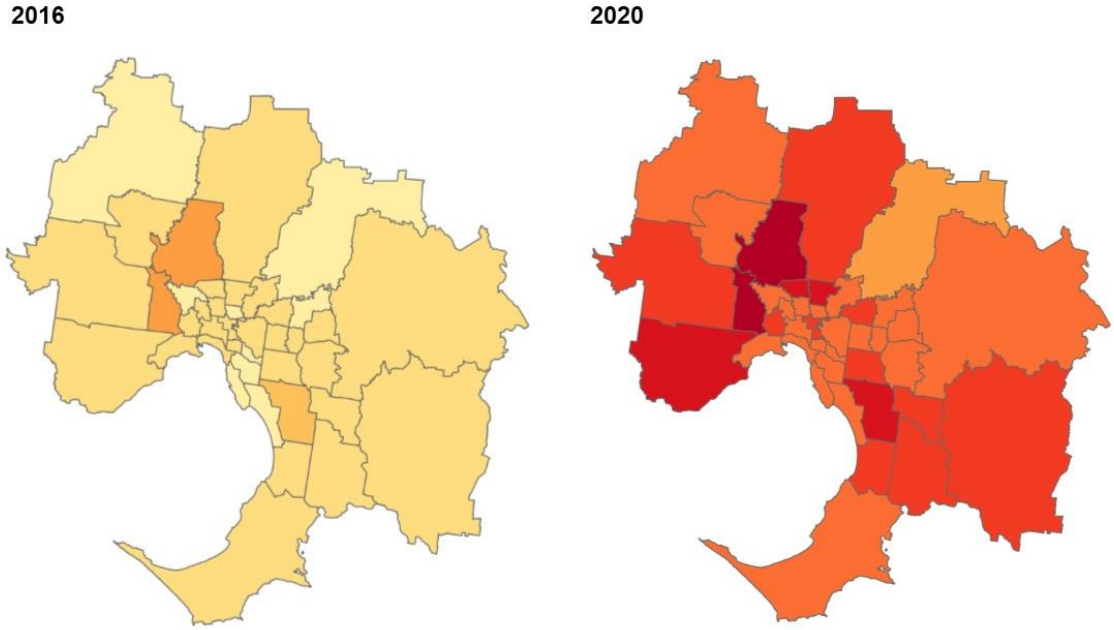


Figure 7: Greater Perth

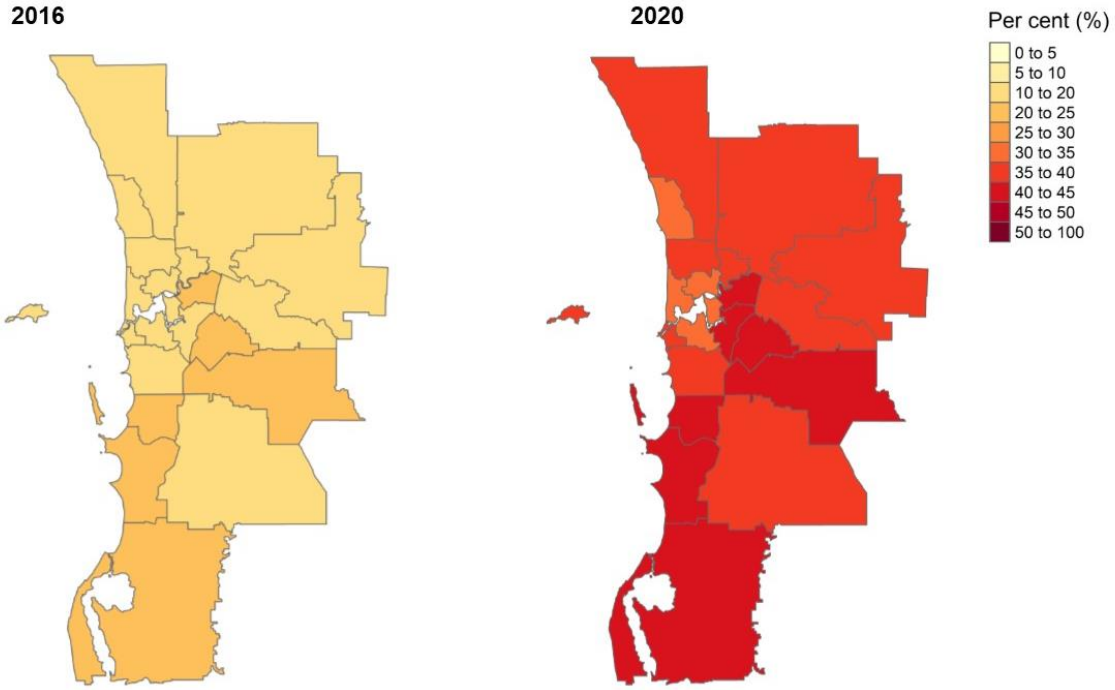


Figure 8: Greater Sydney

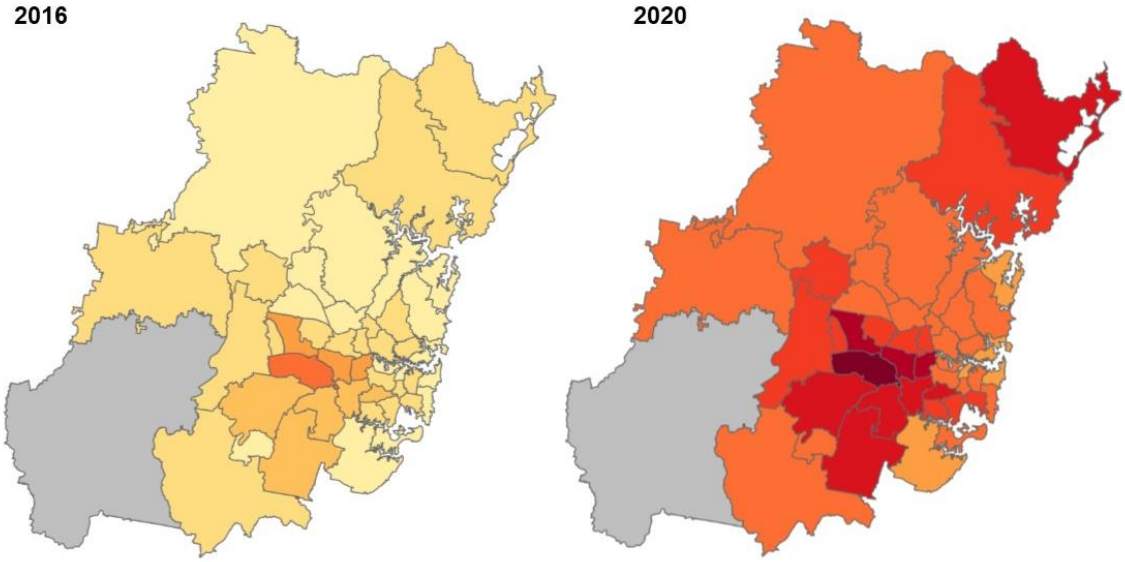


Figure 9: Northern Territory

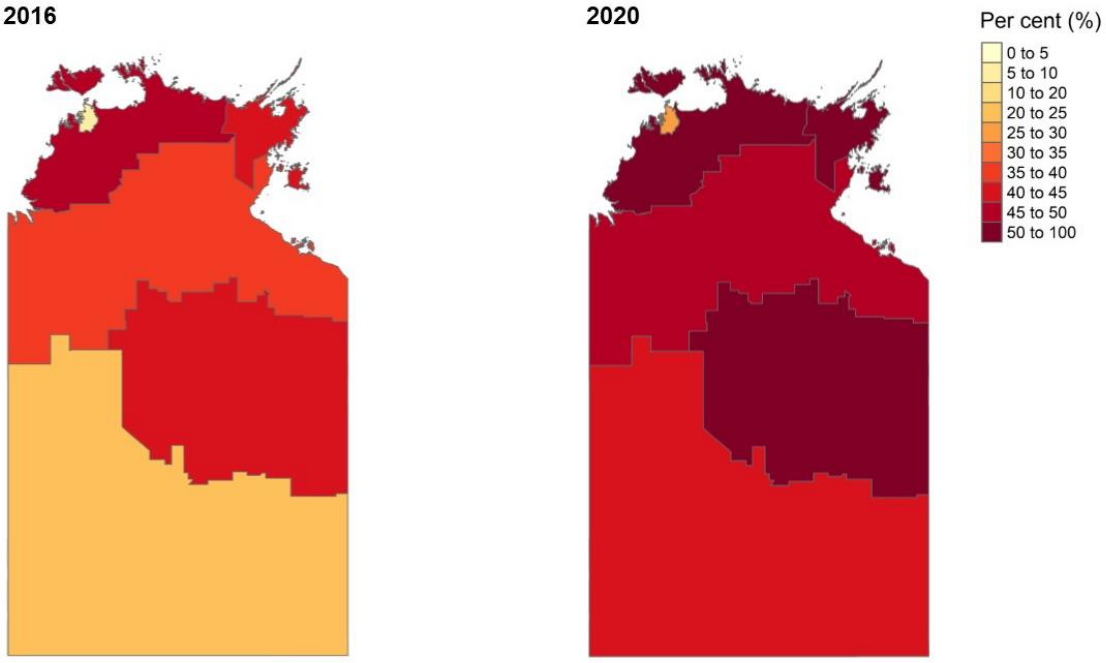
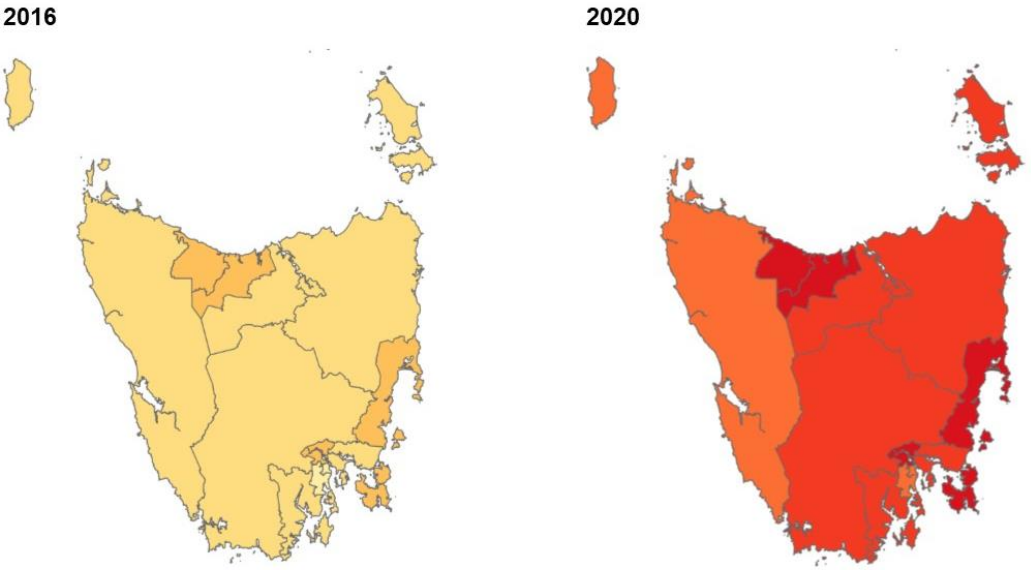


Figure 10: Tasmania



References

Australian Bureau of Statistics (ABS) (a) (2020). *Australian Census (August 2016)*. TableBuilder. Findings based on use of ABS TableBuilder data.

Australian Bureau of Statistics (ABS) (b) (2020). 4940.0 – Household Impacts of COVID-19 Survey, 29 Apr–4 May 2020.

Australian Curriculum, Assessment and Reporting Authority (ACARA), (2015). Guide to understanding ICSEA (Index of Community Socio-educational Advantage) values. Accessed on 12 April 2020. Retrieved from: https://docs.acara.edu.au/resources/Guide_to_understanding_icsea_values.pdf

Australian Government. (2020, 14 May). Impact of COVID-19 on Australian businesses – part two. Retrieved from: https://www.employment.gov.au/newsroom/impact-covid-19-australian-businesses-part-two

Australian Institute of Health and Welfare (AIHW) (2017). *Australia's welfare 2017*. Australia's welfare series no.13. AUS 213. Canberra: AIHW.

Australian Institute of Health and Welfare (AIHW) (2015). *Literature review of the impact of early childhood education and care on learning and development*. Working paper. Cat. no. CWS 53. Canberra: AIHW.

Baxter, J., Gray, M., Hand, K. & Hayes, A. (2013). *Parental joblessness, financial disadvantage and the wellbeing of parents and children*. Occasional paper no.48, Australian Institute of Family Studies and the Research School of Social Sciences, Australian National University.

Bonyhady, N. & Patty, A. (2020, 13 May). University union agrees to wage cuts to save 12,000 jobs. *Sydney Morning Herald*.

Borland, J. (a) (2020, 14 May). Were it not for JobKeeper, unemployment would be 11.7%, up from 5.2% in one month. Here's how the numbers pan out. Retrieved from https://theconversation.com/were-it-not-for-jobkeeper-unemployment-would-be-11-7-up-from-5-2-in-one-month-heres-how-the-numbers-pan-out-138268

Borland, J. (b) (2020, 15 May). Coronavirus has seen unemployment surge so what should the government do next? ABC: Retrieved from https://www.abc.net.au/news/2020-05-15/coronavirus-unemployment-surge-what-government-should-do/12249758

Brown, N., Te Riele, K., Shelley, B. & Woodroffe, J. (2020). *Learning at home during COVID-19: Effects on vulnerable young Australians.* Independent Rapid Response Report. Hobart: University of Tasmania, Peter Underwood Centre for Educational Attainment.

Bubonya, M. & Cobb-Clark, D.A. (2020). *Pathways of disadvantage: Unpacking the intergenerational correlation in welfare.* Life Course Centre working paper series, 2019–28. Institute for Social Science Research, University of Queensland.

Cantillon, B., Chzhen, Y., Handa, S. & Nolan, B. (2017). *Children of austerity: Impact of the great recession on child poverty in rich countries*. The United Nations Children's Fund and Oxford University Press.

Clinton, J. (2020). *Supporting vulnerable children in the face of a pandemic*. A paper prepared for the Australian Government Department of Education, Skills and Employment. Centre for Program Evaluation, Melbourne Graduate School of Education, University of Melbourne.

Coates, B., Cowgill, M., Chen, T. & Mackey, W. (2020). *Shutdown: estimating the COVID-19 employment shock.* Grattan Institute. Retrieved from: https://grattan.edu.au/wp-content/uploads/2020/04/Shutdown-estimating-the-COVID-19-employment-shock-Grattan-Institute.pdf

Cobb-Clarke, D. (2010). Disadvantage across the generations: What do we know about social and economic mobility in Australia? *The Economic Record*, *86*, 13-17.

Cobbold, T. (2020). Low SES schools have far less resources than high SES schools. Save Our Schools. Retrieved from: https://saveourschools.com.au/equity-in-education/low-ses-schools-have-far-less-resources-than-high-ses-schools/

Cobbold, T. (2017, Feb 12). Resource Gaps between advantaged and disadvantaged schools among the largest in the world. Save Our Schools. Retrieved from: https://saveourschools.com.au/equity-in-education/resource-gaps-between-advantaged-disadvantaged-schools-among-the-largest-in-the-world/

Coelli, M. (2005). *Parental income shocks and the education attendance of youth*. Unpublished manuscript, Department of Economics, University of British Columbia.

Davidson, P., Saunders, P., Bradbury, B. & Wong, M. (2020). *Poverty in Australia 2020: Part 1, overview*. ACOSS/UNSW Poverty and Inequality Partnership Report No. 3, Sydney: ACOSS.

Foodbank (2019). *Foodbank hunger report 2019*. McCrindle and Foodbank Australia. Sydney.

Gittens, R. (2020, May 30). Beancounters believe nation can dodge depression, but no sharp rebound. *The Sydney Morning Herald.* Retrieved from: https://www.smh.com.au/business/the-economy/bean-counters-believe-nation-can-dodge-depression-but-no-sharp-rebound-20200529-p54xq6.html

Gray, M., Edwards, B., Hayes, A. & Baxter, J. (2009). The impacts of recessions on families. *Family Matters*, No. 83. Retrieved from: www.aifs.gov.au

Hand, K., Gray, M., Higgins, D., Lohoar, S. & Deblaquiere, J. (2011). *Life around here: Community, work and family life in three Australians communities*. Research Report No. 19, Australian Institute of Family Studies, Melbourne.

Hurley, P. (Forthcoming). *Australian investment in education: Schools*. Victoria University, Melbourne.

Jericho, G. (2020, 21 May). The latest slowdown of Covid-19 job losses has been touted as good news. Is it though? *The Guardian.* Retrieved from: https://www.theguardian.com/business/grogonomics/2020/may/21/the-latest-slowdown-of-covid-19-job-losses-has-been-touted-as-good-news-is-it-though#maincontent

Kalil, A. and Wightman, P. (2011). Parental job loss and children's educational attainment in black and white middle-class families. *Social Science Quarterly*, *92*(1), 57–78.

Lamb, S., Jackson, J., Walstab, A. & Huo, S. (2015*). Educational opportunity in Australia 2015: Who succeeds and who misses out*, Centre for International Research on Education Systems, Victoria University, for the Mitchell Institute, Melbourne: Mitchell Institute.

Lamb, S., Maire, Q., Doecke, E., Macklin, S., Noble, K. & Pilcher, S. (2020). *Impact of learning from home on educational outcomes for disadvantaged children*. Centre for International Research on Education Systems and the Mitchell Institute, Victoria University.

Lancker, W.V. & Parolin, Z. (2020). COVID-19, school closures, and child poverty: a social crisis in the making. *The Lancet*, *5*(5). doi: https://doi.org/10.1016/S2468-2667(20)30084-0

Lane, S. & Long, C. (2020, 11 May). Research jobs set to go as coronavirus takes hold throughout Australian universities. ABC News. Retrieved from https://www.abc.net.au/news/2020-05-11/australia-research-workforce-facing-widespread-coronavirus-pain/12234704

Lehti, H., Erola, J. & Karhula, A. (2019). The heterogeneous effects of parental unemployment on siblings' educational outcomes. *Research in Social Stratification and Mobility*, *64*.

Lindemann, K. & Gangl, M. (2019). The intergenerational effects of unemployment: How parental unemployment affects educational transitions in Germany. *Research in Social Stratification and Mobility*, *62*.

McLachlan, R., Gilfillan, G. & Gordon, J. (2013). Deep and persistent disadvantage in Australia. Productivity Commission Staff Working Paper. Commonwealth of Australia, Canberra.

Mooi-Reci, I., Bakker, B., Curry, M. & Wooden, M. (2019). Why parental unemployment matters for children's educational attainment: Empirical evidence from the Netherlands, *European Sociological Review*, *35*(3), 394–408.

Noble, K., Jackson, J. & Pilcher, S. (2020). Childcare is critical for COVID-19 recovery: We can't just snap back to 'normal' funding arrangements. *The Conversation*. 21 May 2020: Retrieved from: https://theconversation.com/childcare-is-critical-for-covid-19-recovery-we-cant-just-snap-back-to-normal-funding-arrangements-139027

Oreopoulos, P., Page, M. & Huff Stevens, A. (2008). The intergenerational effects of worker displacement. *Journal of Labor Economics*, 26(3), 455-483.

Organisation for Economic Cooperation and Development (2018). *Equity in education: Breaking down barriers to social mobility*, PISA, OECD Publishing, Paris.

Partridge, J. (2020, 28 May). EasyJet plans to cut up to 30% of staff as Covid-19 hits demand. *The Guardian.* Retrieved from: https://www.theguardian.com/business/2020/may/28/easyjet-plans-to-cut-up-to-30-per-cent-of-staff-because-of-covid-19-crisis

Perry, L. (2018). *Educational inequality. How unequal? Insights on inequality*. Committee for Economic Development of Australia.

Public Health Information Development Unit (PHIDU) (2020). Social Health Atlas of Australia, Data by Population Health Area. Torrens University Australia.

Quach, J., Nguyen, C., O'Connor, M. & Wake, M. (2017). The cumulative effect of heath adversities on children's later academic achievement. *Academic Paediatrics*, *17*(7), 706–714.

Rice, J., Edwards, D. & McMillan, J. (2019). *Education expenditure in Australia*. Australian Council for Educational Research, Melbourne.

Rickard, K. & Lu, L. (2014). Family Occupation and Education Index (FOEI) 2013. Centre for Education Statistics and Evaluation. NSW Department of Education and Communities.

Senate Select Committee on COVID-19. (2020). May 28 hearing. Retrieved from: https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id:%22committees/commsen/a3af0917-dc51-4d01-a86f-69153eb93040/0000%22

Tadros, E. & Wootton, H. (2020, 15 April). How the big consultants are cutting costs amid COVID-19. *Australian Financial Review.* Retrieved from: https://www.afr.com/companies/professional-services/how-the-big-consultants-are-cutting-costs-amid-covid-19-20200414-p54ju1

Teager, W., Fox, S. & Stafford, N. (2019). *How Australia can invest early and return more: A new look at the $15b cost and opportunity*. Early Intervention Foundation, The Front Project and CoLab at the Telethon Kids Institute, Australia.

Whelan, C., Watson, D., Maître, B. & Williams, J. (2015). Family economic vulnerability & the Great Recession: An analysis of the first two waves of the Growing up in Ireland study. *Longitudinal and Life Course Studies*, *6*(3), 230–244.

Victorian Department of Education and Training (2019). *State of Victoria's Children Report 2017: A focus on health and wellbeing*. State of Victoria. Melbourne.

Victorian Government. (2013). Victoria's vulnerable children: Our shared responsibility, Strategy 2013–22. Retrieved from: http://youthlaw.asn.au/wp-content/uploads/2016/07/Victorias-vulnerable-children-Our-Shared-Responsibility.pdf

YouthInsight (2020). COVID-19 (Coronavirus) youth understanding and sentiment. Wave 2 survey data. Retrieved from: https://youthinsight.com.au/news/covid-19-coronavirus-youth-understanding-and-sentiment-wave-2/

Yu, M. & Daraganova, G. (2014). Children's early home learning environment and learning outcomes in the early years of school. *Longitudinal Study of Australian Children Annual Statistical Report 2014*. Australian Institute of Family Studies. Melbourne, pp. 63–81.