UNIVERSITY of TASMANIA

The changing nature of employment on Tasmania's West Coast

November 2022

Report prepared by the

Tasmanian Policy Exchange

Lachlan Johnson, Megan Langridge and Richard Eccleston

Image: https://www.discovertasmania.com.au/places/west-coast/queenstown/

Acknowledgement of Country

We acknowledge the palawa/pakana of lutruwita, the traditional owners of the land upon which we live and work.

We pay respects to Elders past and present as the knowledge holders and sharers. We honour their strong culture and knowledges as vital to the self-determination, wellbeing and resilience of their communities.

We stand for a future that profoundly respects and acknowledges Aboriginal perspectives, culture, language and history.

The Tasmanian Policy Exchange

The Tasmanian Policy Exchange (TPE) was established in 2020 as a strategic initiative to enhance the University of Tasmania's capacity to make timely and informed contributions to policy issues and debates which will shape Tasmania's future.

The TPE is developing an innovative place-based and outcomes-focused model of engagement to work with government and community partners to establish and frame priority policy questions, before working with staff across the University to develop evidence-based policy options and longer-term collaborations.

This study was commissioned by the West Coast Council. We acknowledge our colleagues across the University of Tasmania who provided feedback on the report.

Report Authors

Dr Lachlan Johnson – ARC Research Fellow and Policy Analyst

Lachlan is a research fellow at the TPE specialising in regional economic development, demography, and policy analysis. He has also published on tax and public finance, and supports the TPE's quantitative data analysis and visualisation work. Lachlan completed his PhD, which investigated institutional determinants of regional development, at the University of Tasmania in 2021.

Dr Richard Eccleston – Director of the TPE

Richard is a specialist in social and economic policy and has worked on analysing and developing practical evidence-based solutions to some of the most significant policy challenges facing our community, including regional development, housing affordability, migration, tax reform, preventative health, and the future of climate and sustainability policy in Tasmania. He was a Fulbright Senior Scholar and was Founding Director of the Institute for Social Change.

Megan Langridge – Policy Intern

Megan is a policy intern at the TPE whose work focuses on climate, sustainability, and workforce issues. Megan completed her Honours degree in Sociology in 2021 at the University of Tasmania with a thesis investigating Tasmanian forestry workers' perceptions of change in their industry and in their forest environment.

Overview

Part 1 The rise of DIDO and FIFO in Tasmania	A review of studies and government reports on the impacts of FIFO/DIDO employment on workers themselves and on other similar regional communities around the world.
Part 2 The extent of FIFO/DIDO work on the West Coast	New and detailed 2016 and 2021 ABS Census of Population and Housing.
Part 3 Mitigating the impacts and responding to the challenges	Our initial thinking about how local and state government, business and communities might mitigate the negative impacts of FIFO/DIDO on affected communities, particularly when it comes to improving liveability in regional Australia.

Image: Rob Mulally. Recovered from: https://www.discovertasmania.com.au/places/west-coast/queenstown/

What is this study about and why is it important?

Aims, approach, and data

This study, which was commissioned by the West Coast Council, seeks to determine the **prevalence and the impact** of **drive-in/drive-out (DIDO) commuting on the West Coast of Tasmania**. The methods used include analysis of just-released ABS census data and a desktop review of existing academic literature.

Relevance, outcomes, and impact

Increasingly, and especially since the beginning of the Covid-19 pandemic, workers are becoming more mobile and more flexible. The continuing growth in FIFO/DIDO employment is just one manifestation of broader changes impacting how, where, when, and even why we work. While these shifts are being felt across Australia and around the world, the impacts have perhaps been most severe in rural and regional areas like the West Coast.

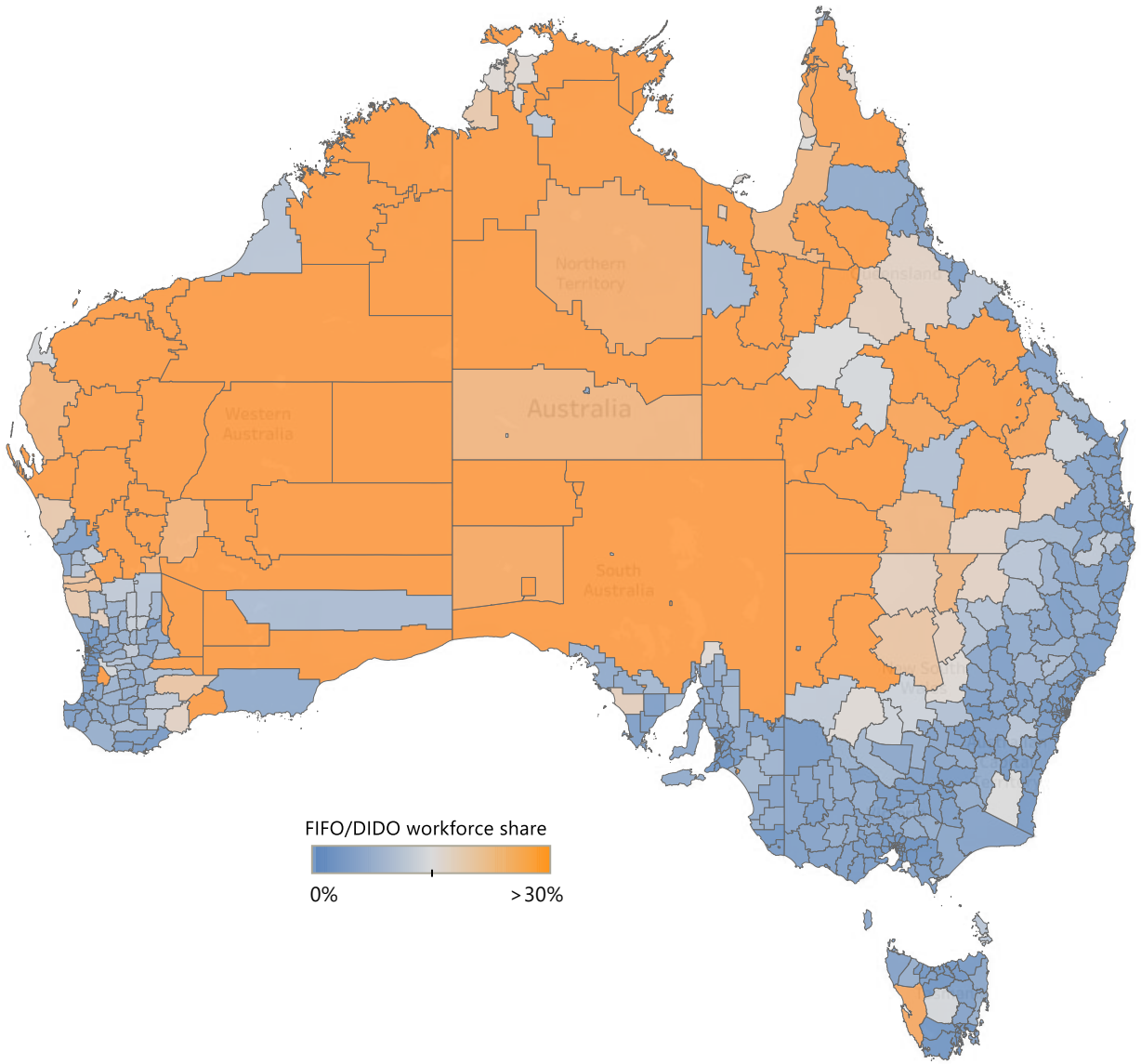
While mobility creates challenges for regional and remote communities, there are also opportunities. Research conducted by the Regional Australia Institute (RAI) in 2020 suggests that, contrary to popular perceptions, more people were moving from capital cities to regional areas than vice versa.

As well as evaluating the extent and impact of FIFO/DIDO employment on the West Coast, this study examines how it can be leveraged by the community to embed sustainable regional economic development.

Part 1: The rise of DIDO and FIFO work

Key concepts

- The terms **fly-in/fly-out (FIFO)** and **drive-in/drive-out (DIDO)** refer to employment arrangements that involve long-distance commuting of **more than 100km** between a person's workplace and their usual residence (McKenzie 2013).
- FIFO/DIDO workers tend to live in cities or coastal regions and commute to work sites on a rotational basis. This is typically in block rosters (e.g., seven days on, seven days off), and is often combined with 'even-time' (12-hour) shifts. Many stay in work camps nearby existing communities.
- DIDO is the primary form of long-distance commuting on the West Coast of Tasmania, although around 8% of long-distance commuters to the West Coast fly in from mainland Australia (see page 17).
- FIFO/DIDO work has both beneficial and adverse impacts on community sustainability in the 'host' regions where it is used, and the 'source' regions whence the workforce is drawn. This paper is focused on the former.



National extent of FIFO/DIDO employment in 2016

The Australian FIFO/DIDO workforce has grown rapidly since the 1980s. By 2016, some 288,000 Australians reported a commute to work of more than 100km – the generally accepted threshold distance for FIFO or DIDO work.

A range of structural and social factors have contributed to the rapid uptake of FIFO/DIDO around Australia, including:

- Increasing cost of building and operating towns in remote locations.
- Availability of cost-effective air transport.
- Tax incentives for companies employing FIFO/DIDO rather than resident workforces.
- Skilled labour shortages in remote regions.
- Workers' preference for living in larger metropolitan areas or coastal regions.
- Limited opportunities and amenities for spouses and families of workers in remote regions.

SOURCE: Australian Bureau of Statistics, 2016 Census of Population and Housing

Forms and context of FIFO/DIDO employment

There are different forms of FIFO/DIDO work that correlate with different phases of project development: **construction** and **operation**.

FIFO/DIDO is often unavoidable during the construction phase of resources projects (when workforce needs are high but quite short-lived) as well as for very remote operations and short-lived operations.

FIFO/DIDO can become problematic, however, when relied upon too heavily for staffing the long-term operation of mines, particular when they are located near existing regional communities.

Impacts of FIFO/DIDO on host communities

Economic impacts

- Mining companies in remote regions benefit from the resources in those regions, but by sourcing their workforces, supplies, and services from elsewhere, give little back to host communities.
- These **fly-over effects** can create **hollow economies** in regions impacted by FIFO/DIDO, with knock-on impacts for livability and local services and amenity (Carrington and Pereira 2011; McKenzie 2011; McKenzie 2020; Morris 2012; Storey 2010a; Storey 2010b).

Infrastructure and services impacts

- Local governments provide infrastructure and services that support mining activity in their regions, but typically derive little financial benefit.
- FIFO/DIDO workers are sometimes described as **'shadow populations'.** Local governments receive funding based partly on estimates of their resident populations. FIFO/DIDO may result in underestimation of the number of people using local services and infrastructure, and can lead to underfunding in host communities (House of Representatives 2013).

Social capital and community wellbeing impacts

- FIFO/DIDO can erode the sense of community in host regions, introducing a large population of (predominantly) young men in temporary accommodation with limited community connection.
- Remote communities with high rates of FIFO/DIDO find themselves in a vicious cycle wherein they cannot sustain services or attract new residents to build the population and infrastructure of the town.
- FIFO/DIDO and its impacts can undermine the 'social licence' and community support for resource and energy projects in remote communities.

What is missing from this literature?

Most research has been about FIFO rather than DIDO

- Few studies have investigated DIDO workforces, which typically travel much shorter distances and are less mobile than the average mainland FIFO worker.
- The primary DIDO-specific concern addressed in available literature relates to the risks of workers driving 100km or more after a 12-hour shift.
- Important questions regarding the composition and impacts of DIDO workforces within smaller jurisdictions like Tasmania remain unanswered.

Most research is on FIFO/DIDO in mining only

- Very little research has been conducted into the use of FIFO/DIDO workers for industries other than mining, such as energy projects, aquaculture, and agriculture, all of which are relevant to the West Coast of Tasmania.
- This is important because a broader industrial scoping of these issues would likely cast greater light on social and community issues associated with non-resident workforces in service or care economy sectors such as health and education.

Most research has been on Western Australia and Queensland

- The geography of remote work in these states is very different to Tasmania. WA in particular features many single-industry, purpose-built mining towns or camps established by resource companies specifically for their own workers.
- The impacts of FIFO/DIDO employment are also qualitatively different in these regions. In WA for instance, FIFO is associated with extreme pressure on housing affordability; the cost of living in the Pilbara is 37% higher than in Perth (McKenzie 2020).

Community case study: Kalgoorlie-Boulder

The town of Kalgoorlie-Boulder in the Goldfields region of Western Australia faces similar challenges to the West Coast in terms of the growth of FIFO/DIDO and its impacts on community sustainability, housing and infrastructure, and economic diversification.

Similarly to the West Coast, Kalgoorlie-Boulder has been an important mining town since the discovery of gold in the late 19th century. This stands in contrast to many other mining towns in WA which were developed in the 1960s-70s by mining companies for the sole purpose of housing workers and their families.

The growth of FIFO in Kalgoorlie-Boulder has had implications for community and economic sustainability as in the absence of large workers' camps, the mining industry allegedly buys and rents houses to accommodate temporary workers.

The consequent shortage of quality housing makes it challenging to attract and accommodate a resident workforce, especially for lower wage positions outside the mining sector. This leads to challenges attracting new residents and retaining existing residents, particularly families and young people, both because of the lack of accommodation and because of the lack of education and training opportunities.

This limits economic diversification beyond mining, with growth in the tourism and services industries stagnating due to the lack of available workers.

The impacts on the Kalgoorlie-Boulder community can be seen through the residential population which has experienced a decline of 13.7% since 2013, falling from 33,267 to 28,709 (Lucas 2022).

The town is working on improving liveability through the supply of housing and economic and social infrastructure to make the region more attractive to residential workers.

Different types of mining towns

Single-industry purpose-built mining towns

Developed in the mid-20th century by the mining industry, subject to narrow diversification and with relatively limited long-term prospects post-mine closure.

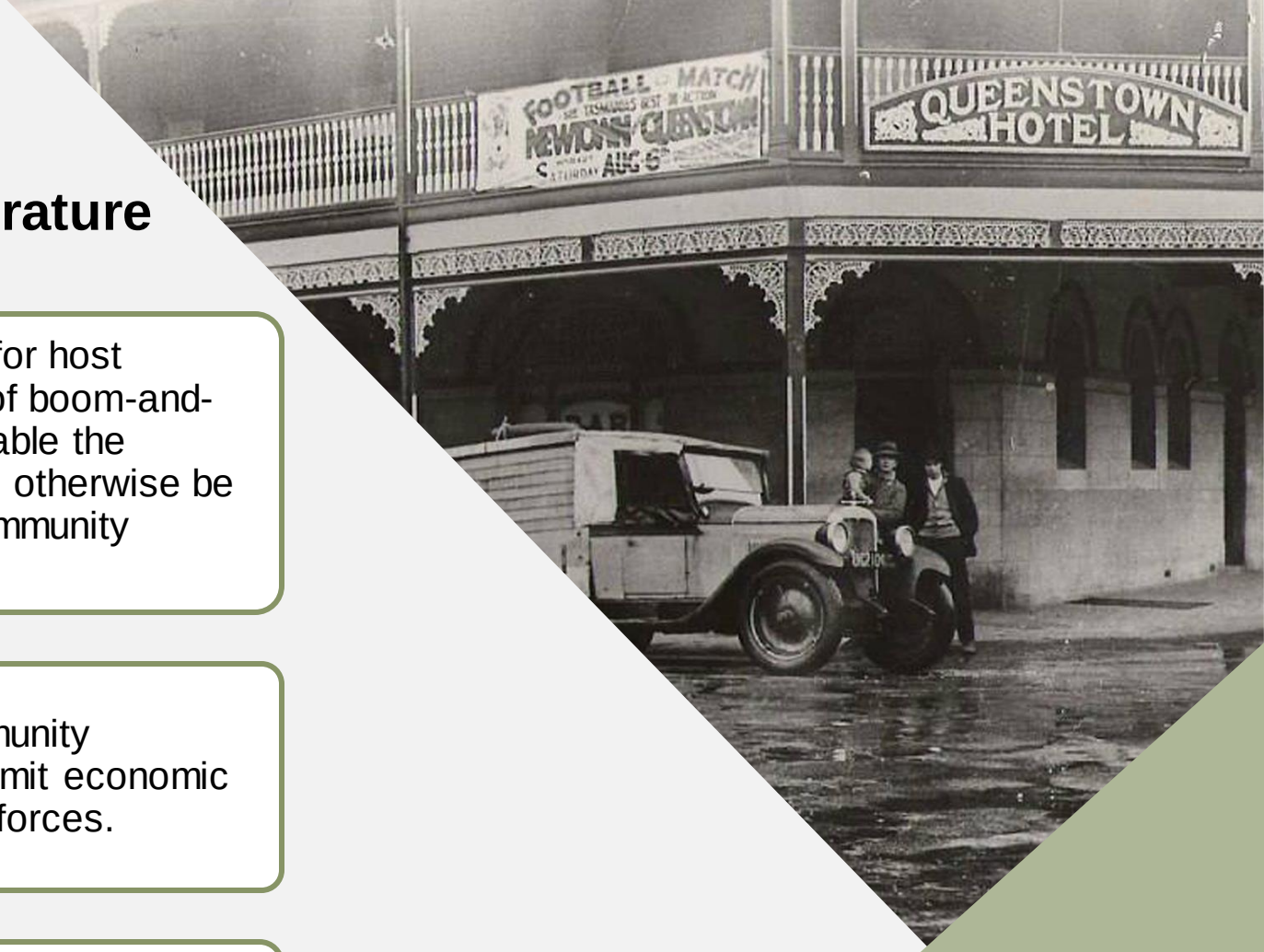
e.g., Moranbah, Pilbara region, Leinster

Mining-focused towns hosting a range of other industries

Existed prior to the mining boom of the 1960s-70s, but have become increasingly economically dependent on mining – founded as a mine town, but diversified.

e.g., West Coast region, Emerald

Key takeaways from the FIFO/DIDO literature



There are some **limited positive effects** of FIFO/DIDO for host communities. FIFO/DIDO can help mitigate the impacts of boom-and-bust resource cycles on host communities, and it can enable the **development of isolated resource deposits** that would otherwise be uneconomic, thereby providing returns to the broader community through royalty payments.

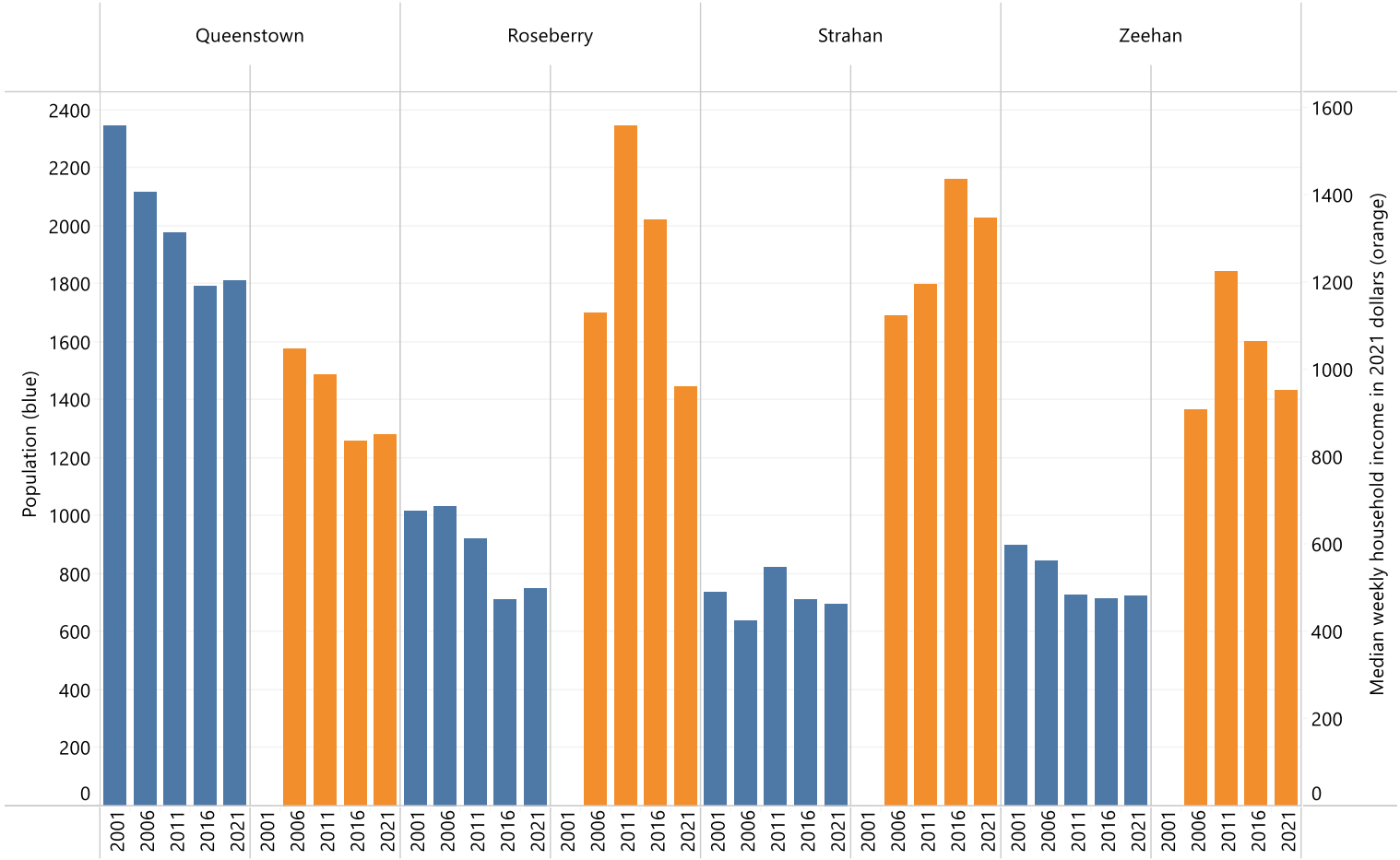
However, it is also clear that FIFO/DIDO can erode community wellbeing, burden local services and infrastructure, and limit economic development in host regions with shrinking resident workforces.

These issues need to be better understood and addressed to ensure that both mining itself and the remote communities where it occurs are sustainable. This is especially relevant given the rise of ESG investment and expectations of corporate social responsibility.

Part 2: The extent of FIFO/DIDO employment on the West Coast

Population and income change on the West Coast

Population and median weekly household income in West Coast settlements, 2001-2021



SOURCE: Australian Bureau of Statistics; Denny, L. & Pisanu, N. (2018). *Insight Nine: Regional Population Trends in Tasmania: Issues and Options*. Institute for the Study of Social Change. Hobart: University of Tasmania, available at https://www.utas.edu.au/__data/assets/pdf_file/0009/1236348/ISC-UTAS-Insight-Nine-Regional-Population-Trends-in-Tasmania.pdf

Despite some recent stabilisation, the populations of the West Coast's major settlements have, for the most part, been experiencing long-term decline.

Much of this decline is attributable to a combination of an ageing population and net-outward migration. There is some evidence that the COVID-19 pandemic disrupted this trend in some areas, though this has yet to be seen clearly on the West Coast.

Demographic projections from the University of Tasmania has projected further decline in the order of 30% by the early 2040s, which is the steepest downward trajectory in the state (Denny & Pisanu 2018).

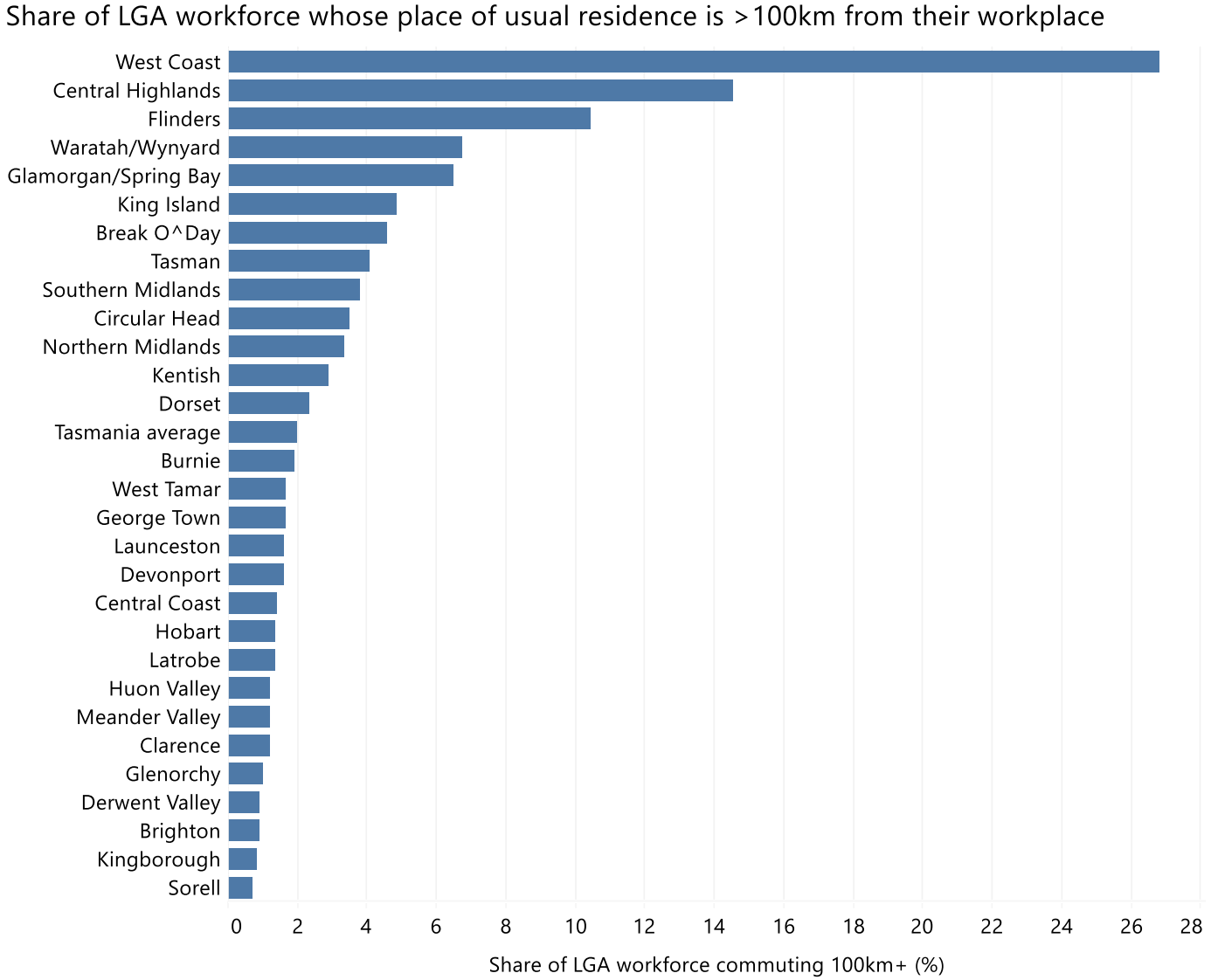
Weekly household incomes have likewise been trending downward in most settlements (Strahan may be emerging as a more recent exception).

How many ‘DIDO’ workers were there on the West Coast in 2016?

Around **675 of the 2140** people employed on the West Coast lived more than 100km from their place of work at the time of the **2021 census**.

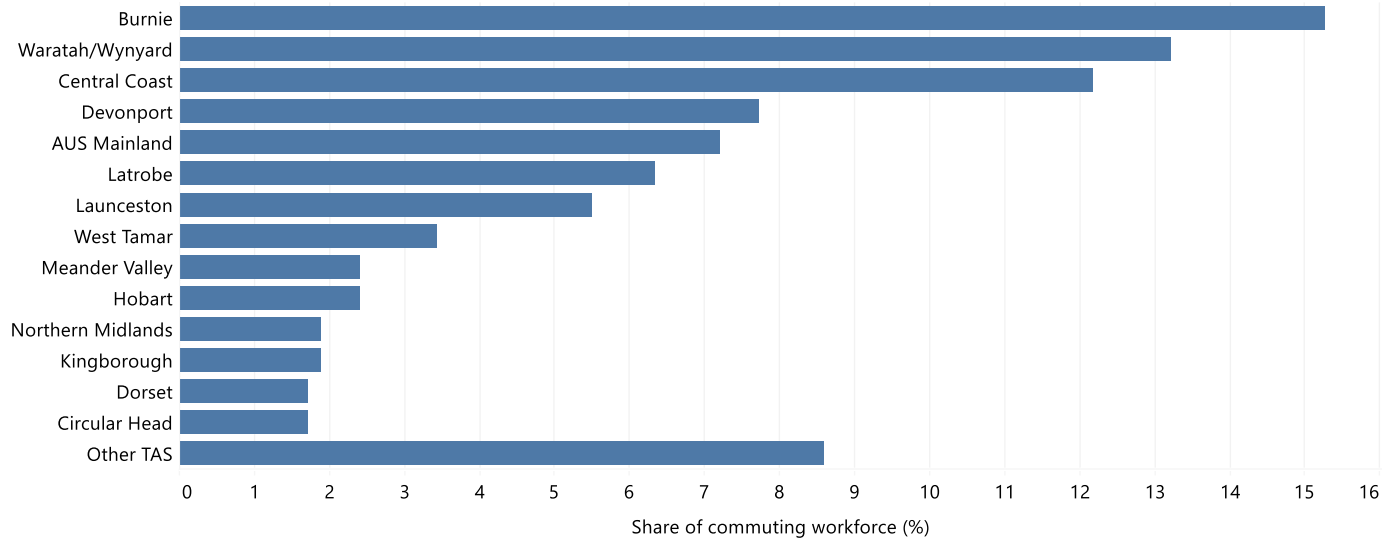
The West Coast Council LGA hosts a **higher share of non-resident workers than anywhere else in the state**. Nearly **one third** of people whose place of work is on the West Coast live more than 100km away. The next highest LGA is Central Highlands at just over 14%, while the state average is less than 2%.

In percentage terms, of the approximately **31% of West Coast workers reside outside the West Coast LGA**, commuting more than 100km to their jobs.



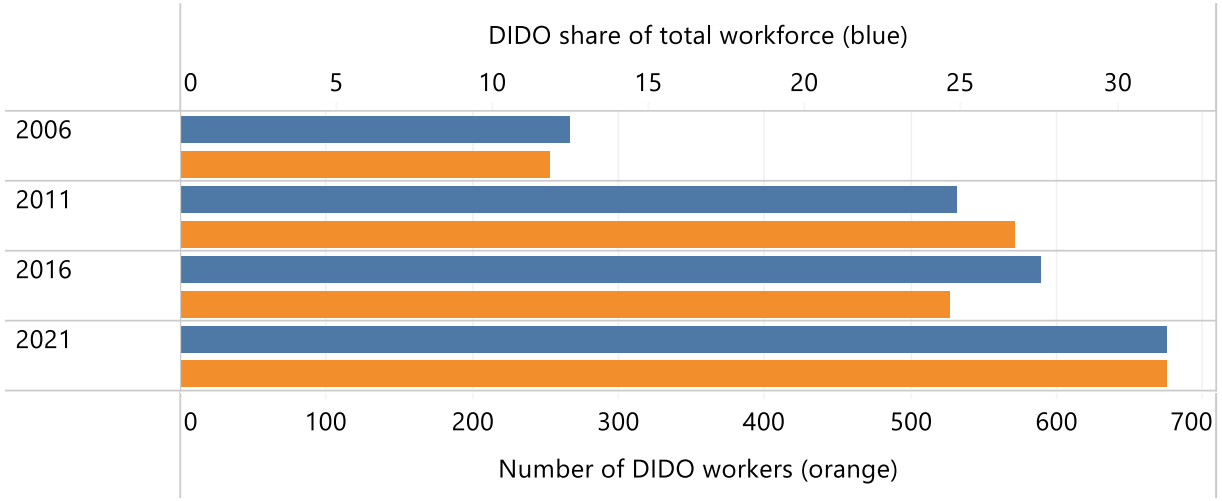
SOURCE: Australian Bureau of Statistics, 2016 Census of Population and Housing

Out-of-area workforce by source region, 2016



The number of West Coast DIDO workers has increased in absolute terms and as a share of the total workforce

Non-resident workers on the West Coast, 2006-2021



SOURCE: Australian Bureau of Statistics, 2016; Census of Population and Housing Australian Bureau of Statistics, 2021 Census of Population and Housing

Where do DIDO workers come from and has their number changed over time?

Most non-resident workers on the West Coast commute from the broader Cradle Coast and Waratah/Wynyard areas, though a significant portion also come from mainland Australia (around 8% of the long-distance commuting workforce).

DIDO work has occupied a large slice of the West Coast labour market for a long time, and has been growing. The 2021 census data show continued growth in not just the number of DIDO workers but also in their share of the total West Coast workforce. DIDO workers now comprise a record share of West Coast workers – around 31%.

While the overall size of the West Coast workforce contracted in the 2016 census period (likely due to the closure of the Mt Lyell mine), the share of DIDO has continued to increase.

Most, though by no means all, work in mining

The majority of non-resident workers on the West Coast (some 68%, or around 460 people) are employed in the mining industry. This means that just over 50% of the West Coast's mining workforce are DIDO workers.

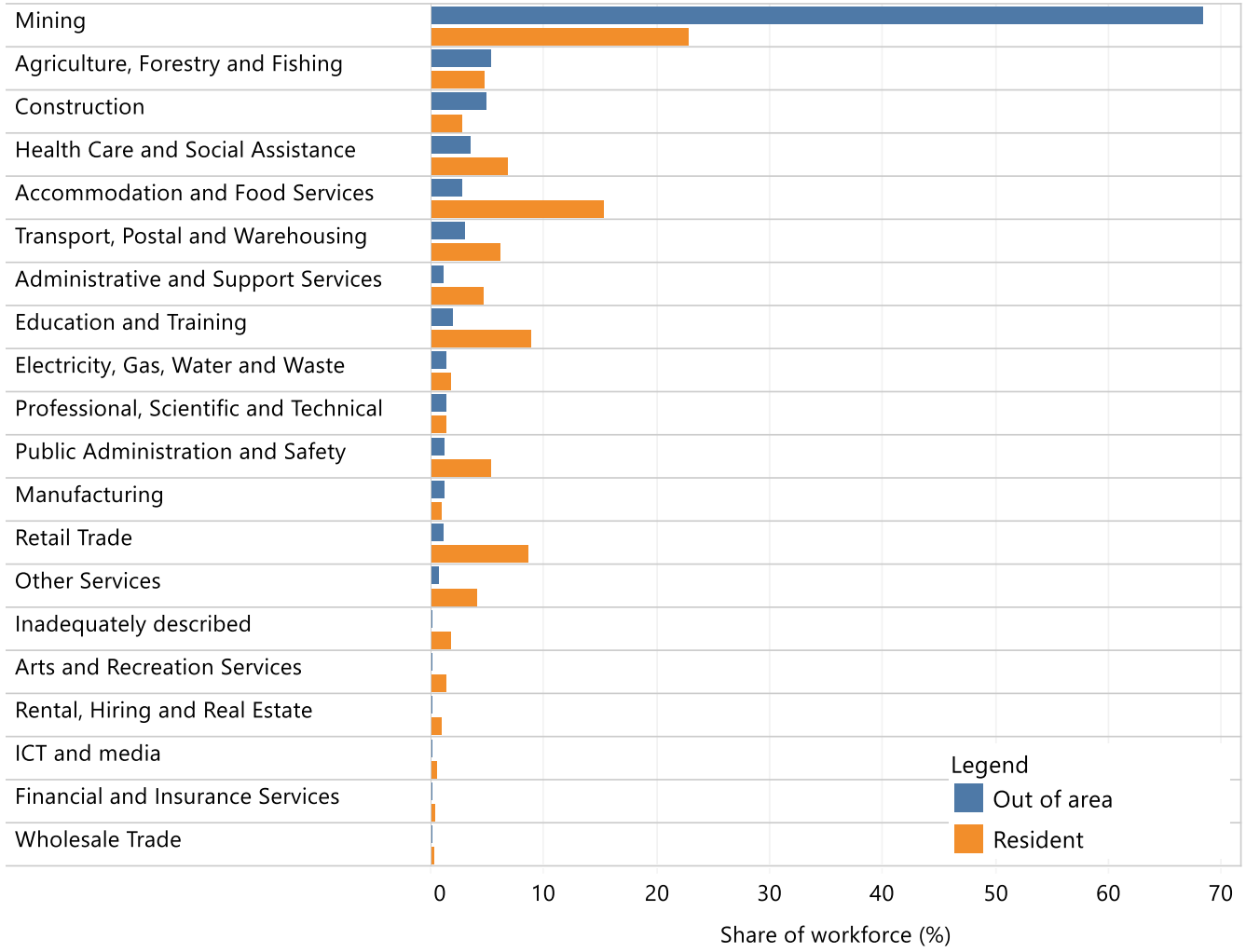
However, agriculture, forestry, and fishing; construction; and healthcare and social assistance also employ a significant number of DIDO workers.

Many workers reported in categories like electricity, gas, water, and waste; accommodation and food services; or professional, scientific, and technical services are likely also employed by the mining companies.

Finally, it is important to note that while the DIDO share of some industries may be small by comparison to mining, their impact remains high due to the importance of that industry to the community – healthcare and social assistance is a clear example.

The vast majority of DIDO workers on the West Coast work in mining

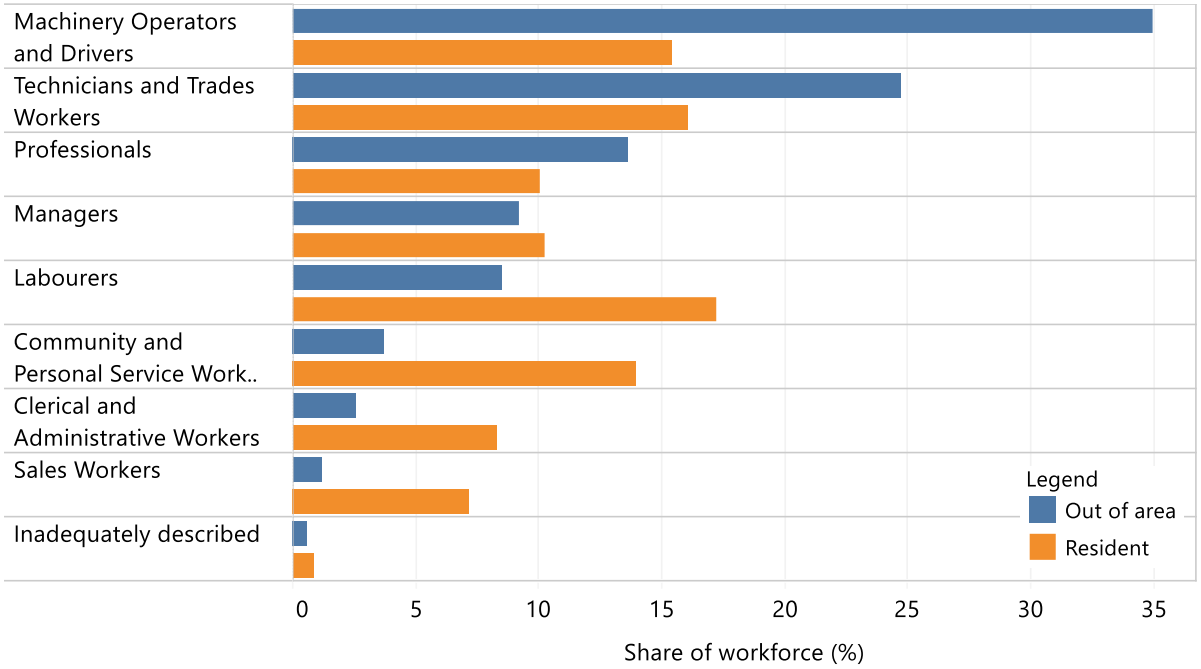
Commuting and resident workforce share by industry of employment



SOURCE: Australian Bureau of Statistics, 2021 Census of Population and Housing

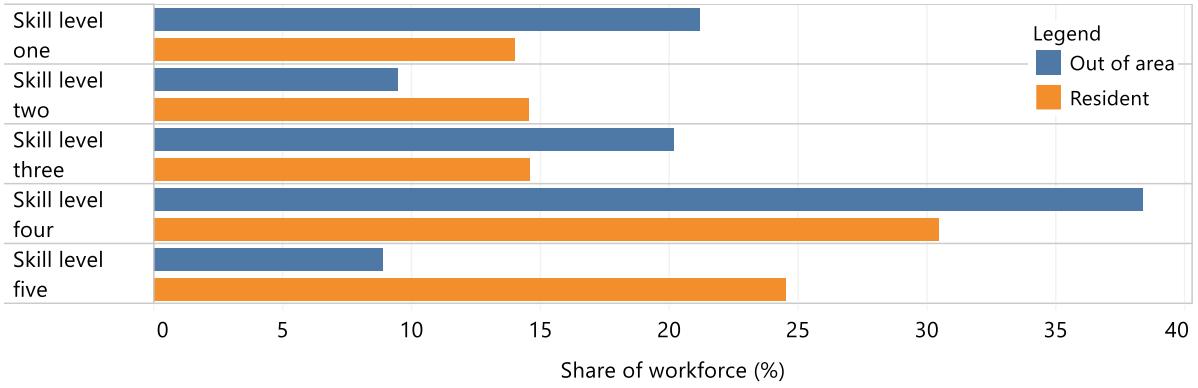
Most DIDO workers are employed in specialist mining occupations

Share of workforce by occupation, resident and DIDO workers



While some DIDO workers fill gaps in highly skilled occupations, many do not

Share of workforce by ANSCO occupational skill level



SOURCE: Australian Bureau of Statistics, 2021 Census of Population and Housing

DIDO workers overwhelmingly occupy reasonably specialised mining occupations

DIDO/FIFO workers are more likely to be employed in higher paid occupations than local workers, likely due to high demand for particular skills, especially in the mining and construction industries. Where skills demand in the construction sector is short-term, and driven by major projects, demand in the mining sector has been consistent for some decades.

However, as illustrated on the next page, DIDO/FIFO workers are not necessarily more highly educated than their resident colleagues. This suggests that the workforce gap being filled by DIDO/FIFO comprises niche skilled workers subject to high labour market competition.

More than 60% of all FIFO/ DIDO workers on the West Coast are employed as machinery operators and drivers or technicians and trades workers.

DIDO/FIFO workers earn more than West Coast residents

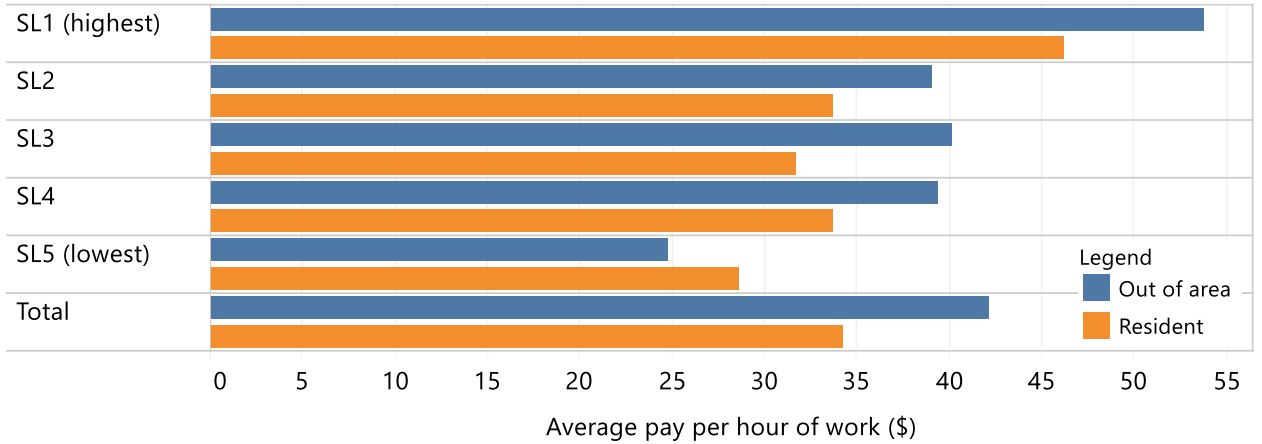
DIDO workers are more likely to have undertaken tertiary or higher education than resident workers, but not to a degree that would explain their income disparity. In other words, the gaps filled by non-resident workers are likely to be specific (skills gaps) rather than general (workforce capability gaps).

Another important factor is the industry of employment – the shares of local and DIDO workers employed in the mining industry boosts the average pay of out-of-area workers relative to locals.

Nevertheless, it is clear that despite similar aptitude and employment in similarly demanding roles, skills demand means that DIDO workers earn far more than residents.

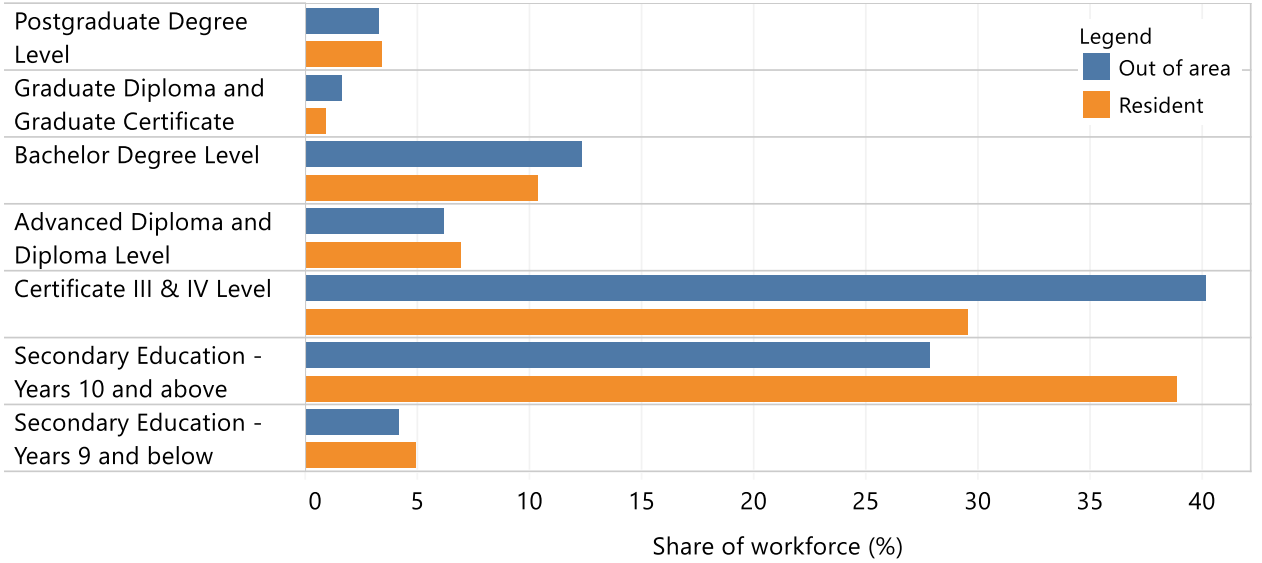
DIDO workers earn more for the same (or very similar) jobs

Average hourly income of DIDO and resident workers by ANZSCO occupational skill level



DIDO workers are more highly educated than resident workers, but not by enough to explain their disparate pay

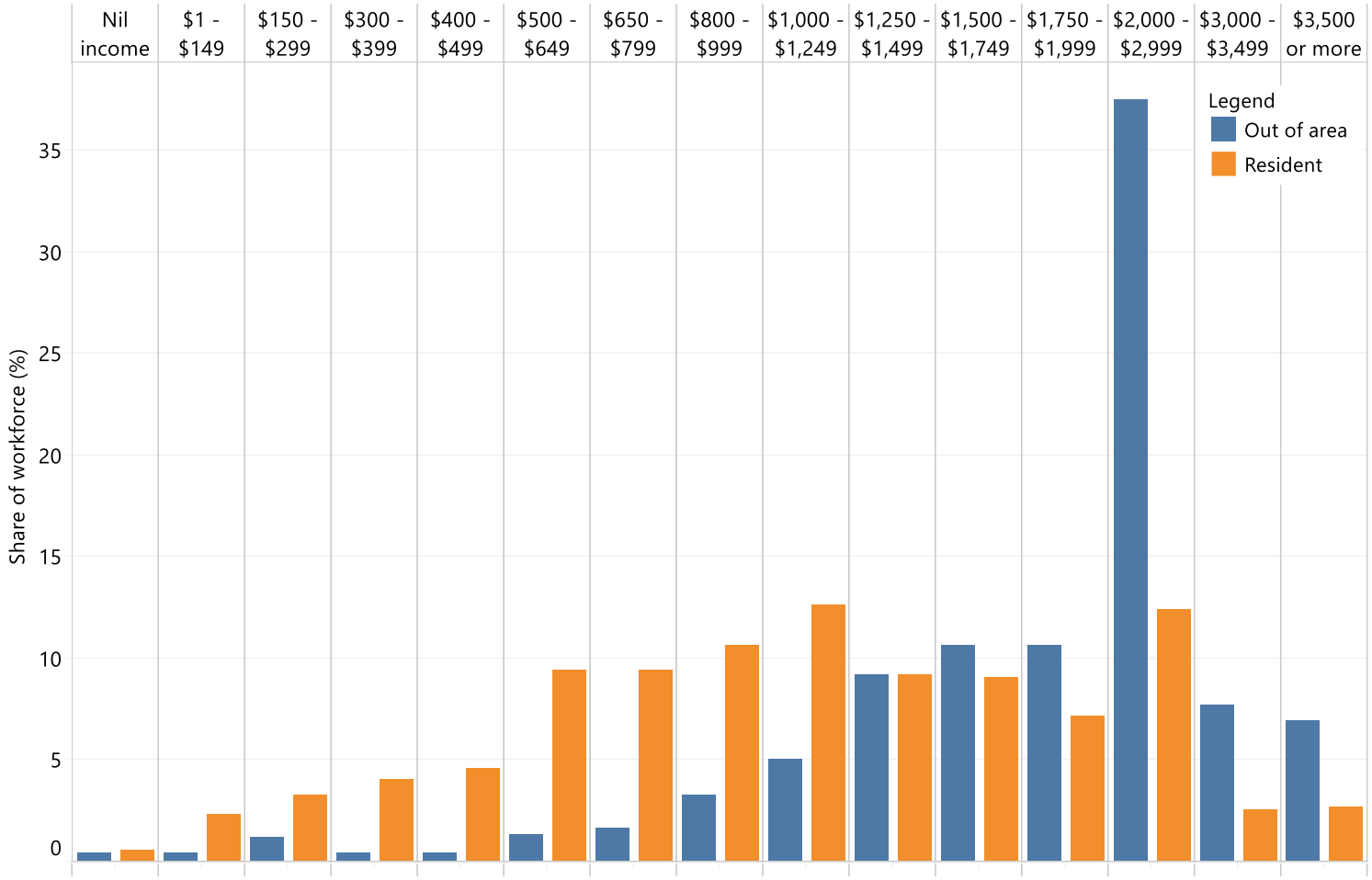
Highest level of educational attainment among DIDO and resident workers



SOURCE: Australian Bureau of Statistics, 2021 Census of Population and Housing

DIDO workers typically earn much more than their West Coast resident colleagues

Share of workers by total personal weekly income, resident and DIDO



SOURCE: Australian Bureau of Statistics, 2021 Census of Population and Housing

DIDO workers are considerably more highly paid than the resident workforce

DIDO/FIFO workers on the West Coast earn much more than local/resident workers. They typically work far more hours and also earn more per hour for doing the same (or similar) jobs (see next page). We estimate that the median income of a DIDO/FIFO worker on the West Coast is roughly double the LGA average.

This pattern is visible within major DIDO industries too, with the exception of agriculture, forestry, and fishing (non-resident workers in this industry are typically lower-paid aquaculture labourers).

The gross value of wages earned in the West Coast LGA by FIFO/DIDO workers is likely to be in the region of $71 million annually.

FIFO/DIDO workers earn a far greater share of gross wages than their share of the total workforce

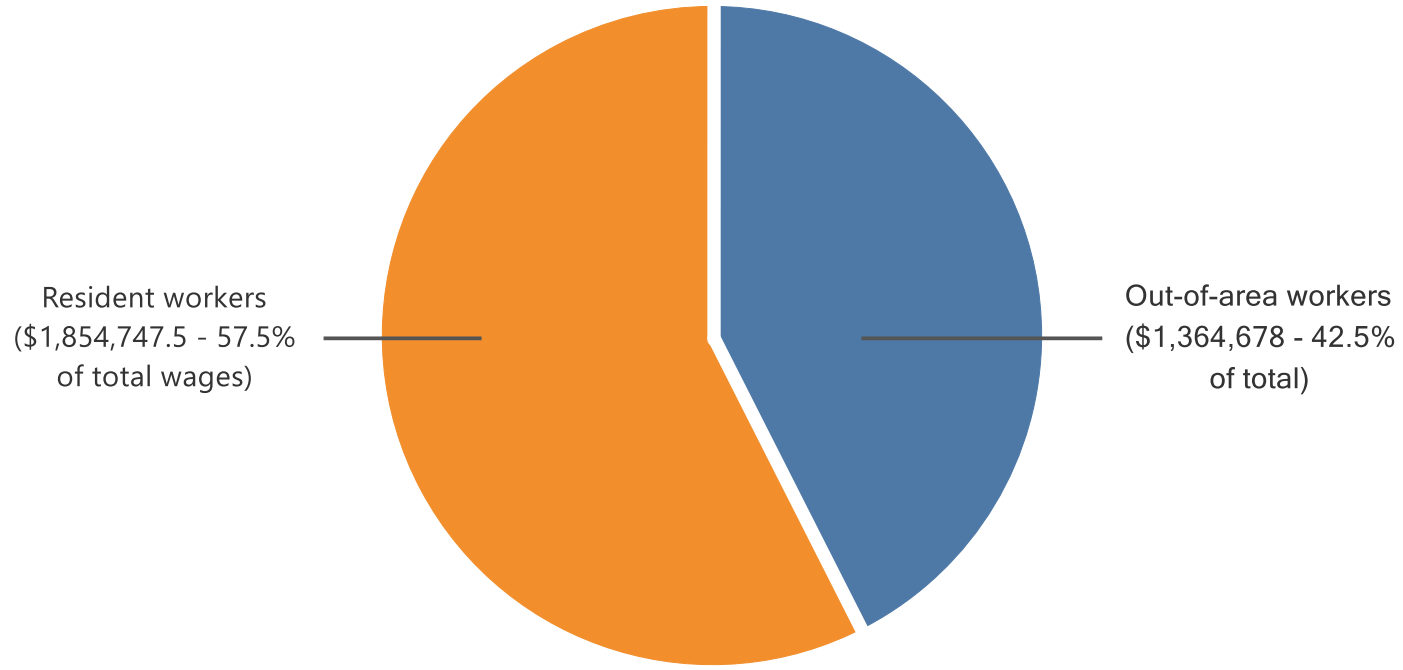
Despite accounting for only 31% of the workforce, DIDO/FIFO workers take home roughly 42.5% of gross wages earned on the West Coast.

In absolute terms, this means that resident workers make approximately $96.5 million per year where DIDO/FIFO workers make around $71 million.

Needless to say, this means that a very significant portion of the wealth earned on the West Coast leaves the local area and is spent in surrounding communities, particularly in the Cradle Coast and Waratah/Wynyard regions.

Despite comprising less than a third of the workforce, DIDO workers take home nearly half of total wages

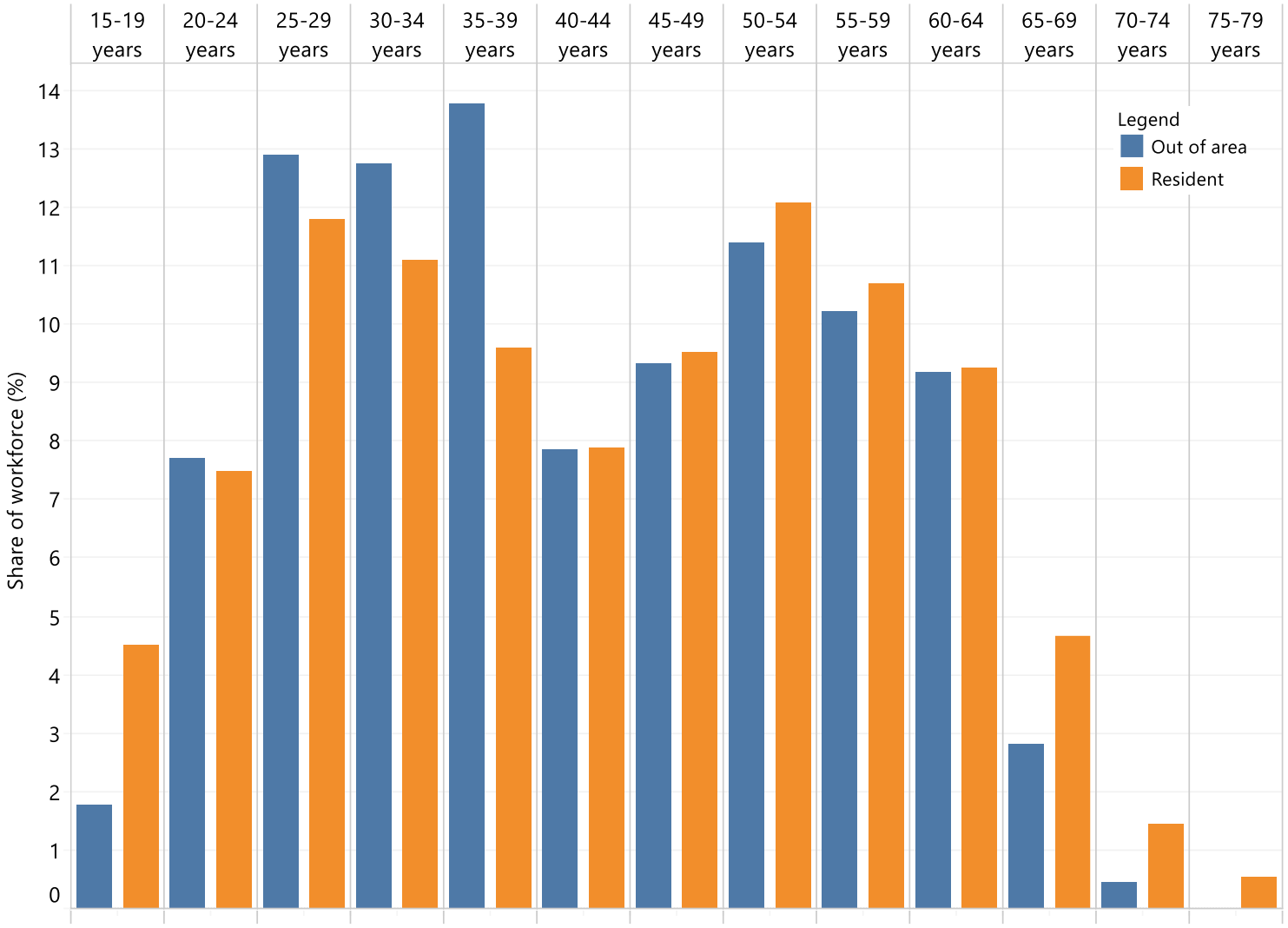
Total weekly income by workforce, 2021



SOURCE: Australian Bureau of Statistics, 2021 Census of Population and Housing

DIDO workers are younger than their resident colleagues

Share of West Coast resident and DIDO workforce by age group



SOURCE: Australian Bureau of Statistics, 2021 Census of Population and Housing

Who are the West Coast's DIDO workers?

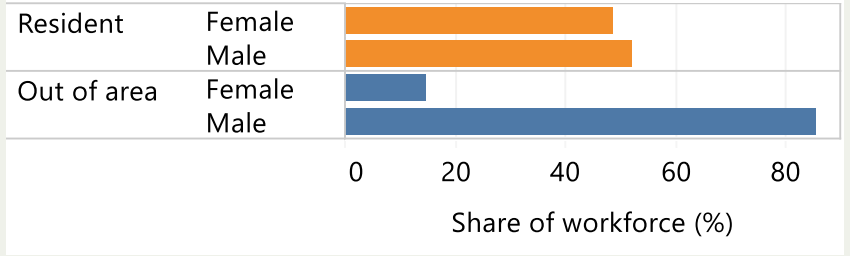
DIDO workers on the West Coast are nearly all men. They are typically younger than their resident colleagues, and many appear to stop working on the West Coast in their mid- to late-30s – around the age at which they are most likely to have early-school-age children.

Many return to DIDO work on the West Coast in their early- to mid-40s, however.

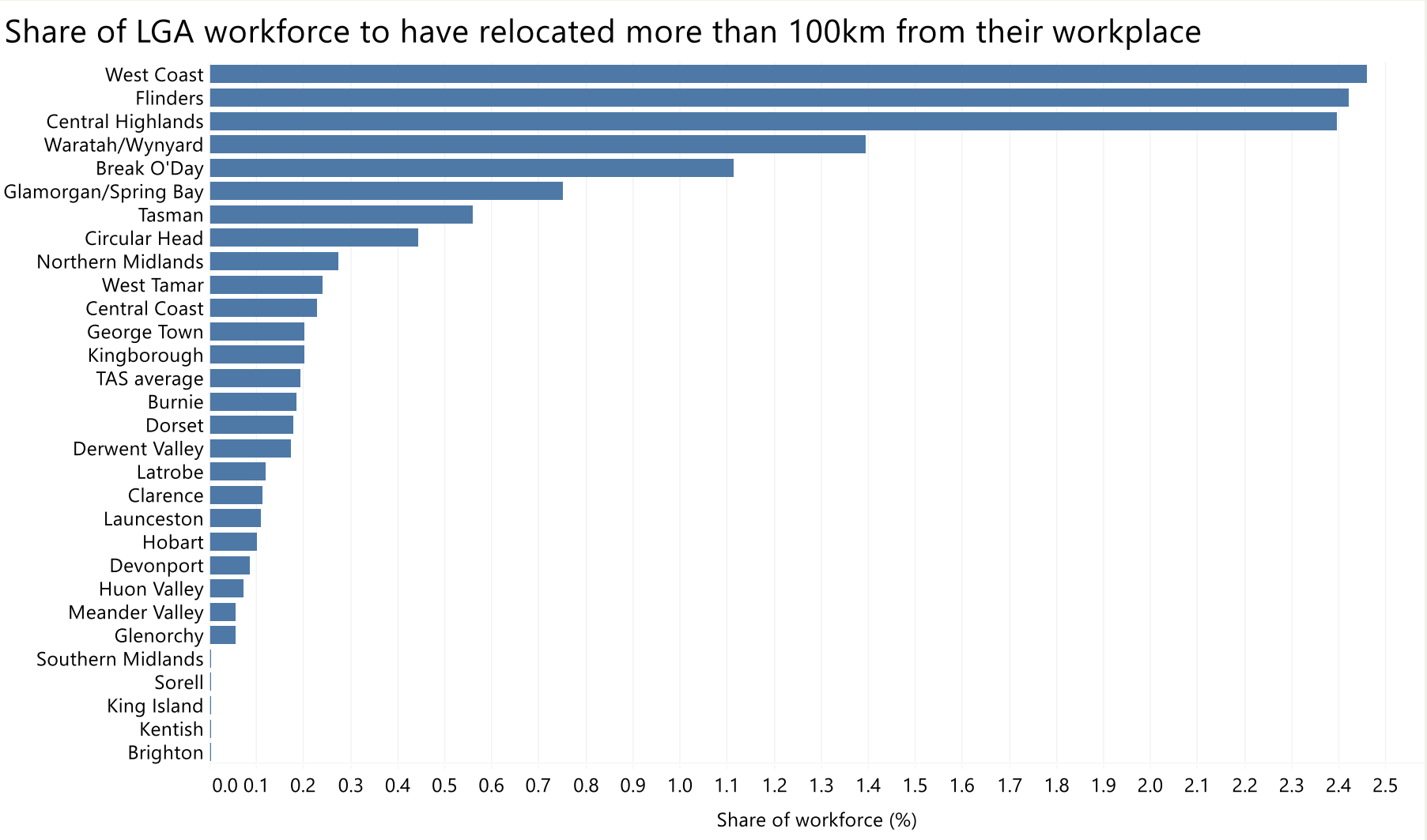
It is unclear, though very possible, that improved access to education opportunities on the West Coast could impact workers' relocation decision making. In any case, it would appear that many begin to return to FIFO/DIDO work in their early- to mid-40s.

West Coast DIDO workers are nearly all men

Share of resident and out-of-area workforce by sex



How many people have moved away from the West Coast but kept their jobs?



Between 2011 and 2016, more West Coast residents moved away but kept their jobs (i.e., transitioned from resident to FIFO/DIDO work) than the residents of any other LGA in Tasmania.

The data suggest that resident workers who leave the West Coast and transition to DIDO work are likely to be younger men, many with partners and young children.

It is difficult to say whether the availability of FIFO/DIDO work influences the decision of these workers to leave the West Coast, but given the high incomes of these workers it is certainly conceivable that many might not have relocated otherwise.

SOURCE: Australian Bureau of Statistics, 2016 Census of Population and Housing

Part 3: Mitigating impacts and responding to the challenge

Mitigating impacts and responding to the challenge

Literature on FIFO/DIDO work details several strategies that governments and major industries can take. While not of these all are relevant to the West Coast, options discussed in the existing academic and policy literature include:

- Providing incentives to increase the attractiveness of host communities to mine workers e.g., housing packages, flexible working hours, and tax incentives
- Improving local services, infrastructure, and liveability e.g., the *Pilbara Cities Vision*
- Communicating and promoting the benefits of the region to workers and their families
- Improving the capacity of local businesses to service the resource sector, thereby mitigating the 'fly-over effect'
- Improving data collection to more accurately measure the costs of FIFO/DIDO on infrastructure and services
- Reforming Financial Assistance Grants and other government funding to more accurately reflect regional service populations as well as just resident populations
- Ensuring that mining leases or development approvals are tied to agreements that maximise benefit from resource projects e.g., Canada's *Community Benefits Agreements*
- Legislating a cap on the FIFO/DIDO share of a company's workforce. For example, Queensland's *Strong and Sustainable Resource Communities Act 2017* bans 100% FIFO operations
- Allocating mining royalties or resource tax revenues to infrastructure and service development e.g., Western Australia's *Royalties for Regions* program
- Reviewing tax exemptions for worker camps in regional areas (i.e., fringe benefits tax)
- Reviewing Zone Tax Offset arrangements to ensure they're claimable only by permanent residents of a region

Cause or Consequence? DIDO working and the importance of liveability and amenity

Some of the strategies discussed on the previous page, such as capping numbers of FIFO/DIDO workers, seek to address FIFO/DIDO directly. It is essential to recognize, however, that FIFO/DIDO work is as often a symptom as it is a cause of diminishing liveability and population decline in regional areas.

Places that can offer good amenity, infrastructure (housing) services, and lifestyle opportunities have the best chance of turning long-distance commuters into long-term local residents.

The West Coast of Tasmania is changing. Any effective regional economic development and renewal strategy must start by understanding who wants to live on the West Coast and why.

Additionally, it's important to recognize that it is possible to generate community renewal and wellbeing even without population growth, through community-led place-based development and innovation.

Mitigation and transformation are complex and must involve the whole community. This will be a focus of the proposed second phase of this project.

Conclusion: what makes an attractive community? It's about much more than employment

There is an abundance of literature about liveability in regional Australia that can inform strategies to encourage workers to relocate to the West Coast.

The Regional Australia Institute (RAI) describes the decision to relocate as a two-step process:

- An individual makes a decision to move to regional Australia based on whether they can be employed in a given area.
- After identifying broad areas suitable for relocation, an individual's decision of where to live is based on a more personal and nuanced liveability assessment.

This assessment involves the six indicators in the graphic to the right (Regional Australia Institute 2020). The relative importance of the different elements varies for different groups of people e.g., education services may be more important for families with young children than for retirees.

Effective liveability strategies must therefore be demographically targeted and strategic. The West Coast has a high number of millennial aged (20–35-year-old) FIFO/DIDO workers. These are considered desirable potential regional residents because they include families and early-to-mid career workers who have the potential to become long-term community members.

References

Carrington, K & Pereira, M (2011), 'Assessing the social impacts of the resources boom on rural communities', *Rural Society,* 21:1. Available from: https://doi.org/10.5172/rsj.2011.21.1.2

Connel-Variy, T (2018), 'The resources cycle impact on housing in Australian mining towns in the Bowen Basin, Queensland (2000-2016)'. Available from: https://researchrepository.rmit.edu.au/view/delivery/61RMIT_INST/12273202130001341/13273202120001341.

Denny, L. & Pisanu, N. (2018). *Insight Nine: Regional Population Trends in Tasmania: Issues and Options*. Institute for the Study of Social Change. Hobart: University of Tasmania, available at https://www.utas.edu.au/__data/assets/pdf_file/0009/1236348/ISC-UTAS-Insight-Nine-Regional-Population-Trends-in-Tasmania.pdf

House Standing Committee on Regional Australia (2013), *Cancer of the bush or salvation for our cities? Fly-in, fly-out and drive-in, drive-out workforce practices in Regional Australia*. Available from: https://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=ra/fifodido/report/fullreport.pdf.

Lucas, J (2022), *Regional migration is booming during pandemic, so why is Kalgoorlie-Boulder's population falling?*, ABC. Available from: abc.net.au/news/2022-04-02/regional-migration-boom-yet-kalgoorlie-boulder-populations-drops/100958802

McKenzie, F (2011), *Fly-in fly-out: the challenges of transient populations in rural landscapes*, Housing and Urban Research Institute of Western Australia. Available from: https://www.researchgate.net/profile/Fiona-Mckenzie-3/publication/50297399_Fly-In_Fly-Out_The_Challenges_of_Transient_Populations_in_Rural_Landscapes/links/0c96053643596d493f000000/Fly-In-Fly-Out-The-Challenges-of-Transient-Populations-in-Rural-Landscapes.

McKenzie, F (2013), *Long distance commuting and regional development: a case study of Stawell, Victoria,* Victorian Department of Transport, Planning and Local Infrastructure. Available from: https://www.planning.vic.gov.au/__data/assets/pdf_file/0036/97686/Long-Distance-Commuting-Stawell-Case-Study.pdf.

McKenzie, F (2020), 'Long distance commuting: a tool to mitigate the impacts of the resources industries boom and bust cycle?', *Land Use Policy*, 93. Available from: https://doi.org/10.1016/j.landusepol.2019.03.045.

Morris, R.J (2012), *Scoping study: impact of fly-in fly-out drive-in drive-out work practices on local government*, Australian Centre of Local Government, University of Technology, Sydney. Available from: https://www.researchgate.net/profile/Robyn-Morris-3/publication/258839596_Scoping_Study_Impact_of_Fly-in-Fly-out_Drive-in_Drive-out_Work_Practices_on_Local_Government/links/58dc51daaca2725c4745231f/Scoping-Study-Impact-of-Fly-in-Fly-out-Drive-in-Drive-out-Work-Practices-on-Local-Government.pdf.

Regional Australia Institute (2020), *The big movers: understanding population mobility in regional Australia*. Available from: https://www.regionalaustralia.org.au/libraryviewer?ResourceID=46.

Storey, K (2010a), 'Fly-in/fly-out: implications for community sustainability', *Sustainability*, 2:5. Available from: https://doi.org/10.3390/su2051161.

Storey, K (2010b), 'Fly-in/fly-out and fly-over: mining and regional development in Western Australia', *Australian Geographer,* 32:2. Available from: https://doi.org/10.1080/00049180120066616.

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