April 2021

APPENDICES

# The NDIS market in Queensland

This report is available online and in PDF format on our website.

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# Appendix A: Terms of Reference

## Context

The National Disability Insurance Scheme (NDIS) is a significant social reform, introducing a market approach to the provision of disability services and a significant increase in sector funding.

The NDIS is intended to improve life outcomes and increase opportunities, choice and control for people with disability. The NDIS also offers the opportunity for new and existing providers to engage with participants as customers and to respond to their needs.

Queensland's transition to the NDIS commenced in January 2016 with the early launch in Townsville followed by a region-by-region rollout over three years from July 2016. The NDIS is now available in all areas of Queensland, for all eligible people with disability. A significant number of Queenslanders are continuing to enter the scheme.

Introduction of the NDIS brought about substantial changes in the way services for people with disability are procured, moving away from services either provided or funded by state governments, to enabling NDIS participants or their agents to procure services directly from the market with individualised funding in their support plans.

Consequently, it is important to review the current status of market participation and service delivery and to apply any learnings that may promote improvement and further opportunities for market development.

As the NDIS market in Queensland matures, it is important that settings are appropriate, that it is able to operate efficiently, and that the services needed by participants are available.

The Queensland Government currently maintains a role in the NDIS market, including providing Accommodation Support and Respite Services and preparation of Positive Behaviour Support Plans. It also maintains a regulatory role in areas relating to quality and safeguards, including authorisation of the use of restrictive practices and criminal history screening of NDIS workers.

It is important that the role and policies of the Queensland Government support the NDIS market and promotes participant outcomes.

## Terms of Reference

The Queensland Productivity Commission (QPC) is directed to conduct an Inquiry into NDIS transition and market development in Queensland. This includes investigating and reporting on market conditions and prospects to determine whether governance, regulation and policy settings support the operation of the NDIS market and promote participant outcomes.

The QPC should review the performance of the NDIS market during transition in Queensland, including:

- the degree to which the NDIS market has met the needs of participants, including whether thin markets or supply issues are contributing to the underutilisation of NDIS Plans;
- consideration of any impediments to supply, including in relation to the preparedness of the private and non-government sectors to enter the market;
- the productivity impacts of Queensland's investment in the NDIS, including enabling people with disability and carers to obtain employment, undertake education and training and ability to participate in the community;
- the effectiveness of provider markets, both in the private and non-government sectors; and a review of participant transition rates and factors, including identification of any cohorts that have not transitioned and why transition has not occurred.

In reviewing the performance of the NDIS market during transition, the QPC should give regard to the likely effectiveness of the actions or interventions by Queensland and the Commonwealth as part of transition, or as part of other inquiries including Joint Standing Committee reports about NDIS markets and readiness. This includes actions taken to address thin market issues, particularly in regional and remote settings.

The QPC should investigate and report on NDIS market conditions and prospects, including:

- the efficiency and effectiveness of the NDIS market across Queensland including the availability of market information and data, and price settings and review mechanisms;
- the appropriateness of market governance and management;
- the anticipated NDIS participant population and the ability of the market to meet their expected level and type of service requirements;
- any structural, regulatory or other impediments that might inhibit the efficient operation of the NDIS market including: impediments under State jurisdiction, under Federal jurisdiction and outside of government control;
- any factors affecting specific markets or market segments, including in rural and remote areas; and
- any issues relating to the interaction between the NDIS market and related markets and schemes.

The QPC should also investigate and report on the Queensland Government's role in the NDIS, in relation to the authorisation of restrictive practices and preparation of Positive Behaviour Support Plans.

In light of this analysis, the QPC should recommend options for improved policies and measures to ensure the NDIS market in Queensland will meet the needs of participants both now and in the future.

## Consultation

The QPC should undertake public consultation in relation to the Inquiry, including with participants and participant advocates, service providers, peak bodies, experts and government agencies.

## Reporting

The QPC must publish a draft report for consultation by 30 November 2020.

The Final Report must be provided to Government by 30 April 2021.

**Table reconciling inquiry terms of reference against the final report**

| Terms of reference | Relevant chapters of draft report |
|---|---|
| The degree to which the NDIS market has met the needs of participants, including whether thin markets or supply issues are contributing to the underutilisation of NDIS Plans. | Chapter 3 The NDIS and its transition<br>Chapter 4 Participant outcomes<br>Chapter 6 Supply side issues<br>Chapter 10 NDIS housing supports<br>Chapter 11 Participant employment outcomes<br>Chapter 12 The NDIS in rural and remote areas<br>Chapter 13 Aboriginal and Torres Strait Islander people and the NDIS |
| Consideration of any impediments to supply, including in relation to the preparedness of the private and non-government sectors to enter the market. | Chapter 6 Supply side issues<br>Chapter 7 Improving market coordination and supply<br>Chapter 8 Improving price regulation<br>Chapter 9 Improving market coordination<br>Chapter 10 NDIS housing supports<br>Chapter 12 The NDIS in rural and remote areas<br>Chapter 13 Aboriginal and Torres Strait Islander people and the NDIS<br>Chapter 14 Queensland Government roles and interventions |
| The productivity impacts of Queensland's investment in the NDIS, including enabling people with disability and carers to obtain employment, undertake education and training and ability to participate in the community. | Chapter 4 Participant outcomes<br>Chapter 5 Improving participant outcomes<br>Chapter 11 Participant employment outcomes |
| The effectiveness of provider markets, both in the private and non-government sectors; and a review of participant transition rates and factors, including identification of any cohorts that have not transitioned and why transition has not occurred. | Chapter 3 The NDIS and its transition<br>Chapter 4 Participant outcomes<br>Chapter 5 Improving participant outcomes<br>Chapter 6 Supply side issues<br>Chapter 7 Improving the supply side<br>Chapter 8 Improving price regulation<br>Chapter 9 Improving market coordination |
| The efficiency and effectiveness of the NDIS market across Queensland including the availability of market information and data, and price settings and review mechanisms. | Chapter 4 Participant outcomes<br>Chapter 5 Improving participant outcomes<br>Chapter 6 Supply side issues<br>Chapter 7 Improving the supply side |

| | |
|---|---|
| | Chapter 8 Improving price regulation<br>Chapter 9 Improving market coordination<br>Chapter 10 NDIS housing supports<br>Chapter 11 Participant employment outcomes<br>Chapter 12 The NDIS in rural and remote areas<br>Chapter 13 Aboriginal and Torres Strait Islander people and the NDIS |
| The appropriateness of market governance and management. | Chapter 8 Improving price regulation<br>Chapter 16 Intergovernmental governance |
| The anticipated NDIS participant population and the ability of the market to meet their expected level and type of service requirements. | Chapter 4 Participant outcomes<br>Chapter 6 Supply side issues<br>Chapter 7 Improving the supply side<br>Chapter 8 Improving price regulation<br>Chapter 9 Improving market coordination<br>Chapter 10 NDIS housing supports<br>Chapter 11 Participant employment outcomes<br>Chapter 12 The NDIS in rural and remote areas<br>Chapter 13 Aboriginal and Torres Strait Islander people and the NDIS<br>Chapter 14 Queensland Government roles and interventions |
| Any structural, regulatory or other impediments that might inhibit the efficient operation of the NDIS market including: impediments under State jurisdiction, under Federal jurisdiction and outside of government control. | Chapter 4 Participant outcomes<br>Chapter 5 Improving participant outcomes<br>Chapter 6 Supply side issues<br>Chapter 7 Improving the supply side<br>Chapter 8 Improving price regulation<br>Chapter 9 Improving market coordination<br>Chapter 10 NDIS housing supports<br>Chapter 11 Participant employment outcomes<br>Chapter 12 The NDIS in rural and remote areas<br>Chapter 13 Aboriginal and Torres Strait Islander people and the NDIS<br>Chapter 14 Queensland Government roles and interventions<br>Chapter 15 Interactions with Queensland Government services |

| | |
|---|---|
| Any factors affecting specific markets or market segments, including in rural and remote areas. | Chapter 4 Participant outcomes<br>Chapter 5 Improving participant outcomes<br>Chapter 10 NDIS housing supports<br>Chapter 11 Participant employment outcomes<br>Chapter 12 The NDIS in rural and remote areas<br>Chapter 13 Aboriginal and Torres Strait Islander people and the NDIS |
| Any issues relating to the interaction between the NDIS market and related markets and schemes. | Chapter 7 Improving the supply side<br>Chapter 10 NDIS housing supports<br>Chapter 12 The NDIS in rural and remote areas<br>Chapter 13 Aboriginal and Torres Strait Islander people and the NDIS<br>Chapter 14 Queensland Government roles and interventions<br>Chapter 15 Interactions with Queensland Government services |
| The QPC should also investigate and report on the Queensland Government's role in the NDIS, in relation to the authorisation of restrictive practices and preparation of Positive Behaviour Support Plans. | Chapter 14 Queensland Government roles and interventions<br>Chapter 15 Interactions with Queensland Government services |
| The QPC should recommend options for improved policies and measures to ensure the NDIS market in Queensland will meet the needs of participants both now and in the future. | Chapter 5 Improving participant outcomes<br>Chapter 7 Improving the supply side<br>Chapter 8 Improving price regulation<br>Chapter 9 Improving market coordination<br>Chapter 10 NDIS housing supports<br>Chapter 11 Participant employment outcomes<br>Chapter 12 The NDIS in rural and remote areas<br>Chapter 13 Aboriginal and Torres Strait Islander people and the NDIS<br>Chapter 14 Queensland Government roles and interventions<br>Chapter 15 Interactions with Queensland Government services<br>Chapter 16 Intergovernmental governance |

# Appendix B: Submissions

Written submissions provide a significant contribution to the Commission's evidence base. In total, the Commission received 70 submissions. Publicly available submissions are listed below. Five submissions were confidential and have not been published.

| Organisation of person | Issues paper | Draft report |
|---|---|---|
| Catalano and Denton | 1 | |
| The Royal Australian and New Zealand College of Psychiatrists | 4 | DR19 |
| Occupational Therapy Australia | 5 | DR6 |
| Independent Audiologists Australia | 6 | |
| Spinal Life Australia | 8 | |
| Institute of Professional Organisers | 9 | |
| HELP Enterprises | 10 | |
| Property Council of Australia | 11 | DR24 |
| XtremeCARE Australia | 12 | |
| Assistive Technology Suppliers Australia | 13 | |
| Rural Lifestyle Options Australia | 15 | |
| Breakaway Toowoomba | 16 | |
| TransitCare | 17 | |
| Exercise and Sports Science Australia | 18 | DR16 |
| Australian Community Support Organisation | 19 | |
| The Public Advocate | 20 | DR3 |
| Leap In! | 21 | |
| AEIOU Foundation | 22 | |
| Stride | 23 | |
| National Disability Services | 24 | |
| Queensland Advocacy Incorporated | 25 | DR22 |
| Quality Lifestyle Support | 26 | |
| JobSupport | 27 | |
| Queenslanders with Disability Network | 28 | DR14 |
| Australian Association of Social Workers | 29 | DR17 |
| Allied Health Professions Australia | 30 | DR11 |
| Maurice Blackburn Lawyers | 31 | DR5 |
| Australian Physiotherapy Association | 32 | DR23 |

| Organisation of person | Issues paper | Draft report |
|---|---|---|
| Queensland Aboriginal and Islander Health Council | 33 | |
| Queensland Alliance for Mental Health | 34 | |
| WorkAbility Queensland | 35 | DR15 |
| Mercy Community Services | 36 | |
| Office of the Public Guardian | 37 | |
| Queensland Government | 38 | DR26 |
| National Disability Insurance Agency | 39 | |
| AMPARO Advocacy | 40 | |
| The Hopkins Centre | 41 | DR10 |
| Institute for Urban Indigenous Health | 42 | DR20 |
| CheckUP | | DR1 |
| Down Syndrome Queensland | | DR4 |
| The Services Union | | DR7 |
| Queensland School Bus Alliance | | DR8 |
| Audiology Australia | | DR9 |
| Queensland Nurses and Midwives' Union | | DR12 |
| Michael Moodie | | DR13 |
| Australian Small Business and Family Enterprise Ombudsman | | DR18 |
| Office of the Queensland Small Business Commissioner | | DR21 |
| Summer Foundation | | DR25 |
| Autism Queensland | | DR27 |
| Department of Social Services, National Disability Insurance Agency and the NDIS Quality and Safeguards Commission | | DR28 |

# Appendix C: Consultations

## Meetings and discussions

| Organisation or person |
|---|
| Aboriginal and Torres Strait Islander Councils and the Local Government Association of Queensland |
| Aboriginal and Torres Strait Islander Disability Network of Queensland |
| AMPARO Advocacy |
| Aruma |
| Australian Federation of Disability Organisations |
| BDO |
| Blind Citizens Australia |
| Bonyhady, Bruce |
| Boyce, Sharon |
| Carers Queensland |
| Carey, Gemma |
| Catalano, Grazia |
| Centacare |
| CheckUP |
| Community Resources Unit |
| Community Services Industry Alliance |
| Davis, Scott |
| Denton, Michelle |
| Department of Aboriginal and Torres Strait Islander Partnerships |
| Department of Child Safety, Youth and Women |
| Department of Communities, Disability Services and Seniors |
| Department of Education |
| Department of Employment and Small Business |
| Department of Housing and Public Works |
| Department of Local Government, Racing and Multicultural Affairs |
| Department of the Premier and Cabinet |
| Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships |
| Department of Social Services (Cth) |
| Department of Transport and Main Roads |

| Organisation or person |
| --- |
| Department of Youth Justice |
| Down Syndrome Queensland |
| Endeavour Foundation |
| Ferguson, Helen |
| Fredericks, Bronwyn |
| Gidgee Healing |
| HELP Enterprises |
| Hulcombe, Julie |
| Independent Living Support Association |
| Institute for Urban Indigenous Health |
| Jigsaw |
| JRZ Homes |
| JobSupport |
| Kynd |
| Mater Refugee Health Service and Refugee Health Network Queensland |
| Menezes, Flavio |
| Mental Health Australia |
| Mercy Community |
| National Disability Insurance Agency |
| National Disability Services |
| National Injury Insurance Agency Queensland |
| National Retail Association |
| NDIS Quality and Safeguards Commission |
| Occupational Therapy Australia |
| Office of Industrial Relations |
| Office of the Public Guardian |
| O'Keefe, Nicole |
| Productivity Commission |
| Prominence Consulting |
| Public Service Commission |
| Queensland Aboriginal and Islander Health Council |
| Queensland Advocacy Incorporated |
| Queensland Alliance for Mental Health |

| Organisation or person |
| --- |
| Queensland Corrective Services |
| Queensland Council of Social Services |
| Queensland Family & Child Commission |
| Queensland Health |
| Queensland Human Rights Commission |
| Queensland Investment Corporation |
| Queensland Mental Health Commission |
| Queensland Transition Advisory Forum |
| Queensland Treasury |
| Queenslanders with Disability Network |
| Regional Housing Ltd |
| Residential Tenancies Authority |
| Royal Australian College of General Practitioners |
| SDA Services |
| SDA Smart Homes |
| Silky Oak Support Services |
| Specialist Disability Accommodation Alliance |
| Summer Foundation |
| Synapse |
| The Hopkins Centre |
| Xavier |
| Yarrabah Aboriginal Shire Council |
| Young, Andrew |
| YoungCare |
| Young People in Nursing Homes National Alliance |

## Roundtables and forums

| Roundtable/forum |
|---|
| AiG Roundtable |
| Queenslanders with Disability Network focus group with participants |
| Queenslanders with Disability Network focus group with carers |
| National Disability Services roundtable (Workforce) |
| National Disability Services roundtable (Thin markets) |
| National Disability Services roundtable (Accommodation) |
| National Disability Services roundtable (Restrictive practices) |
| National Disability Services roundtable (Specialist Disability Accommodation) |
| National Disability Services roundtable (Participant employment services) |
| National Disability Services roundtable (Provider guarantee) |
| The Hopkins Centre (2) |

## Public hearings (Brisbane)

| Speaker/s | Attendance |
|---|---|
| Michael Moodie, University of the Sunshine Coast | In-person |
| Jess Harper, Disability Intermediaries Australia | In-person |
| Belinda Drew and Matthew Gillett, Community Services Industry Alliance and WorkAbility Qld | Via Zoom |
| James Houghton, Office of the Public Guardian | Via Zoom |
| Jen Williams, Property Council of Australia | In-person |
| Claire Hewat and Gail Mulcair, Allied Health Professions Australia | Via Zoom |
| Marlene Levasseur, Rights in Action | Via Zoom |
| Sophie Wiggans and Chris Coombes, Queensland Advocacy Incorporated | In-person |
| Des Ryan OAM | Via Zoom |
| Ian Montague, National Disability Services | In-person |
| Paige Armstrong, Queenslanders with Disability Network | In-person |
| Matt Moore, Institute for Urban Indigenous Health | In-person |

## Regional visits

| Organisation or person |
|---|
| Access Recreation (Rockhampton) |
| All Abilities Physiotherapy (Townsville) |
| Aspire to Achieve Occupational Therapy (Townsville) |
| Bidgerdii Community Health Service (Rockhampton) |
| BUSHKids (Cherbourg) |
| Cairns Disability Providers Network Roundtable (Cairns) |
| Centacare CQ (Rockhampton) |
| Cherbourg Aboriginal Shire Council (Cherbourg) |
| Cherbourg Regional Aboriginal and Islander Community Controlled Health Services (Cherbourg) |
| Cootharinga (Townsville) |
| Creative Consulting (Cairns) |
| Des Ryan (Rockhampton) |
| Enhanced Health Therapy Services (Townsville) |
| Emerge Supports (Cherbourg) |
| Home Support Association (Rockhampton) |
| Hub Community Network Inc (Murgon) |
| ITEC Health (Rockhampton) |
| Matt Ganly (Townsville) |
| Martin Locke Homes (Townsville) |
| North and West Remote Health (Townsville) |
| NQ Enable (Townsville) |
| Rights in Action (Cairns) |
| selectability (Townsville) |
| Yumba Bimbi Support Services (Rockhampton) |

# Appendix D: Understanding participants' plans

Plan utilisation describes how much of a participant's budget is being spent, and is calculated as the ratio of payments made over the value of committed supports. Low plan utilisation might indicate market gaps, although there could be other causes. As at 31 December 2020, the NDIA reported that plan utilisation levels in Queensland were 68 per cent (NDIA 2020ay, p. 2). No Queensland regions were more than 10 percentage points below the national average[218]; however, four regions were below this benchmark—Rockhampton, Mackay, Toowoomba, and Townsville.

This appendix seeks to characterise the types of NDIS plans held by Queenslanders, and understand what factors predict low plan utilisation and how they might vary across regions and between cohorts. It also produces experimental estimates for the causal effect of support coordination on plan utilisation. It informs discussion of plan utilisation in Chapters 4, 9, 12 and 13.

## D.1 What kinds of plans do Queenslanders have?

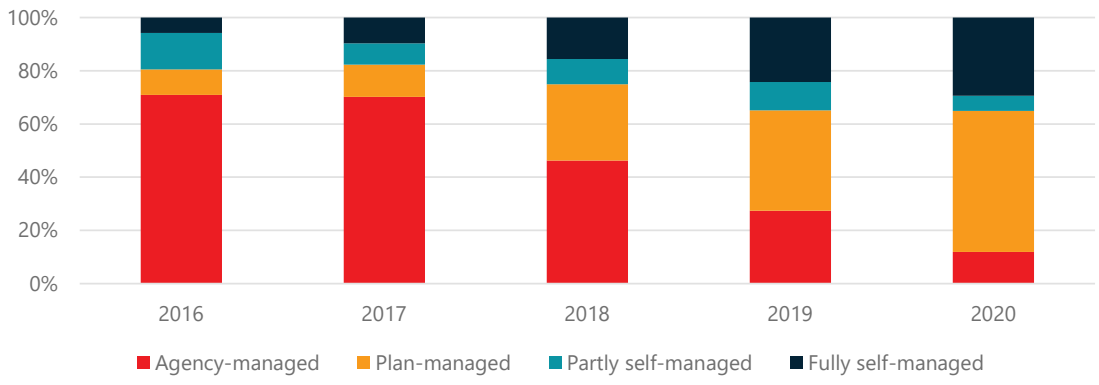
There has been a shift towards more flexible forms of plan management.

The proportion of participants with agency-managed plans fell from 70 per cent in December 2017 to 19 per cent in December 2020, and the proportion of participants with either partly or fully self-managed plans increased from 18 per cent to 31 per cent (NDIA 2020ap, p. 277). The proportion of participants on plan-managed plans has shown significant growth, from just 13 per cent in December 2017 to 49 per cent of all participants in December 2020 (NDIA 2020ap, p. 277).

### Plan management during the transition period

The proportion of participants with plan-managed and self-managed plans might be expected to increase over time as people gain familiarity with the scheme and choose to switch from agency management to other more flexible forms of plan management. However, data on first plans shows that new entrants to the scheme in Queensland were also much more likely to choose plan management or self-management options in 2020 than they were in 2016 (Figure D.1).

**Figure D.1 Proportion of first plans, by plan management type over time, Queensland**



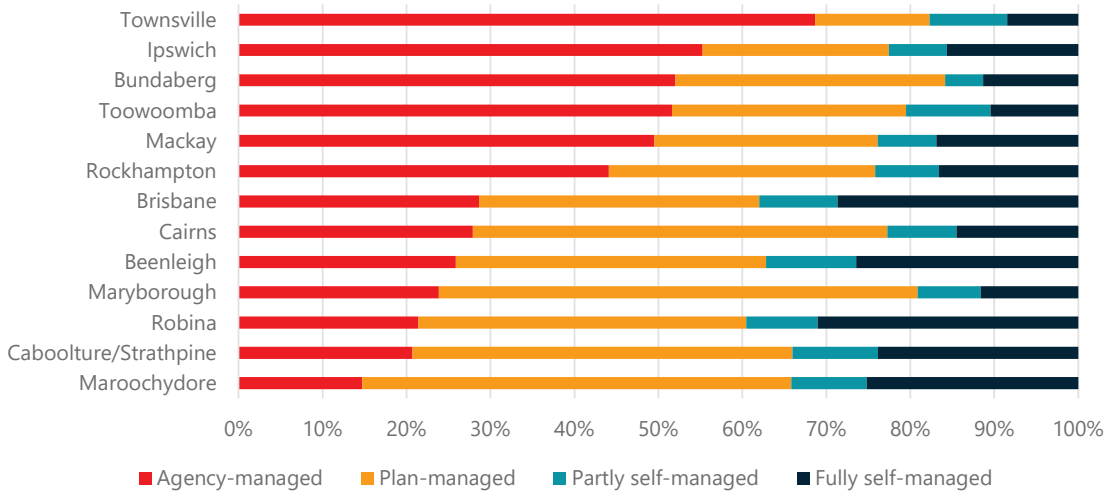

*Source: NDIA, December 2020, unpublished; QPC estimates.*

[218] The 'benchmark' is the national average after adjusting for the proportion of participants in SIL in each region (who have high levels of plan utilisation and might therefore skew the data) and the length of time participants have been in the scheme (NDIA 2020ax, p. 2).

There is also evidence of participants switching from agency management to plan or self-management over time on their second, third or fourth plan.

At the service district level, 68 per cent of participants in Townsville—the first service district to begin NDIS rollout in Queensland—chose agency management on their first plan (Figure D.2). Over 50 per cent of first plans are agency-managed in Ipswich, Bundaberg and Toowoomba. Self-management of a first plan is highest in Brisbane, Beenleigh and Robina.

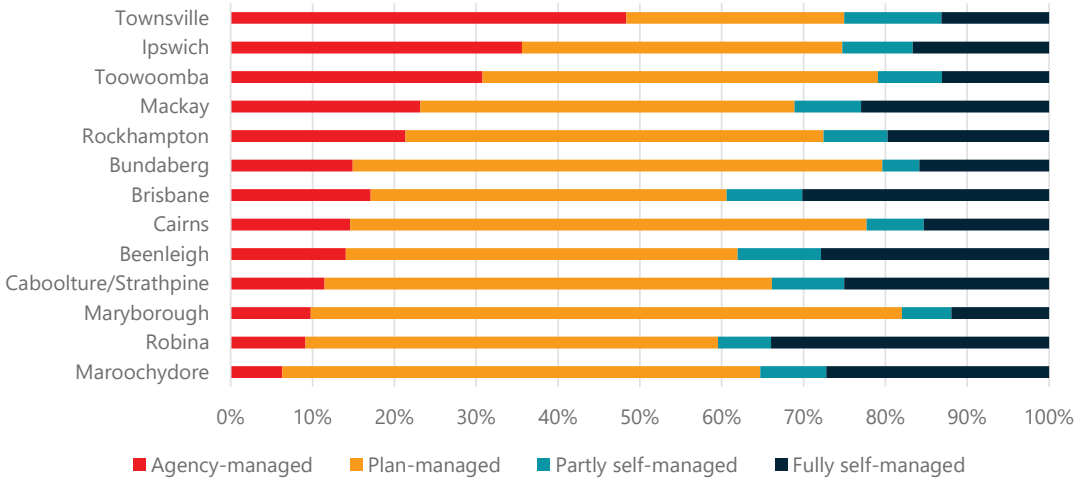
**Figure D.2 Proportion of first plans, by plan management type and service district**




*Source: NDIA, December 2020, unpublished; QPC estimates.*

Over time, the proportion of participants on agency-managed plans has decreased in all service districts—particularly in Bundaberg where approximately 52 per cent of first plans are agency-managed but only 15 per cent of current plans (Figure D.3). While there has been growth in the proportion of self-managed plans, much of the shift from agency management appears to be driven by a shift to plan management, which may offer some more flexibility than an agency-managed plan but less effort on the part of the participant or their nominee to keep records and manage invoicing than self-management.

**Figure D.3 Proportion of current plans, by plan management type and service district**



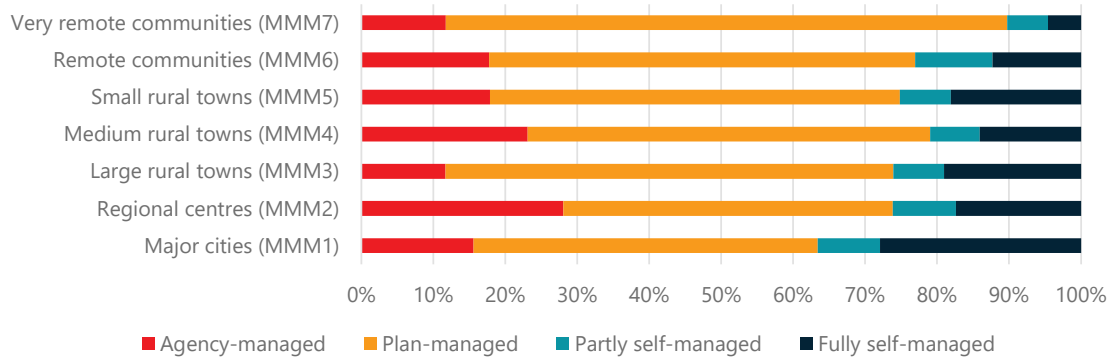

*Source: NDIA, December 2020, unpublished; QPC estimates.*

## Plan management by cohort

The proportion of people choosing each plan management type varies between cohorts. For example, approximately 16 per cent of Aboriginal and Torres Strait Islander participants have either partly or fully self-managed plans, compared to 34 per cent of participants who do not identify as Aboriginal and Torres Strait Islander and 33 per cent of participants who did not respond to this question (NDIA, December 2020, unpublished; QPC estimates).[219]

A higher proportion of participants in major cities had either fully or partly self-managed plans than those living in other areas, particularly those living in very remote areas where only just over 10 per cent of participants have self-managed plans (Figure D.4).

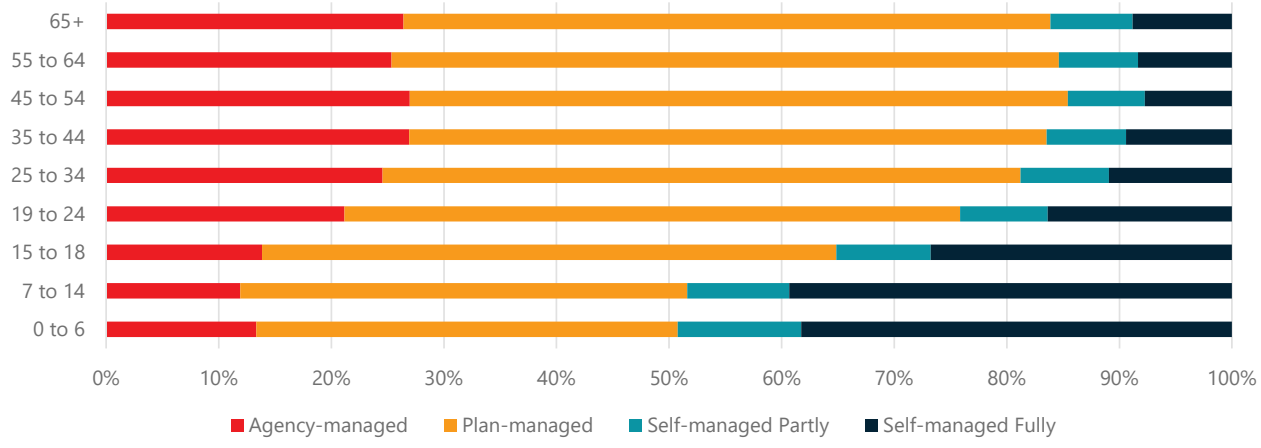
**Figure D.4 Proportion of current plans, by plan management type and remoteness**




*Source: NDIA, December 2020, unpublished; QPC estimates.*

The proportion of plans that are self-managed is higher for younger participants (Figure D.5). Just under 50 per cent of participants aged 0 to 6 are on partly or fully self-managed plans, and 48 per cent of those aged 7 to 14. This compares to only 16 per cent of participants aged 65 and over.

**Figure D.5 Proportion of current plans, by plan management type and participant age group**



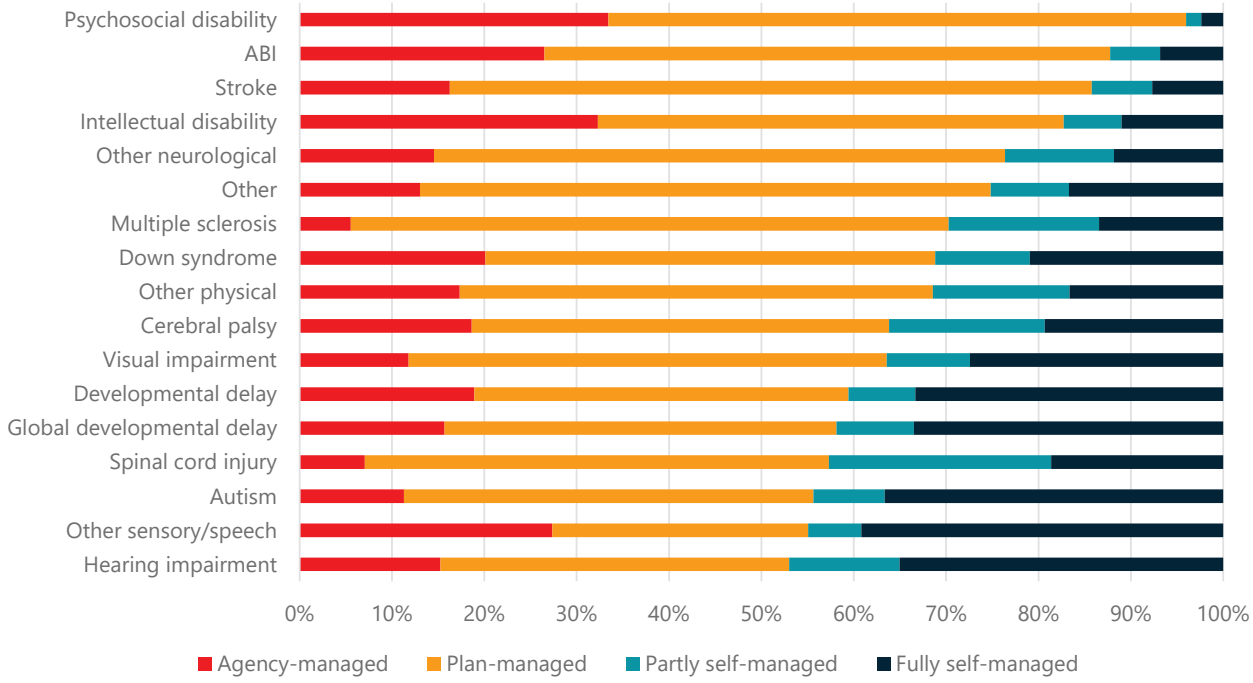

*Source: Reproduced from NDIA 2020ap, p. 276.*

[219] This data refers to active plans, whereas the analysis in the draft report referred to all current plans.

The digital literacy required to navigate an NDIS plan can create barriers for older carers and participants who may not have significant experience with online platforms like the myplace portal (QDN sub. 28, p. 15). This may explain why fewer older participants are self-managing their plans. Children may be most likely to self-manage as they have a parent managing on their behalf. For example, Blaxland et al. (2020, p. 23) found that almost half of all fully self-managed plans across Australia were managed by parents of children with autism.

Plan management methods also vary by disability group (Figure D.6). For example, approximately 4 per cent of participants with psychosocial disability are partly or fully self-managing their plan, with 33 per cent choosing agency management. The proportion of participants with acquired brain injury (ABI) that self-manage their plan is also low at 12 per cent.

**Figure D.6 Proportion of current plans, by plan management type and disability group**




*Source: Reproduced from NDIA 2020ap, p. 277.*

In contrast, a large proportion of participants with global developmental delay, developmental delay, autism or other sensory/speech disabilities have self-managed plans. This may reflect that many children in the scheme have these kinds of disabilities (Blaxland et al. 2020, p. 17; PC 2017b, p. 17), and thus are likely to have a parent self-managing their plan. A large proportion of participants with spinal cord injury, hearing impairment and visual impairment also self-manage their plans. These decisions might be related to the flexibility required to purchase supports for these disability groups, or the capacity of the individuals within these groups. However, there was no clear pattern when financial management types were compared for participants with different severity scores.

## Determinants of agency management

Participants with agency-managed plans might experience decreased levels of choice and control, as well as a lack of services in some cases, because they are limited to purchasing supports from registered providers. Analysis undertaken by the Commission[220] indicates that, keeping other factors constant, participants are more likely to

[220] A logit regression on the outcome 'agency-managed' was undertaken using unpublished NDIA data current at December 2020.

have an agency-managed plan if they are aged 15 and over, are Aboriginal and Torres Strait Islander, or are from a CALD background. Participants are less likely to have an agency-managed plan if they live outside of major cities.

## D.2 Distribution of committed supports

Low utilisation might occur if participants are unable to spend their budgets—for example, if they cannot find service providers—or if plan budgets exceed their needs. Before analysing reasons for low plan utilisation from the participant's perspective, it is important to understand how budgets are determined.

### How are plan budgets set?

The amount of funding included in a plan is based on what supports are assessed as reasonable and necessary for the participant to meet their goals. During the planning meeting, information is collected about the participant's age, primary and other disabilities, and level of functional impairment. Information is also collected about the participant's current and potential mainstream, informal and community supports. This information is used to create a Typical Support Package (TSP) amount, which is a baseline of the expected funding a participant with similar characteristics might require. This is then adjusted based upon individual factors. The TSP does not determine if supports are reasonable and necessary, rather it provides a data-driven national benchmark to guide planners. Further mechanisms to assist decision-making include:

- use of a support calculator, which allows planners to determine the benchmark cost of a support based on the NDIS Price Guide and Support Catalogue to generate items in a plan
- technical advice requests, which help planners to achieve consistency in decision-making via access to internal advisors with a professional background in disability or clinical care (NDIA, pers. comm., 2 November 2020).

Plans could be set too high for numerous reasons:

- participants might advocate for a high plan value as a form of risk management
- needs might be miscommunicated, leading a planner to include unnecessary supports in a plan
- planners might have an incentive to set budgets too high to avoid plan reviews or complaints processes
- items in the planning guide or price guide might be defined poorly, priced inappropriately, or be unnecessary.

Similarly, plans might also be set too low due to miscommunication, or if planners have an incentive to constrain budget size to protect the financial sustainability of the scheme.

Constraints at lower levels of the budget—the support class or support category level—may also lead to low levels of plan utilisation if there is not enough flexibility for a participant to choose how they allocate their funds between support categories to best meet their needs.

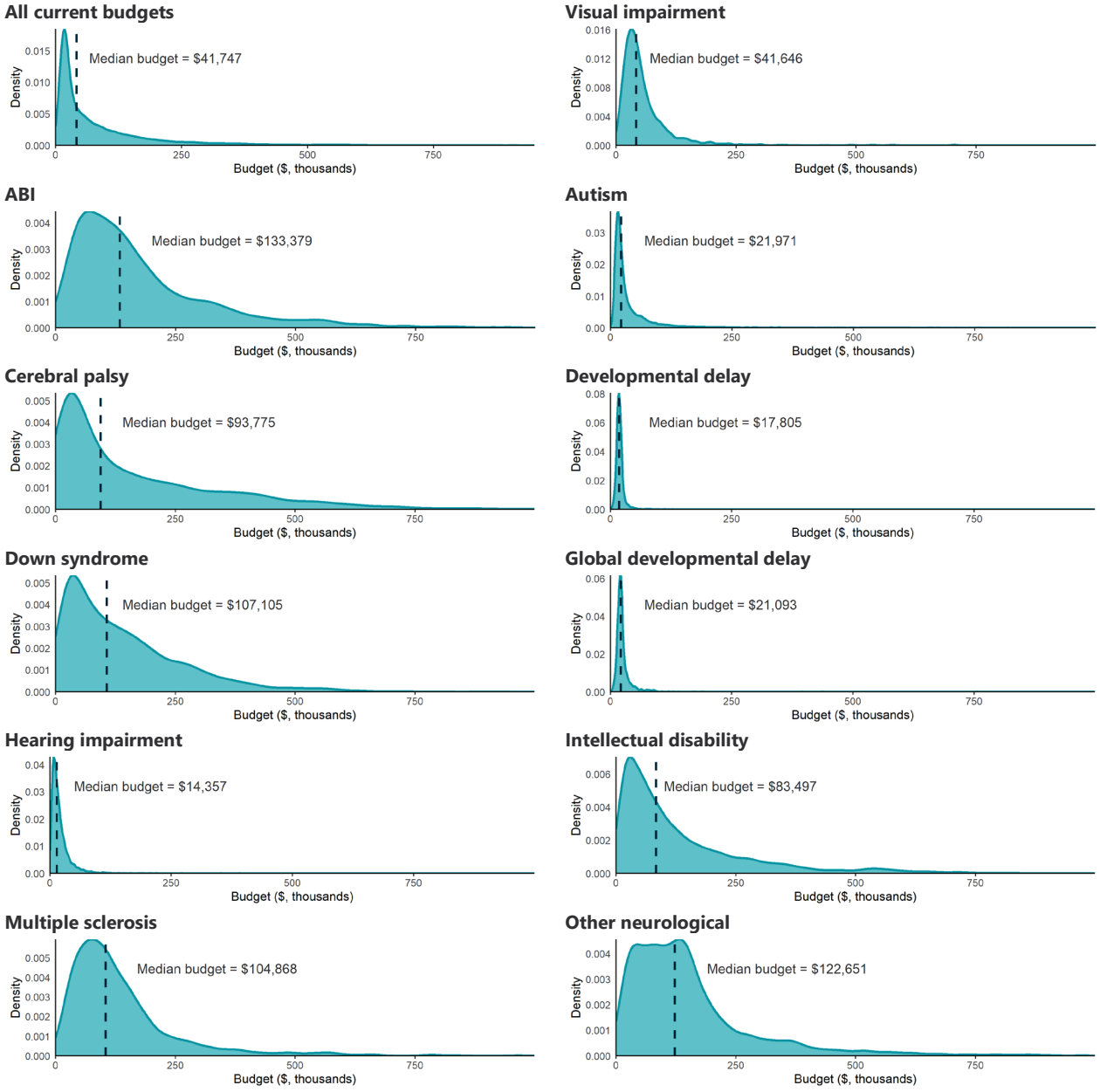
### How does the distribution of committed supports vary?

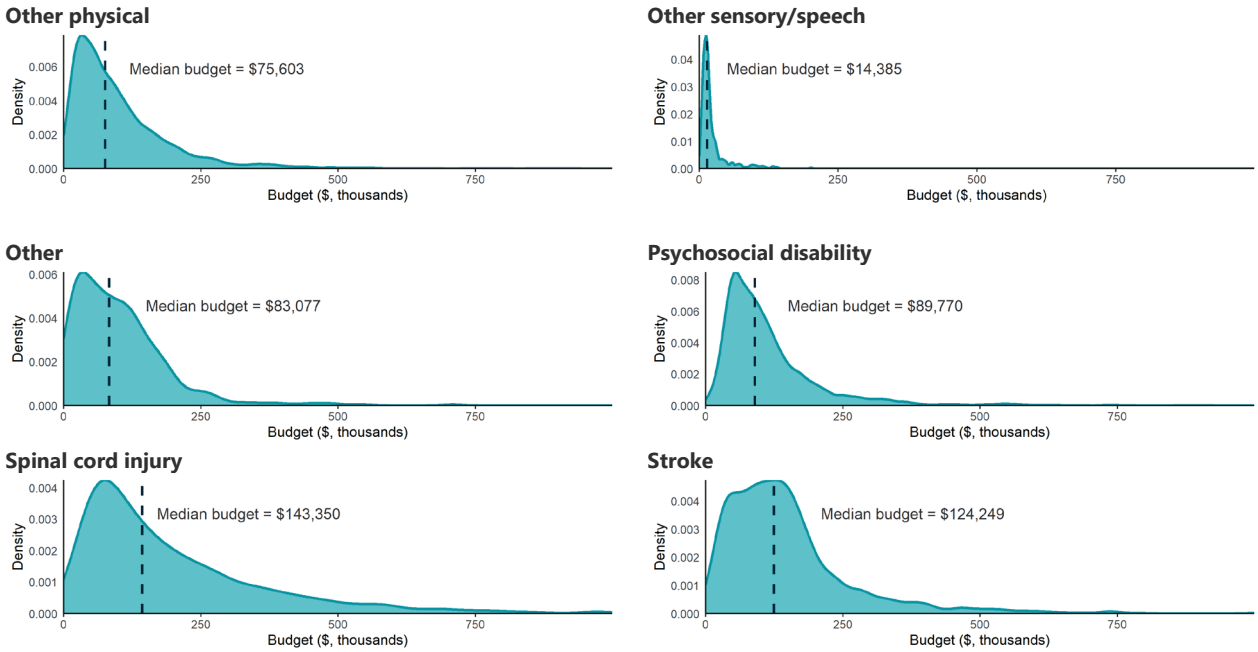
This analysis uses committed supports data provided to the Commission by the NDIA linked to the participant demographics data. After summing committed budget amounts over support categories for each individual plan, the Commission had data entries for 84,598 current plans in Queensland.

The distribution of committed supports is heavily skewed to the right, with the bulk of budgets at the lower end of the distribution at smaller budgets levels and a long right-hand tail where small numbers of participants that need full-time care have large budgets up to a maximum of $2.5 million. The lowest quartile of budgets are less than $18,486 per plan, and the highest quartile are above $110,066, with a median plan value of $41,747 and an average plan value of $89,720. Most of these budgets have a length of one year, although a minority may have a longer duration (Chapter 9).

While the distribution is skewed to the right for all disability groups, the median budget varies significantly from $14,357 for hearing impairment to $143,350 for spinal cord injury (Figure D.7). The spread of each distribution also depends on disability group, with tight bunching around the median for developmental delay, global developmental delay, autism, other sensory/speech disabilities and hearing impairment. Conversely, there is large variance in the value of plan budgets for participants with disabilities such as ABI, cerebral palsy, intellectual disability, spinal cord injury, Down syndrome and other neurological disabilities, which all have estimated variances greater than that for all budgets.

**Figure D.7 Current budget distributions in Queensland, 31 December 2020**






*Note: For the purposes of these charts, budgets over $1 million have not been shown.*
*Source: NDIA, December 2020, unpublished; QPC estimates.*

The Commission undertook regression analysis of various explanatory variables on budget size (NDIA, December 2020, unpublished; QPC estimates). It found that budget size is correlated with a participant's severity score, and generally increases as a participant's level of function decreases, as would be expected.[221] Budgets are also larger for participants over 25 than for those under 25. Average budget size also appears to be increasing with the plan sequence number—that is, participants are, on average, receiving more funding the longer they remain in the scheme. This should indicate that, if utilisation is improving, it is not likely to be due to budgets being systematically cut at review.

Budgets are also higher for participants with funding for supported independent living (SIL). These participants are receiving high levels of care, sometimes at all times of the day, and therefore have high budgets.

In terms of budget equity, there is some evidence that participants from a CALD background are systematically receiving plans that are approximately $2,500 lower, on average, than those who do not identify as CALD, controlling for other factors like age and disability type. RANZCP (sub. DR19, p. 2) noted that:

> *Many tools and assessments recommended by the NDIA for larger support packages are often not culturally appropriate for CALD populations. Utilisation of alternative assessments has resulted in misinterpretation from NDIA planners, impacting their ability to provide an adequate support plan.*

This might explain the systematically lower budget values assigned to participants from a CALD background.

There does not appear to be a clear difference in budget size for Aboriginal and Torres Strait Islander participants. It must be noted that the analysis of CALD and Aboriginal and Torres Strait Islander participants is limited by a significant proportion of participants in the 'not stated' group, which are difficult to characterise.

It has been suggested that participants that are more well off may be receiving higher NDIS budgets (Fitzsimmons 2020). Data released by the Minister in March 2021 indicated that there were disparities in average

[221] Normalised severity scores describe a participant's level of function, measured on a scale from 1 (highest level of function) to 15 (lowest level of function) (NDIA 2018j, p. 51). Controlling for other factors such as SIL status, a participant with a severity score of 15 has a budget $247,356 higher, on average, than a participant with a severity score of 1 (NDIA, December 2020, unpublished; QPC estimates).

plan budget sizes depending on where you live in South Australia and Tasmania (Robert 2021b, 2021a). These reported average plan budgets do not control for factors such as severity or SIL status, which Commission analysis shows are strong drivers of plan budget size. For example, if a certain region contained a large cluster of specialist disability accommodation (SDA), it would be expected that the average budget sizes in this region would be significantly larger than those in another region with no SDA. Data has also not been released for other states, including Queensland.

The December 2020 quarterly report provides some evidence that non-SIL participants from higher socioeconomic areas are receiving average plan budgets that are nine per cent higher than participants in lower socioeconomic status, using the ABS Index of Education and Occupation (IEO) deciles (NDIA 2020ap, p. 10). This analysis, while removing participants receiving SIL, does not appear to control for other characteristics that may cluster by location like age. It is also not published specifically for Queensland, instead only at the national level. However, Commission analysis finds that participants in the highest two IEO deciles have budgets that are between $3,000 and $4,000 higher, on average, than those in the lowest IEO decile once other characteristics have been controlled for. However, this result is sensitive to the choice of socioeconomic status indicator. The ABS index of relative socioeconomic disadvantage[222]; for example, does not provide evidence of a strong pattern—participants in both the fifth (near the middle) and the tenth (the highest) index of relative socioeconomic disadvantage decile have estimated plans that are higher than those in the first decile by approximately $2,500. There is no statistically significant effect for participants in the eighth or ninth decile compared to those in the lowest decile.

There may therefore be some evidence that participants who are more disadvantaged are receiving higher budgets in Queensland. However, analysis of this kind should be carefully considered and interpreted as many of the characteristics that determine budgets are correlated with each other—and many of these characteristics will also be correlated with where participants choose to live. Further, socioeconomic deciles are relatively blunt instruments to determine the advantage of the participant themselves since they are based on the postcode the participant lives in. The socioeconomic status of an individual may not always align well with the socioeconomic status of their postcode.

Socioeconomic status may also be an important factor at the access stage before the participant can use NDIS funds to see specialists to support their application.

## D.3 Utilisation of plans

Once participants have received their plan, they must then make choices about how and when to spend their budget. Numerous factors may drive low utilisation of budgets. Assuming that budgets are set correctly, spending may be low due to supply issues such as thin markets, or issues related to transition and scheme implementation. From the demand-side, spending may be low as participants may:

- be cautious and delay spending. This may be due to the incorrect belief that unspent funds can be 'rolled over' to a following year and saved for an emergency, or participants may have uncertainty about how and when they can use their funding
- continue to rely on informal supports instead of purchasing replacement formal supports included in their plan
- forgo services as they search for an appropriate provider or are on a waiting list for their chosen provider.

Average payments per Queensland participant have increased over the last two years, with participants receiving an average of $56,600 at 30 June 2020 compared to $39,800 at 30 June 2018. Average payments in Queensland are the third highest nationally (NDIA sub. 39, p. 11). It is unclear if these increases in payments are due to:

- changes in the underlying demographics of participants
- price guide increases

[222] This variable is defined in Table D.1.

- greater supply of services
- greater participant demand for services over time
- better utilisation of given plans over time
- a combination of the above factors.

Data on payments can better be put into the context of the allocated budget by analysing the utilisation of individual plans—that is, taking the budget constraint as given, how much are participants spending?

## Data and methodology

To understand the factors that might drive low plan utilisation, the Commission constructed a utilisation variable for each individual as the ratio of funds spent over the committed supports available in that plan, using unpublished NDIA data on plan support, participant demographics, and payments from December 2020. This analysis updates that provided in Appendix D of the draft report, which was current as at March 2020.

The budget data was limited to budgets approved up to 30 September 2020, and payments up to 31 December 2020, to allow for timing delays between when supports are provided and when they are paid for. Plans that were effective for less than 30 days are also excluded, as these are likely to represent a plan correction rather than a review for a change of circumstance (NDIA 2020aq, p. 281).

The final data set contains observations on 188,154 plans held by 77,318 participants (as participants will generally receive a new plan each year).

An indicator variable was constructed that equals one if utilisation for a given plan is below the median or zero if above the median, classifying plans as having 'low utilisation' or not. A logit model was estimated, modelling the likelihood of a participant having low plan utilisation based on a set of various underlying characteristics (Table D.1). The logit model was preferred to the probit model as the underlying latent variable driving the binary outcome is not normally distributed; however, the calculated marginal effects should be similar for the logit and the probit models.

**Table D.1 Participant characteristics**

| Variable | Description |
|---|---|
| Service district[223] | The service district the participant resides in. |
| Remoteness | Remoteness based on the Modified Monash Model (major cities, population > 50,000, population between 15,000 and 50,000, population between 5,000 and 15,000, population less than 5,000, remote, very remote). This variable may act as a proxy for thin markets. |
| Age band | The age band of the participant (0 to 6, 7 to 14, 15 to 18, 19 to 24, 25 to 34, 35 to 44, 45 to 54, 55 to 64, 65+). |
| Gender | The stated gender of the participant. |
| Aboriginal and Torres Strait Islander | The stated Aboriginal or Torres Strait Islander status of the participant—recorded as 'yes', 'no' or 'not stated'. |
| CALD | The stated Cultural and Linguistic Diversity status of the participant—recorded as 'yes', 'no' or 'not stated'. |
| Disability group | NDIA grouping for the primary disability of the participant. |
| Plan number | Sequential numbering of the plan from 1 to 5+, where 1 indicates a first plan. This variable may reflect how 'learning from experience' relates to plan utilisation. |
| Plan management type | Budget management method for the specified plan (agency managed, plan managed, partly self-managed or fully self-managed). This behaves as a proxy for choice and control. |
| Support coordination | Indicates if a participant has used support coordination services in that plan. |
| SIL | Indicates if a plan has budget allocated for supported independent living. |
| Client type | Indicates if the participant was previously a state client, a Commonwealth client, or a new client. |
| Postal area index of relative socioeconomic disadvantage | The decile ranking within Queensland of the participant's postcode for the ABS index of relative socioeconomic disadvantage, based on the 2016 Census. A low score indicates relatively greater disadvantage in general; for example, there may be many households with low income, many people with no qualifications, or many people in low skill occupations (ABS 2018b). The indicator for disadvantage was chosen as we are interested in understanding how disadvantage might lead to low plan utilisation, rather than if advantage leads to high utilisation. |
| Scheme maturity | Indicates the year the plan was made effective, to control for time factors like scheme maturity. |

*Source: NDIA, December 2020, unpublished; ABS 2018b; QPC estimates.*

[223] The Commission considered using local government areas instead of service district in the analysis; however, service districts were selected as they are less likely to be closely correlated to a participant's remoteness classification while still providing insight into various regions of Queensland.

Four different models were estimated, the coefficients for which are presented in Table D.2:

- Model 1, which includes the index of socioeconomic disadvantage
- Model 2, which tests the inclusion of the service district variable
- Model 3, which tests the inclusion of the scheme maturity variable to account for time factors
- Model 4, which does not include variables for scheme maturity, service district or socioeconomic disadvantage.

**Table D.2 Determinants of low plan utilisation, logit model estimates, Queensland**

| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|---|---|---|---|---|
| **Remoteness (base group: major cities)** | | | | |
| Population > 50,000 | -0.07*** | -0.09*** | -0.08*** | -0.24*** |
| Population between 15,000 and 50,000 | 0.09** | 0.10*** | 0.20*** | 0.16*** |
| Population between 5,000 and 15,000 | 0.00 | -0.03 | 0.02 | -0.14*** |
| Population less than 5,000 | 0.15*** | 0.14*** | 0.20*** | 0.04** |
| Remote | 0.52*** | 0.52*** | 0.44*** | 0.24*** |
| Very remote | 0.77*** | 0.79*** | 0.81*** | 0.64*** |
| **Service district (base group: Brisbane)** | | | | |
| Beenleigh | -0.05** | -0.01 | - | - |
| Bundaberg | -0.13*** | -0.04 | - | - |
| Caboolture/Strathpine | 0.03 | 0.07*** | - | - |
| Cairns | 0.02 | 0.08** | - | - |
| Ipswich | 0.00 | 0.05** | - | - |
| Mackay | -0.16*** | -0.08** | - | - |
| Maroochydore | -0.13*** | -0.09*** | - | - |
| Maryborough | 0.05 | 0.12*** | - | - |
| Robina | -0.24*** | -0.21*** | - | - |
| Rockhampton | 0.06* | 0.13*** | - | - |
| Toowoomba | -0.01 | 0.06** | - | - |
| Townsville | -0.34*** | -0.28*** | - | - |
| **Age (base group: age 0 to 6)** | | | | |
| Age 7 to 14 | 0.13*** | 0.13*** | 0.13*** | -0.06*** |
| Age 15 to 18 | 0.57*** | 0.57*** | 0.57*** | 0.32*** |
| Age 19 to 24 | 0.44*** | 0.44*** | 0.45*** | 0.16*** |
| Age 25 to 34 | 0.23*** | 0.23*** | 0.24*** | 0.00 |
| Age 35 to 44 | 0.16*** | 0.16*** | 0.17*** | -0.05* |
| Age 45 to 54 | 0.28*** | 0.28*** | 0.29*** | 0.08*** |
| Age 55 to 64 | 0.37*** | 0.37*** | 0.39*** | 0.17*** |
| Age 65+ | 0.51*** | 0.51*** | 0.52*** | 0.24*** |
| **Gender (base group: female)** | | | | |
| Male | 0.05*** | 0.05*** | 0.05*** | 0.04*** |
| Not stated | 0.01 | 0.01 | 0.02 | 0.00 |
| **Aboriginal and Torres Strait Islander (base group: no)** | | | | |
| Yes | 0.18*** | 0.19*** | 0.19*** | 0.21*** |
| Not stated | 0.10*** | 0.10*** | 0.11*** | 0.06*** |
| **CALD (base group: no)** | | | | |
| Yes | -0.12*** | -0.11*** | -0.10*** | -0.08*** |
| Not stated | -0.48** | -0.49** | -0.55** | -0.75*** |
| **Disability group (base group: ABI)** | | | | |
| Autism | -0.08*** | -0.08*** | -0.07** | -0.05* |
| Cerebral palsy | -0.02 | -0.02 | -0.01 | -0.06** |
| Developmental delay | 0.26*** | 0.26*** | 0.25*** | 0.36*** |
| Down syndrome | -0.01 | -0.01 | 0.00 | -0.04 |
| Global developmental delay | 0.21*** | 0.21*** | 0.22*** | 0.27*** |
| Hearing impairment | 0.95*** | 0.96*** | 0.96*** | 0.88*** |
| Intellectual disability | 0.07** | 0.07** | 0.08*** | 0.06** |

| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|---|---|---|---|---|
| Multiple sclerosis | 0.59*** | 0.58*** | 0.59*** | 0.45*** |
| Other | -0.14 | -0.13 | -0.13 | 0.02 |
| Other neurological | 0.14*** | 0.14*** | 0.15*** | 0.09*** |
| Other physical | 0.17*** | 0.17*** | 0.18*** | 0.19*** |
| Other sensory/speech | -0.19** | -0.19** | -0.22*** | -0.33*** |
| Psychosocial disability | 0.27*** | 0.27*** | 0.27*** | 0.35*** |
| Spinal cord injury | 0.00 | 0.01 | 0.00 | -0.07* |
| Stroke | 0.06 | 0.06 | 0.06 | 0.05 |
| Visual impairment | 0.07* | 0.08* | 0.08* | 0.08* |
| **Plan number (base group: 1)** | | | | |
| 2 | -0.52*** | -0.52*** | -0.54*** | -0.30*** |
| 3 | -0.50*** | -0.50*** | -0.52*** | -0.06*** |
| 4 | -0.56*** | -0.56*** | -0.60*** | -0.02 |
| 5+ | -0.58*** | -0.59*** | -0.66*** | 0.08*** |
| **Plan management type (base group: agency-managed)** | | | | |
| Plan-managed | -0.27*** | -0.28*** | -0.26*** | 0.03*** |
| Self-managed partly | -0.31*** | -0.31*** | -0.30*** | -0.19*** |
| Self-managed fully | -0.36*** | -0.37*** | -0.37*** | -0.12*** |
| Not recorded | -9.85 | -9.86 | -10.01 | -8.85 |
| **Support coordination (base group: no)** | | | | |
| Yes | -0.31*** | -0.31*** | -0.31*** | -0.24*** |
| **SIL (base group: no)** | | | | |
| Yes | -1.04*** | -1.04*** | -1.03*** | -0.94*** |
| **Client type (base group: Commonwealth)** | | | | |
| New | 0.04* | 0.04** | 0.03 | 0.14*** |
| State | -0.17*** | -0.17*** | -0.15*** | -0.26*** |
| **Disadvantage decile (base: 1)** | | | | |
| 2 | -0.12*** | - | - | - |
| 3 | -0.05* | - | - | - |
| 4 | -0.10*** | - | - | - |
| 5 | -0.06* | - | - | - |
| 6 | -0.06* | - | - | - |
| 7 | -0.11*** | - | - | - |
| 8 | -0.07** | - | - | - |
| 9 | -0.13*** | - | - | - |
| 10 | -0.18*** | - | - | - |
| **Scheme maturity** | **Yes** | **Yes** | **Yes** | **No** |
| **Intercept** | **Yes** | **Yes** | **Yes** | **Yes** |
| AIC | 234843 | 234885 | 235378 | 249446 |

**** 1% significance, ** 5% significance, * 10% significance.*
*Source: NDIA, December 2020, unpublished; ABS 2018b; QPC estimates.*

The results for models 3 and 4 indicate that the model is sensitive to the inclusion of the scheme maturity variable. This may be due to market maturity factors, such as increased service providers or more informed consumers, and might also account for lower utilisation of recent plans made effective in 2019 that have not been fully spent yet. This variable must therefore be included to account for any time-related factors; however, its interpretation may not be useful.

The results for models 2 and 3 indicate that service district and remoteness can be included at the same time, even though geography might be closely related to remoteness. Multicollinearity might cause standard errors to increase and for the model not to converge. A comparison with model 2 shows that the remoteness coefficients change slightly, but signs remain the same. Test models that included a variable for local government area were not preferred, as the LGA indicator can be highly correlated with other variables in the model.

Finally, the results for model 1 and 2 test whether the model is sensitive to the inclusion of a socioeconomic disadvantage variable, as it may be related to other markers of disadvantage in the model. For example, it is

constructed using data including the percentage of people under the age of 70 who have a long-term health condition or disability and need assistance with core activities, and the percentage of people who do not speak English well. While these variables are not directly included in our model, we are interested in the population of people with disability and have an indicator for variables such as CALD that may be related to the index of disadvantage. The model does not appear highly sensitive to its inclusion, although it does affect the estimates for some service districts. As the disadvantage variable is based on postal areas, this is not surprising. There may therefore be some evidence that socioeconomic disadvantage may be related to lower or higher levels of utilisation in certain regions of Queensland. However, developing a specific identification strategy to understand this problem would be difficult due to reverse causality in disadvantage. Including the variable does not improve the predictive power of the model and is thus omitted.

Model 2 is therefore the preferred model.

## Results

The estimated average marginal effects show that there are numerous factors that make a participant more or less likely to have low utilisation (Table D.3). These effects can be interpreted as the change in the likelihood of being in the low utilisation group based on certain characteristics relative to their base category (Box D.1). As a detailed identification strategy has not been developed, these coefficients are best interpreted as positive or negative relationships between certain characteristics and the likelihood of low plan utilisation.

**Table D.3 Determinants of low plan utilisation, logit model, marginal effects, Queensland**

| Variable | Average marginal effect | Standard error |
|---|---|---|
| **Remoteness (base group: major cities)** | | |
| Population > 50,000 | -0.02*** | 0.01 |
| Population between 15,000 and 50,000 | 0.02*** | 0.01 |
| Population between 5,000 and 15,000 | -0.01 | 0.01 |
| Population less than 5,000 | 0.03*** | 0.01 |
| Remote | 0.11*** | 0.01 |
| Very remote | 0.17*** | 0.01 |
| **Service district (base group: Brisbane)** | | |
| Beenleigh | 0.00 | 0.00 |
| Bundaberg | -0.01 | 0.01 |
| Caboolture/Strathpine | 0.02*** | 0.00 |
| Cairns | 0.02** | 0.01 |
| Ipswich | 0.01** | 0.00 |
| Mackay | -0.02** | 0.01 |
| Maroochydore | -0.02*** | 0.01 |
| Maryborough | 0.03*** | 0.01 |
| Robina | -0.05*** | 0.00 |
| Rockhampton | 0.03*** | 0.01 |
| Toowoomba | 0.01** | 0.01 |
| Townsville | -0.06*** | 0.01 |
| **Age (base group: age 0 to 6)** | | |
| Age 7 to 14 | 0.03*** | 0.00 |
| Age 15 to 18 | 0.12*** | 0.01 |
| Age 19 to 24 | 0.09*** | 0.01 |
| Age 25 to 34 | 0.05*** | 0.01 |
| Age 35 to 44 | 0.03*** | 0.01 |
| Age 45 to 54 | 0.06*** | 0.01 |
| Age 55 to 64 | 0.08*** | 0.01 |
| Age 65+ | 0.11*** | 0.01 |
| **Gender (base group: female)** | | |
| Male | 0.01*** | 0.00 |
| Not stated | 0.00 | 0.01 |

| Variable | Average marginal effect | Standard error |
|---|---|---|
| **Aboriginal and Torres Strait Islander (base group: no)** | | |
| Yes | 0.04*** | 0.00 |
| Not stated | 0.02*** | 0.00 |
| **CALD (base group: no)** | | |
| Yes | -0.02*** | 0.01 |
| Not stated | -0.10** | 0.05 |
| **Disability group (base group: ABI)** | | |
| Autism | -0.02*** | 0.01 |
| Cerebral palsy | 0.00 | 0.01 |
| Developmental delay | 0.06*** | 0.01 |
| Down syndrome | 0.00 | 0.01 |
| Global developmental delay | 0.05*** | 0.01 |
| Hearing impairment | 0.20*** | 0.01 |
| Intellectual disability | 0.02** | 0.01 |
| Multiple sclerosis | 0.13*** | 0.01 |
| Other | -0.03 | 0.02 |
| Other neurological | 0.03*** | 0.01 |
| Other physical | 0.04*** | 0.01 |
| Other sensory/speech | -0.04** | 0.02 |
| Psychosocial disability | 0.06*** | 0.01 |
| Spinal cord injury | 0.00 | 0.01 |
| Stroke | 0.01 | 0.01 |
| Visual impairment | 0.02* | 0.01 |
| **Plan number (base group: 1)** | | |
| 2 | -0.11*** | 0.00 |
| 3 | -0.11*** | 0.00 |
| 4 | -0.12*** | 0.00 |
| 5+ | -0.13*** | 0.01 |
| **Plan management type (base group: agency-managed)** | | |
| Plan-managed | -0.06*** | 0.00 |
| Self-managed partly | -0.07*** | 0.00 |
| Self-managed fully | -0.08*** | 0.00 |
| Not recorded | -0.54*** | 0.00 |
| **Support coordination (base group: no)** | | |
| Yes | -0.07*** | 0.00 |
| **SIL (base group: no)** | | |
| Yes | -0.22*** | 0.00 |
| **Client type (base group: Commonwealth)** | | |
| New | 0.01** | 0.00 |
| State | -0.04*** | 0.00 |

**** 1% significance, ** 5% significance, * 10% significance.*
*Source: NDIA, December 2020, unpublished; QPC estimates.*

### Box D.1 The logit model and interpretation of its coefficients

A logit model is used to model the probability of a binary (or a yes/no) outcome occurring. In economics, it is often used to predict the likelihood of a person making various choices, such as entering the labour force, or experiencing a success or a fail outcome, such as poor achievement on a standardised test.

The coefficients on the logit model are not interpretable as marginal effects in the same way that those for linear regression are due to non-linearity of the model. Instead, the exponent of the logit model's coefficients gives the 'log odds ratio'—the odds for the event occurring for that characteristic relative to the odds of it occurring in the base group.

The economist usually calculates the marginal effects for each coefficient. The marginal effect of a given characteristic refers to the slope of the probability curve relating that characteristic to the probability of the outcome occurring, holding all other variables constant. As the logit model is non-linear, this marginal effect varies across individuals. This analysis reports the average marginal effect, which is the average of the marginal effect calculated for each observation in the data. An alternative approach is to calculate the marginal effect at the mean, which substitutes in the characteristics of the 'average' individual in the data. However, this 'average' individual may not exist, so the average marginal effect is preferred here.

The covariates considered by this analysis are factor variables, and effects should therefore be interpreted relative to the base case. Most variables have an intuitive base case, except for disability type and service district. For these variables, base cases were selected that had 'middling' performance for utilisation in the summary statistics:

- ABI—utilisation was 70 per cent in December 2020, which is relatively close to the December 2020 Queensland average of 68 per cent (NDIA 2020ay, p. 2). While the results for ABI have improved since the draft report, the same base case has been selected for consistency in interpretation between the two reports.
- Brisbane—utilisation was close to the Queensland average in December 2020 (NDIA 2020ay, p. 3). It is also the largest service district and serves as an intuitive base case.

The discussion of the results mostly focuses on interpreting the signs of the marginal effects. If a variable is statistically significant and positive, it can be said that this indicator makes a participant more likely to have low plan utilisation, relative to the base case, and vice versa.

## Discussion

Participants with funding for SIL are much less likely to have low plan utilisation than those who do not, controlling for other factors. In fact, being in SIL appears to be the strongest predictor for not having low plan utilisation as this coefficient has the largest magnitude. This aligns with the findings of the NDIA, which finds that utilisation for participants in SIL is 86 per cent, compared to 62 per cent for non-SIL (NDIA 2020ap, p. 290). This is because this cohort tends to have large plan budgets that are close to completely spent as they are receiving high levels of care, sometimes at all hours of the day.

Controlling for other characteristics, participants who live in remote or very remote areas are much more likely than those who live in major cities to have low utilisation, aligning with figures published by the NDIA for Queensland (NDIA 2020ap, p. 291), as well as participants who are Aboriginal or Torres Strait Islander.

The results from the draft report (using March 2020 data) showed that there did not appear to be a statistically significant difference in plan utilisation by gender or for people from a CALD background. However, updated figures indicate that participants who are male may be more likely to have low plan utilisation than those who are

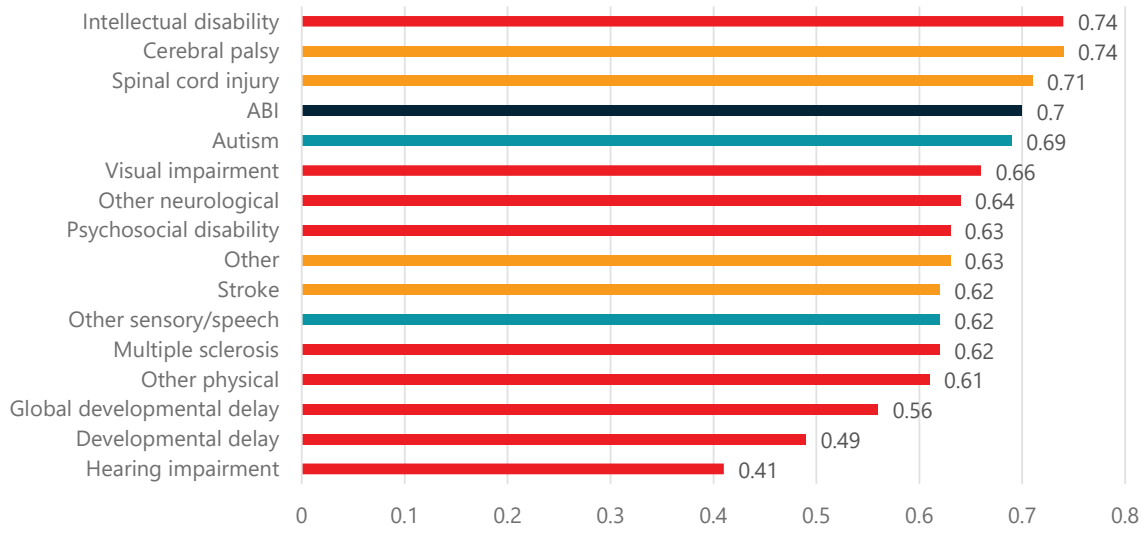
female. Further, there is some indication that participants from a CALD background may be less likely to have low plan utilisation that those not from a CALD background. However, participants from a CALD background were also found to have lower budgets, on average, than those not from a CALD background so further work would be required to understand if this utilisation result is due to budgets being set too low in the first instance.

Participants are less likely to have low plan utilisation if they have used support coordination in their plan than if they do not, and if they have more flexible forms of plan management like self-management or plan management, compared to agency management. Clients who were receiving Queensland Government services prior to the NDIS are also less likely to have low plan utilisation than those who were previously a Commonwealth client. There is no statistically significant effect for participants that are new to disability services, indicating that they have a similar likelihood of having low plan utilisation as participants that were previously Commonwealth clients.

The likelihood of having low plan utilisation also differs dependent on a participant's age. Holding other characteristics constant, participants aged 15 to 18 are most likely to have low plan utilisation, followed by participants aged 65 and over. This broadly aligns with publicly available data published by the NDIA, which indicates that plan utilisation in Queensland was 59 per cent for participants aged 15 to 18, and 55 per cent for participants aged 65 and over as at 31 December 2019 (NDIA data downloads), but controls for other factors such as disability type that might also influence utilisation.

Certain disability types are also more or less likely to have low plan utilisation than others. Compared to a participant with acquired brain injury (ABI, the base group) and controlling for all other characteristics, participants with hearing impairment and multiple sclerosis are most likely to have low utilisation, followed by those with psychosocial disability. Participants with autism and other sensory/speech disabilities are less likely to have low utilisation than participants with ABI, controlling for all other characteristics. This broadly aligns with publicly available data published by the NDIA (Figure D.8), but further controls for the effects of other variables on utilisation, particularly for SIL status. These results are interesting as it shows that, for some disability groups, other characteristics might be driving low levels of average utilisation. In particular, other sensory/speech disabilities have relatively low levels of average utilisation, but once other underlying characteristics are controlled for participants from this group are less likely to have low utilisation than ABI (which has relatively high plan utilisation on average). Down syndrome is not included as a category in the publicly available NDIA data.

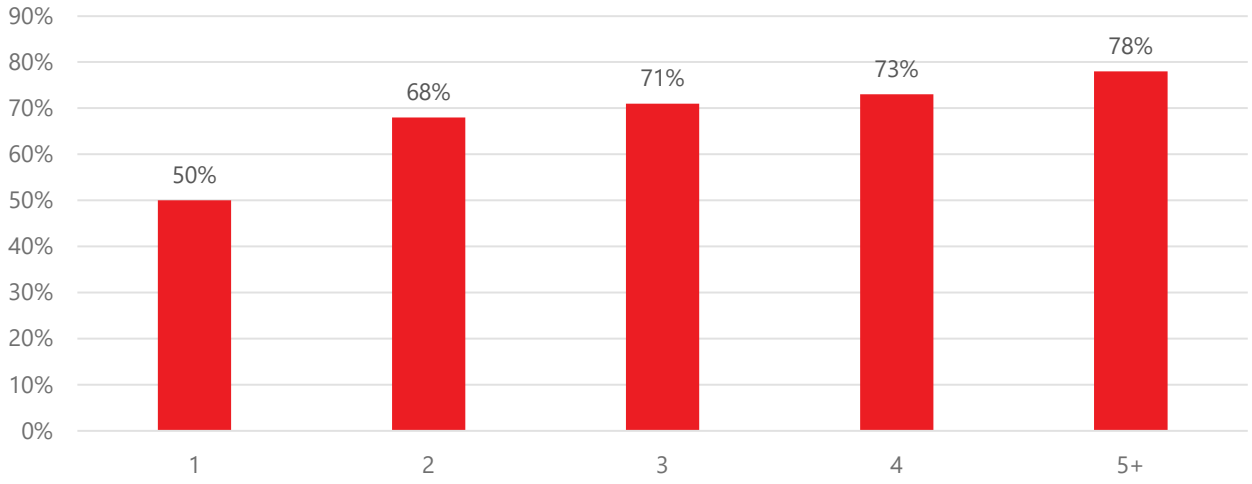
**Figure D.8 Plan utilisation, by disability group, as at 31 December 2020, Queensland**




*Note: Disability groups identified as more likely to have low utilisation (controlling for other characteristics) are shown in red, and those identified as less likely to have low utilisation in blue. ABI was the base group for these estimates (shown in navy). The disability groups coloured orange did not have an effect that was statistically different from ABI.*
*Source: NDIA data downloads, utilisation of plan budgets data, December.*

Participants are also more likely to have low utilisation if they are on their first plan. This is supported by data published by the NDIA, which shows that plan utilisation is higher as participants spend more time in the scheme (Figure D.9). However, these findings do not explain why plan utilisation appears to improve over time.

**Figure D.9 Utilisation of committed supports, by plan number from, 1 April 2020 to 30 September 2020, Queensland**




*Source: NDIA 2020ap, p. 290.*

The 2018 independent pricing review by McKinsey & Company concluded that lower than expected utilisation in the trial sites was driven by participant unfamiliarity with the NDIS, rather than supply shortages (McKinsey & Company 2018, p. 5; RANZCP sub. DR19, p. 1). They argued that average utilisation rates in trial sites were low and improved over time, and that these changes occurred without a reduction in the average size of plans. They also found that the share of participants with high utilisation rates (which they defined as greater than 75 per cent) almost doubled from first to subsequent plans (McKinsey & Company 2018, p. 21). While there is little participant survey data to understand the drivers of this utilisation rate, surveys during the trial showed that 27 per cent of NDIS participants had at least some difficulty in accessing supports for which they had funding (McKinsey & Company 2018, p. 22).

The analysis undertaken by the Commission would support that there is a 'learning effect' present, where participants become better at utilising their plan over time as they gain experience with the scheme. Impacts of supply shortages for certain product types or locations would likely be controlled for by the disability type or location variables included in the model (unlike the McKinsey analysis, which does not control for other factors but appears to only consider summary statistics). The impacts of more supply becoming available over time would be controlled for in the 'scheme maturity' time variable. The Commission also found similar evidence that budgets were not reducing over time—in fact, average budgets are growing over time. This means that it is unlikely that utilisation is improving purely due to budgets being cut at review. However, budgets may be changing at review to better suit the participant. This would still reflect a 'learning effect' as participants gain better knowledge about what services they may require.

## Participants in rural and remote areas

The main analysis indicated that participants in rural and remote areas are more likely to experience low plan utilisation than those that live in major cities. This analysis seeks to uncover what underlying factors might be related to low plan utilisation in this specific cohort, by undertaking analysis on this sub-population containing observations on 33,059 plans held by 13,002 participants (Table D.4).

Inclusion of interaction variables in the main analysis indicates that this cohort may be statistically different from the population classified as MMM1 or MMM2, and it is therefore appropriate to analyse them separately. The specification used is the same as that in model 2; however, service districts are omitted from this analysis as some service districts do not contain a large proportion of rural and remote participants.

**Table D.4 Determinants of low plan utilisation, logit model, marginal effects, rural and remote areas of Queensland**

| Variable | Average marginal effect | Standard error |
|---|---|---|
| **Age (base group: age 0 to 6)** | | |
| Age 7 to 14 | 0.01 | 0.01 |
| Age 15 to 18 | 0.10*** | 0.01 |
| Age 19 to 24 | 0.09*** | 0.01 |
| Age 25 to 34 | 0.00 | 0.01 |
| Age 35 to 44 | -0.02 | 0.01 |
| Age 45 to 54 | -0.01 | 0.01 |
| Age 55 to 64 | 0.01 | 0.01 |
| Age 65+ | 0.02 | 0.02 |
| **Gender (base group: female)** | | |
| Male | 0.02*** | 0.01 |
| Not stated | 0.02 | 0.03 |
| **Aboriginal and Torres Strait Islander (base group: no)** | | |
| Yes | 0.06*** | 0.01 |
| Not stated | 0.01 | 0.01 |
| **CALD (base group: no)** | | |
| Yes | 0.03 | 0.02 |
| Not stated | 0.05 | 0.14 |
| **Disability group (base group: ABI)** | | |
| Autism | -0.06*** | 0.01 |
| Cerebral palsy | 0.00 | 0.02 |
| Developmental delay | -0.01 | 0.02 |
| Down syndrome | -0.07*** | 0.02 |
| Global developmental delay | 0.03 | 0.03 |
| Hearing impairment | 0.15*** | 0.02 |
| Intellectual disability | -0.04** | 0.01 |
| Multiple sclerosis | 0.13*** | 0.02 |
| Other | -0.03 | 0.05 |
| Other neurological | 0.01 | 0.02 |
| Other physical | 0.05*** | 0.02 |
| Other sensory/speech | -0.10*** | 0.03 |
| Psychosocial disability | 0.01 | 0.02 |
| Spinal cord injury | 0.03 | 0.02 |
| Stroke | 0.04* | 0.02 |
| Visual impairment | -0.01 | 0.02 |
| **Plan number (base group: 1)** | | |
| 2 | -0.12*** | 0.01 |
| 3 | -0.13*** | 0.01 |
| 4 | -0.14*** | 0.01 |
| 5+ | -0.14*** | 0.01 |
| **Plan management type (base group: agency-managed)** | | |
| Plan-managed | -0.04*** | 0.01 |
| Self-managed partly | -0.04*** | 0.01 |
| Self-managed fully | -0.05*** | 0.01 |
| **Support coordination (base group: no)** | | |
| Yes | -0.05*** | 0.01 |

| Variable | Average marginal effect | Standard error |
|---|---|---|
| **SIL (base group: no)** | | |
| Yes | -0.29*** | 0.01 |
| **Client type (base group: Commonwealth)** | | |
| New | 0.00 | 0.01 |
| State | -0.04*** | 0.01 |

**** 1% significance, ** 5% significance, * 10% significance.*
*Source: NDIA, December 2020, unpublished; QPC estimates.*

The results show that the factors that make a participant more or less likely to experience low plan utilisation are similar for those living in rural and remote areas to those identified in the main results. For example, keeping all other characteristics constant, participants are more likely to have low utilisation if they are Aboriginal and Torres Strait Islander, or if they are aged 15 to 24. Further, participants living in rural or remote areas with hearing impairment or multiple sclerosis are more likely to have low plan utilisation than those with ABI (the base group).

Controlling for other factors, participants in rural and remote areas are less likely to have low plan utilisation if they are in SIL, if they have used support coordination in their plan, have a plan-managed or self-managed plan, and as they gain experience with the scheme.

## Aboriginal and Torres Strait Islander participants

The main analysis indicated that Aboriginal and Torres Strait Islander participants are more likely to experience low plan utilisation than those who are non-Indigenous. This analysis seeks to uncover what underlying factors might be related to low plan utilisation in this specific cohort, by undertaking analysis on this sub-population containing observations on 16,377 plans held by 6,858 participants (Table D.5).

Inclusion of interaction variables in the main analysis indicates that this cohort may be statistically different from the population not stating whether they are Aboriginal or Torres Strait Islander, and it is therefore appropriate to analyse them separately. The specification used is the same as that in model 2.

**Table D.5 Determinants of low plan utilisation, logit model, marginal effects, Aboriginal and Torres Strait Islander participants in Queensland**

| Variable | Average marginal effect | Standard error |
|---|---|---|
| **Remoteness (base group: major cities)** | | |
| Population > 50,000 | -0.02 | 0.02 |
| Population between 15,000 and 50,000 | 0.01 | 0.03 |
| Population between 5,000 and 15,000 | 0.02 | 0.02 |
| Population less than 5,000 | 0.04* | 0.02 |
| Remote | 0.13*** | 0.03 |
| Very remote | 0.17*** | 0.03 |
| **Service district (base group: Brisbane)** | | |
| Beenleigh | -0.08*** | 0.02 |
| Bundaberg | -0.04 | 0.03 |
| Caboolture/Strathpine | -0.05** | 0.02 |
| Cairns | -0.01 | 0.03 |
| Ipswich | -0.06*** | 0.02 |
| Mackay | -0.09*** | 0.03 |
| Maroochydore | -0.08*** | 0.02 |
| Maryborough | -0.03 | 0.03 |
| Robina | -0.12*** | 0.02 |
| Rockhampton | -0.01 | 0.03 |
| Toowoomba | -0.07*** | 0.03 |
| Townsville | -0.09*** | 0.03 |
| **Age (base group: age 0 to 6)** | | |
| Age 7 to 14 | 0.03** | 0.01 |
| Age 15 to 18 | 0.10*** | 0.02 |

| Variable | Average marginal effect | Standard error |
|---|---|---|
| Age 19 to 24 | 0.07*** | 0.02 |
| Age 25 to 34 | 0.00 | 0.02 |
| Age 35 to 44 | -0.05** | 0.02 |
| Age 45 to 54 | -0.03 | 0.02 |
| Age 55 to 64 | -0.02 | 0.02 |
| Age 65+ | 0.04 | 0.03 |
| **Gender (base group: female)** | | |
| Male | 0.01 | 0.01 |
| Not stated | -0.06 | 0.05 |
| **CALD (base group: no)** | | |
| Yes | 0.06** | 0.03 |
| Not stated | 0.22 | 0.19 |
| **Disability group (base group: ABI)** | | |
| Autism | -0.05** | 0.02 |
| Cerebral palsy | 0.01 | 0.02 |
| Developmental delay | 0.06** | 0.03 |
| Down syndrome | -0.01 | 0.03 |
| Global developmental delay | 0.03 | 0.04 |
| Hearing impairment | 0.13*** | 0.03 |
| Intellectual disability | 0.01 | 0.02 |
| Multiple sclerosis | 0.01 | 0.06 |
| Other | -0.04 | 0.06 |
| Other neurological | 0.01 | 0.02 |
| Other physical | 0.04* | 0.02 |
| Other sensory/speech | 0.06 | 0.05 |
| Psychosocial disability | 0.05** | 0.02 |
| Spinal cord injury | -0.05 | 0.03 |
| Stroke | 0.03 | 0.03 |
| Visual impairment | -0.03 | 0.04 |
| **Plan number (base group: 1)** | | |
| 2 | -0.14*** | 0.01 |
| 3 | -0.14*** | 0.01 |
| 4 | -0.16*** | 0.01 |
| 5+ | -0.15*** | 0.02 |
| **Plan management type (base group: agency-managed)** | | |
| Plan-managed | -0.06*** | 0.01 |
| Self-managed partly | -0.09*** | 0.01 |
| Self-managed fully | -0.14*** | 0.01 |
| Not recorded | -0.58*** | 0.01 |
| **Support coordination (base group: no)** | | |
| Yes | -0.03*** | 0.01 |
| **SIL (base group: no)** | | |
| Yes | -0.26*** | 0.01 |
| **Client type (base group: Commonwealth)** | | |
| New | 0.01 | 0.01 |
| State | -0.02 | 0.01 |

**** 1% significance, ** 5% significance, * 10% significance.*
*Source: NDIA, December 2020, unpublished; QPC estimates.*

Aboriginal and Torres Strait Islander participants are more likely to experience low plan utilisation if they live in MMM classifications 5, 6 or 7. They are less likely to have low plan utilisation if they are in SIL, as with the broader population of NDIS participants.

The results from the draft report showed no statistically significant effect for support coordination for Aboriginal and Torres Strait Islander participants, but the updated results show that support coordination makes a participant

less likely to have low plan utilisation. This effect is relatively small in magnitude, so the changed result might be due to the greater precision offered by the larger sample size available for the final report.

Aboriginal and Torres Strait Islander participants are more likely to experience low plan utilisation (compared to the base group of ABI) if they have hearing impairment, developmental delay or psychosocial disability.

### Conclusion

This section showed that plan utilisation is related to various underlying characteristics, and the results inform the discussion of plan utilisation in Chapter 4. Namely, it shows that participants are more likely to have low utilisation if they:

- are on their first plan and are still learning about the scheme
- are from an Aboriginal and Torres Strait Islander background
- live in rural or remote areas, or
- have hearing impairment, multiple sclerosis, or psychosocial disability (compared with ABI).

Similarly, participants are less likely to have low plan utilisation if they:

- are receiving funding for SIL
- are on a plan-managed or self-managed plan
- have used support coordination in their plan, or
- were previously receiving Queensland Government-funded disability supports.

## D.4 Experimental estimates of the effect of support coordination on plan utilisation in Queensland

Chapter 4 noted that utilisation of plans in Queensland is relatively low. Further, in section D.3 it was found that participants using support coordination are less likely to have low plan utilisation. Increasing support coordination for certain participants may therefore play a role in improving their utilisation. However, the estimates reported in section D.3 are not causal in nature so it is not possible to conclude that giving participants support coordination will increase plan utilisation. Funding support coordination in plans also comes at a cost—the NDIA reports that $429 million was spent on support coordination claimed in 2019–20 across Australia (NDIA 2020ai, p. 5). In Queensland, the average spend on support coordination per plan (excluding plans that did not purchase support coordination) was approximately $2,200 in 2019–20.[224] Since it comes at a cost, it is therefore necessary to develop a better understanding of the potential benefits from increasing support coordination.

### Findings published by the NDIA on support coordination

The NDIA released a discussion paper for external consultation on support coordination in August 2020. The paper sought feedback on ways to enhance the participant experience regarding support coordination (NDIA 2020ai, p. 3).

This paper reported that 40 per cent of all NDIS participants had support coordination funded in their current plan as at 30 June 2020. In Queensland, 27,224 participants (37 per cent) were reported as having support coordination

[224] This excludes payments made by participants that utilised the core line items for support coordination introduced as a result of COVID-19.

funded in their plans (NDIA 2020ai, p. 5). It also showed that the inclusion of support coordination in plans varies by age (Table D.6) and disability type (Table D.7).

**Table D.6 Support coordination by age group, Australia, 30 June 2020**

| Age | Participants with support coordination as a proportion of all participants in that age group (%) | Annualised value of support coordination in plans ($, millions) |
|---|---|---|
| 0 to 6 | 7 | 14 |
| 7 to 14 | 20 | 67 |
| 15 to 18 | 37 | 50 |
| 19 to 24 | 44 | 71 |
| 25 to 34 | 55 | 100 |
| 35 to 44 | 64 | 110 |
| 45 to 54 | 68 | 139 |
| 55 to 64 | 66 | 152 |
| 65+ | 63 | 33 |
| Total | 40 | 737 |

*Source: Reproduced from NDIA 2020ai, p. 6.*

**Table D.7 Support coordination by disability type, Australia, 30 June 2020**

| Disability type | Participants with support coordination as a proportion of all participants with that disability type (%) | Annualised value of support coordination in plans ($, millions) |
|---|---|---|
| Acquired brain injury | 76 | 54 |
| Autism | 23 | 114 |
| Cerebral palsy | 46 | 34 |
| Developmental delay | 7 | 5 |
| Down syndrome | 42 | 19 |
| Global developmental delay | 10 | 2 |
| Hearing impairment | 12 | 8 |
| Intellectual disability | 54 | 184 |
| Multiple sclerosis | 61 | 21 |
| Other | 47 | 2 |
| Other neurological | 63 | 58 |
| Other physical | 35 | 28 |
| Other sensory/speech | 13 | 1 |
| Psychosocial disability | 84 | 167 |
| Spinal cord injury | 51 | 13 |
| Stroke | 63 | 19 |
| Visual impairment | 29 | 9 |
| Total | 40 | 737 |

*Source: Reproduced from NDIA 2020ai, p. 7.*

The proportion of participants receiving support coordination is highest for those with psychosocial disability (84 per cent), ABI (76 per cent), other neurological disabilities (63 per cent) and stroke (63 per cent).

The discussion paper also highlighted that participants (excluding those in SIL) with funding in their plans for support coordination do not appear to have higher utilisation rates than those without support coordination (plan utilisation was 66 per cent for participants with support coordination compared to 67 per cent for participants without support coordination) (NDIA 2020ai, p. 8). However, comparing these descriptive statistics does not control for underlying factors that also affect plan utilisation, like disability type and age. The NDIA analysis also does not account for the potential selection into the support coordination group—that is, it does not take into account the fact that under the counterfactual without the treatment (no support coordination) it would be expected that the support coordination group, on average, has lower plan utilisation than those not in the support coordination group. It may therefore be a successful outcome that plan utilisation rates are relatively similar between the two groups.

## Controlling for selection

The NDIS website explains that a support coordinator might be funded in a participant's plan if early childhood early intervention (ECEI) partners or local area coordinators (LAC) are not available in their area or if they need more help coordinating supports and services (NDIA 2020k). The NDIA describes that participants might need greater assistance due to factors including (but not limited to):

- limited informal supports and social isolation
- involvement with multiple community or mainstream systems (e.g. justice, child protection)
- living in remote and very remote locations
- being of Aboriginal or Torres Strait Islander background
- being of a CALD background
- greater complexity arising from profound, complex and often interrelated support needs (NDIA 2020ai, p. 8).

It is therefore expected that there is some amount of selection into the group of participants receiving support coordination—that is, we might expect that the underlying characteristics of participants receiving support coordination may differ from the population of participants not receiving support coordination. For example, people who are struggling to utilise their plan might be more likely to be assigned a support coordinator to assist them. However, there is no clear policy rule for the assignment of a support coordinator to a participant, which makes it difficult to control for this selection bias (Box D.2). It is instead assigned when considered 'reasonable and necessary' (NDIA 2020bi). The Tune Review recommended that the NDIS Rules be amended to 'set out the factors the NDIA will consider in funding support coordination in a participant's plan' (Tune 2019, p. 15).

### Box D.2 What is selection bias?

The gold standard for estimating the effect of a given treatment on outcomes is the randomised controlled trial (RCT). By randomly allocating participants to a treatment group and a control group, it can be ensured that treatment status is not confounded with any underlying characteristics of the participants (either observed or unobserved). In this case, the outcomes of the control group and the treated group can be directly compared to estimate the effect of the treatment.

Selection bias usually occurs when participants are not randomly assigned to the treatment group. This often occurs in studies using observational data, where an experiment did not take place. Instead, people may have been subject to some kind of treatment in the real world (for example, participants who received support coordination in the NDIS). In these kinds of observational status, the participants who received the treatment usually share some underlying characteristics that differ from the underlying characteristics of the 'control group' who did not receive the treatment. These differences mean that outcomes may systematically differ between the two groups without the treatment. For example, it would be reasonably expected that utilisation rates for the support coordination group are systematically lower than those not in the support coordination group when the treatment is not applied. These differences between the two groups must therefore be accounted for when trying to estimate the effect of the treatment on outcomes.

*Source: Austin 2011, pp. 400–401; Cameron & Trivedi 2009, pp. 865–871.*

Selection into the group receiving support coordination might therefore mean that the estimates for the effect of support coordination on plan utilisation in section D.3 are likely to be biased. It is difficult to know if the effect is underestimated or overestimated:

- if people who receive support coordination are more likely to struggle to utilise their plan than those who do not, the effect could be underestimated

- if people who receive support coordination are more easily able to advocate for themselves (or have someone else act as advocate) to receive this assistance in their plan, they may be more savvy consumers who are better at utilising their plans and the effect could be overestimated
- both of these mechanisms (and potentially others) could be working together, making it unclear in what direction the estimate is biased.

It is also difficult to account for both the quantity and quality of support coordination received:

- support coordinators may have an incentive to use the entire budget allocated to support coordination, rather than completing the tasks in fewer hours, causing them to work less productively (although the NDIA reports a utilisation rate of approximately 69 per cent across Australia for support coordination (NDIA 2020ai, p. 5))
- stakeholders have highlighted inconsistencies in the quality of support coordination supports provided to participants (Chapter 9).

## Data

To understand the impact of support coordination on plan utilisation, the Commission used the utilisation data set constructed for the preceding analysis with some minor modifications. The utilisation variable was constructed for each individual plan as the ratio of funds spent over the committed supports available in that plan multiplied by 100 (to be interpretable as percentages); however, all payments for support coordination and any committed supports for support coordination were removed from the utilisation calculations. This is to ensure that any improvements to utilisation rates are not simply due to funds being spent on support coordination itself.

The support coordination variable was constructed in the same way as the preceding analysis. Additional support coordination line items were added during the COVID-19 pricing update to assist participants to utilise their plans. These new items allowed participants to use their core funds more flexibly to access support coordination, potentially also introducing self-selection into the support coordination group (NDIA 2020bi). For this reason, this analysis is constrained to the time period prior to March 2020 to ensure that only NDIA mechanisms are selecting individuals into the treatment or control group.[225]

Data with missing observations are dropped, as one of the approaches utilised for this analysis cannot handle missing observations.[226] The final data set contains observations on 113,219 plans held by 58,152 participants.

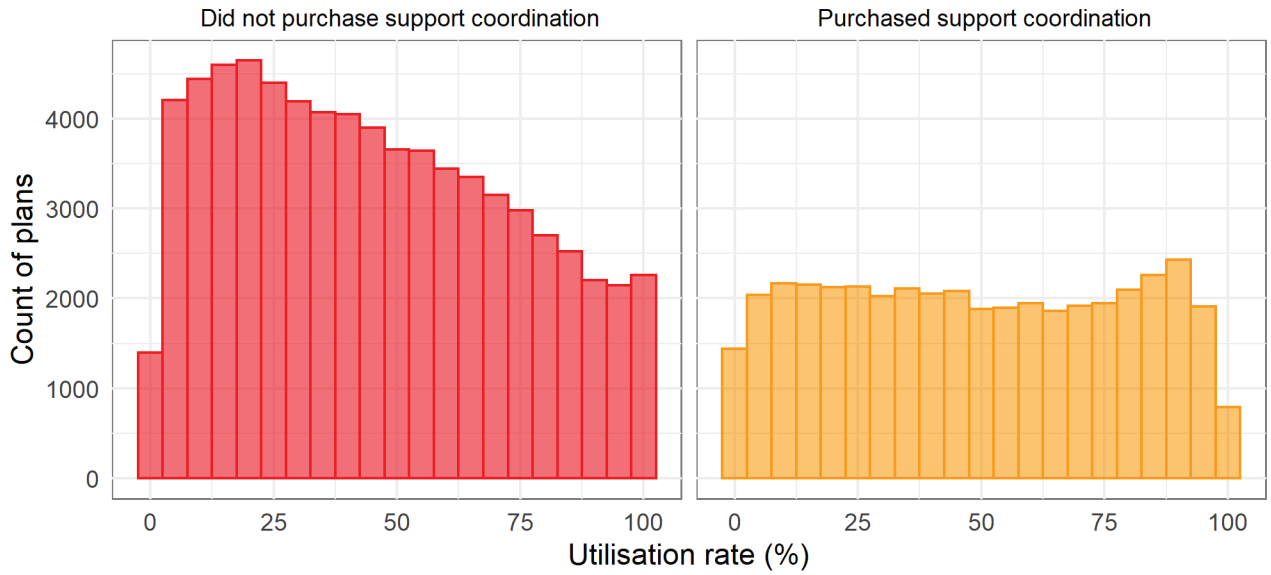
The distribution of utilisation rates in this data set is skewed slightly to the right. The lowest quartile of plans have utilisation rates less than 22 per cent, and the highest quartile above 70 per cent, with a median plan utilisation rate of 44 per cent and an average utilisation rate of 47 per cent.

Of the plans in the data, 41,273 had purchased support coordination and 71,946 had not. The average utilisation rate for plans where support coordination was not purchased is 45 per cent, compared to 49 per cent for the group of plans that had purchased support coordination. Thus, before accounting for selection, the support coordination group has higher utilisation (by four percentage points) than the group without support coordination. This effect is statistically significant at the 1 per cent level (p-value $< 0.001$).

The distribution of utilisation rates also differs between the group that has purchased support coordination and the group that has not (Figure D.10). The bulk of participants who did not purchase support coordination have low utilisation rates, whereas the distribution of utilisation rates for those who purchased support coordination is more uniform. However, it is difficult to directly compare these distributions using simple histograms, as the group of participants that purchased support coordination is smaller than the group that did not.

[225] The use of these line items to claim for support coordination funding has since been discontinued.
[226] Only approximately 500 observations are lost by dropping these from the sample.

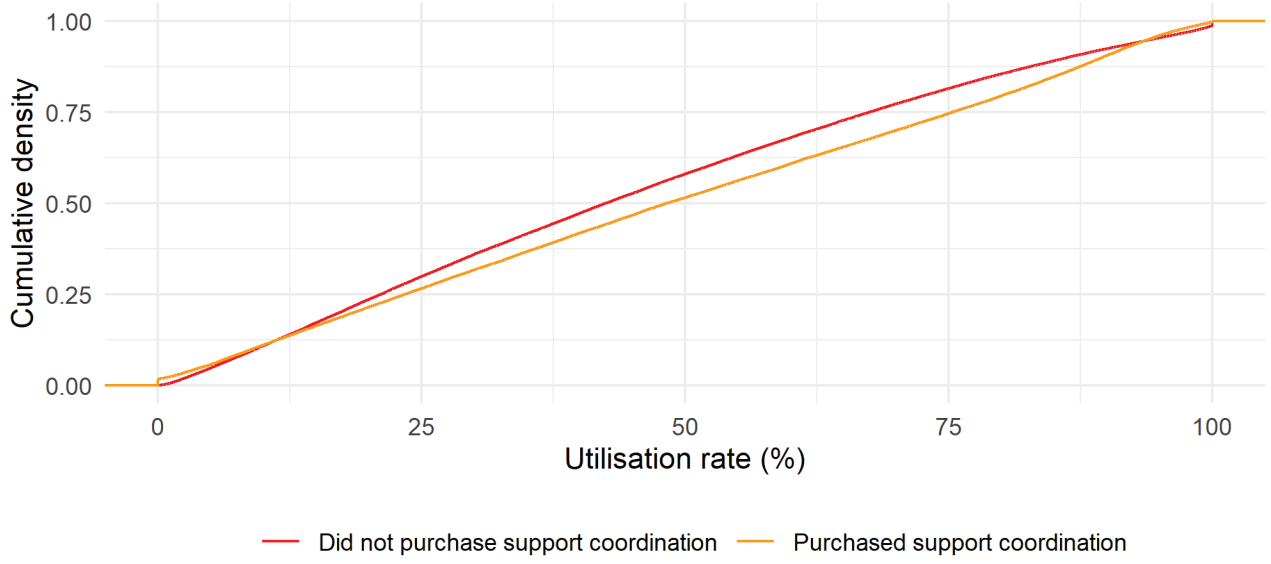
**Figure D.10 The distribution of utilisation rates by purchase of support coordination, Queensland**




*Source: NDIA, December 2020, unpublished; QPC estimates.*

The distributions can be compared more directly by looking at the empirical cumulative distribution function (ECDF) (Figure D.11). At any specified value of the measured variable (in this case, the utilisation rate) the ECDF's value is the fraction of observations that are less than or equal to that given value. The ECDF for participants who have purchased support coordination is to the right of the ECDF for those that have not, indicating that the group receiving support coordination appears to be achieving higher rates of utilisation across the majority of the distribution compared to the group that does not.

**Figure D.11 Empirical cumulative density functions, Queensland**




*Source: NDIA, December 2020, unpublished; QPC estimates.*

However, these pure distributions do not account for any other differences underlying these two groups. These two cohorts differ systematically from each other based on a number of covariates (Table D.8). However, there is no covariate for which no participant has received support coordination.

**Table D.8 Differences in characteristics between support coordination groups, Queensland**

| Characteristic | Did not purchase support coordination (%) | Purchased support coordination (%) | Difference (percentage points) |
|---|---|---|---|
| **Remoteness** | | | |
| Major cities | 47.97 | 49.95 | -1.98*** |
| Population > 50,000 | 32.24 | 33.56 | -1.32*** |
| Population between 15,000 and 50,000 | 3.68 | 3.01 | 0.67*** |
| Population between 5,000 and 15,000 | 5.9 | 5.45 | 0.45*** |
| Population less than 5,000 | 8.53 | 5.74 | 2.79*** |
| Remote | 1.08 | 1.28 | -0.20*** |
| Very remote | 0.61 | 1.01 | -0.40*** |
| **Service district** | | | |
| Beenleigh | 7.5 | 8.67 | -1.17*** |
| Brisbane | 15.04 | 17.53 | -2.49*** |
| Bundaberg | 4.88 | 3.23 | 1.65*** |
| Caboolture/Strathpine | 6.26 | 5.64 | 0.62*** |
| Cairns | 3.29 | 4.82 | -1.53*** |
| Ipswich | 11.31 | 9.61 | 1.70*** |
| Mackay | 5.7 | 5.29 | 0.41*** |
| Maroochydore | 5.47 | 5.37 | 0.10 |
| Maryborough | 3.67 | 4.11 | -0.44*** |
| Robina | 8.5 | 7.84 | 0.66*** |
| Rockhampton | 6.83 | 4.43 | 2.40*** |
| Toowoomba | 10.82 | 10.67 | 0.15 |
| Townsville | 10.73 | 12.79 | -2.06*** |
| **Age** | | | |
| Age 0 to 6 | 11.04 | 0.81 | 10.23*** |
| Age 7 to 14 | 31.41 | 9.08 | 22.33*** |
| Age 15 to 18 | 7.61 | 6.27 | 1.34*** |
| Age 19 to 24 | 10.17 | 10.36 | -0.19 |
| Age 25 to 34 | 9.79 | 13.53 | -3.74*** |
| Age 35 to 44 | 7.53 | 14.06 | -6.53*** |
| Age 45 to 54 | 8.28 | 18.37 | -10.09*** |
| Age 55 to 64 | 10.79 | 21.07 | -10.28*** |
| Age 65+ | 3.39 | 6.46 | -3.07*** |
| **Gender** | | | |
| Female | 36.01 | 41.66 | -5.65*** |
| Male | 63.36 | 57.95 | 5.41*** |
| Not stated | 0.63 | 0.39 | 0.24*** |
| **Aboriginal and Torres Strait Islander** | | | |
| Yes | 6.85 | 11.51 | -4.66*** |
| No | 80.28 | 75.86 | 4.42*** |
| Not stated | 12.87 | 12.63 | 0.24 |
| **CALD** | | | |
| Yes | 4.69 | 4.52 | 0.17 |
| No | 95.27 | 95.4 | -0.13 |
| Not stated | 0.04 | 0.08 | -0.04*** |
| **Disability group** | | | |
| ABI | 2.61 | 7.58 | -4.97*** |
| Autism | 35.89 | 16.09 | 19.80*** |
| Cerebral palsy | 6.07 | 6.03 | 0.04 |
| Developmental delay | 4.38 | 0.33 | 4.05*** |
| Down syndrome | 4.44 | 4.02 | 0.42*** |
| Global developmental delay | 1.07 | 0.12 | 0.95*** |
| Hearing impairment | 4.83 | 0.98 | 3.85*** |
| Intellectual disability | 17.39 | 27.35 | -9.96*** |

| Characteristic | Did not purchase support coordination (%) | Purchased support coordination (%) | Difference (percentage points) |
|---|---|---|---|
| Multiple sclerosis | 1.44 | 3.24 | -1.80*** |
| Other | 0.25 | 0.29 | -0.04 |
| Other neurological | 4.27 | 8.77 | -4.50*** |
| Other physical | 6.86 | 3.6 | 3.26*** |
| Other sensory/speech | 0.72 | 0.16 | 0.56*** |
| Psychosocial disability | 3.36 | 15.7 | -12.34*** |
| Spinal cord injury | 2.31 | 2.56 | -0.25*** |
| Stroke | 1.56 | 2.18 | -0.62*** |
| Visual impairment | 2.55 | 0.99 | 1.56*** |
| **Plan number** | | | |
| 1 | 49.39 | 42.73 | 6.66*** |
| 2 | 28.95 | 29.07 | -0.12 |
| 3 | 13.37 | 15.13 | -1.76*** |
| 4 | 5.35 | 7.39 | -2.04*** |
| 5+ | 2.94 | 5.69 | -2.75*** |
| **Plan management type** | | | |
| Agency-managed | 37.18 | 53.78 | -16.60*** |
| Plan-managed | 26.48 | 36.55 | -10.07*** |
| Self-managed partly | 13.13 | 7.91 | 5.22*** |
| Self-managed fully | 23.21 | 1.76 | 21.45*** |
| **SIL** | | | |
| Yes | 1.63 | 23.02 | -21.39*** |
| **Client type** | | | |
| Commonwealth | 11.13 | 7.43 | 3.70*** |
| New | 35.84 | 20.43 | 15.41*** |
| State | 53.02 | 72.14 | -19.12*** |
| **N** | 71,946 | 41,273 | |

**** 1% significance, ** 5% significance, * 10% significance.*
*Note: A 2 sample proportion z-test was used to determine which proportions are statistically different between the two groups.*
*Source: NDIA, December 2020, unpublished; QPC estimates.*

## Methodology

The causal variable of interest ('purchased support coordination') is an indicator variable that equals one if a participant purchased support coordination in the plan, and zero otherwise. However, as argued above, there is reason to expect that the NDIA allocates support coordination to participants based on various observed characteristics. This means that there is not a random allocation of participants between the treatment and control groups. This is confirmed by the systematic differences in covariates between the two groups—if the treatment had been randomly assigned, the underlying characteristics between the two groups would be similar.

Propensity score methods may allow the researcher to mimic some characteristics of a randomised control trial in an observational study (Austin 2011, p. 400). The propensity score is defined by Rosenbaum and Rubin (1983, p. 41) as 'the conditional probability of assignment to a particular treatment given a vector of observed covariates'. It is a kind of balancing score, meaning that conditional on this score, the distribution of observed characteristics in a sample is similar between the treatment and control groups.

The propensity score is typically estimated using a logit model where treatment status has been regressed on observed characteristics. The estimated propensity score is then the predicted probability of the individual being treated derived from the model. Other methods like tree-based methods, bagging, boosting, random forests and neural networks might also be used to estimate the propensity score.[227] This analysis estimates the propensity

[227] See Angrist & Pischke 2009, pp. 80–91; Austin 2011, 2020; Cameron & Trivedi 2009, pp. 862–865, 873–878; Rosenbaum & Rubin 1983 for more on propensity score estimation methods.

scores using two methods—a logit model and a random forest—to test for sensitivity to the modelling specification.

Estimated propensity scores underlie a number of methods for balancing the differences between the treatment and control groups, including matching, stratification and weighting. This analysis uses the inverse probability of treatment weighting technique to maintain sample size, but other methods for matching or stratification could be explored in future analyses.

An alternative methodology to achieve identification would be to find an instrumental variable that is related to the choice to include support coordination in the plan but does not relate to plan utilisation. Given that the results in section D.3 highlight relatively strong relationships between most characteristics and plan utilisation, finding an instrumental variable would likely require some much stronger assumptions than those required for propensity score methods. Instead, here it only needs to be assumed that the allocation of support coordination is driven by characteristics that are observable in the data. This is likely to be the case since the NDIA themselves would largely need to allocate support coordination on observable characteristics (for example, as part of the typical support packages described previously).

## Results

### Predicting the probability of purchasing support coordination

The first goal of this analysis is to accurately predict which participants purchase support coordination. The probabilities produced by these models are then used as the propensity scores in the second stage of the analysis.

To predict the probability of purchasing support coordination, the same set of covariates was used for both models. These covariates were the severity score of a participant, the LGA a participant resides in, an indicator for if the participant is receiving SIL in that plan, remoteness, age (as a continuous variable), gender, Indigenous status, CALD status, primary disability (96 categories, rather than the higher-level NDIS disability groups used in the preceding analysis), secondary disability, plan number, plan management method, access status (State, Commonwealth, New) and controls for time.

First, a logit model was used to predict the probability of support coordination being purchased in each plan. The model has a relatively high balanced accuracy (0.77) and misclassifies less than 20 per cent of the observations (Table D.9).

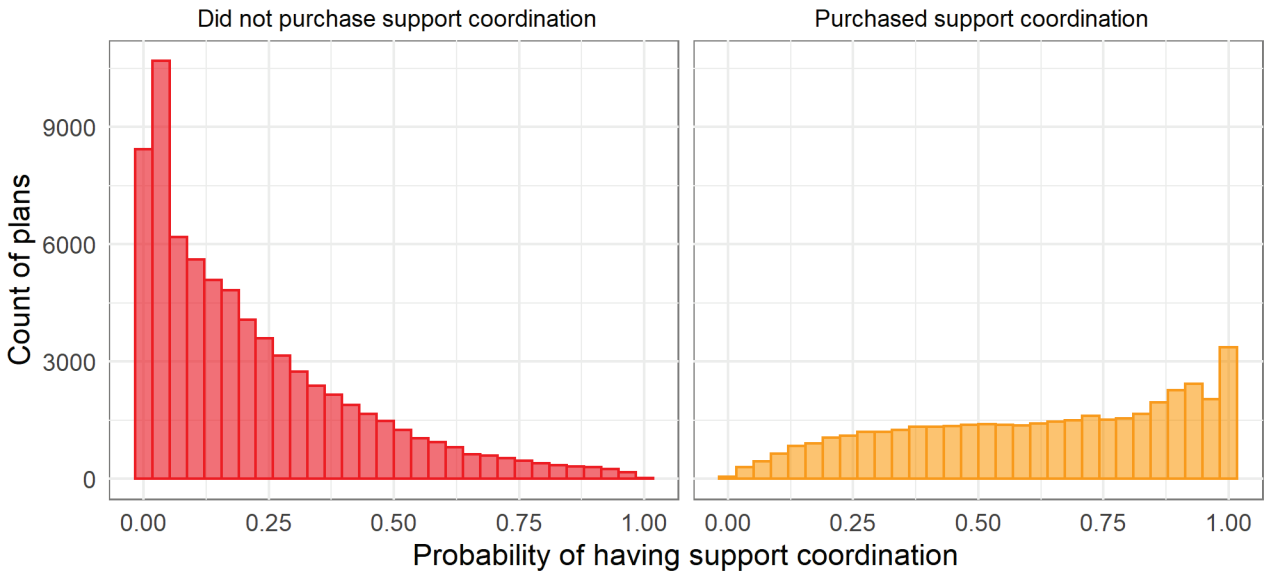
**Table D.9 Confusion matrix for the predictions of the purchase of support coordination, logit model**

| | | Actual treatment status | |
|---|---|---|---|
| | | Did not purchase | Did purchase |
| Predicted treatment status | Did not purchase | 63,932 | 14,393 |
| | Did purchase | 8,014 | 26,880 |

*Note: A confusion matrix summarises the prediction results for a classification problem, which shows the number of correct and incorrect predictions summarised by count values and broken down by class. It gives more detail on the performance of the model than the overall accuracy.*
*Source: NDIA, December 2020, unpublished; QPC estimates.*

Figure D.12 shows the distribution of the predicted probabilities of treatment for those plans that did not purchase support coordination (left panel) and those that did (right panel).

**Figure D.12 Predicted probabilities for the likelihood of purchasing support coordination, logit model**




*Source: NDIA, December 2020, unpublished; QPC estimates.*

Next, a random forest method was used to predict the probability of support coordination being purchased in each plan. A random forest is an ensemble machine learning method for classification based on multiple decision trees.[228] Random forests are frequently used as an 'off-the-shelf' method for classification as they generate reasonable predictions without requiring much user configuration. The random forest predicts the likelihood of receiving the treatment with higher accuracy than the logit model (balanced accuracy of 0.92 compared to 0.77 for the logit model). Only 6 per cent of observations are misclassified by this model (Table D.10).

**Table D.10 Confusion matrix for the predictions of the purchase of support coordination, random forest**

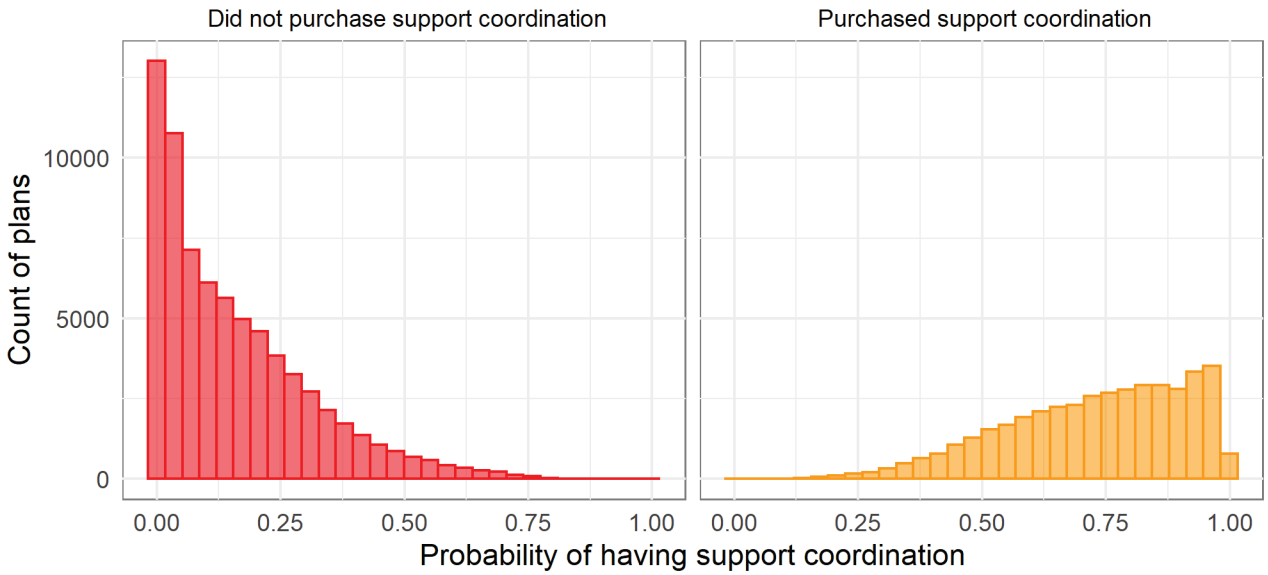
| | | Actual treatment status | |
|---|---|---|---|
| | | Did not purchase | Did purchase |
| Predicted treatment status | Did not purchase | 69,223 | 5,185 |
| | Did purchase | 2,273 | 36,088 |

*Note: A confusion matrix summarises the prediction results for a classification problem, which shows the number of correct and incorrect predictions summarised by count values and broken down by class. It gives more detail on the performance of the model than the overall accuracy.*
*Source: NDIA, December 2020, unpublished; QPC estimates.*

The predicted probabilities for the random forest model show that it is better at predicting treatment status than the logit model, but there is still common support between the two treatment groups (Figure D.13).

[228] See Breiman (2001) for the theory underlying random forests, and Breiman & Cutler (nd) for a manual.

**Figure D.13 Predicted probabilities for the likelihood of purchasing support coordination, random forest**




*Source: NDIA, December 2020, unpublished; QPC estimates.*

The propensity scores estimated by the random forest model are used for the second stage of the analysis, as they are more accurate than those estimated by the logit model. Further, there is sufficient overlap in the support of the two distributions.

There are some cases of relatively extreme propensity scores (close to zero or one). This problem is typical when attempting to construct causal estimates in health settings—for example, when wanting to test the impacts of a certain health intervention, very ill patients in an observational sample may always receive a treatment. Extreme scores may result in biased estimates and high variance. This issue will be accounted for in the methodology for estimating the causal effect of support coordination in the following section.

## Estimating the effect of support coordination on utilisation

To estimate the effect of support coordination on utilisation, the support coordination variable was regressed on the plan utilisation variable using ordinary least squares (OLS). Four different models were estimated to check the sensitivity of the results to model specification (Table D.11).

Model 1 is a model with no controls except for time to establish a baseline. Model 2 includes the same control variables included as in the plan utilisation analysis in the preceding section.

Model 3 contains the same control variables and controls for selection using the random forest propensity scores as weights. The weights are constructed as $\frac{1}{\hat{p}(x)}$ for individuals in the treatment group and $\frac{1}{1-\hat{p}(x)}$ for individuals in the control group, where $\hat{p}(x)$ is the estimated propensity score for each individual.

Model 4 is the same as model 3, but has been restricted to the sample with estimated propensity scores between 0.1 and 0.9 following the method of Crump et al. (2009). This is considered to be a good approximation to the optimal selection rule for a wide range of distributions. Trimming the sample in this way lowers the weighting given to high variance observations and increases the weighting of observations with propensity scores closer to one-half. Due to the large initial sample size of this analysis, dropping observations still leaves a large sample size of 75,926 plans.

**Table D.11 Econometric results for the marginal effect of support coordination on plan utilisation, Queensland**

| Model | Point estimate | Standard error |
|---|---|---|
| 1 | 3.98*** | 0.17 |
| 2 | 1.59*** | 0.20 |
| 3 | 2.40*** | 0.28 |
| 4 | 2.03*** | 0.22 |

**** 1% significance, ** 5% significance, * 10% significance.*
*Source: NDIA, December 2020, unpublished; QPC estimates.*

The results for the first and second models show that the estimated effect for support coordination becomes smaller once controlling for other underlying characteristics. This is likely because receiving SIL appears to be correlated positively with both utilisation rates and being given access to support coordination services. While the prior was that participants who require support coordination might be more likely to have low utilisation in the first instance due to the complexity of their support needs, the effect of being in SIL appears to dominate to make the difference in utilisation larger between the group that received support coordination and the group that did not. Controlling for SIL status in the second model removes the effects of underlying characteristics such as SIL status.

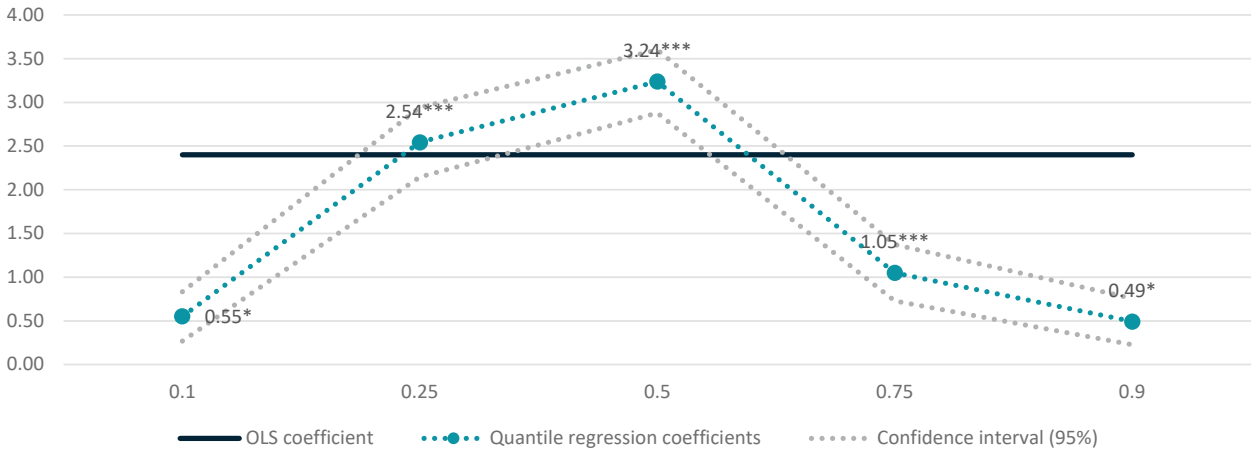
The results for model 2 and model 3 show that accounting for sample selection bias increases the size of the estimate. This supports the prior assumption that participants who require support coordination might be more likely to have low utilisation without assistance, so the effect is larger than a naïve estimator would indicate. The results for model 4 (on a restricted sub-sample with greater covariate balance) also indicate that the estimated effect of support coordination is likely to be positive and significant.

### Quantile regression

The estimated marginal effect of support coordination on plan utilisation appears to be relatively small, at about 1 or 2 percentage points (Table D.11). However, it might be expected that the size of the benefit would vary across the distribution of plan utilisation. That is, for participants with very low utilisation, the benefit might be higher than for those with relatively high utilisation already. The heterogeneity of this effect across the distribution of participants could mean that the average effect, as estimated by OLS, is small and close to zero.

To see how the estimated effect varies across the distribution of plan utilisation, quantile regression can be used to estimate the marginal effect at various percentiles rather than at the average. As a first pass at this kind of study, the Commission has used the Koenker (2019) approach to estimating model 3 above. Figure D.14 plots the coefficient estimates at each quantile alongside a 95 per cent confidence interval for those estimates. It also shows the comparison OLS estimate. Where the OLS estimate rests outside the confidence interval for the quantile estimate, it can be concluded that the true effect may be higher (or lower) than that estimated by OLS.

**Figure D.14 Coefficient estimates from a quantile regression of support coordination on plan utilisation, Queensland**




*Source: NDIA, December 2020, unpublished; QPC estimates.*

The results from the quantile regression show that the effect of support coordination on plan utilisation is highest for those participants in the middle of the distribution of utilisation (in this data set, the median utilisation rate is 44 per cent).[229] There is also a large effect for participants at the 0.25 quantile. The results for participants at the 0.75 quantile and above are relatively low (although still significant). This may be because there is little scope to improve on utilisation for those participants that are already at the higher end of the distribution. The estimated coefficient is also small in size at the 0.1 quantile, which may indicate that there is also little scope to improve utilisation via a support coordinator at the lower end, where utilisation rates might be constrained by other dominating factors like a lack of services.

These findings should not necessarily be interpreted as meaning that the allocation of support coordination should favour those with relatively average levels of utilisation. However, it does indicate that for some individual participants, the benefits received from support coordination could be significantly higher than average. It is also likely to indicate that other factors like thin markets might play a larger role than a lack of access to support coordination in driving low utilisation rates for some cohorts.

## Conclusion

This analysis provides a preliminary study of the causal effect of support coordination on plan utilisation for NDIS participants in Queensland. The strategy for identification relied on having good information about what affects each individual's probability of receiving the treatment.

It finds that access to a support coordinator may improve a participant's utilisation by several percentage points. However, it also shows that the benefits of support coordination are likely to vary over the population of NDIS participants.

The effect of a support coordinator may not increase utilisation in a continuous manner—instead it is likely to increase in a 'lumpy' manner, in blocks of services. While an increase of several percentage points may seem small, for many participants it might mean the receipt of a service required in their plan that they otherwise would not have received. The impact of receiving this service would be larger than the pure increase in plan utilisation.

[229] The maximum coefficient estimate may potentially be higher than 3.24 at a quantile that has not been estimated.

More work would be required to quantify the benefits of support coordination. The current study has made no attempt to account for the quantity or quality of support coordination received. Instead it was interested in understanding whether access to a support coordinator improved plan utilisation. Stakeholders indicated that the amount of funding provided to participants for support coordination may be too low, and that the quality of support coordinators can be inadequate, constraining the size of the support coordination benefit. More work would need to be done to investigate the impact of these factors. It is also unclear if access to a support coordinator improves the size and quality of a participant's plans over time.

This study does not fully account for time dynamics—as participants spend more time in the scheme, the degree of reverse causality between utilisation and support coordination, or the effects of receiving support coordination in a previous plan, may increase. At this stage, a large proportion of the data set has participants on their first plan, so these issues are likely to be minor. This study did control for time effects and plan number effects; however, the panel nature of this data is odd (there are two 'time dimensions'—the maturity of the scheme itself, and the length of time and individual has spent in the scheme) and each individual's plans lapse at different times. These time-related factors will make understanding time dynamics more complicated when interested in the experience of individuals (for scheme-wide understanding, utilisation is assessed on a quarterly basis).

Further work could also be done to understand how the effect of support coordination varies for different cohorts. This could be as simple as including interaction variables for support coordination and various cohorts (for example, an indicator for a participant who is Indigenous). If the interaction variable is statistically significant, this would indicate that the benefit differs between groups. The NDIA might also be interested in exploring how access to support coordination relates to the achievement of other outcomes, such as access to the community or experience of choice and control.

These results hold for policy settings in Queensland as at March 2020, such as the level of funding given for support coordination, the current average quality of support coordinators, and the current role of support coordinators. Further analysis would need to be done to understand the effect of support coordination in other states and over time as policy settings significantly change.

# Appendix E: NDIS market indicators

This appendix outlines the Commission's NDIS quantitative market indicator framework, methodology and results. These indicators are primarily derived using administrative data provided to the Commission by the NDIA which covers individuals in Queensland up until 31 December 2020.

Given limitations in resources and data, the results in this appendix are necessarily high-level indicators, and subject to significant caveats. It is important to note inferences should be based on a holistic analysis of the information presented here, and not a single indicator in isolation.

## E.1 Background

Well-functioning markets typically exhibit several characteristics, for example:

- low barriers to supplier entry or exit
- technical and scale efficiency in supply
- prices close to marginal economic costs (including opportunity costs).

In practice, several of these characteristics are difficult (or impossible) to evaluate empirically. For example, while the ability to set prices above marginal costs is generally considered strong evidence of market power, constructing such a metric often requires prohibitively large amounts of data about individual suppliers. Two additional issues arise analysing market power in the NDIS context using this approach; the existence of price caps, and the 'artificial' demarcation between registered and unregistered providers.

Given the above, the nine indicators which broadly evidence market conditions are presented in Table E.1.

**Table E.1 Market characteristics and indicators**

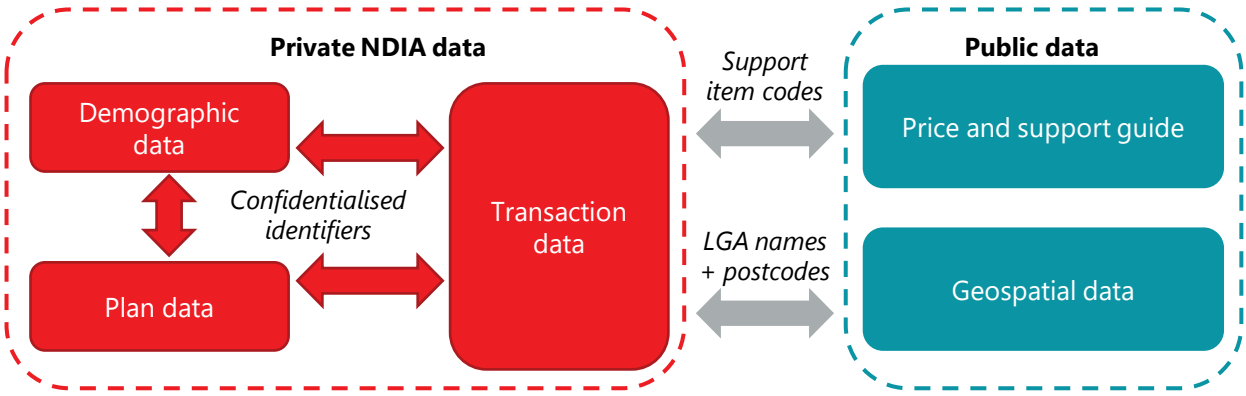
| Characteristic | Indicators |
|---|---|
| Supply measures | • Missing markets<br>• Market depth |
| Competitive pressure | • Market concentration<br>• Differences between price caps and actual prices<br>• Switching rates<br>• Provider-participant attachment rates |
| Market dynamism | • Firm entry rates<br>• Firm exit rates<br>• Continuation rates |

### Data sources and linkages

In general, measures were primarily constructed using transaction level data provided by the NDIA, which records every transaction made in connection to a participant with an agency or plan-managed plan This data was combined with NDIA demographic and plan data, most commonly to identify the location in which a service was

provided. In limited cases this data was augmented with other public data; for example, when computing differences between price limits and actual prices price caps from the support guides were used (Figure E.1).

**Figure E.1 Overview of data used to construct market indicators**




## Market definition

For the purposes of this analysis a market is defined a set of substitutable products. In this analysis, NDIS markets are defined by three characteristics:

- product—a registration group
- geography—a local government area (LGA)
- time—transactions are aggregated over quarters.

That is, it is assumed that a provider active in an LGA in a given quarter is in competition with all other providers active in the same registration group in that LGA and quarter. Not all indicators use all characteristics in their construction. For example, market depth is constructed in respect of the overall NDIS market (without reference to registration groups). Major limitations associated with this assumption are outlined below.

### Registration groups as products

While registration groups are a reasonable approximation of services that may be in competition with one another, this assumption does not necessarily hold for registration groups which are more broadly defined. For example, the therapeutic supports registration group includes both psychologists and physiotherapists, which are unlikely to generally provide substitutable supports, and would not therefore form part of the same market. Where this occurs, providers may be taken to be in competition with one another when they are in fact not; this may lead the number of providers 'in competition' to be overcounted and some indicators will therefore tend to overestimate the extent of competition.

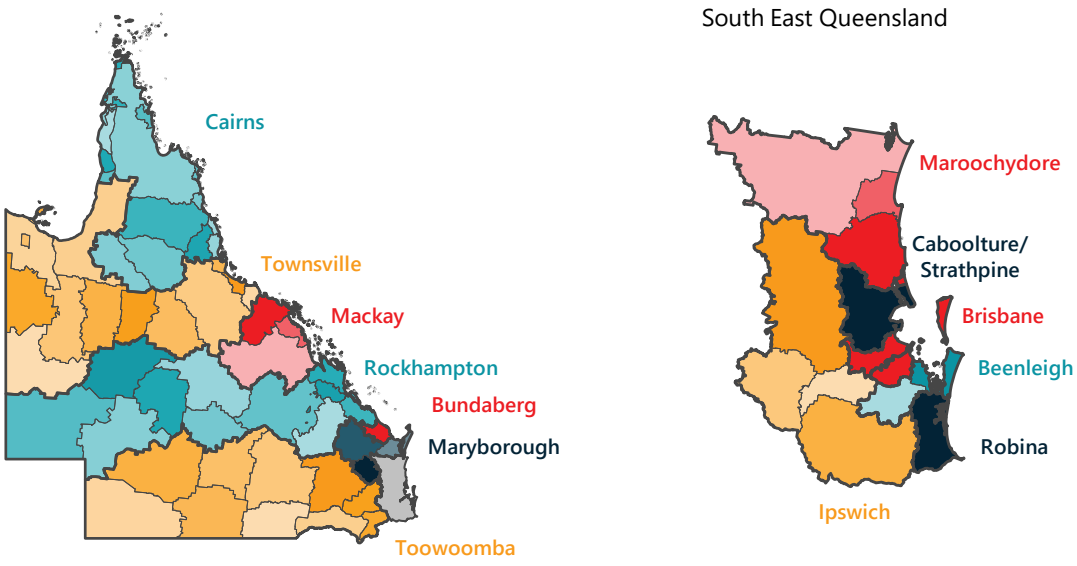
### LGAs as geographic markets

Often, the 'location' of a provider in administrative data is simply the head office address; this can radically differ from the areas it provides a service, particularly in the case of a large organisation. Instead, this analysis defines a provider as active in a geographic market if they provide a service to a person residing there.

Of the geographic data available, LGAs were considered the most appropriate geographic definitions of a market. Service districts outside of South East Queensland are too large; in many cases, it would be unreasonable to assume that firms operating within the same service district form part of the same market. For example, that a service provider operating only in Townsville would be in competition with a firm only providing services in Mt Isa.

Figure E.2 shows the LGA composition of service districts in Queensland, with service districts represented by a colour, and LGAs shown as constituent parts in shades of that colour.

**Figure E.2 Service districts and LGA constituents**




Where indicators are constructed on an LGA basis, they are presented by service district. This is done by taking the average of the indicators in each LGA comprising a service district weighted by the proportion of participants who reside in each of those LGAs. That is

$$\text{Indicator}_{district} = \sum_{lga \in district} \frac{\#\{\text{participant resides in } lga\}}{\#\{\text{participant resides in } district\}} \cdot \text{Indicator}_{lga}$$

In this appendix the notation #{condition} is used to indicate the count of elements where the condition is satisfied.

As a stylised example, suppose a district contains two LGAs each with the same number of participants and each containing two equally sized separate service providers. Market concentration is defined as the sum of squared proportions (described further below). If concentration is calculated with the district as the definition of the market, the market concentration for the district is $4 \times (1/4)^2 = 0.25$. If the LGAs define the market, each has a concentration of $2 \times (1/2)^2 = 0.5$, and the *average* concentration in the district is $0.5$.

# E.2 Supply measures

## Missing markets

The 'missing markets' indicator measures the degree to which registration groups present across the state are absent in an LGA. It is expressed as the state-wide proportion of the NDIS transaction value related to registration groups which are missing. For example, if two registration groups are not present in an LGA which comprise 5 per cent of the value of supports across all of Queensland, that LGA is assigned a missing markets value of 5 per cent. A value of zero indicates that all registration groups are present and is the optimal result.

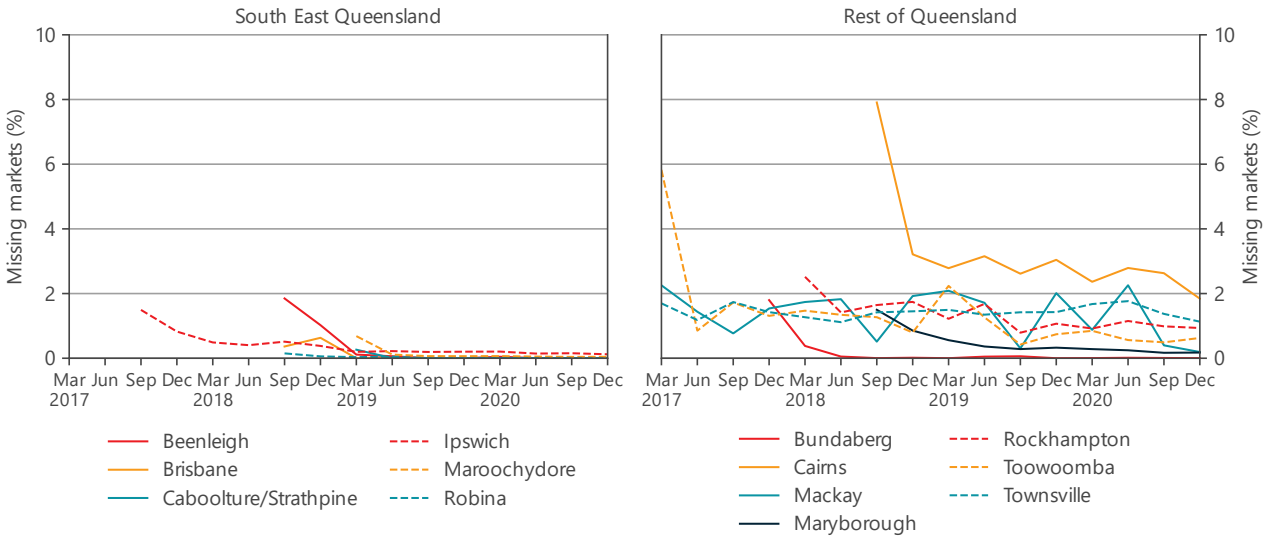
More formally, the indicator is calculated as:

$$\text{missing}_l = \sum_{r \in R} \left[ \begin{Bmatrix} 0 \text{ if } v_{r,l} > 0 \\ 1 \text{ otherwise} \end{Bmatrix} \cdot \left( \frac{\sum_{l \in L} v_{r,l}}{\sum_{l \in L} \sum_{r \in R} v_{r,l}} \right) \right]$$

where $l$ is an LGA in the set of LGAs in Queensland $L$, $r$ is a registration group in the set of registration groups $R$, and $v_{r,l}$ is the total transaction value associated with registration group $r$ in $l$.

The missing markets metrics indicate that essentially all registration groups are present in all South East Queensland districts, and no more than around 2 per cent (by value) are absent (on average) in any other district. The absence of a service provider is not necessarily a negative in very small LGAs; there will be areas in which no individuals requiring some services reside.

**Figure E.3 Missing markets, by service district**




*Source: NDIA, December 2020, unpublished; QPC analysis.*

Note that this metric only captures the presence of a registration group in a market and does not imply that supply is adequate.

## Market depth

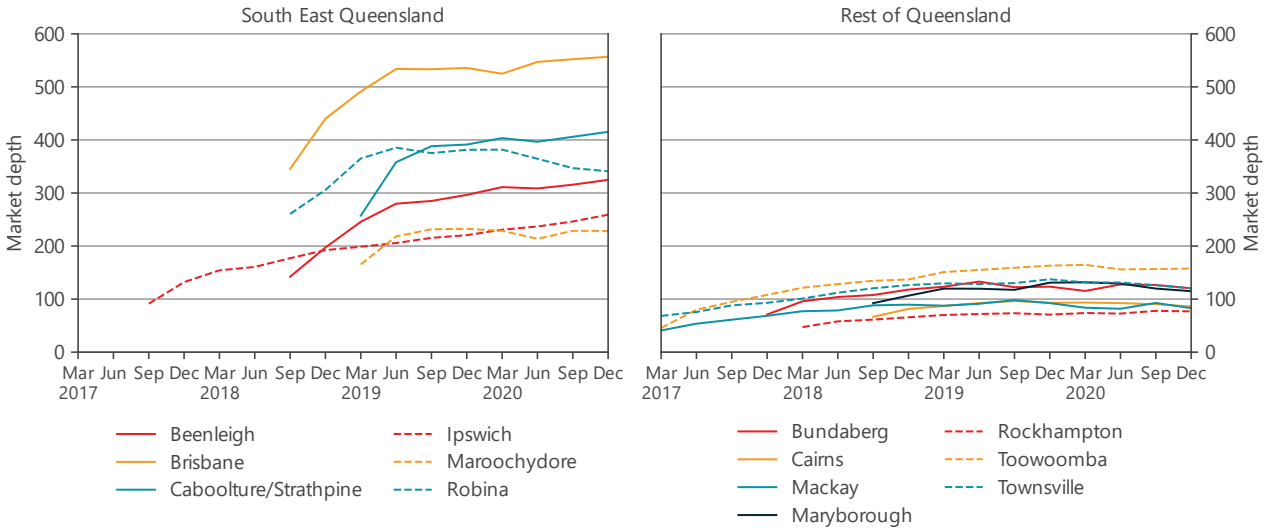
Market depth approximates the number of alternative service arrangements a participant may choose to pursue. A higher market depth indicates a greater degree of service offerings and a greater amount of potential choices for participants. It is defined as the number of providers in an LGA divided by the average number of providers each participant uses:

$$\text{Depth}_l = \frac{\#\{s \in S_l\}}{\frac{1}{\#\{p \in P_l\}} \cdot \sum_{p \in P_l} \sum_{s \in S_l} \#\{\text{p has purchased from s}\}}$$

where $S_l$ is the set of providers in LGA $l$ and $P_l$ is the set of participants in $l$. Note that this is *not* equivalent to the average number of providers per participant as multiple participants will use the same providers.

Figure E.4 shows that the deepest markets are in South East Queensland, with Brisbane being the deepest by far. Markets in the rest of the state are comparatively much shallower. Market depth appears stable to slightly increasing in most regions, with only Robina showing signs of decline.

**Figure E.4 Mean market depth, by service district**




*Source: NDIA, December 2020, unpublished; QPC analysis.*

# E.3 Competition measures

This section presents the four competition measures: market concentration, switching rates, provider participant attachment rates and deviation from price caps.

## Market concentration

Market concentration estimates range from 0 to 1, with a lower number representing a less concentrated market. Market concentration measures the degree to which market activity is concentrated among a set of firms; in general, a lower market concentration indicator implies that firms have less market power. For a single 'product type' (for example a registration group) and an LGA, market concentration was calculated as Herfindahl-Hirschman Index (HHI) score normalised between 0 and 1, that is

$$\text{Concentration}_{r,l} = \sum_{s \in S_{l,r}} \left( \frac{v_{s,l,r}}{\sum_{s \in S_{l,r}} v_{s,l,r}} \right)^2$$

where $S_{l,r}$ is the set of providers which supply within a registration group $r$ in an LGA $l$ over the relevant period of time, and $v_{s,l,r}$ is the total value of payments made associated with provider $s$ in that LGA, registration group and time period.

### Market concentration by geography

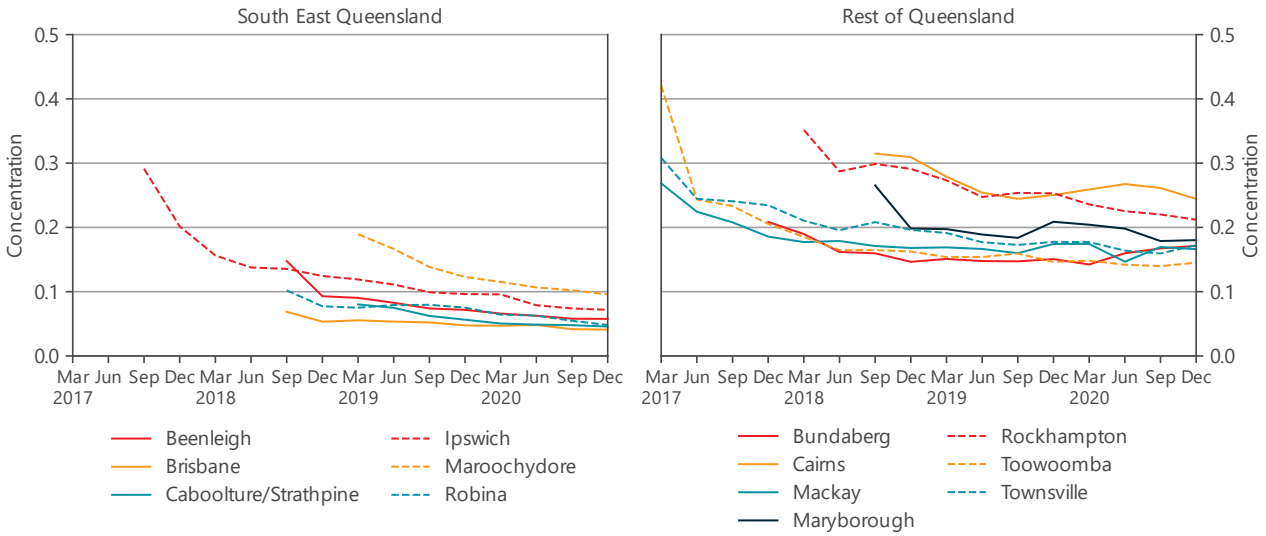
Market concentration for each LGA is the average of the market concentrations in each registration group, weighted by the proportion of the total value of services provided by that registration group in Queensland. That is:

$$\text{Concentration}_{l} = \sum_{r \in R} \left[ \text{Concentration}_{r,l} \cdot \left( \frac{\sum_{l \in L} v_{r,l}}{\sum_{l \in L} \sum_{r \in R} v_{r,l}} \right) \right]$$

where $l$ is the LGA of interest, $L$ is the set of LGAs in Queensland and $R$ is the set of registration groups. Indicator values for LGAs are aggregated to service districts using the participant count weighted average described above.

In general, mean market concentration has been decreasing or stable across most service districts, and is lower on average in South East Queensland than in the rest of the state (Figure E.5)

**Figure E.5 Mean market concentration, by service district**

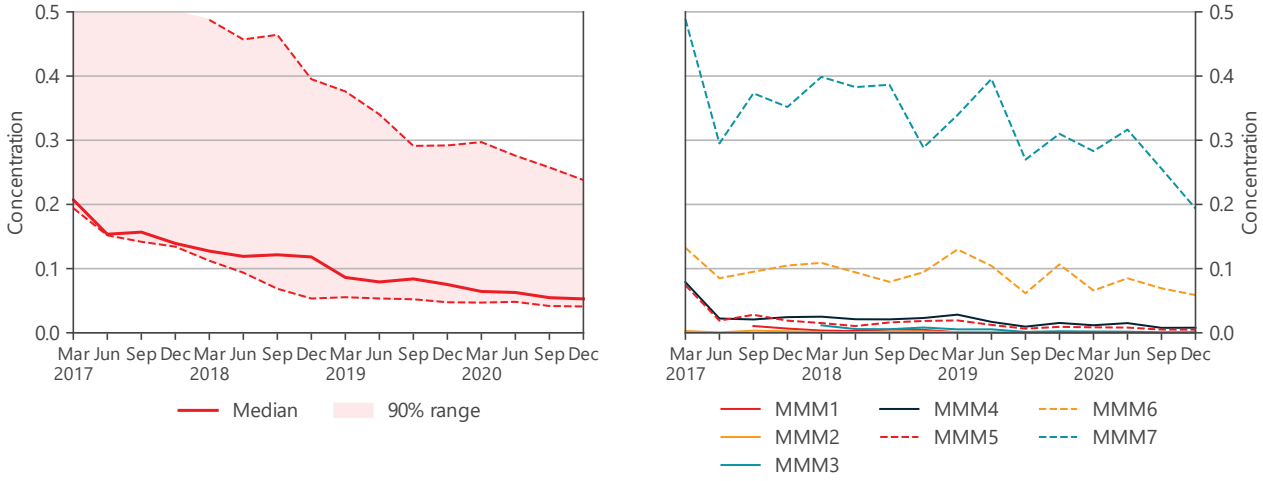



*Source: NDIA, December 2020, unpublished; QPC analysis.*

A common 'rule of thumb' interpretation is that a concentration value of less than 0.2 (equivalent to 5 equally sized providers) is an approximate threshold for a diverse market (for example, see ACCC 2017). Only two service districts have mean concentrations above this level, Cairns and Rockhampton, both of which cover large and remote areas of the state.

The nature of a concentration indicator generally results in its distributions being skewed toward higher concentrations; in this case, the median is very close to the lower end of the distribution, while a small number of participants face highly concentrated markets (Figure E.6). As stated above, this seems almost entirely attributable to remoteness; Figure E.6 confirms that average conditions are broadly similar in all areas except remote (MMM6) and very remote areas (MMM7). Because the NDIS in Queensland was generally available in rural and remote areas before urban areas in the south east, the mean market concentration faced by participants in Queensland has generally declined with time.

**Figure E.6 Distribution of concentration faced by individuals (left), mean concentration by remoteness (right)**




*Notes: Concentration levels are shown as a distribution over participants, with the red shaded region indicating the concentration faced by 90 per cent of participants. Remoteness classifications are in order of increasing remoteness, such that MMM1 is major cities, and MMM7 is very remote. Further discussion of these classifications is found in Chapter 12.*
*Source: NDIA, December 2020, unpublished; QPC analysis.*

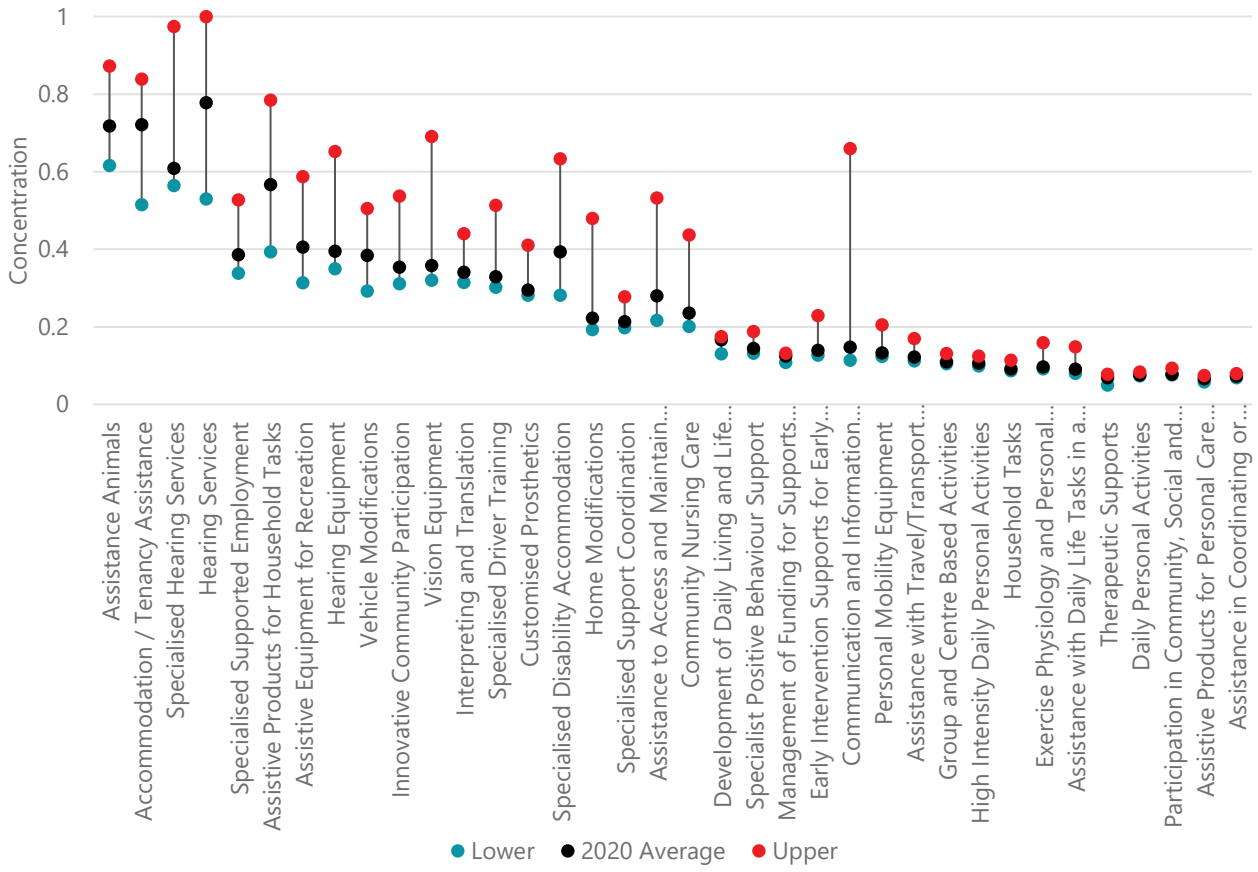
Note that without further evidence, a more concentrated market in less densely populated areas is not necessarily indicative of adverse outcomes; it is likely that costs of provision are much higher in remote areas, and consequently there are likely to be greater economies of scale associated with service provision.

## Market concentration by registration groups

Market concentration can also be calculated on the registration group level. In this case, a state-wide mean concentration for a registration group is derived by calculating the HHI for the given registration group in each LGA, and taking the average weighted by the number of participants using supports from the registration group in each LGA.

Figure E.7 also includes the indicator maxima and minima for each registration group over the previous 8 quarters. This range shows the stability of the indicator over time; the smaller the range, the more stable the indicator appears to be. Because market concentration is declining in most registration groups, the 2020 averages tend to be closer to the lower bounds than the upper bounds.

**Figure E.7 Mean market concentration, by registration group, Queensland, 2020 average, 2 year quarterly maxima and minima**




*Notes: The lower and upper values are the minimum and maximum quarterly values between Q1-2019 and Q4-2020, inclusive.*
*Source: NDIA, December 2020, unpublished; QPC analysis.*

## Switching rates

Switching rates are calculated as the proportion of people who access a new provider, in a particular registration group, while the old provider remains active in the market.

This metric was constructed by identifying a set of 'switches' that occurred. A switch is assumed to have occurred when:

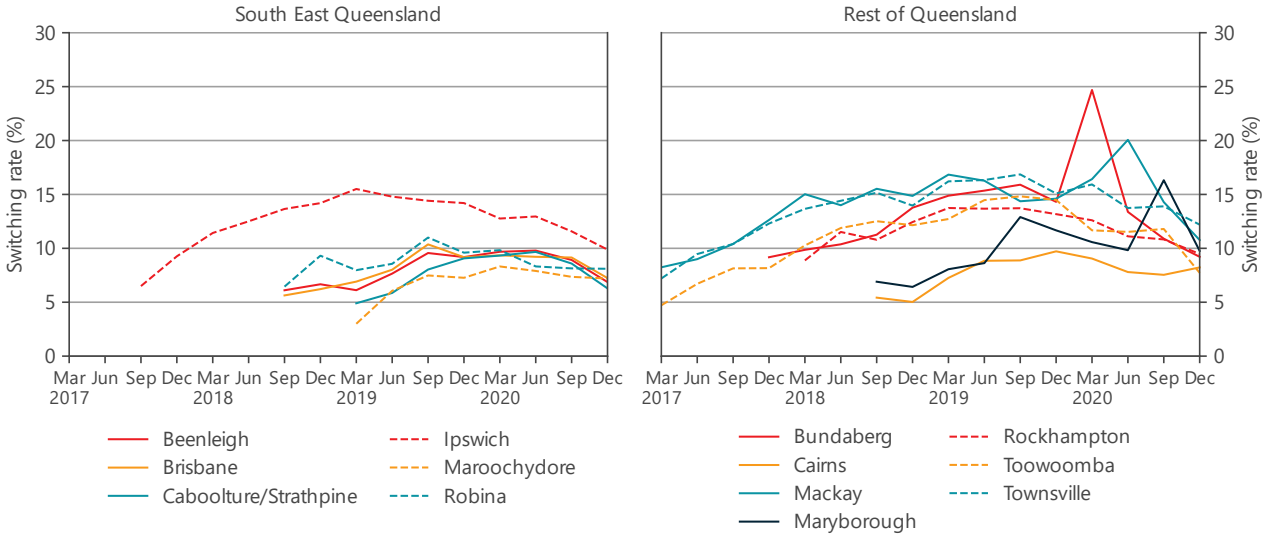
- a person had previously used provider $A$ in a registration group
- the person engaged provider $B$ in the same registration group and
- provider $A$ was still active, that is, they provided a service in that registration group and service district at or after the date the person engaged provider $B$.

Note that switching rate metrics use service districts, not LGAs, to define whether a provider is still active. This is done to reduce the risk of a provider being incorrectly deemed inactive where the potential switcher is the only person being serviced by the provider in their LGA. Because a provider must have been active in the LGA the potential switcher resides in, it is more reasonable to assume they retain the potential to provide services in that LGA when they are active in other LGAs in the district. This is in contrast to other metrics, where constructing the

geographic market as the district would assume a provider has the potential to compete in distant areas without ever evidencing a presence there.

The switching rate is the proportion of individuals in a reference group who switched at least once divided by the total number of individuals in the reference group. For example, if the reference group is 'participants who used positive behaviour support in the March quarter of 2020', the switching rate would be the proportion of participants who have used positive behaviour support who 'switched' their provider (according to the definition above) in that quarter in 2020. Figure E.8 shows the average switching rate for each service district, defined as the simple average of the switching rates in each registration group. At this level, switching appears to be broadly similar across all service districts (at around 10 per cent per quarter) in the most recent period.

**Figure E.8 Average switching rate, by service district**



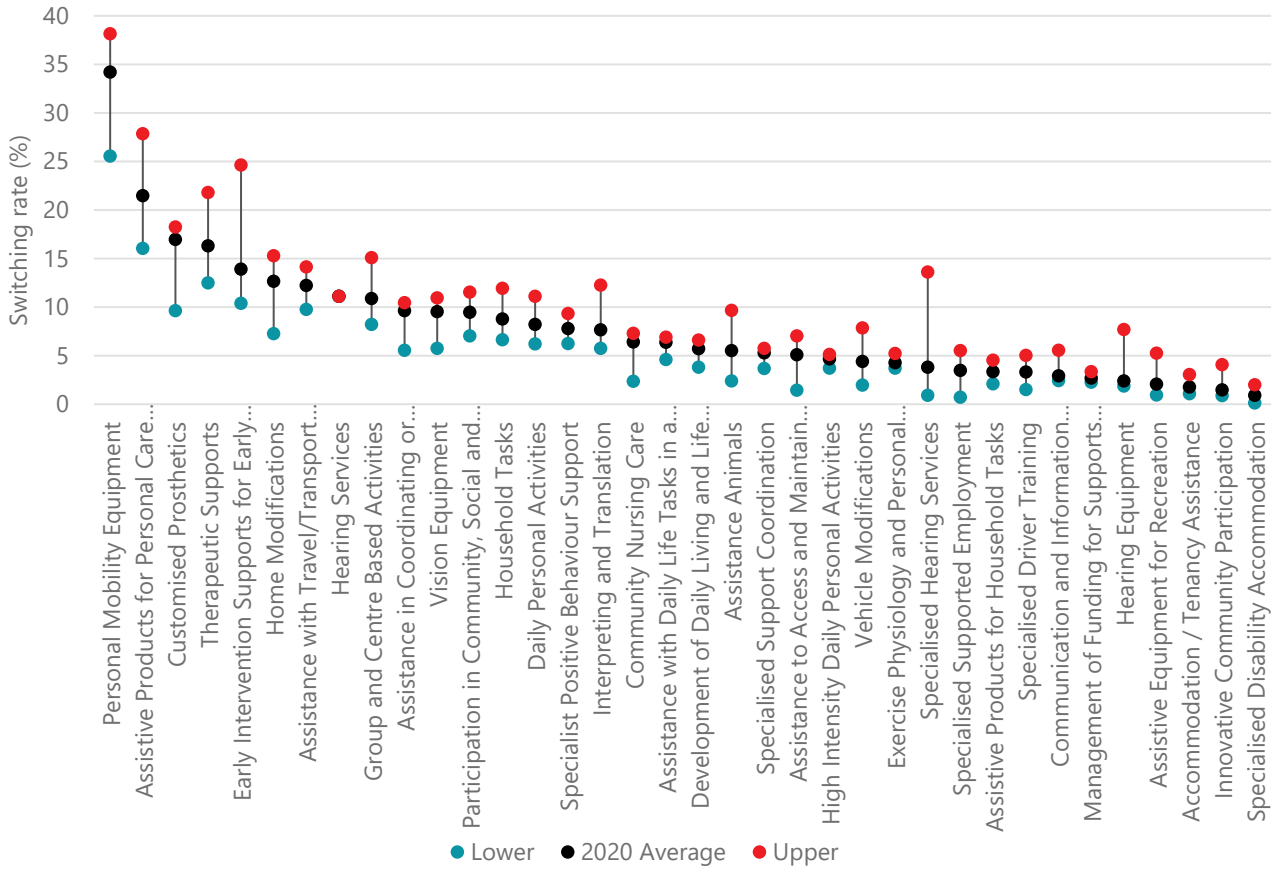

*Source: NDIA, December 2020, unpublished; QPC analysis.*

Switching rates exhibit a large amount of dispersion over different registration groups. For example, Accommodation and Tenancy Assistance has a switching rate of close to zero, while almost half of Personal Mobility Equipment purchases were made from a different provider than the participant had purchased from previously (Figure E.9). To show variance over time, the maximum and minimum quarterly rates over the previous two years are shown as a range, alongside the average quarterly rate over 2020.

Switching across registration groups should generally be interpreted in conjunction with concentration. For example, while the switching rate for 'Assistance Animals' is low, that registration group is highly concentrated, so participants may have a limited capacity to switch even if they wished to.

Caution should be exercised when interpreting the switching rates within registration groups, as different registration groups encompass a different range of services. As above, many registration groups contain diffuse and non-substitutable services. As such, what is considered 'switching' under the definition above may include where a participant is simply using two different supports, provided by two different providers, within the same registration group. In this case, switching will be overcounted, and estimates may be much higher than what would be the 'true' value.

**Figure E.9 Switching rates, by registration group, Queensland, 2020**




*Note: The lower and upper values are the minimum and maximum quarterly values between Q1-2019 and Q4-2020, inclusive.*
*Source: NDIA, December 2020, unpublished; QPC analysis.*

## Provider-participant attachment

An alternative means of evaluating whether participants are switching between providers is by how 'attached' they are to a provider (sometimes referred to as being 'rusted on'). The indicator estimates the proportion of a participant's time in the scheme during which they maintained a relationship with a provider in respect of a support. For a participant $p$ and a provider $s$:

$$\text{Attachment}_{p,s} = \frac{\text{Days between first and last date } s \text{ provided a support to } p}{\text{Days between first date and last dates } p \text{ received any support}}$$

The longer a person has been an NDIS participant, the more likely they will have changed providers. Because the attachment rate is evaluated over the participants' time in the scheme, it will change as the scheme matures. A service district level average is therefore sensitive to the rollout date, as regions with earlier rollouts will contain participants who have spent longer time in the scheme, and therefore will have lower levels of attachment over scheme life. To control for this, and outliers with little time spent in the scheme, only participants who have been in the scheme for between 90 days and 720 days[230] are included below.

[230] Ideally an upper bound of greater than two years would be used. However, that is the time between Maroochydore entering the scheme and the most recent data date and is therefore the smallest upper bound that can be chosen.

Figure E.10 depicts the median attachment time, with the vertical axis ordered by the registration group's state-wide median (this ordering includes individuals in districts that have been censored due to small counts). It shows that the provider attachment tends to be driven by the registration group of the provider to a much greater degree than the location of the service. It also shows that some supports, such as Management for Funding for Supports in Participants' Plans, Specialist Disability Accommodation and Supported Employment tend to involve long-lasting relationships.

**Figure E.10 Median proportion of time in scheme spent with a single provider, by registration group and service district**


*Note: A greyed cell indicates that there are fewer than 20 participants who have identifiable participant provider pairings.*
*Source: NDIA, December 2020, unpublished; QPC analysis.*

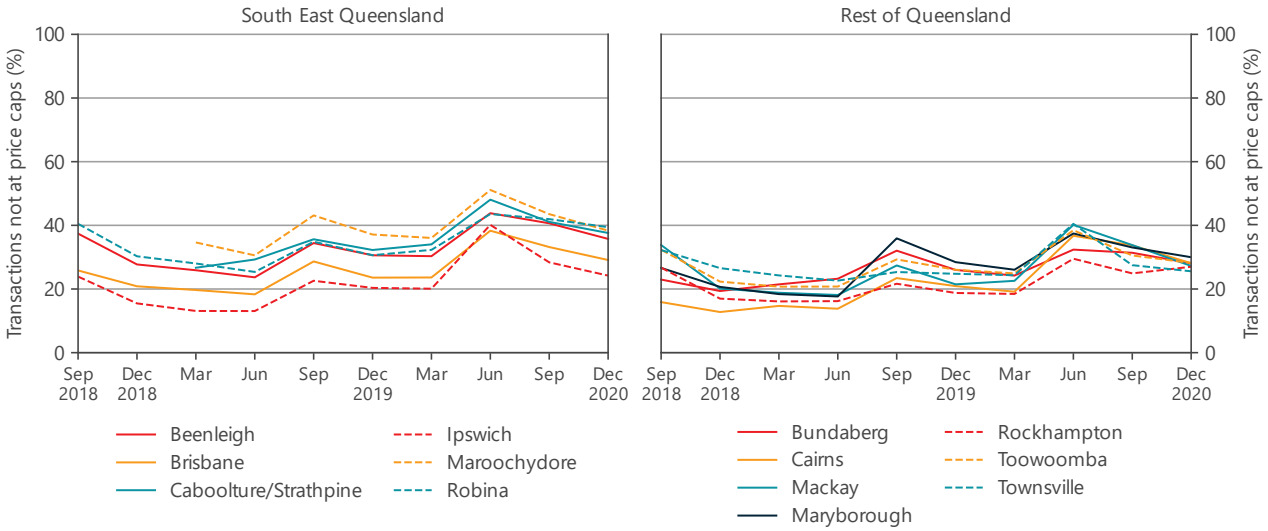
## Deviations from price caps

Further evidence of competition may be the degree to which prices fall below price caps, where they apply. A price cap ratio is calculated as the ratio of the price charged by a provider and the price cap for the service. Price caps are taken from the NDIS price guides using the relevant remoteness code and time periods for Queensland.[231]

Deviations from price caps are expressed in terms of the proportion of price capped transactions which did not occur at the price cap. A 1 per cent allowance for administrative error is allowed, such that any price to price cap ratio of $r \geq 0.99$ is counted as being at the price cap.[232]

In general, only around 30–40 per cent of transactions subject to price caps occur below the price cap. This rate range appears to be consistent both across regions and broadly stable over the past two and half years (Figure E.11).

**Figure E.11 Proportion of price capped transactions below price caps, by service district, Queensland**



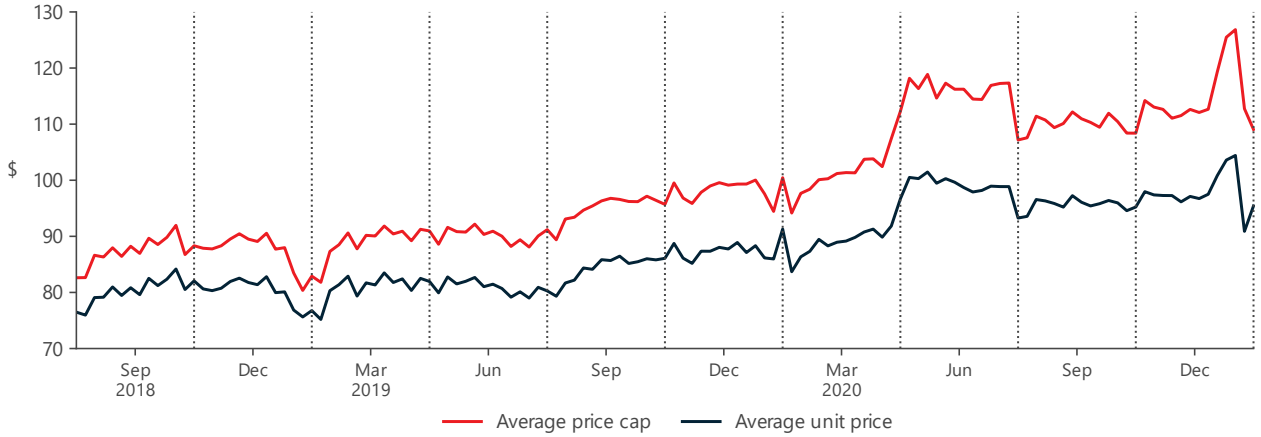

*Source: NDIA, December 2020, unpublished; QPC analysis.*

Most regions in Figure E.11 show a spike in below-cap transaction in the second quarter of 2020. The quarter saw several temporary upward adjustments to the price caps to account for the impact of COVID-19 (subject to restrictions). It seems that the spike in below-cap transactions was due to that increased price allowance not being completely implemented in prices by providers, rather than a structural fall in prices away from caps. Figure E.12 shows that while both average prices and average price caps were temporarily higher during Q2-2020, the former increased by less.

[231] This incorporates the 'isolated towns' modification.

[232] A small proportion of transactions have price cap ratios of greater than 1. The vast majority of these are very close to 1, and likely represent small administrative or data entry errors. As such, price cap ratios of up to 1.01 are counted as being at 1. Price ratios above that level are discarded as erroneous.

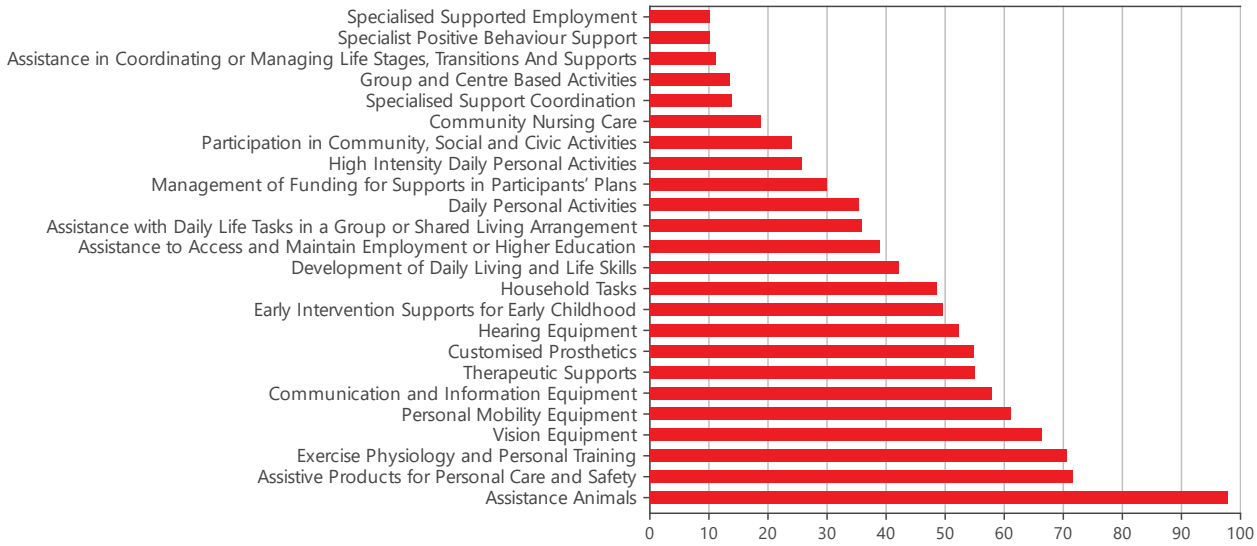
**Figure E.12 Average price caps and unit prices, all price capped supports, by week**




*Source: NDIA, December 2020, unpublished; QPC analysis.*

The proportion of supports being provided at the price caps varies significantly by registration group (for example, over 2020, almost 90 per cent of Specialist Positive Behaviour Supports were provided at the price caps). Note that only some support items within a registration group may be price capped; for example, providing ongoing support in respect of assistance animals is price capped, but the animal itself is not (Figure E.13).

**Figure E.13 Percentage of transaction occurring below price caps, by registration group, Queensland, 2020**




*Note: Only registration groups with at least 1000 price capped transactions in Queensland over 2020 are included.*
*Source: NDIA, December 2020, unpublished; QPC analysis.*

# E.4 Market dynamism

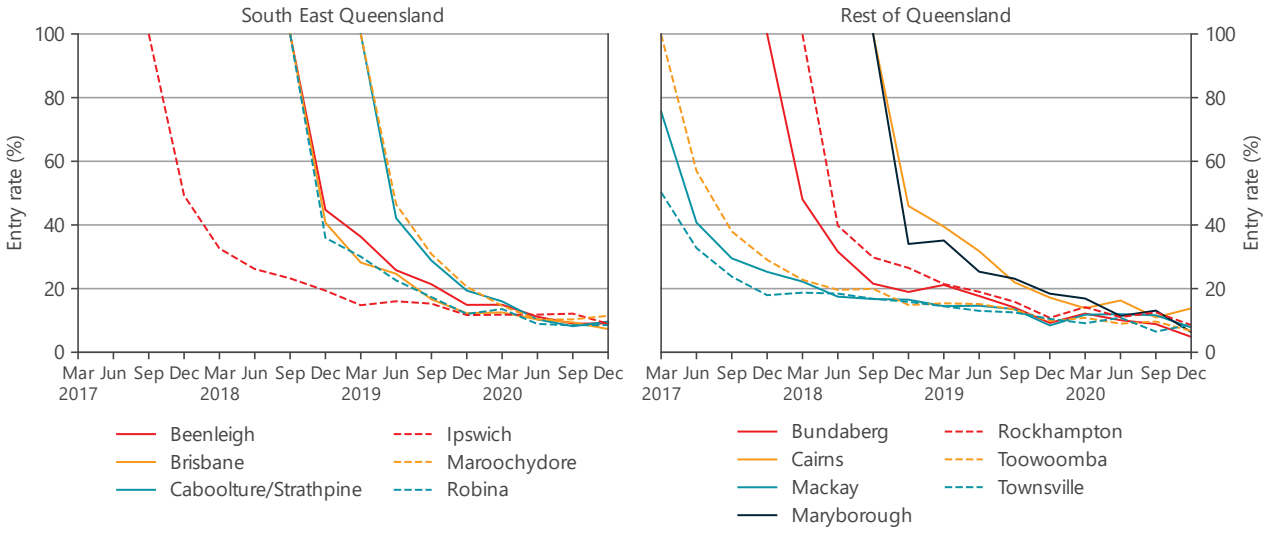
Market dynamism measures attempts to capture the changes on the make-up of market supply. The presented measures of market dynamics are entry rates, exit rates, and continuation rates.

## Entry rates

The entry rate is the number of firms entering a market in a quarter, divided by the number of providers that provide at least one service in that quarter. A firm is said to have entered when it first provides a service in an LGA. Note that a firm may 'enter' multiple times if it expands to new LGAs.

By definition, all providers supplying services in the first period a service district is active are ‘entrants’, as they cannot have supplied in that district in the past; for this reason, the first period entry rate is always 100 per cent., Through the transition period, entry rates appears to have stabilised across all service districts at about 10 per cent, indicating that in any given quarter, 10 per cent of active firms are new to the market (Figure E.14).

**Figure E.14 Entry rates, by service district**

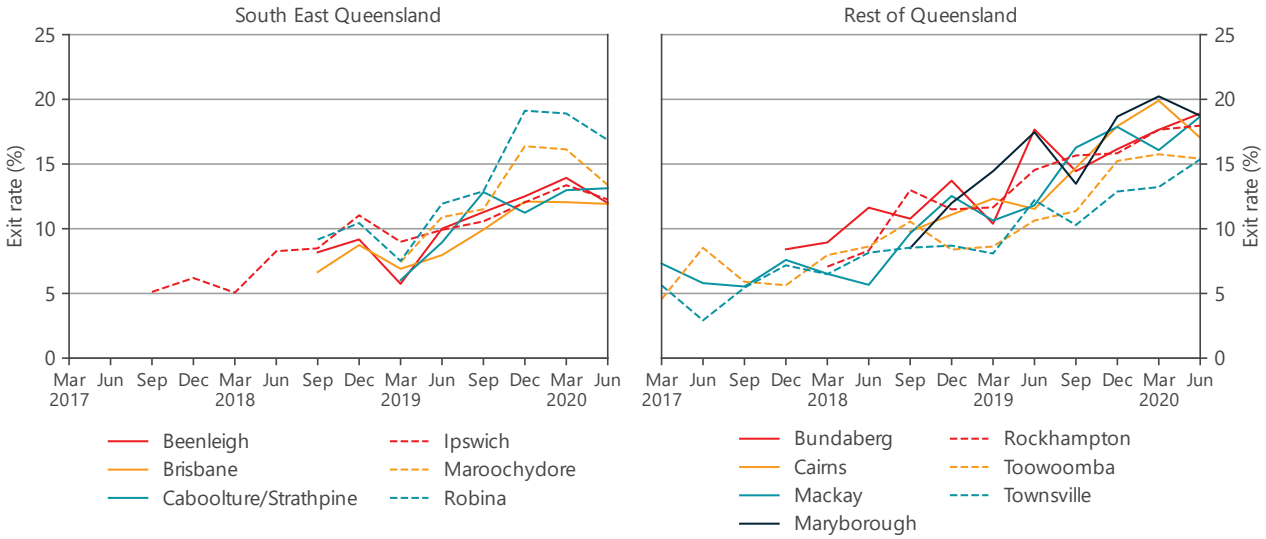



*Source: NDIA, December 2020, unpublished; QPC analysis.*

The exit rate is the ratio of firms who exit a market to the number of active firms. A firm is said to have exited if it does not provide another service, and its exit date is assigned to its last service date. Note that exit rates are not provided for the most recent two quarters as insufficient time has elapsed to reasonably argue a firm has ceased service provision.

In all service districts exit rates appear to be increasing (Figure E.15). The Commission heard from stakeholders that because of the costs (both monetary and otherwise) of registration, smaller providers often preferred to be unregistered; given that the available data is limited to registered providers, a possible explanation for increasing exit rates could be that smaller providers are ceasing to provide services while registered, as opposed to ceasing to provide services in general. It is also important to note that the latest period for which this measure can be constructed coincided with the COVID-19 related economic downturn and may reflect broader economic conditions outside the NDIS market and the withdrawal of services due to COVID-19 related restrictions.

**Figure E.15 Exit rates, by service district**

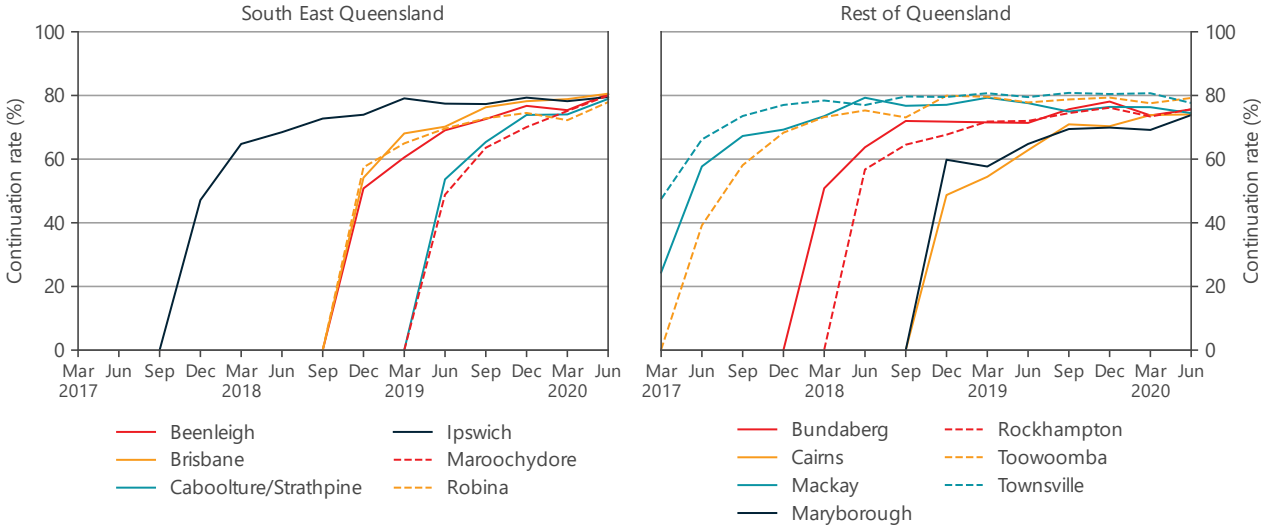



*Source: NDIA, December 2020, unpublished; QPC analysis.*

The 'continuation rate' is the proportion of providers that has neither entered or exited in a period. Note because some firms enter and exit a market in the same quarter, the entry, exit and continuation rate do not sum to 1.

The continuation rate in all regions is persistently around 80 per cent, which indicates that a large proportion of firm entries and exits are due to 'churn' in providers, and the overall composition of the market is relatively unchanging over time (Figure E.16).

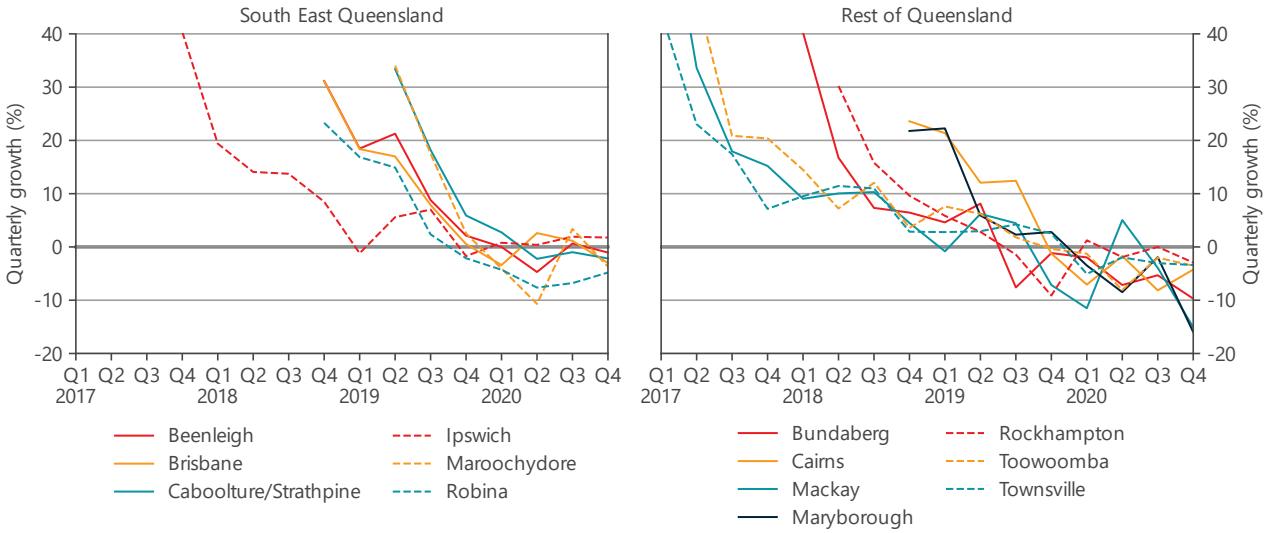
**Figure E.16 Continuation rates, by service district**




*Source: NDIA, December 2020, unpublished; QPC analysis.*

Overall, provider counts in South East Queensland appear to be stable, with a churn of around 10 per cent of the market each quarter. In contrast, registered provider exits appear to be outstripping entries in other regions, leading to a decline in the overall number of registered providers there (Figure E.17).

**Figure E.17 Quarterly growth in registered providers, by service district**




*Source: NDIA, December 2020, unpublished; QPC analysis.*

# Appendix F: Provider structure

This appendix provides the following information to support the analysis in Chapters 6 and 8:

- background on registered not-for-profit providers
- a correspondence between registration group numbers and names (Table F.1)
- registered active providers by registration group, including economies of scope indicator (Table F.2)
- exit and entry rates by registration group (Table F.3)
- concentration (HHI) and missing markets measures by LGA (Table F.4)
- participant to yellow card holder ratios (Table F.5).

## F.1 Not-for-profits in the NDIS market

Not-for-profits (NFPs, also referred to as 'non-profit', 'morally motivated' or 'for purpose' entities) have historically played a large role in provision of disability services. Registered not-for-profits[233] (RNFPs) were frequently characterised in consultation as large established providers in the NDIS market with a long history of involvement in social services sector.

RNFPs remained a large component of the NDIS market; in the most recent data available to the Commission, they provided at least $593.3 million of NDIS supports in Queensland, equivalent to 53.4 per cent of the total value in the December quarter of 2020. Over the life of the scheme, at least two-thirds of Queensland participants have received a support from an RNFP. [234]

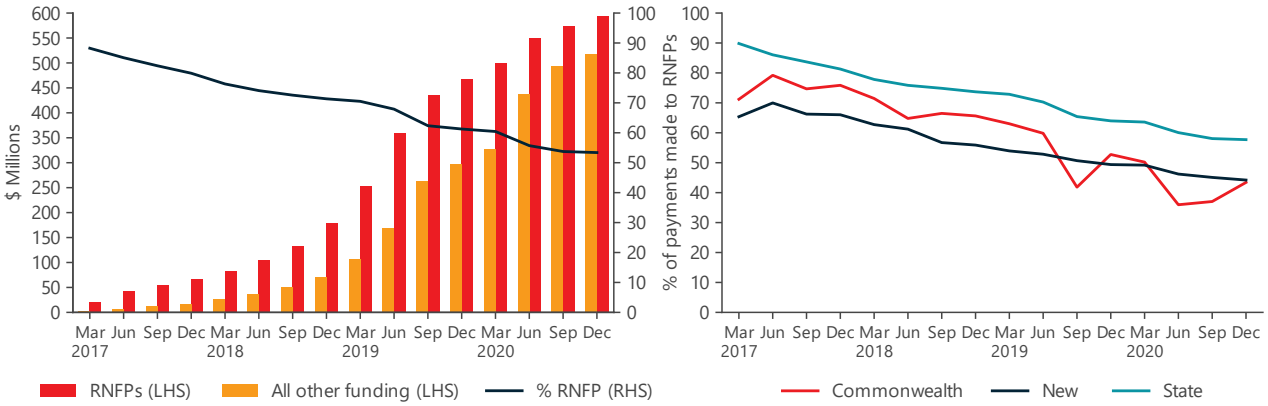
RNFPs also tend to be older, larger and more diversified than other providers:

- the average value of supports provided by an RNFP is nine times higher (over the scheme life) than other registered providers
- a much larger proportion of RNFPs were founded at or before 2000 (73 per cent of RNFPs compared with 9 per cent of other registered providers)[235]
- 70 per cent of RNFPs have provided services for at least two registration groups, compared to 43 per cent of other entities.

Though they remain a large part of the scheme, the proportion of services delivered by RNFPs has been steadily declining over the transitional period in Queensland. While participants who had previously received support under pre-NDIS State and Commonwealth schemes may have had existing relationships with RNFPs (evidenced by higher RNFP use), the decline in relative RNFP use does not appear to be solely the result of 'new' participants—the proportion of RNFP use has been consistently declining for both new participants and those who participated in older schemes (Figure F.1).

[233] RNFPs are defined as entities which are both registered providers of NDIS supports and registered charities with the Australian Charities Commission.
[234] It is not possible to identify when self-managed participants have used RNFP services in the data available; the true proportion may be higher.
[235] Based on ABN registration dates, the earliest of which coincide with their introduction in 2000.

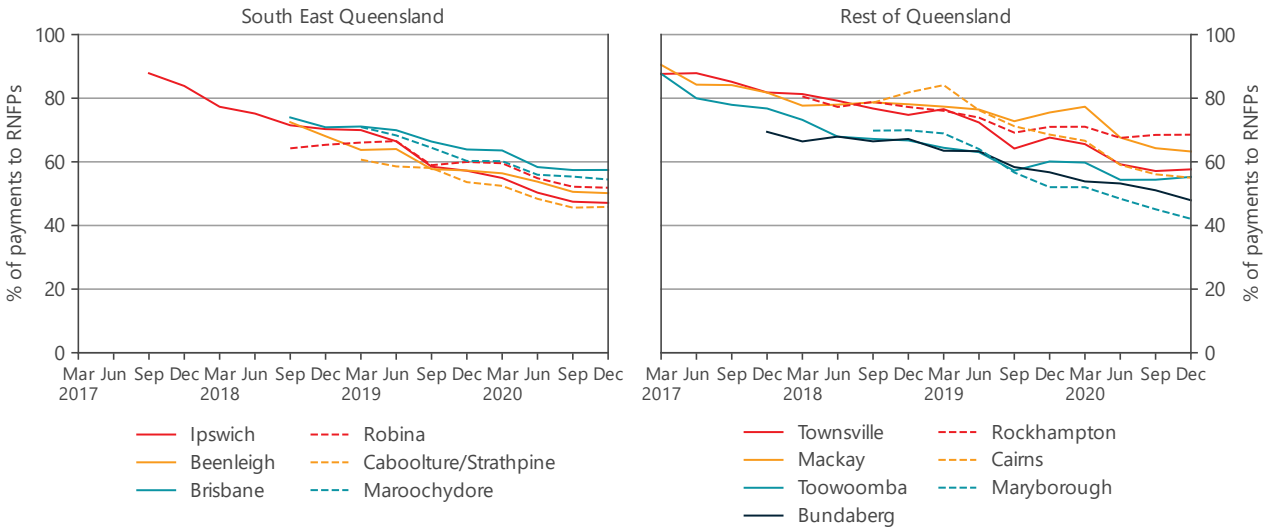
**Figure F.1 Value and proportion of NDIS services provided by RNFPs**




*Note: 'Commonwealth' and 'State' refer to participants who were previously members of a Commonwealth or State disability scheme, respectively.*
*Source: NDIA, December 2020, unpublished; ATO 2021; QPC analysis.*

This trend does not appear to have been caused by the staggered regional transition; while on average service districts which transitioned to the NDIS later had lower shares of RNFP funding, all districts have seen declining RNFP market shares, and shift-share analysis suggests that around half the decline is due to falls within each service district (Figure F.2).

**Figure F.2 Proportion of services provided by RNFPs by value, by service district**




*Source: NDIA, December 2020, unpublished; ATO 2021; QPC analysis.*

The scope of services provided by RNFPs varies significantly across different provider registration groups; for example, over 95 per cent of the value of Specialised Support Employment were provided by RNFPs in 2020 (Figure F.3). While the overall proportion of supports provided by RNFPs is falling in all registration groups, the rate of change is highly variable (for example, the proportion of Specialised Support Employment provided has been falling at less than 1 percentage point per annum).

**Figure F.3 Proportion of services provided by RNFPs, 2020**


*Source: NDIA, December 2020, unpublished; ATO 2021; QPC analysis.*

In aggregate, the available data suggest that the proportion of supports provided by RNFPs is declining as other market-based providers enter the NDIS, both in general and in most registration groups, and is structural rather than driven by purely transitional factors. This development is consistent with the view that a move toward market based service provision under the NDIS would attract a greater for-profit involvement (PC 2011, p. 526).

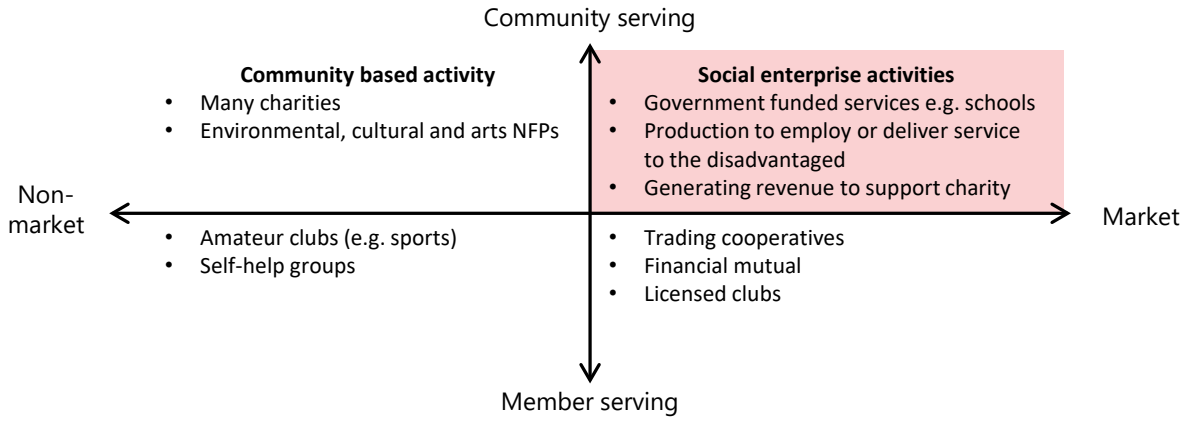
## Differentiating characteristics of RNFPs

RNFPs may behave differently in providing disability services than for-profit firms and may respond differently to policy changes. Those differences largely arise from two bases; different motivations and incentives, and different regulatory factors.

### Motivation and incentives

In general, NFPs (both registered and unregistered) can be categorised based on their market orientation, the section of the community they are designed to service (Figure F.4) and their size (PC 2010, p. 8). While NFPs operating in the NDIS market will mostly fall into the category of 'social enterprise activities', some may fall into other areas (for example, amateur clubs in relation to social participation).

**Figure F.4 Types of non-for-profit organisations**




*Source: Adapted from PC 2010, p. 8.*

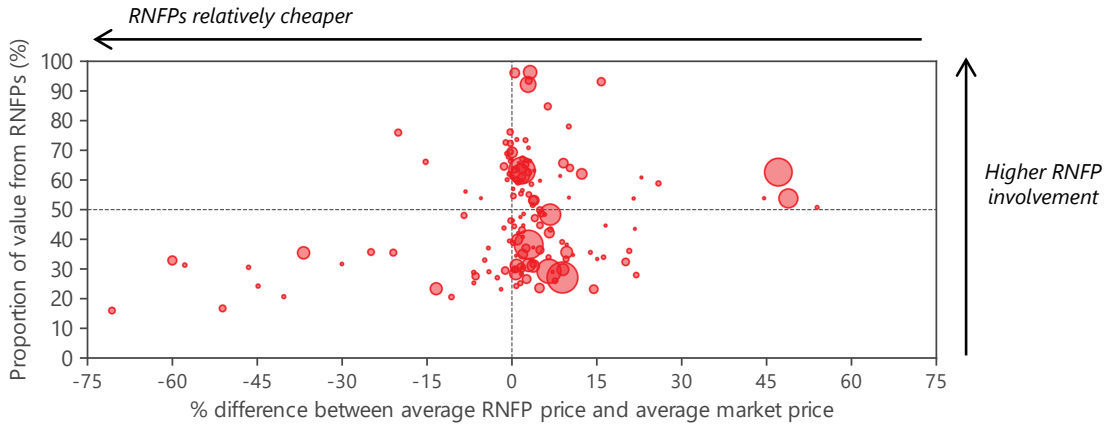
A community service objective does not imply that NFPs will not experience commercial pressure, or an incentive to innovate. If the purpose of an NFP is to service a community need, that creates an incentive to remain financially viable, provide an accessible and quality service, and for some, to run accounting profits to expand.

In some cases, there will be a tension between community benefit and commercial efficiency; an example given in consultation was a provider that also employs persons with disability, and incurs additional costs (such as a sign-language interpreter) that they would otherwise not incur. An NFP which associates itself with a clear social purpose may be less likely to respond in a purely profit oriented way to adverse participant behaviour (for example, it may continue to provide services despite non-payment by the participant).

The nature of an NFP can translate to internal staff and managerial behaviour. For example, NFP hospitals in the United States make less use of performance-based pay than their for-profit equivalents. However, differences in management practices appear to be sensitive to the presence of competitive pressure, with greater use of for-profit commercial practices being observed when an NFP is in competition with for-profit providers (Besley & Ghatak 2005, pp. 625–627). While the 'commerciality' of NDIS NFP behaviour is unobservable to the Commission, it may be the case that RNFPs will increasingly behave more similarly to their for-profit competitors, but for the reinvestment of any profit into service delivery as opposed to generating a return on equity. While the behaviour of NFPs funded by donations is affected by donor preferences it is unclear to what extent the NFP activities in the NDIS are funded by donations, and those preferences may not have a significant impact in the context of government funded supports.

Figure F.5 shows that for most support items, the average unit price charged by RNFPs is greater than the overall market average. This appears to be largely independent of the proportion of that service being provided by RNFPs. In general, the lack of data on unregistered providers and the existence of price caps mean that these price comparisons should be interpreted with caution. It is unclear whether these price differences are the result of profit-maximising behaviour, operating inefficiency, or some other unmeasured factor.

**Figure F.5 Relative prices of RNFPs and all registered providers, by support item**




*Notes: Bubble size indicates the total value of transactions for a support item. Support items with fewer than $500,000 worth of transactions associated with both RNFPs and other providers are excluded.*
*Source: NDIA, December 2020, unpublished; ATO 2021; QPC analysis.*

## Competitive neutrality concerns in relation to NFPs

RNFPs receive non-NDIS regulatory advantages over for-profit providers when registered as NFP entities. These include income tax exemptions and franking credits, GST concessions, fringe benefits tax concessions, the ability to receive tax-deductible donations, stamp duty exemptions, land tax exemptions and payroll tax exemptions (ACNC 2018; Queensland Treasury 2020). The benefits of providing those concessions, which may be thought of as indirect government funding, are generally considered to be the public benefits that accrue from charitable institutions (PC 2010, p. 158).

Those tax advantages have three potential implications in relation to the NDIS:

- RNFPs may have competitive advantages over for-profit providers which, coupled with their relative size and incumbency, may stifle for-profit entry in the NDIS market.
- As concessions tend to favour labour inputs over other inputs, they may distort production decisions toward employment over investment. As most NDIS activities are labour intensive by nature, and there is likely to be limited substitutability between labour and non-labour inputs in providing those supports, distortions in input decisions are unlikely to be of serious concern.
- The true cost of the NDIS may exceed its budgeted amount, as over half of its services are delivered by entities eligible for other Government subsidies. Such fiscal issues are beyond the scope of this inquiry.

In designing the NDIS, the PC was cognisant of the competitive neutrality issue, and particularly noted FBT exemptions and concessions. It argued that because NFPs could avoid FBT, they could use in-kind transfers to pay a higher effective wage to their employees, granting a competitive advantage over for-profit providers:

> *The pre-tax wage rate is one of the major determinants of costs in the disability sector. All things being equal, [the FBT tax concession] means that a less efficient NFP provider may displace a more efficient for-profit or government provider (PC 2011, p. 527).*

In principle, this possible distortion remains a potential issue for the scheme as the FBT rules exception remains (see Part IIIA, *Fringe Benefits Tax Assessment Act 1986* (Cth)). Similar arguments could also be made in respect of state-based payroll tax concessions. The Commission is not aware of any assessment of actual distortionary impacts of those tax concessions in the NDIS market. Given the breadth of application of NFP tax exemptions, a discussion of their merits is beyond the terms of reference and it suffices to note that lower marginal labour costs as a result of tax concessions may both afford NFPs a competitive advantage in the NDIS market, including to allow them to operate at a larger efficient scale.

# F.2 Correspondence of registration group numbers and names

**Table F.1 Correspondence of registration group numbers and names**

| Number | Name |
|---|---|
| 101 | Accommodation / Tenancy Assistance |
| 102 | Assistance to Access and Maintain Employment or Higher Education |
| 103 | Assistive Products for Personal Care and Safety |
| 104 | High Intensity Daily Personal Activities |
| 105 | Personal Mobility Equipment |
| 106 | Assistance in Coordinating or Managing Life Stages, Transitions And Supports |
| 107 | Daily Personal Activities |
| 108 | Assistance with Travel/Transport Arrangements |
| 109 | Vehicle Modifications |
| 110 | Specialist Positive Behaviour Support |
| 111 | Home Modifications |
| 112 | Assistive Equipment for Recreation |
| 113 | Vision Equipment |
| 114 | Community Nursing Care |
| 115 | Assistance with Daily Life Tasks in a Group or Shared Living Arrangement |
| 116 | Innovative Community Participation |
| 117 | Development of Daily Living and Life Skills |
| 118 | Early Intervention Supports for Early Childhood |
| 119 | Specialised Hearing Services |
| 120 | Household Tasks |
| 121 | Interpreting and Translation |
| 122 | Hearing Equipment |
| 123 | Assistive Products for Household Tasks |
| 124 | Communication and Information Equipment |
| 125 | Participation in Community, Social and Civic Activities |
| 126 | Exercise Physiology and Personal Training |
| 127 | Management of Funding for Supports in Participants' Plans |
| 128 | Therapeutic Supports |
| 129 | Specialised Driver Training |
| 130 | Assistance Animals |
| 131 | Specialised Disability Accommodation |
| 132 | Specialised Support Coordination |
| 133 | Specialised Supported Employment |
| 134 | Hearing Services |
| 135 | Customised Prosthetics |
| 136 | Group and Centre Based Activities |

*Source: NDIS 2021g.*

# F.3 Provider characteristics by registration group

**Table F.2 Queensland provider characteristics, by registration group, as at 31 December 2020**

| Registration group | Ever active | Active in Q2 | Sole trader active in Q2 | | Organisation active in Q2 | |
|---|---|---|---|---|---|---|
| **Assistance services** | | | | | | |
| Accommodation / Tenancy Assistance | 150 | 35 | 10 | 29% | 25 | 71% |
| Assistance Animals | 97 | 51 | 7 | 14% | 44 | 86% |
| Assistance with daily life tasks in a group or shared living arrangement | 633 | 438 | 50 | 11% | 388 | 89% |
| Assistance with travel/transport arrangements | 630 | 332 | 42 | 13% | 290 | 87% |
| Daily Personal Activities | 1,005 | 581 | 77 | 13% | 504 | 87% |
| Group and Centre Based Activities | 687 | 411 | 56 | 14% | 355 | 86% |
| High Intensity Daily Personal Activities | 678 | 372 | 53 | 14% | 319 | 86% |
| Household tasks | 1,158 | 558 | 145 | 26% | 413 | 74% |
| Interpreting and translation | 130 | 73 | 16 | 22% | 57 | 78% |
| Participation in community, social and civic activities | 1,077 | 647 | 92 | 14% | 555 | 86% |
| **Assistive Technology** | | | | | | |
| Assistive equipment for recreation | 200 | 57 | 2 | 4% | 55 | 96% |
| Assistive products for household tasks | 164 | 37 | 4 | 11% | 33 | 89% |
| Assistance products for personal care and safety | 1,105 | 590 | 78 | 13% | 512 | 87% |
| Communication and information equipment | 376 | 214 | 41 | 19% | 173 | 81% |
| Customised Prosthetics | 455 | 221 | 32 | 14% | 189 | 86% |
| Hearing Equipment | 174 | 82 | 14 | 17% | 68 | 83% |
| Hearing Services | 34 | 16 | 1 | 6% | 15 | 94% |
| Personal Mobility Equipment | 645 | 320 | 49 | 15% | 271 | 85% |
| Specialised Hearing Services | 66 | 35 | 2 | 6% | 33 | 94% |
| Vision Equipment | 183 | 81 | 12 | 15% | 69 | 85% |
| **Capacity Building Services** | | | | | | |
| Assistance in coordinating or managing life stages, transitions and supports | 1,078 | 663 | 131 | 20% | 532 | 80% |
| Behaviour Support | 473 | 217 | 61 | 28% | 156 | 72% |
| Community nursing care for high needs | 329 | 205 | 26 | 13% | 179 | 87% |
| Development of daily living and life skills | 641 | 317 | 42 | 13% | 275 | 87% |
| Early Intervention supports for early childhood | 1,013 | 399 | 111 | 28% | 288 | 72% |
| Exercise Physiology and Physical Wellbeing activities | 569 | 341 | 72 | 21% | 269 | 79% |
| Innovative Community Participation | 204 | 73 | 13 | 18% | 60 | 82% |
| Specialised Driving Training | 147 | 65 | 8 | 12% | 57 | 88% |
| Therapeutic Supports | 2,572 | 1,148 | 409 | 36% | 739 | 64% |
| **Capital services** | | | | | | |
| Home modification design and construction | 337 | 144 | 14 | 10% | 130 | 90% |
| Specialist Disability Accommodation | 65 | 47 | 2 | 4% | 45 | 96% |
| Vehicle Modifications | 173 | 60 | 7 | 12% | 53 | 88% |
| **Choice and control support services** | | | | | | |
| Management of funding for supports in participants plan | 525 | 372 | 74 | 20% | 298 | 80% |
| Support Coordination | 268 | 127 | 23 | 18% | 104 | 82% |
| **Employment and Education support services** | | | | | | |
| Assistance to access and/or maintain employment and/or education | 172 | 102 | 14 | 14% | 88 | 86% |
| Specialised Supported Employment | 194 | 131 | 18 | 14% | 113 | 86% |
| **Total unique providers** | **5,474** | **2,507** | **721** | 29% | **1,786** | 71% |
| Total registration group providers | 18,407 | 9,562 | 1,808 | | 7,754 | |
| Economies of scope ratio | 3.4 | 3.8 | 2.5 | | 4.3 | |

*Notes: Q2 is the most recent quarter, 1 October 2020 to 31 December 2020. The economies of scope ratio is equal to total registration group providers/total unique providers.*
*Source: NDIA 2020ap, pp. 281, 283, 284; QPC estimates.*

**Table F.3 Queensland provider entry and exit rates, by registration group, Q4 2019–20 and Q1, Q2 2020–21**

| Registration group | Q4 entry | Q4 exit | Q1 entry | Q1 exit | Q2 entry | Q2 exit |
|---|---|---|---|---|---|---|
| **Assistance services** | | | | | | |
| Accommodation / Tenancy Assistance | 46% | 19% | 30% | 42% | 34% | 43% |
| Assistance Animals | 6% | 4% | 18% | 18% | 10% | 8% |
| Assistance with daily life tasks in a group or shared living arrangement | 9% | 7% | 10% | -3% | 9% | 5% |
| Assistance with travel/transport arrangements | 9% | 9% | 8% | 4% | 5% | 9% |
| Daily Personal Activities | 5% | 6% | 5% | 3% | 7% | 3% |
| Group and Centre Based Activities | 4% | 10% | 7% | -4% | 9% | 4% |
| High Intensity Daily Personal Activities | 9% | 7% | 8% | 0% | 6% | 1% |
| Household tasks | 6% | 10% | 4% | 8% | 7% | 8% |
| Interpreting and translation | 8% | 6% | 18% | 6% | 11% | 10% |
| Participation in community, social and civic activities | 5% | 7% | 6% | 0% | 7% | 1% |
| **Assistive Technology** | | | | | | |
| Assistive equipment for recreation | 32% | 4% | 36% | 40% | 37% | 39% |
| Assistive products for household tasks | 49% | 32% | 38% | 35% | 35% | 38% |
| Assistance products for personal care and safety | 7% | 7% | 6% | 6% | 6% | 7% |
| Communication and information equipment | 35% | -6% | 18% | 15% | 8% | 16% |
| Customised Prosthetics | 12% | 11% | 10% | 4% | 8% | 14% |
| Hearing Equipment | 33% | 16% | 26% | 25% | 21% | 19% |
| Hearing Services | 50% | 63% | 43% | 33% | 50% | -14% |
| Personal Mobility Equipment | 11% | 10% | 11% | 6% | 9% | 13% |
| Specialised Hearing Services | 50% | 25% | 67% | 17% | 43% | 33% |
| Vision Equipment | 25% | 29% | 27% | 21% | 17% | 9% |
| **Capacity Building Services** | | | | | | |
| Assistance in coordinating or managing life stages, transitions and supports | 10% | 1% | 8% | -1% | 10% | 1% |
| Behaviour Support | 11% | 12% | 10% | 4% | 8% | -1% |
| Community nursing care for high needs | 21% | 10% | 15% | 3% | 16% | 5% |
| Development of daily living and life skills | 6% | 13% | 8% | 8% | 8% | 3% |
| Early Intervention supports for early childhood | 6% | 9% | 8% | 8% | 6% | 8% |
| Exercise Physiology and Physical Wellbeing activities | 7% | 12% | 8% | 0% | 6% | 5% |
| Innovative Community Participation | 16% | 33% | 22% | 17% | 16% | 10% |
| Specialised Driving Training | 29% | 48% | 9% | -21% | 12% | 11% |
| Therapeutic Supports | 5% | 9% | 5% | 5% | 5% | 5% |
| **Capital services** | | | | | | |
| Home modification design and construction | 22% | 6% | 12% | 10% | 10% | 19% |
| Specialist Disability Accommodation | 22% | 17% | 11% | 3% | 23% | -3% |
| Vehicle Modifications | 24% | 4% | 19% | 29% | 25% | 13% |
| **Choice and control support services** | | | | | | |
| Management of funding for supports in participants plan | 7% | -1% | 5% | 1% | 6% | -1% |
| Support Coordination | 15% | -3% | 15% | 8% | 16% | 7% |
| **Employment and Education support services** | | | | | | |
| Assistance to access and/or maintain employment and/or education | 20% | 6% | 17% | -1% | 9% | 0% |
| Specialised Supported Employment | 7% | 5% | 15% | 8% | 20% | 0% |
| **Total unique providers** | 5% | 11% | 5% | 6% | 5% | 6% |

*Notes: Entry rates represent new providers not previously active. Exit rates represent providers that were active in the prior quarter but not active in the current quarter. Providers previously active two or more quarters prior may also become active in the quarter and this can result in negative exit rates (they add to the provider count but are not new entrants). Data is unavailable for previous quarters.*
*Source: NDIA 2020ap, p. 283, 2020ao, p. 289, 2020aq, p. 284, 2020g, p. 247; QPC estimates.*

# F.4 HHI and missing markets measures by LGA

## Measures by LGA

The methods used to calculate the concentration and missing markets indicators are given in Appendix E.

Table F.4 reports measures for LGAs according to the following grouping:

- Category 1—all types of support are available, and markets are not concentrated (HHI less than 0.1)—by value, 73 per cent of the Queensland NDIS market is in this category
- Category 2—nearly all types of support are available (less than 5 per cent missing markets) but concentration is higher (with an HHI from 0.1–0.3)
- Category 3—some types of support are missing (up to 20 per cent of the market) and support markets are highly concentrated (HHI greater than 0.3)
- Category 4—few supports are available (more than 20 per cent missing markets) and markets are highly concentrated (greater than 0.4, although most measure above 0.6).

LGAs are ordered alphabetically in each category, and the values for individual LGAs are not reported for the last category where participant numbers are low.

**Table F.4 Concentration and missing market measures, by Queensland LGA, 2020**

| Local Government Area | Market value (%) | HHI | Missing markets (%) |
|---|---|---|---|
| **Category 1 (HHI<0.10)** | **72.9** | | |
| Brisbane (C) | 20.38 | 0.04 | 0.00 |
| Moreton Bay (R) | 9.80 | 0.05 | 0.00 |
| Gold Coast (C) | 9.73 | 0.06 | 0.00 |
| Logan (C) | 6.80 | 0.05 | 0.02 |
| Sunshine Coast (R) | 6.65 | 0.07 | 0.00 |
| Ipswich (C) | 5.48 | 0.05 | 0.00 |
| Toowoomba (R) | 5.40 | 0.07 | 0.00 |
| Townsville (C) | 5.03 | 0.10 | 0.02 |
| Redland (C) | 3.69 | 0.07 | 0.00 |
| **Category 2 (HHI<0.30)** | **24.3** | | |
| Livingstone (S) | 0.50 | 0.24 | 0.52 |
| Western Downs (R) | 0.47 | 0.28 | 0.81 |
| Somerset (R) | 0.42 | 0.18 | 0.75 |
| Banana (S) | 0.11 | 0.26 | 2.23 |
| Mareeba (S) | 0.27 | 0.28 | 0.85 |
| Maranoa (R) | 0.20 | 0.29 | 1.93 |
| Cassowary Coast (R) | 0.52 | 0.24 | 0.42 |
| Burdekin (S) | 0.36 | 0.28 | 0.82 |
| Scenic Rim (R) | 0.68 | 0.18 | 0.45 |
| Lockyer Valley (R) | 0.68 | 0.11 | 0.55 |
| South Burnett (R) | 0.77 | 0.25 | 0.18 |
| Noosa (S) | 0.88 | 0.13 | 0.35 |
| Gladstone (R) | 1.01 | 0.21 | 0.13 |
| Gympie (R) | 1.16 | 0.23 | 0.11 |
| Cairns (R) | 3.89 | 0.17 | 0.02 |
| Rockhampton (R) | 2.51 | 0.15 | 0.15 |
| Mackay (R) | 2.55 | 0.11 | 0.08 |
| Southern Downs (R) | 0.73 | 0.20 | 0.23 |
| Bundaberg (R) | 3.09 | 0.16 | 0.01 |
| Fraser Coast (R) | 3.47 | 0.16 | 0.00 |

| Local Government Area | Market value (%) | HHI | Missing markets (%) |
|---|---|---|---|
| **Category 3 (HHI>0.30 and MM<20%)** | **2.6** | | |
| Torres (S) | 0.06 | 0.67 | 8.76 |
| Balonne (S) | 0.04 | 0.62 | 14.69 |
| Cherbourg (S) | 0.03 | 0.58 | 8.81 |
| Cook (S) | 0.03 | 0.75 | 4.96 |
| Yarrabah (S) | 0.03 | 0.68 | 6.26 |
| Palm Island (S) | 0.03 | 0.62 | 6.34 |
| Barcaldine (R) | 0.02 | 0.82 | 13.17 |
| Napranum (S) | 0.02 | 0.93 | 17.97 |
| Longreach (R) | 0.03 | 0.57 | 8.98 |
| Isaac (R) | 0.06 | 0.54 | 15.29 |
| Murweh (S) | 0.07 | 0.46 | 2.73 |
| Goondiwindi (R) | 0.10 | 0.72 | 2.67 |
| Whitsunday (R) | 0.35 | 0.34 | 1.19 |
| Charters Towers (R) | 0.31 | 0.37 | 1.61 |
| Central Highlands (R) | 0.29 | 0.44 | 1.46 |
| Hinchinbrook (S) | 0.25 | 0.49 | 1.16 |
| Tablelands (R) | 0.44 | 0.32 | 0.82 |
| Mount Isa (C) | 0.22 | 0.43 | 2.29 |
| North Burnett (R) | 0.11 | 0.35 | 2.17 |
| Douglas (S) | 0.11 | 0.62 | 2.00 |
| **Category 4 (HHI>0.30 and MM>20%)** | **0.2** | **0.68–1.00** | **24%–95%** |
| McKinlay (S) | | | |
| Woorabinda (S) | | | |
| Barcoo (S) | | | |
| Mapoon (S) | | | |
| Bulloo (S) | | | |
| Boulia (S) | | | |
| Burke (S) | | | |
| Etheridge (S) | | | |
| Croydon (S) | | | |
| Quilpie (S) | | | |
| Mornington (S) | | | |
| Richmond (S) | | | |
| Pormpuraaw (S) | | | |
| Kowanyama (S) | | | |
| Torres Strait Island (R) | | | |
| Hope Vale (S) | | | |
| Lockhart River (S) | | | |
| Cloncurry (S) | | | |
| Winton (S) | | | |
| Carpentaria (S) | | | |
| Aurukun (S) | | | |
| Northern Peninsula Area (R) | | | |
| Blackall-Tambo (R) | | | |
| Weipa (T) | | | |
| Paroo (S) | | | |
| Doomadgee (S) | | | |
| Flinders (S) | | | |
| Wujal Wujal (S) | | | |

*Note: Due to small numbers of participants in Group 4 LGAs, their individual results are not reported. Values may not sum due to rounding. HHIs and missing markets are the average of their quarterly values over 2020. Value shares are the proportion of the total transaction value in 2020. (C) represents city, (R) region, (S) shire and (T) township.*
*Source: NDIA, December 2020, unpublished; QPC estimates.*

# F.5 NDIS participants and yellow card holders by LGA

Table F.5 indicates the number of NDIS participants by LGA and their rank by ratio to yellow card holders. LGAs are ordered from highest to lowest ratio.

**Table F.5 Ranking of Queensland LGAs, by ratio of NDIS participants to yellow card holders**

| Local Government Area | Number of participants (30 March 2020) |
|---|---|
| Croydon (S) | |
| Wujal Wujal (S) | |
| Barcaldine (R) | 21 |
| Hope Vale (S) | |
| **Ratio greater than 0.5:1** | |
| Mareeba (S) | 218 |
| Flinders (S) | |
| Burdekin (S) | 261 |
| Cairns (R) | 2056 |
| Winton (S) | |
| Livingstone (S) | 486 |
| Douglas (S) | 90 |
| Hinchinbrook (S) | 166 |
| Torres (S) | 34 |
| Bundaberg (R) | 2251 |
| Etheridge (S) | |
| **Ratio greater than 0.75:1** | |
| Fraser Coast (R) | 2021 |
| Noosa (S) | 493 |
| Tablelands (R) | 281 |
| Somerset (R) | 418 |
| Sunshine Coast (R) | 3922 |
| Mount Isa (C) | 224 |
| Charters Towers (R) | 208 |
| Logan (C) | 4367 |
| Moreton Bay (R) | 6269 |
| Brisbane (C) | 12787 |
| Redland (C) | 2124 |
| Toowoomba (R) | 3372 |
| Aurukun (S) | |
| Longreach (R) | 35 |
| Townsville (C) | 3773 |
| Maranoa (R) | 127 |
| Rockhampton (R) | 1736 |
| Cassowary Coast (R) | 343 |
| Gladstone (R) | 1074 |
| South Burnett (R) | 584 |
| Lockyer Valley (R) | 646 |
| Gold Coast (C) | 6372 |
| **Ratio greater than 1:1** | |
| Blackall Tambo (R) | |
| Paroo (S) | |
| Ipswich (C) | 4330 |
| Whitsunday (R) | 370 |
| Mackay (R) | 2024 |
| Balonne (S) | 41 |
| Kowanyama (S) | |
| Southern Downs (R) | 658 |

| Local Government Area | Number of participants (30 March 2020) |
|---|---|
| North Burnett (R) | 134 |
| Cook (S) | 29 |
| Scenic Rim (R) | 586 |
| Central Highlands (R) | 328 |
| Napranum (S) | |
| **Ratio greater than 1.25:1** | |
| Gympie (R) | 916 |
| Carpentaria (S) | 31 |
| Western Downs (R) | 488 |
| **Ratio greater than 1.5:1** | |
| Murweh (S) | 70 |
| Goondiwindi (R) | 142 |
| Banana (S) | 169 |
| Burke (S) | |
| **Ratio greater than 2:1** | |
| Isaac (R) | 130 |
| Weipa (T) | 23 |
| Mornington (S) | |
| Cloncurry (S) | |
| Barcoo (S) | |
| Doomadgee (S) | |
| Yarrabah (S) | |
| Northern Peninsula Area (R) | |
| Boulia (S) | |
| Cherbourg (S) | |
| Palm Island (S) | |
| Richmond (S) | |

*Note: The LGA boundaries used for participants may not match that for yellow card holders and is indicative only. Data is suppressed where participant numbers are less than 20, but the rank by participant to yellow card ratio is preserved. (C) represents city, (R) region, (S) shire and (T) township.*
*Source: NDIA, March 2020, unpublished; DCDSS, unpublished; QPC estimates.*

# Appendix G: Background to the price control framework and pricing strategy

This appendix provides background information on:

- The NDIA's Pricing Reference Group
- The NDIA's Independent Advisory Council
- The basic structure of price controls as reflected in the Price Guide and NDIS Support Catalogue
- Elements of the NDIA's pricing strategy.

The welfare effects of price setting are also discussed using graphical tools.

## G.1 Pricing Reference Group

### Purpose

The Pricing Reference Group (PRG) was established by the CEO of the National Disability Insurance Agency (NDIA) to provide advice, through the CEO, to the NDIA Board on the price control arrangements for the National Disability Insurance Scheme (NDIS).

The PRG advises on NDIA price regulation activities and decisions to support NDIS objectives during the transition to a competitive marketplace. In particular, the PRG will provide advice that ensures price regulation activities are co-ordinated with participant funding arrangements and non-price market settings to support the best possible outcomes for NDIS participants.

The PRG also advises on:

- embedding a consistent price regulation approach in the NDIA
- increasing the quality of information delivered across the NDIA regarding market settings, particularly price regulation
- building price regulation understanding and capability within the NDIA and the sector through the sharing of knowledge, advice and information (NDIA 2020au).

### Roles

NDIA staff lead market reviews, including consultation activities, and present options and recommendations to the PRG. Options and recommendations are supported by a proportionate impact assessment that considers:

- market prices and factors influencing markets, including market monitoring activities and any market issues that arise based on analysis of scheme data and external data sources
- expected costs and benefits for participants, providers and other relevant stakeholders, including the distribution of these costs and benefits
- risks, along with any options to manage/mitigate these risks
- any other impacts that are relevant to the successful delivery of the NDIS.

The PRG makes and records its advice to the Board on the basis of the impact assessments prepared by NDIA staff.

Price control decisions are announced after the Board has considered the advice of the PRG through the CEO.

### Structure

The PRG is comprised of a chair, and up to five independent members as follows:

- Chair – a senior executive of the NDIA nominated by the CEO
- Independent Members appointed by the CEO, after consultation with the Board, reflecting an appropriate diversity of skills, experience and geography.

The PRG is chaired by the NDIA's General Manager, Provider and Market Development. There are currently three independent members.

The NDIA provides Secretariat functions for the PRG.

## G.2 Independent Advisory Council

The Independent Advisory Council (IAC) was formed in 2013 to represent the participants' voice in the NDIS. The IAC's independence is outlined in the *National Disability Insurance Scheme Act 2013*, in which it is determined that the IAC will provide advice of its own initiative or at the written request of the Board (Box G.1).

### Box G.1 The Independent Advisory Council (IAC)

The IAC membership advise the Board of the NDIA on the most important issues affecting participants, carers and families. The IAC consists of 12 members, who represent a wide range of disability and advocacy sectors, bringing lived experience or expertise of disability to the table. The IAC is also supported by expert advisers.

The IAC was established to provide advice to the Board about the way the NDIA:

- performs its functions in relation to the Scheme
- supports the independence and social and economic participation of people with disability
- provides reasonable and necessary supports, including early intervention supports, for participants in the Scheme launch
- enables people with disability to exercise choice and control in the pursuit of their goals and the planning and delivery of their supports
- facilitates the development of a nationally consistent approach to the access to, and the planning and funding of, supports for people with disability
- promotes the provision of high quality and innovative supports to people with disability
- raises community awareness of the issues that affect the social and economic participation of people with disability, and helps with greater community inclusion of people with disability.

During 2019–20, the IAC provided advice to the Board on plan flexibility for value for money, support for decision making, participants who are parents, and best practice in early childhood intervention, as well as other topics less formally discussed with management and Board Members.

*Source: IAC 2020.*

# G.3 Basic structure of the price control framework

## Structure of the price caps (or limits)

The NDIA implements a complex system of price caps (or limits) through its published Price Guide and Support Catalogue (what it refers to as its Price Control framework). The information below provides a snapshot of some of the structure of the price regulations and a 'snapshot' of the level of detail that regulation actually occurs at.

As the NDIA has noted, '[t]here are no significant differences between the approaches to NDIS price regulation in the Queensland market compared to other jurisdictions' (NDIA sub. 39, p. 19).

**Types of price regulation used by the NDIS**

Supports can be subject to price regulation in different ways:

- *Price controlled supports* should only be claimed by a provider from a participant's plan when they are reasonable and necessary to meet a participant's needs and are subject to the conditions set out in the Price Guide.
- *Quotable supports* should only be claimed by a provider from a participant's plan if the support is specifically included in the participant's plan. They are also subject to the conditions set out in the Price Guide.
- Some supports are not subject to price control. These supports should only be claimed by a provider from a participant's plan when they are reasonable and necessary to meet a participant's needs. They are subject to the other conditions set out in the Price Guide (NDIA 2021g, p. 8).

**Support categories, purposes and items**

Supports are classified into categories, purposes and items.

Support Categories are aligned to the NDIS Outcomes Framework (or domains). The eight domains include:

- choice and control
- daily living
- home
- health and wellbeing
- lifelong learning
- relationships
- social and community participation
- work.

Support Purposes are classified as: core; capital; and capacity building.

Support Items are the level at which price caps are applied and consist of 632 support items which are price regulated of which 493 have price caps and 139 are quotable supports (NDIA sub. 39, p. 19).

**Registration Groups**

Each support item specifies the registration group for which a registered provider that delivers the support must be registered with the NDIS Quality and Safeguards Commission. There are currently 36 registration groups (NDIA 2021g, p. 11).

**Isolated towns modification**

To determine whether a support is being delivered in a regional, remote or very remote area the NDIA uses a modification of the Modified Monash Model (MMM) (NDIA 2021g, pp. 23–25).

There is a substantial list of Queensland locations that were reclassified from a regional area (MMM4–5) to a remote area (MMM6). This has the effect of increasing price caps where caps are differentiated between regional areas and remote areas.

**Pricing arrangements in remote and very remote areas**

In general, the price cap arrangements apply a uniform price for metropolitan areas, regional centres and regional areas. Price limits are 40 per cent higher in remote areas and 50 per cent higher in very remote areas. Some different pricing arrangements do apply in regional areas (MMM4–5).

**Time of day and day of week**

In determining which price limit is applicable to a support, the important consideration is when the support was provided to the participant, not the shift of the worker used to deliver that support as determined by the applicable industry award or enterprise bargaining agreement. For NDIS claiming purposes, the provider must first determine the day of the week on which the support was provided on and then the time of the day during which the support was delivered.

**Non-face-to-face support provision**

Providers can only claim from a participant's plan for the non-face-to-face delivery of a support item if all of the following conditions are met:

- the price guide indicates that providers can claim for non-face-to-face support provision in respect of that support item
- the proposed charges for the activities comply with the price guide and with the service agreement with the participant
- the activities are part of delivering a specific disability support item to that participant (rather than a general activity such as enrolment, administration or staff rostering)
- the provider explains the activities to the participant, including why they represent the best use of the participant's funds (that is, the provider explains the value of these activities to the participant)
- the provider has the agreement of the participant in advance (that is, the service agreement between the participant and provider specifies that non-face-to-face supports can be claimed).

Time spent on administration, such as the processing of NDIS payment claims for all clients, should not be claimed from a participant's budget as a non-face-to-face support. The NDIS price limits include an allowance for overheads, including the costs of administration tasks. Examples of administrative activities that are covered by the overhead component of the support price limits and that should not be billed as non-face-to-face supports include, but are not limited to:

- pre-engagement visits
- developing and agreeing service agreements
- entering or amending participant details into system
- making participant service time changes
- staff/participant travel monitoring and adjustment
- ongoing NDIS plan monitoring
- completing a quoting tool
- making service bookings and payment claims.

**Non-face-to-face billable hours and staff training and upskilling**

The costs of training and upskilling staff, and of supervision, are included in the base price limits for supports and are not considered billable non-face-to-face supports. However, research undertaken by a capacity building provider specifically linked to the needs of a participant and to the achievement of the participant's goals may be billable as a non-face-to-face support with the participant's prior agreement.

# G.4 NDIA's pricing strategy

## Pricing transitional strategy

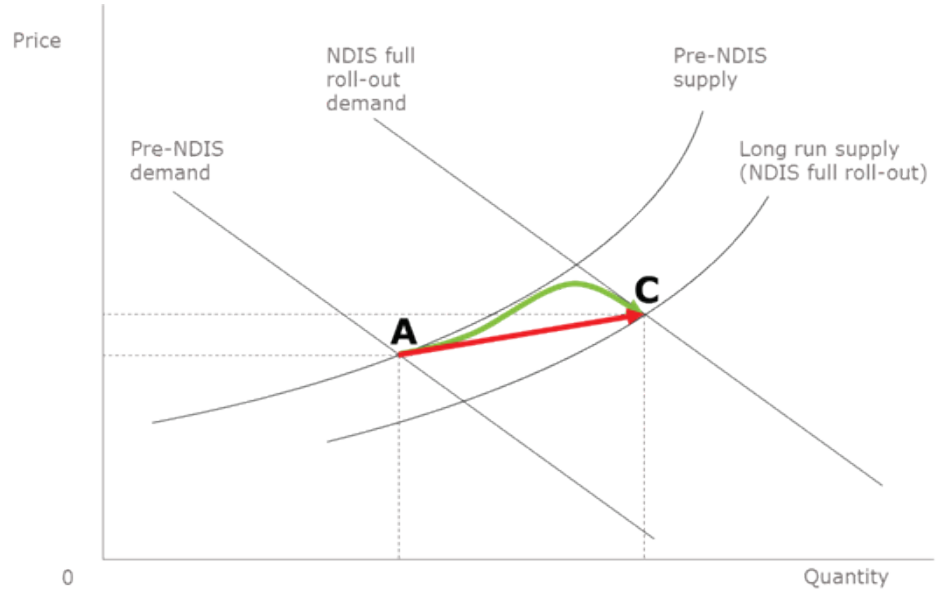
The pricing strategy is intended to take account of the need for higher prices during the transition phase of market development (illustrated by the green arrow in Figure G.1).

> *Critically, higher prices are needed to both maintain current supply volumes and enable greater volumes of disability support, as this provides an incentive to redirect the allocation of resources to the NDIS from other sectors in the economy. Without price growth, supply side shortages will likely exist.*
>
> *Overall, macroeconomic modelling shows that market-clearing efficient prices for disability services rise significantly in the short term and reach a long run equilibrium of approximately 5 per cent higher than pre-NDIS levels in real terms (and peaking at about 15 per cent higher than pre-NDIS levels in real terms ... (NDIA 2019q, p. 29)*

Pressure for higher prices results from demand expanding more rapidly than supply, rigidities in the transition of incumbent organisations to the new market arrangements, and competition for resources with other sectors of the economy.

The test on when to remove price caps is based on observing pricing outcomes in relation to the regulated price caps. When price outcomes are below the caps then the caps are no longer 'effective' and price deregulation can proceed.

**Figure G.1 Higher prices and a major increase in the quantity of supports provided**




*Source: Reproduced from NDIA 2019q, p. 37.*

# G.5 The welfare effects of price setting

## Welfare effects of regulated price interventions in a competitive market

Many NDIA markets are not competitive markets, but some are, and, at the time of this report, price setting applies across all markets. Errors in price setting can result in both welfare losses and transfers between participants and providers. Where there are transfers to participants this will be a short-term gain because it will influence investment and the longer-term supply of supports.

The price ($p_c$) and quantity ($q_c$) outcomes that result from the interaction of supply and demand in a normal competitive market are illustrated in the left-hand panel of Figure G.2. All quantities are sold at the price ($p_c$) even though participants may value the supports at greater than ($p_c$). This extra value that participants obtain above the price they had to pay for the support is represented by the upper shaded area labelled 'consumers surplus'. Similarly, providers are willing to supply supports at prices below ($p_c$), as represented by the supply curve. However, as all supply is provided at ($p_c$), the bottom area labelled 'producers surplus' represents returns or profits to suppliers. The competitive market outcome of ($p_c$, $q_c$) maximises the combined consumer and producer surpluses.

If the market exhibited the conditions that would allow a monopolist seller to determine the prevailing price in the market, then the monopolist would set a price above the competitive price ($p_m$, where $p_m > p_c$) and would supply a lower quantity of supports ($q_m < q_c$) (middle panel).

A regulator would seek to set prices equal to the competitive market price, but which is unknown. If the regulator sets the price ($p_h$) below the monopoly price, but above what would be the outcome under competitive conditions ($p_h > p_c$), and, under the assumption that market transaction prices gravitate towards the cap, then the quantities of supports provided will be more than the monopoly quantity, but less than the competitive quantity ($q_h < q_c$). The regulated outcomes, relative to the competitive market outcomes, result in an aggregate welfare loss (equal to areas A + B). From a participant's perspective, there is an additional loss as providers are able to capture a larger share of the overall surplus (the area C represents a transfer of rents (value or profits) from consumers to producers). However, in the absence of regulation, the monopolist's choices result in larger welfare losses (the areas A and B are larger) and a larger transfer of rents (area C is larger).

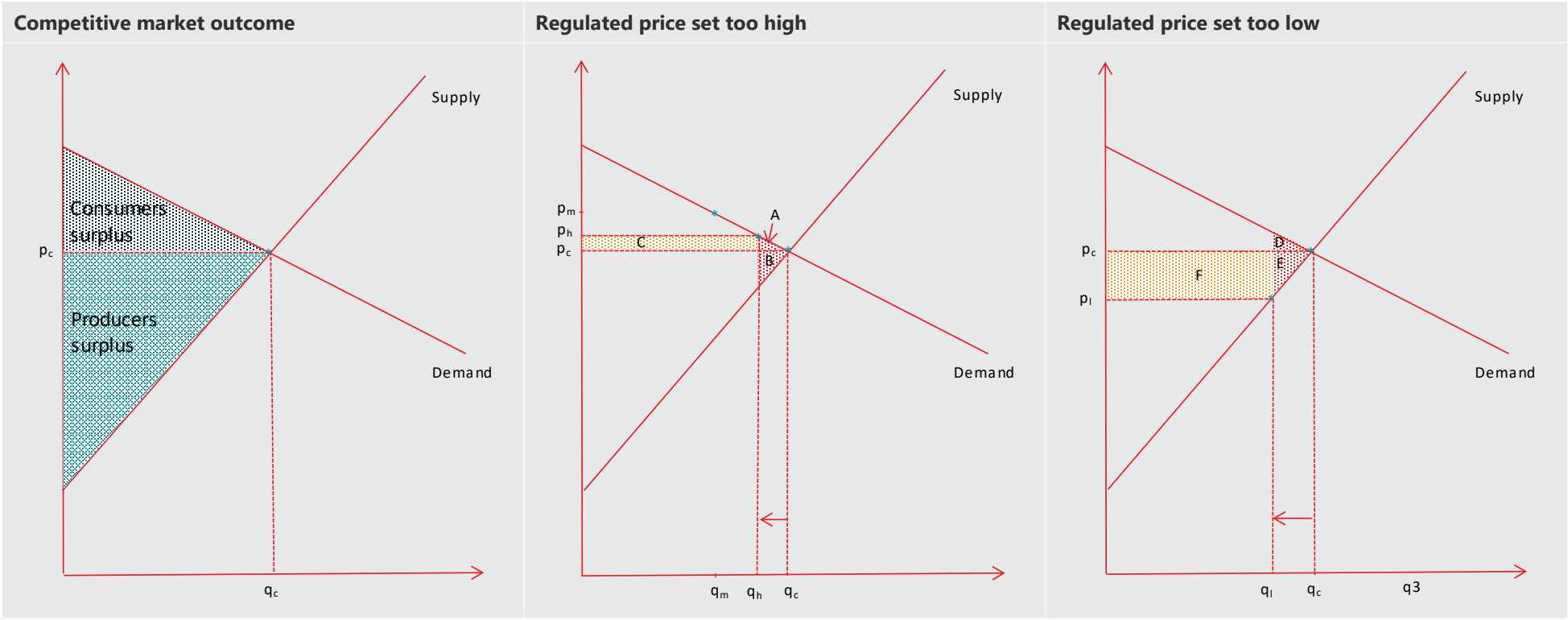
The consequences of setting the regulated price ($p_l$) below the unknown competitive market price ($p_l < p_c$), is that the quantity of services supplied is reduced to ($q_l$) resulting in welfare losses (equal to D + E) (right-hand panel). There is also a transfer of rent from suppliers to consumers (in the short-term).

The purpose of the illustrations is to demonstrate the concept of consumer and producer surpluses and how different pricing scenarios impact on the surpluses (welfare). The slope of the curves may differ significantly depending on context, for example, due to the time frame under analysis.

In the short-run, price increases may mean that participants are unable to purchase all of the supports in their plan (the demand curve would look like those drawn). If the price level was to move below the price level used to calculate funding for a participant's plan then either: the participant is able to purchase a quantity of supports greater than included in their plan (the demand curve continues downward in a sloped fashion as drawn); or, if budget rules restrict participants from purchasing a quantity of supports greater than the quantity defined by the reasonable and necessary criterion, then the demand curve kinks and becomes vertical.

Over the longer-term, if the process of plan reviews fully compensated participants for price increases, then the demand curve would be vertical (perfectly inelastic). In other words, whatever the price, the participant purchases a fixed quantity of supports (and has the funding to do so).

**Figure G.2 Welfare effects of regulated price interventions**




*Note: The monopolist seller maximises its revenue by selecting a price where its marginal revenue equals its marginal cost.*

## A monopolist purchaser (or monopsonist)

The NDIA as the regulated price setter has a financial incentive to set prices too low.

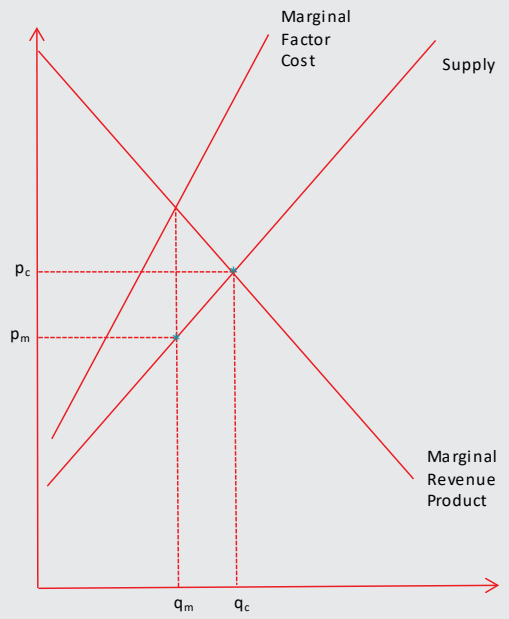
Monopsony arises when a purchaser is a price setter in factor input markets rather than a price taker.

The NDIA is a monopsonist for many inputs to the provision of supports to participants. It is able to exercise influence over the prices it pays in purchasing for the supply of supports. It selects a price-quantity combination ($p_m$, $q_m$) (illustrated in Figure G.3) where quantities are less than in a fully competitive input market. At the lower level of quantity demanded, the price for the supply of the input is also less. Shading the changes in consumer and producer surpluses as in the above illustrations would show a significant transfer of rents from the suppliers of the input to the NDIA as purchaser.

There are constraints on the NDIA as a monopsonist because it is unable to set prices in the markets for the supply of some inputs. An example is where a support involves the labour inputs of a therapist and the therapist has the choice to work in other industries, such as aged care, the hospital system, or supplying services to veterans. In this case the relevant 'market' for considering the price of a therapist is not just the NDIS, but the other industries as well. Changes in supply and demand conditions in one industry is transmitted to conditions in other industries.

The NDIA may be able to price therapy services too low for a period of time (for example, if there are transaction costs for the therapist in switching between industries), but its pricing behaviour is ultimately constrained.

**Figure G.3 The NDIA is a monopsonist purchaser**




The marginal revenue product (MRP) curve of the monopsonist purchaser represents how the purchaser's marginal revenues change with the purchase and use of an additional unit of the factor input (for example, another hour of therapy services). The marginal factor cost (MFC) curve of the purchaser represents how the purchaser's total costs change with the purchase and use of an additional unit of the factor input. The decision rules which maximises profits for a monopsonist is to set MRP = MFC which is at the intersection of the two curves.

# Appendix H: Further analysis of housing supports

This appendix expands on the analysis in Chapter 10 NDIS Housing Supports.

## NDIS housing supports decision-making processes

The NDIA's processes for approving specialist disability accommodation (SDA), supported independent living (SIL) and home modifications are described in more detail below. The NDIA has not yet released the guidelines on the process for independent living options (ILO).

### Accessing SDA

The process for accessing SDA supports is as follows:

- The potential SDA participant makes an application to the NDIA for SDA.
- The potential participant undertakes pre-planning, including assessments of support and accommodation needs, likely from an occupational therapist.
- The NDIA assesses whether the person has an 'extreme functional impairment' or 'very high support needs', has an SDA needs requirement and if SDA is reasonable and necessary.
- The NDIA may consider whether other less costly forms of housing could meet a participant's needs and whether SDA constitutes value for money.[236]
- The NDIA, in preparing the plan, determines the appropriate design category, building type and location and whether SDA will be provided as in-kind support. The NDIA CEO may determine more than one design category, building type and location (SDA Rules 2020, s. 15).
- Before choosing a home, the participant and planner must consider what support (likely SIL) will be provided within the home (NDIA 2016f, p. 19).
- Once approved the participant may seek out a vacancy in an SDA (SDA Rules 2020; NDIA 2020w).

### Accessing home modifications

The NDIA considers whether to support home modifications if the home is the principal residence of a person with disability and they intend to remain living there. Where the property is a rental, written agreement of the owner is required before modifications can take place (NDIA 2019n). Modifications must also comply with building codes and planning regulations.

The NDIA funds home modifications where modifications are reasonable and necessary, the current condition of the home has adverse impacts on living and care arrangements and are assessed and recommended by an occupational therapist. The NDIA assesses if the modifications represent value for money by assessing cost effectiveness relative to other options, such as moving to an accessible property and the expected tenure of the participant and the use of equipment (NDIA 2019n). The NDIA also generally funds incidental costs, such as property transaction costs and removal costs.

[236] The requirement to exhaust all other options before SDA is considered was removed with amendments to the SDA Rules 2020 (NDIA sub. DR28, p. 6). However, SDA Services (2021, p. 7) have cited recent cases, after the changes in rules, where evidence that other housing options were not explored was used to decide that a participant was not eligible. Section 14 of the rules appears to provide room to consider value for money of SDA when compared with other supports.

### Accessing SIL

A person's eligibility for and access to SIL are determined through the following steps:

- The potential SIL participant makes an access request, then seeks evidence to prove they are eligible and an occupational therapist carries out an assessment.
- The planner determines whether a person is eligible for SIL, based on evidence provided by the assessment.
- If eligible, the participant approaches a SIL provider that has a vacancy and is willing to give a quote.
- The NDIA assesses the quotes and either accepts or negotiates with the provider.
- Once the NDIA accepts the quote, it is included in the participant's plan and funding commences (JSCNDIS 2020d, pp. 17–31).

## SDA design standards and pricing

The SDA Rules and SDA (Quality and Safeguards Commission) Rules set out that a dwelling must:

- be a permanent dwelling (e.g., not a mobile home)
- be intended for long-term accommodation for at least one participant (e.g. not used for temporary, emergency or respite)
- not be funded as accommodation by the Australian or Queensland Governments under a scheme unrelated to disability
- not be excluded from SDA because it has previously received funding for home modifications
- meet the requirements of a new build, existing stock or legacy stock.

Section 31 of the SDA Rules attempts to discourage development of group homes by imposing density limits on the development of large residential centres—the greater of 10 eligible residents or 10 per cent of residents for three or more resident homes and 15 eligible participants or 15 per cent of residents for two or more person homes per parcel of land.

SDA housing design and pricing is described in more detail in Table H.1 below.

**Table H.1 Annual base price for SDA per participant for new builds**

| Design category | Description | Maximum base price |
|---|---|---|
| Basic | Housing without specialist design features but with location or features that cater for the needs of people with disability and assist with the delivery of support services. | Not funded for new builds |
| Improved liveability | Housing designed to a Liveable Housing Australia (LHA) 'silver' level to incorporate a reasonable level of physical access and enhance provision for people with sensory, intellectual or cognitive impairment. This includes design features such as luminance contrasts, improved wayfinding and line of sight. | $13,102 to $43,324 |
| Fully accessible | Housing designed to an LHA 'platinum' level to incorporate a high level of physical access for people with significant physical impairment. This includes wheelchair accessible doors, bathroom vanities accessible in seated or standing position, power supply to doors and windows, consideration of whether kitchen features and appliance are accessible in standing or seated position. | $20,813 to $71,569 |
| Robust | Housing designed to an LHA 'silver' level to incorporate a high level of physical access and be very resilient, while reducing the likelihood of reactive maintenance and reducing risk to the participant and the community. This includes materials that can withstand heavy use and minimise the risk of injury, such as high impact wall lining, fitting and fixtures, secure windows, doors and external areas, sound proofing and laminated glass and areas of retreat for staff and other residents to avoid harm. Apartment designs are not funded for robust. | $25,292 to $46,550 |
| High physical support | Housing designed to an LHA 'platinum' level to incorporate a high level of physical access for people with significant physical impairment and requiring very high levels of support. This includes all the features of fully accessible and structural provision for ceiling hoists, assistive technology ready, heating/cooling, household communications technology, emergency power solutions and doors with 950mm minimum clearance. | $30,085 to $96,698 |

*Note: Basic builds are not funded as new builds. Prices differ for existing and legacy stock. The lowest cost dwelling is generally a townhouse with three rooms and the highest an apartment with two bedrooms but one resident. A room for on-site overnight assistance is not included and have higher prices.*
*Source: NDIA 2020at, pp. 15, 21.*

## Where do NDIS participants live?

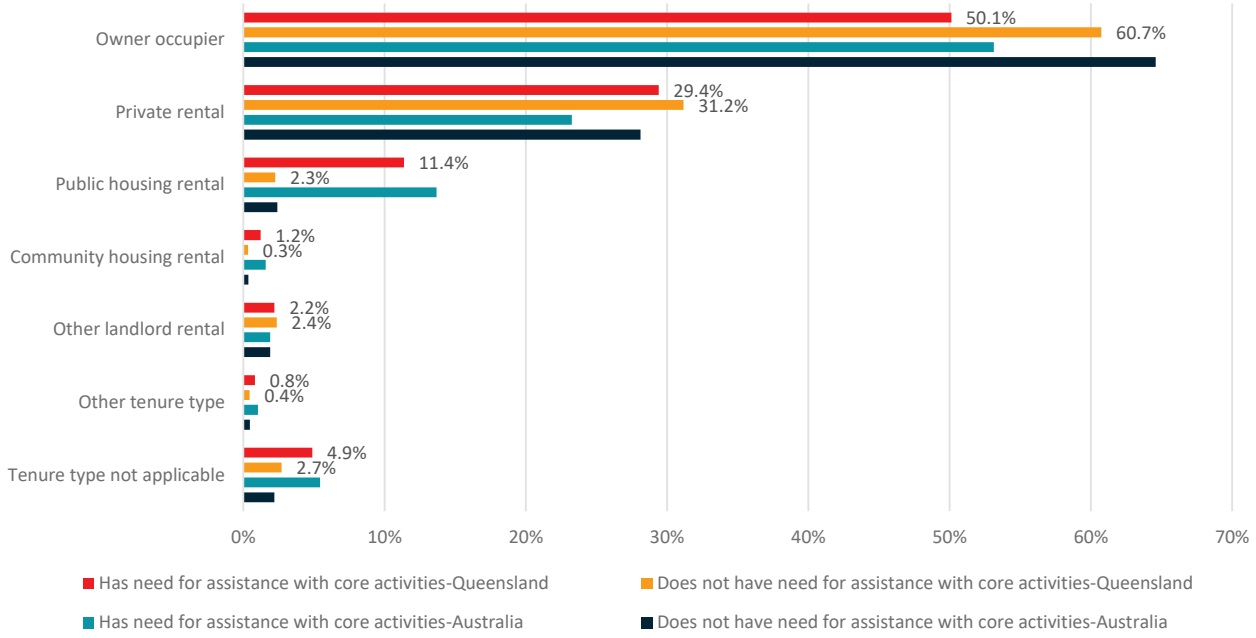
Census includes data on whether a person needs assistance with core activities, which is likely to largely overlap with NDIS participation.[237] The most recent data is from 2016, prior to the introduction of the NDIS in Queensland, but as the scheme is likely to have only modestly shifted tenure arrangements for most NDIS participants, the data is broadly indicative of the current situation.

About half of the people in Queensland needing assistance with core activities were living in owner occupied dwellings, approximately 11 percentage points lower than people who do not require assistance with core activities (Figure H.1). The proportions of people with and without disability living in private rental dwellings were similar, at

[237] Two-thirds of adult NDIS participants were estimated to require assistance with core activities (PC 2011, p. 754).

around 30 per cent. People who need assistance with core activities were five times more likely to live in public housing and almost four times more likely to live in community housing than people who do not need assistance.

**Figure H.1 Proportion of people, aged 20 to 64 years, by type of dwelling lived in, need for assistance and location, 2016**




*Note: 'Not stated' responses were removed from the total. Other tenure type includes life tenure. 'Not applicable' includes non-private dwellings (such as hotels and motels, staff quarters, boarding houses, boarding schools, hospitals, psychiatric institutions, hostels for the disabled, nursing homes, homeless shelters, corrective institutions and religious institutions), migratory, offshore and shipping. The experiences in Queensland are similar to those in Australia, with the largest difference being lower home ownership rates in Queensland for both people with and without disability.*
*Source: ABS 2016; QPC estimates.*

## Non-SDA disability accommodation

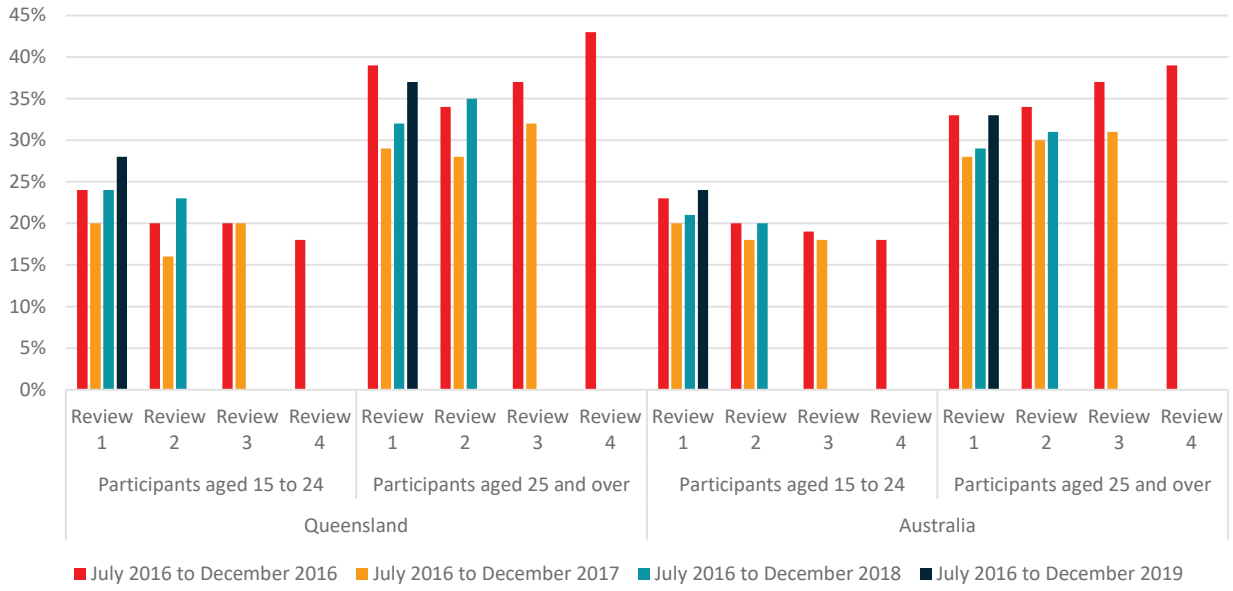
Anecdotally there is a large population in hostels or non-SDA group homes or 'SIL residences' with disability providers. It is unclear where exactly this large cohort of participants reside. Some participants live in public and other social housing or private dwellings and may or may not have appropriately modified facilities.

There were around 2,100 Queensland NDIS participants with SIL and without SDA in their plans or in aged care. The Census (ABS 2016) counted over 1,300 people who needed assistance with core activities in hotels and similar accommodation, staff quarters, boarding homes, homeless accommodation and other welfare housing (not health or custodial institutions). The Summer Foundation (2020c, p. 26) estimated that nationally around 7,700 people live in supervised hostels—Queensland's population share would suggest the state accounts for roughly 1,500. Based on Census data, the numbers of people with SIL but not SDA or aged care, and Summer Foundation analysis, it appears the population in non-SDA disability accommodation, 'SIL residences', is likely over 1,000 in Queensland.

## Assisting participants to choose homes

A minority of Queensland NDIS participants said the scheme had helped them choose the right home (Figure H.2). This likely reflects that NDIS supports a minority of participants with housing supports and the small share of goals related to housing. Over time the proportion who say the scheme has helped them choose a home appears to be increasing for participants aged 25 and over, as they spend longer in the scheme and complete more reviews.

**Figure H.2 Proportion of participants who say the NDIS helped them choose a home that's right for them, Queensland**




*Note: Year refer to when the participant entered the NDIS.*
*Source: NDIA 2020d pp. 256–261.*

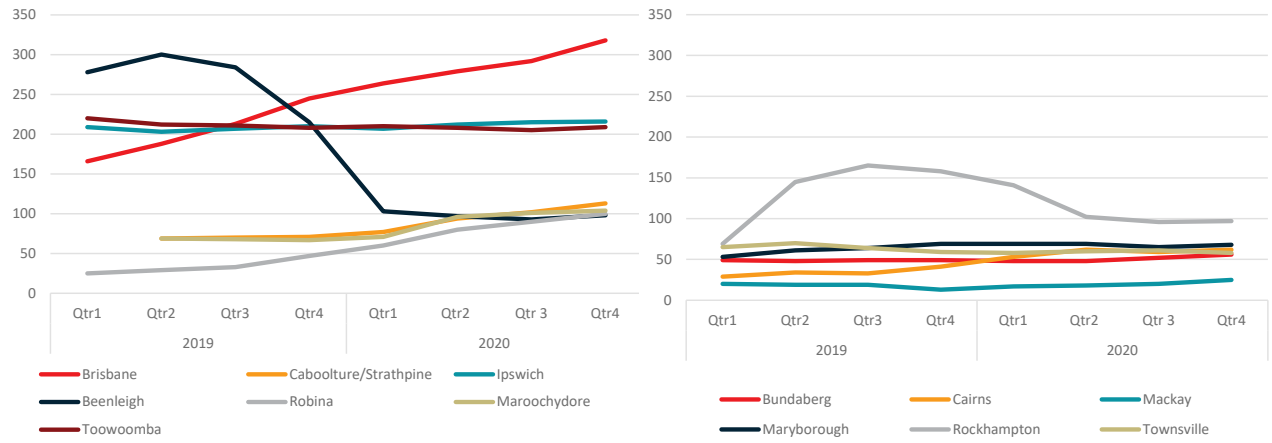
Based on NDIA market survey results, most participants aged 15 to 24 were happy with their home—78 per cent in Queensland and 80 per cent in Australia. Proportions were lower for participants aged 25 and older—69 per cent in Queensland and 70 per cent in Australia. The proportions that felt safe or very safe in Queensland were similar (82 per cent of those aged 15 to 24 and 68 per cent of those aged 25 and over) to the national average (83 and 70 per cent) (NDIA 2021c, pp. 105, 254). However, the absence of a survey baseline for those indicators mean it is challenging to evaluate the impact of the NDIS.

## SDA performance

### Demand for SDA has been slow to emerge in Queensland

The number of participants in SDA dwellings did not materially increase across Queensland between June 2019 and September 2020 (there were four more participants). Between September and December 2020, participation began to grow—by 73 participants or five per cent. In some service districts the number of participants in SDA has fallen—particularly Beenleigh where there are almost two-thirds fewer participants (Figure H.3). In Brisbane, Cairns and Caboolture the number of participants approximately doubled.

**Figure H.3 Participants in SDA dwellings, by service district**




*Note: Only people in SDA are included, not those without SDA but seeking it.*
*Source: NDIA data downloads: Projected participant numbers data, Specialist disability accommodation participants and Participant numbers; QPC estimates.*

The Australian Productivity Commission in its 2011 report (pp. 754–76) estimated that SDA would be utilised by around 28,000 people by 2018–19 or 6.8 per cent of Australian NDIS participants (JSCNDIS 2016, pp. 6–7). There were 15,700 places in group homes at the time, implying an additional 12,300 housing places would need to be created (NDIA 2018n, p. 5).[238] The NDIA continues to consider this to be the best estimate for the number of participants, though it has acknowledged this may change.

There are 1,765 people with SDA funding in Queensland—of which 1,524 are living in an SDA dwelling. Queensland accounted for only 10.6 per cent of national SDA participants in December 2020—compared with 19.4 per cent of all NDIS participants.

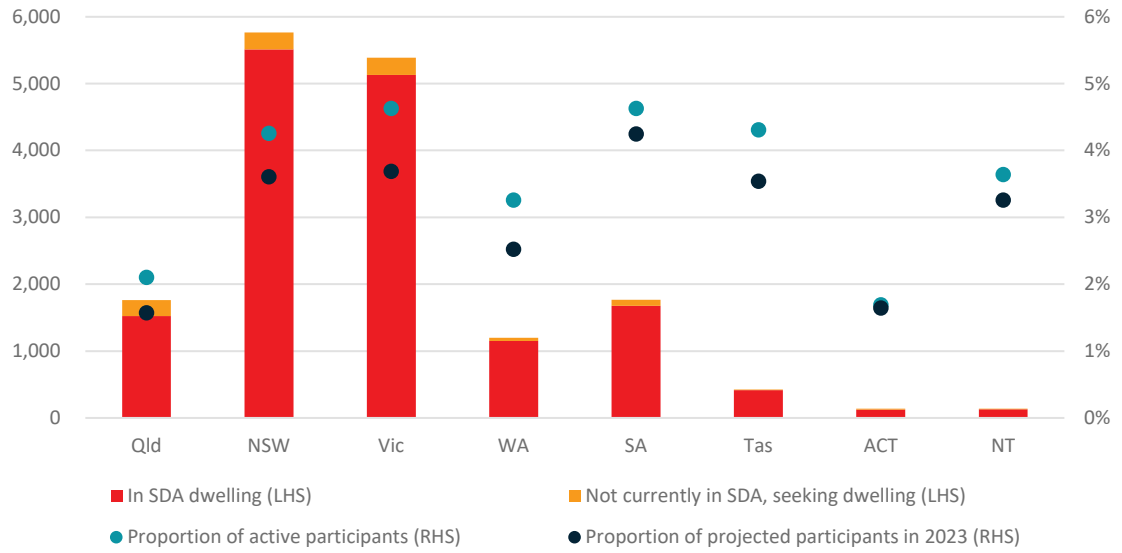
Queensland has the lowest number of SDA participants as a proportion of total NDIS participants—2.1 per cent—apart from the Australian Capital Territory. This is compares to an Australian proportion of 3.8 per cent.

[238] The PC's estimates (2011a, p. 760) were based on waiting list data available from two jurisdictions.

Current SDA participation in Queensland is especially low relative to the number of participants projected for 2023. In Queensland, the current number of SDA participants represents 1.6 per cent of NDIS participants projected for 2023—compared with 3.3 per cent nationally (Figure H.4).

While SDA participation in New South Wales, Victoria, South Australia and Tasmania represents over half of projected SDA participation, Queensland SDA participation represents less than a quarter. This may partially reflect the later commencement of the NDIS in Queensland.

**Figure H.4 Participants with SDA in plans and as a proportion of NDIS participants, by state, 31 December 2020**

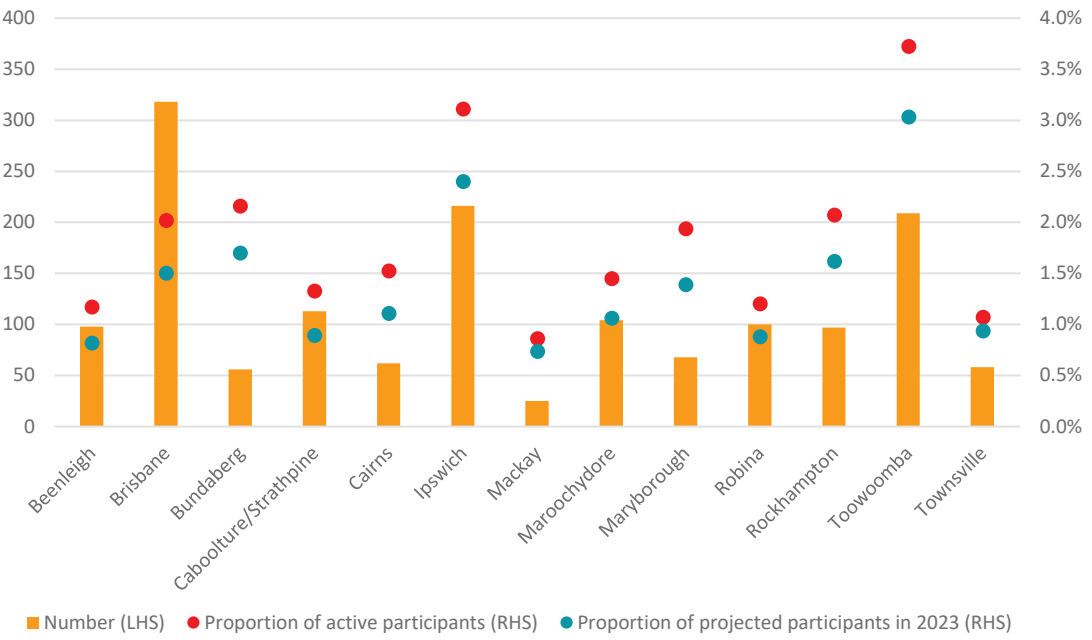



*Source: NDIA data downloads: Projected participant numbers data, Specialist disability accommodation participants and Participant numbers; QPC estimates.*

Access to SDA dwellings varies across Queensland as illustrated in Figure H.5. As a proportion of projected participants, access to SDA is greatest in Toowoomba and Ipswich service districts (3.2 and 2.6 per cent respectively). Less than 1 per cent of projected SDA participants have access to SDA in Beenleigh, Caboolture/Strathpine, Maroochydore, Mackay and Robina.

Given SDA as a proportion of active participants is at most 3.7 per cent in Queensland service districts (in Toowoomba) compared with a projected 6.8 per cent as the scheme matures, the broader NDIS transition in Queensland is only a partial explanation for the slow growth in the SDA market.

**Figure H.5 Participants in SDA per NDIS participant and projected participant, by service district, 31 December 2020**

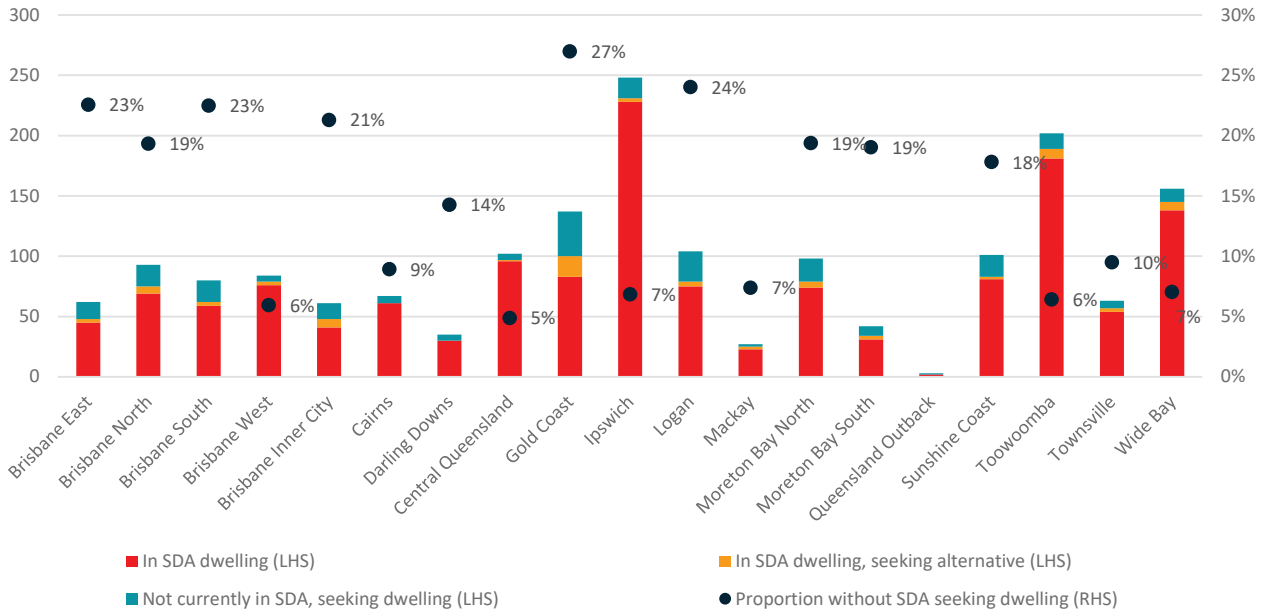



*Source: NDIA data downloads: Projected participant numbers data, Specialist disability accommodation participants, and Participant numbers; QPC estimates.*

The largest number of participants with SDA in their plans, but without SDA are in Gold Coast (37), Logan (25), Moreton Bay North (19) and Brisbane North, Brisbane South and Sunshine Coast (all 18). The proportion of SDA participants not currently in SDA and seeking it varies across Queensland, as shown in Figure H.6.

Gold Coast (27 per cent), Logan (24 per cent) and Brisbane South and East (both 23 per cent) have the largest proportions of SDA participants without and seeking SDA. Central Queensland (5 per cent), Toowoomba (6 per cent) and Brisbane West (6 per cent) have the lowest proportions.

**Figure H.6 Participants with SDA plans, by region, 31 December 2020**

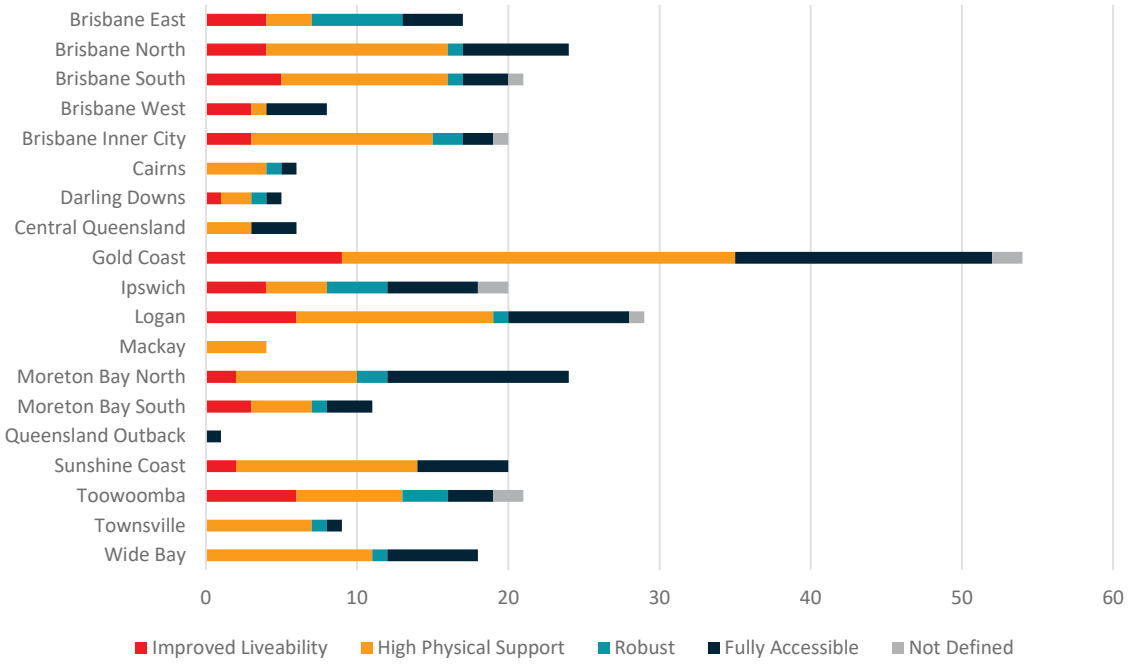



*Note: Regions are SA4s. Proportion in Outback Queensland not shown as it doesn't match other data provided by the NDIA.*
*Source: NDIA data downloads: Projected participant numbers data, Specialist disability accommodation participants and Participant numbers; QPC estimates.*

New NDIS data released now specifies the type of design category a person is seeking. Figure H.7 shows that unmet needs for participants with SDA in plans varies across Queensland. Dwellings designed to provide high physical support are the most commonly sought type of SDA dwelling. In some regions, the less costly fully accessible SDA has greater unmet demand (Brisbane West, Ipswich and Moreton Bay North).

The needs of people without SDA in NDIS plans is unknown. The unmet demand shown below may not be representative of needs of people yet to access the NDIS or have SDA approved in their plans.

**Figure H.7 Number of participants seeking an SDA, by region and design category, 31 December 2020**



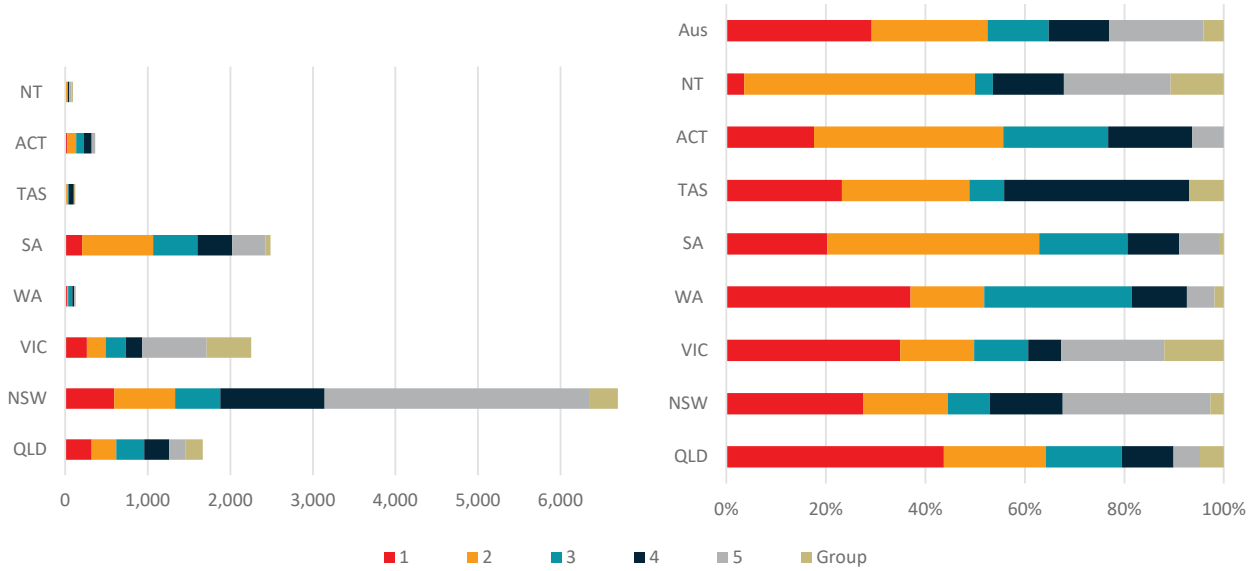

*Note: This includes both participants in SDA seeking another SDA and participants without SDA seeking SDA. This data should not be directly compared with Figure H.9. This figure includes both people within and without an SDA dwelling.*
*Source: NDIA data downloads: Projected participant numbers data, Specialist disability accommodation participants and Participant numbers; QPC estimates.*

## The current stock of SDA

The exact number of places available in SDA in Queensland is not publicly available. The NDIA publishes the number of dwellings by the room categories, with group homes categorised as six or more rooms. In December 2020, there were 732 SDA dwellings in Queensland with at least 1,665 bedrooms, including 35 group homes with at least 210 bedrooms.

In Queensland, one-bedroom SDA is more common than in any other state or territory—44 per cent of dwellings have one bedroom, compared with 29 per cent nationally. SDA-enrolled group homes are also more prevalent in Queensland, comprising 4.8 per cent of SDA dwellings, compared with 4.1 per cent nationally. This may reflect less development of accommodation prior to the introduction of the NDIS in Queensland. There are also proportionally fewer five-bedroom and two-bedroom dwellings in Queensland (Figure H.8).

**Figure H.8 Minimum number of SDA rooms and proportion of SDA rooms, by room number and by state, 31 December 2020**



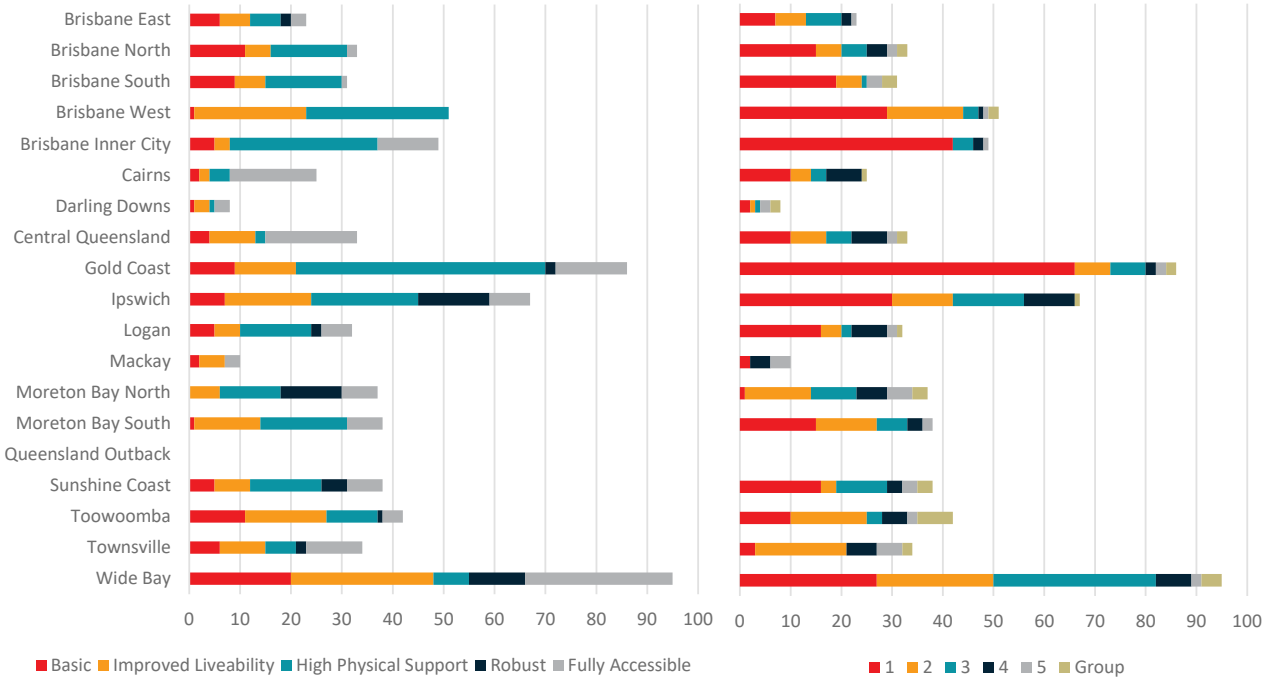

*Note: Minimum number of rooms is calculated by multiplying the number of rooms by the number of dwellings. The number of rooms in group homes is uncertain and is likely higher than presented here. It is assumed each group home has 6 rooms.*
*Source: NDIA data downloads: Specialist disability accommodation participants; QPC estimates.*

Figure H.9 shows the type of SDA dwellings available and number of residents in each dwelling varies considerably across Queensland's regions. In some of these regions, the market for specific types of dwelling is thin and once overlayed with the number of residents per dwelling, choice can be very constrained. Up to a third of dwellings in regions are basic, providing no special accessibility or liveability features and will need to be replaced over time (Summer Foundation 2020a, p. 17).

Most Queensland regions—10 of 19—had no robust dwellings. Queensland Outback, a thinly populated remote region, had no SDA dwellings of any type. Across most Brisbane, Logan and Gold Coast markets, 1-bedroom SDAs comprise at least half of the dwellings.

Pricing of land in the SDA price guide varies little across Queensland's regions (NDIA 2020at, p. 27). In some regions pricing is not likely to reflect land costs and landintensive forms of SDA, particularly robust dwellings, are less likely to be developed. The data shows very few robust dwellings in Brisbane and the Gold Coast. Instead most (73 per cent) of the state's robust dwellings are concentrated in Ipswich, Moreton Bay North and Wide Bay.

**Figure H.9 Number of SDA dwellings, by design category and maximum number of residents, by region, 31 December 2020**

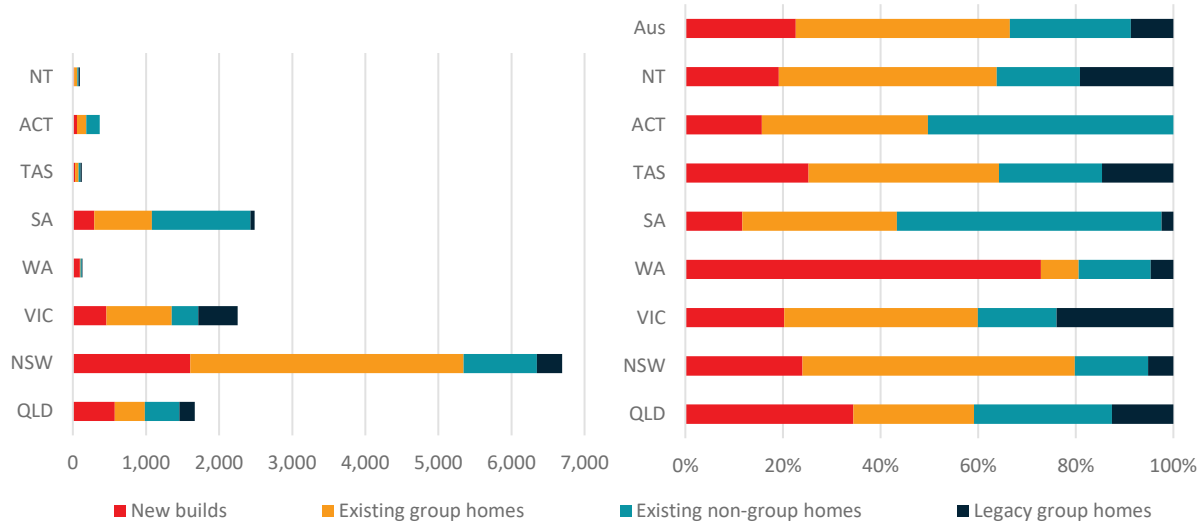



*Note: Minimum number of rooms is calculated by multiplying the number of rooms by the number of dwellings. The number of rooms in group homes is uncertain and is likely higher than presented here. It is assumed each group home has 6 rooms.*
*Source: NDIA data downloads: Specialist disability accommodation participants; QPC estimates.*

### Legacy stock still contributes the majority of SDA places

Figure H.10 shows that SDA existing prior to April 2016 contributes most SDA rooms in all states and territories, other than Western Australia. Queensland has more SDA new builds than all other states except for New South Wales and new builds contribute a greater proportion of the stock than all states except Western Australia. Legacy group homes appear to contribute a greater proportion of SDA rooms than all other states except for Victoria. The data suggests the low stock of pre-existing disability housing is a key factor in the lower availability of SDA in Queensland.

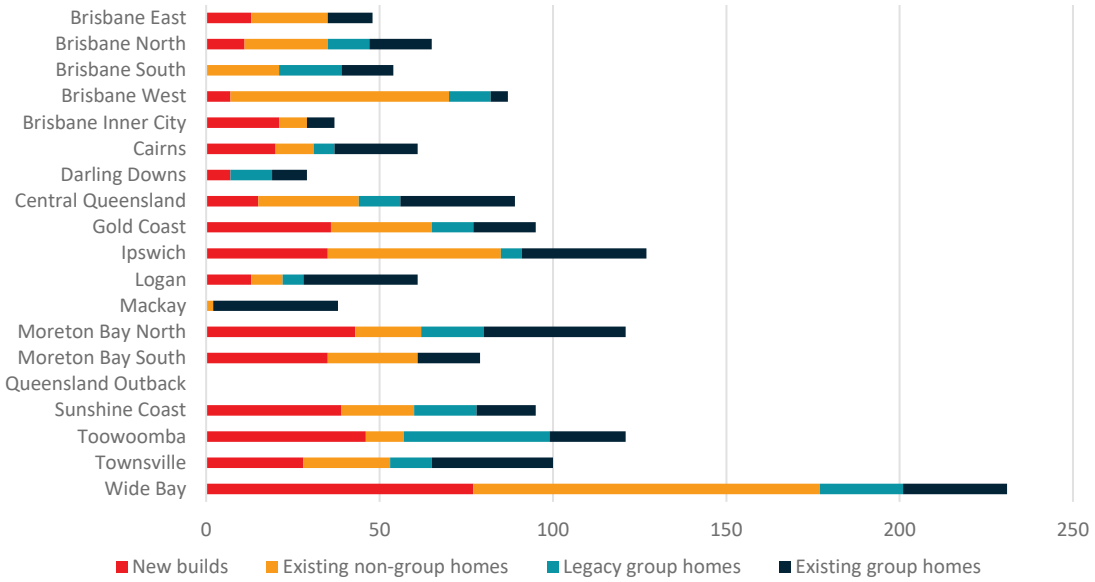
**Figure H.10 Minimum number and proportion of rooms, by building type, by state, 31 December 2020**




*Note: Legacy group homes house six or more people. Existing group homes house four or five residents. Existing dwellings are those built before 1 April 2016 that were used as disability related supported accommodation under a previous State, Territory or Commonwealth scheme. Existing dwellings must substantially comply with the requirements of a new build, and must meet the maximum resident requirement (5 residents or less). Legacy dwellings are existing dwellings that do not meet the maximum resident requirement of five residents or less.*
*Source: NDIA data downloads: Specialist disability accommodation participants; QPC estimates.*

Figure H.11 shows the minimum number of rooms in each region by type of building. Some regions have a diversity of building types and have seen the development of new SDA builds (such as Brisbane Inner City, Moreton Bay South and North, Sunshine Coast, Gold Coast and Cairns). SDA places in Mackay, Darling Downs, Logan, Brisbane South, Toowoomba and Central Queensland are predominantly in existing group homes.

**Figure H.11 Minimum number of rooms, by building type, by region (SA4), 31 December 2020**



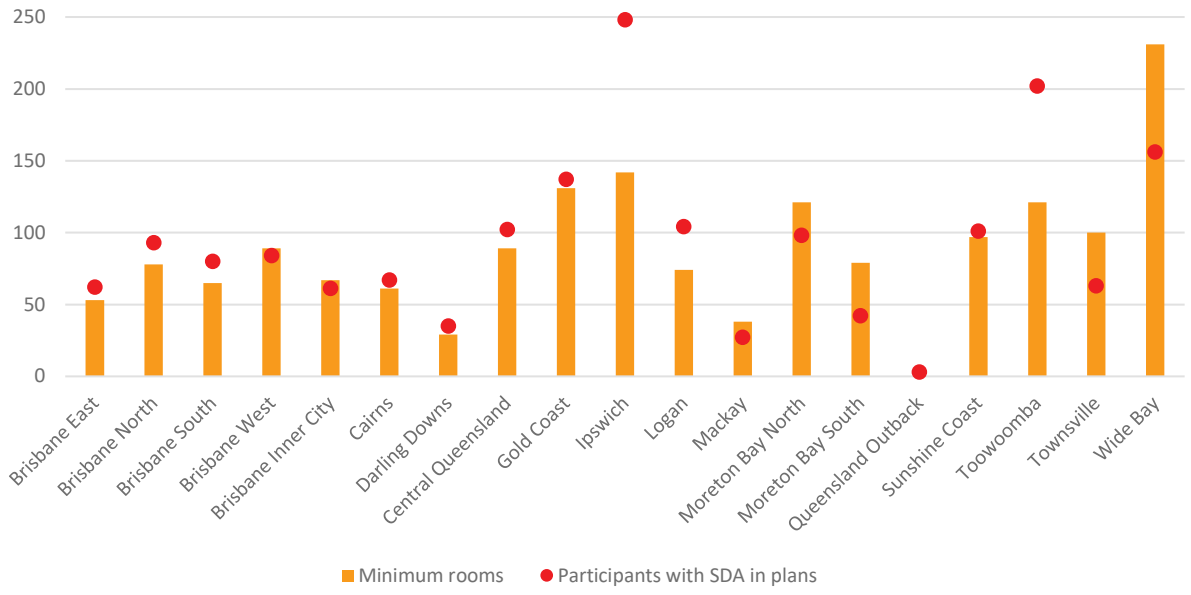

*Note: Legacy group homes house six or more people. Existing group homes house four or five residents. Existing dwellings are those built before 1 April 2016 that were used as disability-related supported accommodation under a previous State, Territory or Commonwealth scheme. Existing dwellings must substantially comply with the requirements of a new build, and must meet the maximum resident requirement (five residents or less). Legacy dwellings are existing dwellings that do not meet the maximum resident requirement of five residents or less.*
*Source: NDIA data downloads: Specialist disability accommodation participants; QPC estimates.*

## Regional imbalances in supply and demand

Figure H.12 shows there are possible imbalances between the supply of SDA rooms and the demand from participants with SDA in their plans across Queensland regions. While in some regions (such as Brisbane West and Inner City and Sunshine Coast) supply and demand appear to be at similar levels, in other regions demand appears to outstrip supply (such as Ipswich, Toowoomba, Logan, Brisbane North and South and Central Queensland) or supply outstrip demand (such as Wide Bay, Townsville and Moreton Bay North and South).

Caution should be exercised in interpreting regional supply and demand imbalances. The Commission understands that participant and dwelling data are compiled through different processes and are therefore difficult to compare. Some dwellings are also not enrolled and there are reporting delays. The NDIA is working to improve data comparability and future system changes will allow relationships between supply and demand to be tracked more accurately over time. At this time, supply and demand imbalances should be considered indicative.

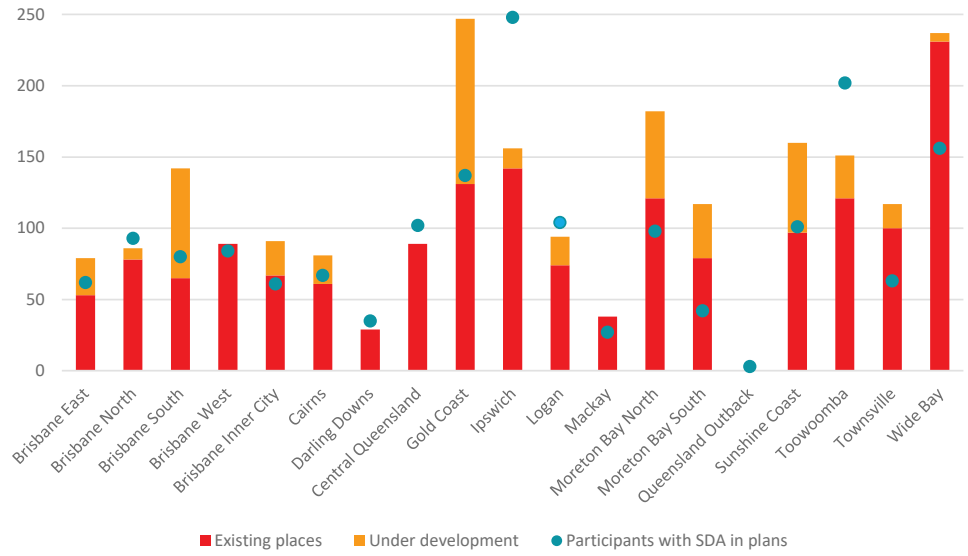
**Figure H.12 Minimum number of SDA rooms and number of SDA participants, by region, 31 December 2020**




*Note: The number of bedrooms in group homes is uncertain and is likely higher than presented here. It is assumed each group home has a minimum of six rooms. The number of SDA dwellings and projected participants are compiled under two different geographic standards and therefore are not directly comparable at a regional level. This makes further regional comparisons of projected demand and supply difficult.*
*Source: NDIA data downloads: Specialist disability accommodation participants, and Participant numbers; QPC estimates.*

Figure H.13 shows that adding SDA places under development to those already built may alleviate the supply shortages for existing participants in some regions but not others. However, increasing access to SDA plans would likely make this a temporary phenomenon in most markets.

**Figure H.13 SDA existing and under development and number of participants, by state, 31 December 2020**




*Note: Minimum number of rooms is calculated by multiplying the number of rooms by the number of dwellings. The number of rooms in group homes is uncertain and is likely higher than presented here. It is assumed each group home has six rooms.*
*Source: Summer Foundation 2021b, p. 61; NDIA data downloads: Specialist disability accommodation participants and Participant numbers; QPC estimates.*

Overall, it appears both supply of and demand for SDA are low relative to projected participation, and approval of SDA plans is low in comparison with other states. The proportion of participants with SDA in their plans but seeking accommodation is more than double that nationally. There are some gaps, for example in Outback Queensland and robust dwellings. Regionally, there are instances of both under- and over-supply. However, supply is being developed, though not in all areas or for all types of need.

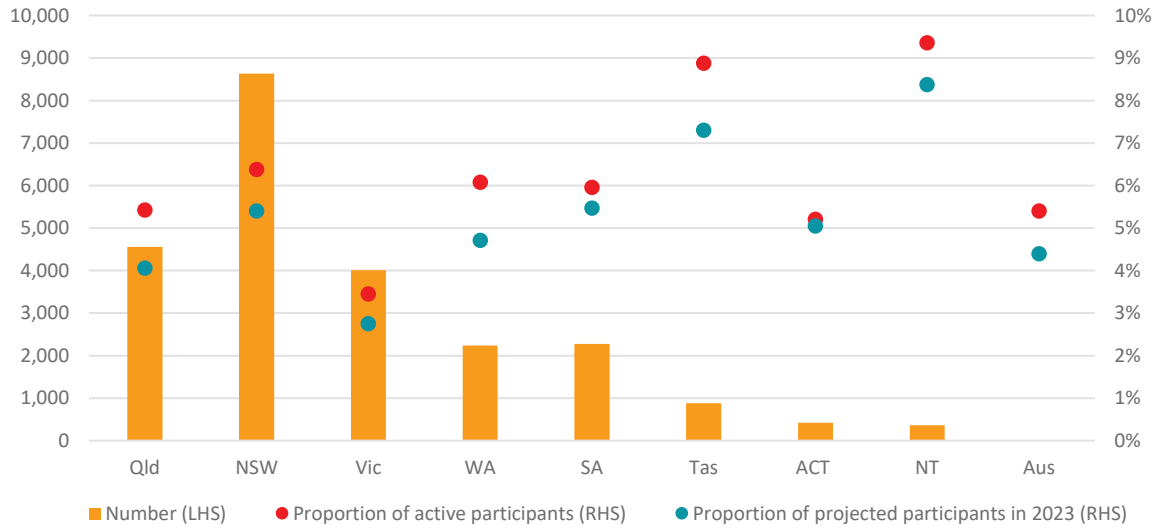
The later transition to the NDIS in Queensland and lack of funding for disability services before the NDIS are likely key factors in the lagged development of SDA in Queensland in comparison to New South Wales and Victoria.

## Access to SIL

The SIL market in Queensland is not entirely new but it has transitioned off a lower base than some other jurisdictions. The SIL market is more mature than the SDA market. The Queensland Government has been funding and commissioning non-government providers to provide support in accommodation for over 20 years.

The proportion of active participants with SIL in Queensland is similar to Australia (both 5.4 per cent). However, as a proportion of projected participants, SIL participation in Queensland (4.1 per cent) was lower than in all other states or territories (between 4.9 per cent and 8.7 per cent) apart from Victoria (Figure H.14).

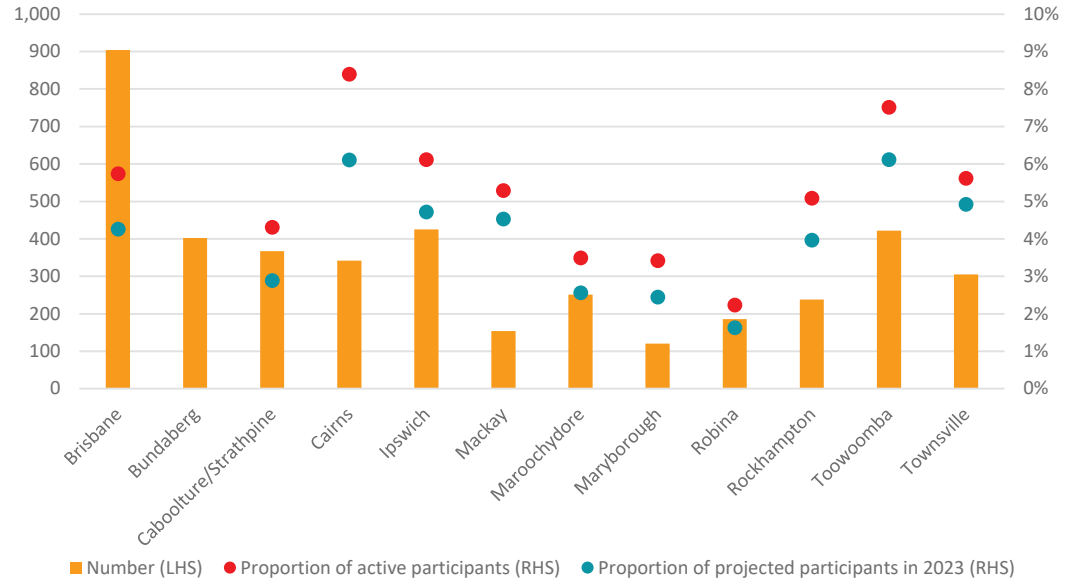
**Figure H.14 SIL participants per NDIS participant, by state, 31 December 2020**




*Source: NDIA data downloads: Supported Independent Living participants, Projected participant numbers data and Participant numbers; QPC estimates.*

Figure H.15 illustrates access to SIL varies across Queensland. Service districts in South East Queensland on average have lower rates of SIL participation relative to active or projected NDIS participants, than those in regional Queensland. Robina, Maroochydore, Maryborough and Caboolture and Beenleigh have a lower than average uptake of SIL (between 1.7 and 3.8 per cent of projected participation).

**Figure H.15 SIL participants, by service district, 31 December 2020**




*Source: NDIA data downloads: Supported Independent Living participants, Projected participant numbers data and Participant numbers; QPC estimates.*

## Broader housing market issues for NDIS participants and tools to improve outcomes

The NDIS is not designed to meet the broader housing needs of NDIS participants. Most NDIS participants will use mainstream housing and do not require intensive 'specialist' accommodation—93 per cent of NDIS participants are not expected to access SDA. However, suitable accommodation is, in most cases, a prerequisite to the success of the NDIS (for example, initiatives to improve community, social and economic participation are unlikely to be effective where minimum housing needs are not being met).

The terms of reference directed the Commission to investigate 'any structural, regulatory or other impediments that might inhibit the efficient operation of the NDIS market', including impediments under State and Federal jurisdiction and outside of government control. Given the importance of housing in achieving good social and economic outcomes, the inappropriate housing of NDIS participants could be said to 'inhibit the efficient operation of the NDIS market'.

For many people in the NDIS, the availability of appropriate housing, including accessible housing, remains challenging. Stakeholders identified a range of issues (Box H.1), which are far broader than the NDIS and the scope of this inquiry. Notwithstanding this, to the extent that the broader housing market does not provide for NDIS participants, beyond the direct impacts there will be inequitable outcomes and perverse incentives for participants to attempt to access more costly intensive support from SDA. A person on SDA pays 25 per cent of their disability support pension while a person in the private rental market will almost certainly pay much more. This raises equity and efficiency issues for the scheme.

Beyond these broader issues, the Queensland Government (sub. DR26, p. 31) in its response to the draft report sought advice as to whether any specific actions 'should be progressed to increase the supply of disability housing for NDIS participants outside of SDA'.

This section considers impediments to the supply of accessible housing for NDIS participants outside of SDA. The Commission has not made any recommendations, as this would require comprehensive policy review and development beyond the scope of this inquiry. Instead, it discusses some options identified by stakeholders and others.

Importantly, the options below are confined to those directly related to accessible housing and could be considered by government after further close review. A wider consideration of the housing market could, for example, identify more effective and efficient options[239] to improve housing supply and affordability that would have a far greater impact, and be a more cost-effective way, to improve accessible housing than the measures discussed below.

[239] Over the past 25 years, the proportion of income spent on housing costs has increased, particularly for the lowest 40 per cent of the household income distribution (ABS 2019b). Many studies have pointed to the likely causes of increasing housing costs and/or housing prices relative to incomes. Factors that have been suggested as contributing to worsened housing affordability include: restrictions on the type and location of housing; and delays and uncertainty through planning and zoning; taxes; inefficient infrastructure charges; market power and the withholding of land; higher immigration; lower interest rates; increasing financial leverage; and lower provision of social housing (Geck & Mackay 2018; Kulish et al. 2011; Kendall & Tulip 2018; Henry et al. 2010, p. 255; PC 2004; The Treasury 2014, p. 278; Daley et al. 2018; Ryan-Collins & Murray 2020; NZPC 2015b; Leishman through CEDA 2017, pp. 64-65; Saunders & Tulip 2019). Addressing the underlying causes of housing costs is an issue not specific to housing for NDIS participants. However, it would help to address the housing needs of participants and enable government funding of social housing to benefit more people, while doing so in a relatively efficient manner.

## Box H.1 Stakeholder views

A lack of affordable and accessible housing has been cited as an ongoing concern for NDIS participants.

> *For other NDIS participants, a lack of suitable and affordable housing can be an issue. These are participants who are not eligible for specialist disability accommodation (SDA), but nonetheless require accessible accommodation and/or modifications to a home so they can comfortably reside there. As many NDIS participants receive a disability support pension as their sole source of income, housing options are limited and will generally require them to seek accommodation in the public or community housing sectors, the responsibility of the Queensland state government. (The Public Advocate sub. DR3, p. 2)*

The Queensland Alliance for Mental Health (sub. 34, p. 5) raised concerns about a lack of access to housing support for NDIS participants, saying:

> *A well-developed whole-of-government coordinated response is required to adequately meet the challenges presented by inadequate housing across Queensland. Addressing this problem will be a significant step toward ensuring people can access services and achieve greater outcomes.*

QAMH (sub. 34, p. 5) recommended drawing on the experiences of other jurisdictions to improve tenancy supports:

> *A well-developed whole-of-government coordinated response is required to adequately meet the challenges presented by inadequate housing across Queensland … For example, New South Wales currently have a program in place to provide housing support for people with psychosocial disability. This program is the Housing and Accommodation Support Initiative (HASI) and is funded by the Ministry of Health, which has invested approximately $48 million in community managed organisations to provide HASI supports across NSW. The program has resulted in improved capacity of participants in maintaining tenancies along with improved mental health outcomes and greater social engagement.*

Spinal Life Australia (sub. 8, p. 7) noted there is:

> *[A] severe lack of accessible dwellings available on the private rental market. For someone who uses a wheelchair for all their mobility, moving into an inaccessible rental before it has been modified and improved is at best, unsafe, and at worst, impossible.*

### Providing more accessible housing

Submissions raised the potential for mandated minimum accessible standards to increase the stock of accessible housing and improve housing outcomes for people with disability (The Hopkins Centre sub. DR10, p. 3; Summer Foundation sub. DR25, p. 16).[240] The Liveable Housing Initiative established voluntary universal access design standards, however it is estimated that only five per cent of dwellings will meet this standard (The Senate 2017, p. 34). Voluntary initiatives to increase the supply of accessible and adaptable housing have been largely ineffective

[240] There is also an increasing population of older people who acquire disabilities as they age that may benefit from minimum accessible standards. CIE (2020a, p. 2) estimated that the demand for accessible housing would increase from 2.9 million Australians to 4.7 million over the next 40 years.

(Franz et al. 2014). Mandatory building standards have been proposed to increase the supply of accessible and adaptable housing.

The Hopkins Centre (sub. DR10, p. 3) suggested that, at a cost of $529 per dwelling, there could be as many as 30,000 more accessible dwellings built per year in Queensland. The costs of renovating an established dwelling to make it accessible exceed the additional costs to make new dwelling accessible (Campanella & Edmonds 2021). The Summer Foundation (sub. DR25, p. 17) also recommended the Queensland Government support the adoption of minimum accessible housing standards.

The National Construction Code (NCC) aims to achieve nationally consistent minimum requirements for the design and construction of housing. A regulatory proposal is being explored to mandate new housing is constructed to minimum accessibility standards to assist in meeting the needs of people with disability is being explored. A consultation regulatory impact statement (RIS) has been produced on which the Australian Building Codes Board (2020) will further consult and produce a final RIS and then in 2021 a draft NCC.

CIE (2020a, p. 74–75) estimated that complying with the 'silver' standard would impose an additional construction cost and opportunity cost of space of $1,185 per separate house and $4,439 per apartment. For the highest standard 'gold+', additional costs of $11,977 and $30,472, respectively, were estimated. The CIE estimated substantial benefits from minimum standards, including societal benefits[241] and reduced falls, time in hospital, loneliness, carer costs, moving costs, and premature entry to aged care (CIE 2020a, p. 6). However, the costs of accessible housing standards within the NCC were greater than the benefits for all options considered. The option of providing subsidies in a more targeted way was found to be the least costly option and broadly broke even.

If advocates of universal standards are correct that the benefits outweigh the costs, this will still raise equity issues. People who own the existing stock of residential property will be unaffected by the additional costs. People who purchase new property will bear the costs. People who own the existing stock of housing are on average wealthier than those who do not.

Alternatives to requiring all new housing to be built to accessible standards could include incentives equal to the difference in costs to any household that includes a person with disability and who were purchasing new homes. Incentives to investors to build-to-rent on a similar basis could assist households who are not well positioned to own their own homes.

An alternative to upfront subsidies would be reductions in land tax or municipal rates for properties built to accessible design standards. If value of the ongoing land tax reduction equalled the upfront capital cost, the value of the property would be unchanged, and the two would cancel each other out. The cost would then fall on the government and the broader tax-paying community, rather than a small minority of new property owners.

### Improving social housing

Many NDIS participants are on lower incomes and people with severe or profound disability are much more likely to live in social housing. In 2018–19, over 146,000 dwellings or 37 per cent of all social housing dwellings were occupied by a household with a person with disability in Australia (AIHW 2020b).

The Queensland Government (2017b) announced a housing strategy to invest $1.8 billion over 10 years to build 4,522 social homes and 1,034 affordable homes. People with disability are a key demographic targeted in this strategy. The Strategy committed:

> *to constructing 50 per cent of public housing dwellings to the Liveable Housing Design Guidelines Gold Level or Platinum Level standards to increase housing options for people with disability. In the first three years of the strategy, 67% of new public housing dwellings completed were built to gold and platinum liveable housing design standards.*

[241] Societal benefits captured equity benefits from people with disability having more equal access to housing. These benefits were not necessarily fully captured (CIE 2020a, p. 110).

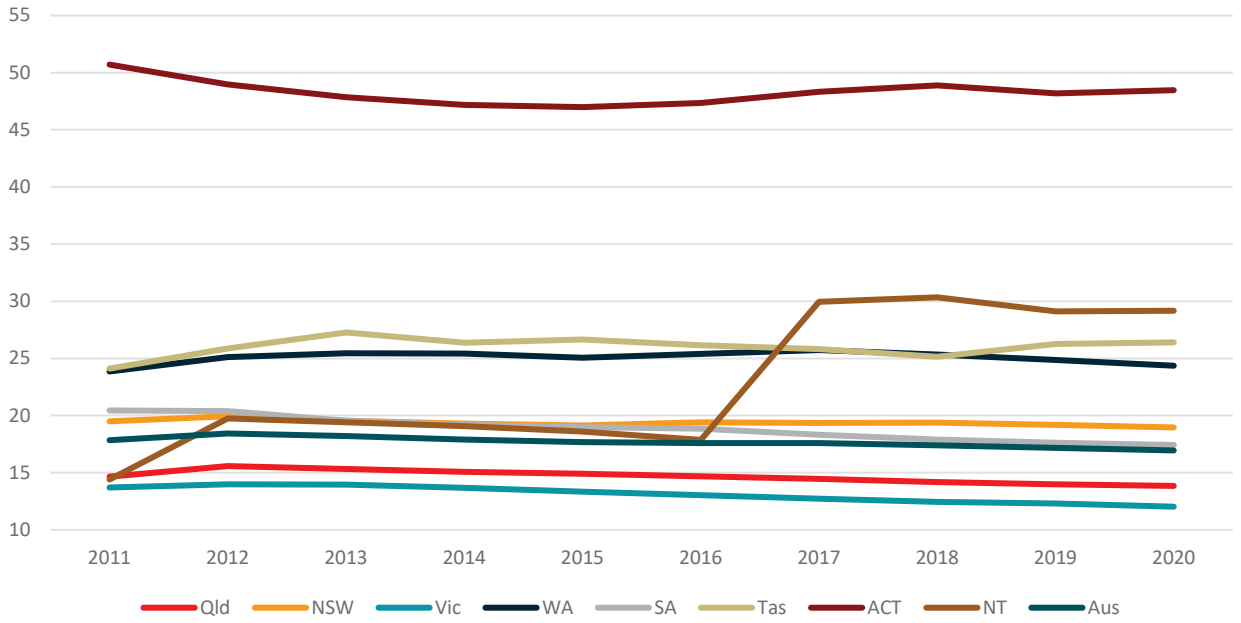
The Queensland Government has introduced a new build-to-rent scheme that subsidises the private sector to deliver affordable rental housing (Dick 2021). The Queensland Government is offering rent subsidies and in the most recent project well located surplus public land to the successful bidders.

The total stock of social housing in Queensland has increased by 1,756 dwellings over the past four years to almost 74,000 in 2020. The stock of fully wheelchair accessible social housing increased more rapidly—by 27 per cent from 3,285 to 4,173 and constituted more than half of new dwellings added (HPW 2020; unpublished data).

A further 3,166 dwellings in the Queensland social housing stock featured a form of disability modification in 2019 (Queensland Government 2020a). The Queensland Government (2020b) allows tenants with disabilities to make modifications to public housing. The proportion of households with a member with disability who were satisfied with public housing was 84 per cent in 2018 and was estimated lower but not statistically different from all households (SCRGSP 2021, table 18A.40).

Figure H.16 shows Queensland has the second fewest social housing dwellings per 1,000 people of any jurisdiction, only behind Victoria. The number of dwellings per 1,000 people is also falling, as the number of dwellings is growing slower than the population—falling from 14.6 to 13.8. Public housing has declined as a share of the housing stock in Queensland and Australia over at least the last two decades (ABS 2019b).

**Figure H.16 Number of social housing dwellings per 1,000 people**




*Source: SCRGSP 2021, table 18A.3; ABS 2020e.*

There are long wait lists for social housing and long-established problems with the lack of social housing. The Australian Productivity Commission (PC 2017a, p. 13) in its inquiry 'Introducing Competition and Informed User Choice into Human Services' concluded:

> *Australia's social housing system is broken. Eligible tenants have little choice over the home they live in and can face a lengthy wait to access housing, and the type and amount of financial assistance available to households is inequitable. There is little transparency around the outcomes governments are seeking to achieve from the social housing system.*

The most recent data on social housing waitlists for Queensland for 2020 has 25,900 households on the waitlist representing a bed entitlement of 44,200. The waiting list has grown from 15,700 households in 2017. In 2019, about 43 per cent of households on the waitlist had a member with disability and 15 per cent needed a disability modification (Queensland Government 2021c, 2021b, 2021d).

A range of policy options could influence social housing, including:

- demand-side subsidies
- supply-side subsidies
- below market rate loans and bonds
- portable financial assistance across rental markets
- improved stewardship by governments
- ensuring tenancy support services are available and portable
- reducing the cost of housing so financial support can be provided more broadly
- aligning housing allocation more closely with people's preferences (PC 2017a, p. 187; Wiesel & Habibis 2015).

Subsidies may not always efficiently use public funds. For example, the National Rental Affordability Scheme provided a subsidy of $10,000 annually per tenant and provided a benefit to tenants of around $4,000 (DSS 2012; Rowley et al. 2016). The National Rental Affordability Scheme has expired for new investment. The National Housing Finance and Investment Corporation has since been established to provide low cost financing to community housing providers.

The Productivity Commission in its inquiry on human services (PC 2017a, pp. 173–179) found that people in similar circumstances can receive vastly different rates of financial assistance from government depending on whether they rent in the private market or within social housing and even within social housing. In most cases social housing will provide a greater financial benefit than Commonwealth Rent Assistance, however not in all cases. It also found that current approaches to managing social housing provided little choice of where to live and provided little incentive to adjust living arrangements.

Wiesel et al. (2014, pp. 1, 2, 30) found that many public housing tenants wanted to leave, including people who found the home unsuitable for their disability. However, many stayed because under current policies they would receive less financial assistance if they found a more suitable property in the private market.

The Productivity Commission (2017a, p. 181) noted that the role of tenancy support services to help stabilise tenancies should not be overlooked. This is particularly the case for those at risk of homelessness, such as many people with psychosocial disability. An evaluation of the Housing and Accommodation Support Initiative (Bruce et al. 2012) found the average number of days spent as a mental health inpatient fell 59 per cent, avoiding potential hospitalisation costs of $30 million per year. The fiscal costs were roughly equivalent. This suggests that if participants had improved outcomes the program could provide a net benefit.

The Productivity Commission (2017a) suggested greater tenant choice and control would enable improvements in social housing through better provider quality and locational decisions. This could be achieved without an increase in funding and supply, though this may be desirable. In order to improve equity and provide choice the Productivity Commission recommended:

- establishing a single choice-based system of financial assistance that is portable across all rental markets (social and private and not geographically limited), whereby Commonwealth rent assistance is available to all eligible social housing tenants and state governments fund additional support where problems are especially acute
- new social housing tenants charged market rents (less applicable assistance)
- more contestable tenancy management
- separating management and regulation of social housing in state governments
- separating tenancy support services from tenancy management.

## Incentivising more development of accessible and social housing

Two systems that governments often use to incentivise development of accessible and social housing (including SDA) are the land use planning system and the tax system. Broadly, instead of direct financial subsidies to residents or housing providers, governments could finance tax reductions or ease planning restrictions to encourage more development.

### Taxes and charges

Taxes and charges provide incentives for people to invest or not invest in an asset. Taxes and charges impose costs on housing, with the burden shared between buyers and sellers of housing and tenants.

Accessible housing occupied by NDIS participants may unintentionally in many cases incur higher tax burdens than some other dwellings, because:

- Owner occupiers face lower tax rates and NDIS participants are less likely to own their home.
- Property tax rates are progressive and accessible dwellings NDIS participants often require higher capital costs, a larger footprint, and more rooms.
- Infrastructure charges tend to impose heavier burdens on apartments, which are the primary form of SDA being developed.

The basis of levying property taxes in Queensland (like other states) gives rise to the possibility that housing for NDIS participants will face higher tax burdens (Box H.2).

### Box H.2 Stamp duties, land taxes and infrastructure charges

Stamp duties are taxed at a rate of $1,050 plus 3.5 per cent of the value between $75,000 and $540,000, and higher rates thereafter up to $1 million in value (Queensland Government 2020d). For owner occupiers and first home owners lower concessional rates apply. The median detached dwelling in Queensland had a price of $490,000 and attached dwelling $400,000, in March 2020 (QGSO 2020). For the typical apartment, the difference in stamp duties between an investor in social housing and an owner occupier would be between $7,175 and $12,425. To the extent that SDA is more costly this difference would increase.

Similarly, for land taxes and sometimes municipal rates, ownership affects tax liability. Individuals pay land tax on values of over $600,000 and are exempt where it's their home, while companies, trusts and superannuation funds are liable for value over $350,000, though charitable organisations are exempt (Queensland Government 2020e). Brisbane City Council (2020) levies lower rates on owner occupier property than non-owner occupiers, residential care and multi-residential property.

Around three-quarters of SDA currently in development in Queensland is apartments. The Henry tax review (2010, p. 426) argued that poorly targeted infrastructure charges can impose a range of unintended distortions:

> *Applying infrastructure charges through use of simple flat prices that do not well approximate actual avoidable costs can sometimes reduce housing supply. For example, where charges are levied at a flat rate per dwelling, high-density developments are likely to face higher prices for the infrastructure they require, compared to lower density developments.*

Additionally, land taxes apply differently to congregate living and new SDA where they are not group homes. Under section 51A of the *Land Tax Act 2010,* a property is exempt from land tax if it provides a residential service accredited at level 3 under the *Residential Services (Accreditation) Act 2002*. Residential services are defined as accommodation provided in return for rent, where a resident has a right to occupy a room but not the whole dwelling (such as boarding houses, supported accommodation and aged rental accommodation) and must register under the *Residential Services (Accreditation Act) 2002* (Queensland Government 2020c). New SDA (where they are not group homes), is unlikely to meet this definition and therefore be eligible for the exemption. This distortion may incentivise the use of group homes over forms of SDA based on choice and control. The distortion could be addressed either by providing exemptions for SDA in line with other land uses, such as owner occupier residential or removing exemptions for other land purposes.

Most residential property is exempt from land tax, with the exception of higher-value rental investments. As a result, institutional investors (which may be well-placed to meet the long-term needs of renters, pool bad tenant risk and invest at scale), are discouraged from the private and affordable rental markets (Anthony & Lu 2020 p. 54). New South Wales offers significant tax concessions for build-to-rent projects. This includes a land tax exemption of 50 per cent and exemptions from surcharge land tax and purchaser duties for Australian corporations (King et al. 2020).

Some local governments, such as Brisbane and Rockhampton, have incentivised accessible housing by offering discounts on local government infrastructure charges. The Brisbane City Council in 2019, introduced a 33 per cent rebate on infrastructure charges for developers who build housing to a universal platinum or gold standard. The scheme is estimated to reduce cost per dwelling by between $3,000 and $5,000 (QShelter 2019). In Rockhampton the reimbursements are up to 75 per cent (Rockhampton Regional Council nd, p. 14).

The way that taxes are levied may impose inefficiencies. Reducing these inefficiencies could provide an economically efficient option to incentivise more investment in accessible and social housing for NDIS participants.

### Land use planning system

One of the largest impediments that housing providers raised was the availability and cost of land. Land use planning and development assessment are an important form of state and local government regulation influencing where and what is built in communities. Inability to attain approval and delays can render projects more costly or unviable. The *Planning Act 2016* (Planning Act) sets out the purpose of land use planning as facilitating ecological sustainability that balances cultural, economic, physical and social wellbeing of people and communities. Regulations can also constrain the supply of land or types of development permissible, contributing to land costs and ultimately to the cost of dwellings (NZPC 2015b, p. 94).

Many studies provide evidence of the relationship between housing affordability and excessive restrictions on the use of land (Demographia 2018, pp. 27–33; Glaeser & Gyourko 2002; Kendall & Tulip 2018; Kulish et al. 2011). Reserve Bank of Australia researchers (Kendall & Tulip 2018) estimated that zoning restrictions increased Brisbane house and apartment prices by $159,000 and $110,000, respectively. They estimated that restrictions increased average house prices by 42 per cent relative to supply costs, and apartment prices by 26 per cent relative to marginal costs.

Generally, accessible housing is designed to look no different from other housing and to blend into the neighbourhood.[242] However, occasionally projects to house people with disability are opposed by some in the community—with concerns about perceived loss of amenity (Raggatt 2018). 'Not In My Back Yard' community opposition can contribute to delaying or preventing a development project (Wiesel & Habibis 2015, p. 24).

[242] The Planning Act does not set out how to balance objectives or resolve conflicts between objectives. In the case of developing well-located housing for people with disability, on face value there does not appear to be substantial conflicts between the objectives. Broadly, from a whole of society perspective building, housing for people with disability in well-located locations aligns with all purposes of the Planning Act.

Anecdotally, the planning barriers faced by social housing, including SDA, are generally also faced by developers of all residential developments.

Apartment construction tends to be more complex, subject to planning intervention and most residential land is zoned low density. Low density zoning and overlays may impede the development social housing on well-located land. For example, Brisbane City Council imposes a townhouse ban and character residential zoning in inner city suburbs, while some councils have minimum car parking ratios. Planning interventions often do not achieve their desired outcomes or improve welfare.[243] In the case of character housing, the restrictions are enforced in established well located areas, often close to employment, services and public transport. These restrictions are likely to impede social housing development. The townhouse ban may particularly impede the development of robust dwellings where supply shortages are most persistent.

Wiesel and Habibis (2015, p. 24) outline interventions to encourage affordable and/or accessible housing, including release of sites, reduction in regulatory and planning barriers, density bonuses or relaxations and mandating certain housing in developments. The Planning Institute of Australia (2016) outlined a range of ways planning could be changed to alleviate supply constraints more generally.

State and local government could reduce planning restrictions to incentivise social and accessible housing, by:

- incentivising developments that include social housing and accessible housing by allowing greater density
- removing mechanisms that require more expensive materials, such as those in priority development areas
- negotiating with developers to include a certain amount of social housing prior to rezoning or master planning
- increasing density around well-located areas, such as public transport and shopping centres
- identifying greenfield opportunities and utilising own surplus land to increase the supply of developable land
- greater use of priority development areas
- exempting social housing from character requirements
- reducing heritage restrictions for social housing
- relaxing minimum parking requirements for accessible housing
- fast tracking development approvals.

Planning concessions could be offered to developers that include accessible and/or social housing dwellings for NDIS participants in their developments. Similar to the state's new Build-to-Rent scheme, projects could be incentivised to include a proportion of affordable dwellings mixed in with regular market dwellings. Instead of subsidies (with associated fiscal costs) governments could offer planning uplifts, concessions and/or exemptions from restrictions.

Standardisation of zoning definitions across local government areas may reduce information costs for developing social and accessible housing. Greater use of as of right development for social and accessible housing could reduce delays and risks.

[243] Recent research found a planning policy to 'protect' the Brisbane backyard was simultaneously incentivising the replacement of the backyard and impeding medium density housing. Most (52 per cent) new housing in Brisbane was coming from redevelopment from subdivision and only 30 per cent was from assembling blocks of land to develop multi-residential housing (Gallagher & Sigler 2020).

# Appendix I: Participant employment

This appendix provides supporting information for the chapter on participant employment outcomes.

## I.1 Labour market outcomes for persons with disability

### Data limitations

The key sources of labour market data which can be used to compare the labour market outcomes of people with and without a disability—the census and the Survey of Disability, Ageing and Carers (SDAC)—are not up-to-date with the latest data being 2018 (Box I.1). Both census and SDAC data relate to the broader population of persons with disability and not specifically to the subset of the population who are NDIS participants. However, both datasets provide various definitions of disability. The groups 'core activity need for assistance' for census data and 'profound or severe core activity limitation' for SDAC should provide a reasonable approximation of the NDIS population for the purpose of identifying broad trends.

The NDIA also surveys NDIS participants on outcomes being achieved, including employment-related outcomes. This data cannot be used to compare outcomes between persons with and without a disability, but the intention of the data is to track outcomes over time to see if outcomes are improving for participants.

### Box I.1 Census and SDAC data and key limitations

There are two main sources of information on the labour market outcomes for persons with disability—the Survey of Disability, Ageing and Carers (SDAC) and the Census of Population and Housing (Census).

The SDAC is the most comprehensive survey on people with disability in Australia, and often details outcomes by severity of disability. Data is collected through personal visits to households (54,142 responses for the 2018 SDAC), and through paper forms completed by establishments that provide long-term care accommodation (11,663 responses). Data is available for the years 2003, 2009, 2012, 2015 and 2018. Since 2015, the SDAC has collected information about NDIS participation for future use in comparing outcomes for NDIS participants compared with those who are not participants.

However, at the time of 2018 enumeration, the NDIS was still rolling out in many jurisdictions and therefore the data reflects only those who reported receiving an agreed package of support through NDIS at the time of enumeration. The 2018 survey was conducted over the period 29 July 2018 to 2 March 2019. At December 2018, there were roughly only 33,000 Queensland NDIS participants (and 2,600 children in ECEI). So, the combination of the SDAC being a survey rather than an enumeration (introducing the problem of sampling error), and the small number of NDIS participants at the time of the survey, means that the size of the standard errors for Queensland estimates are too large to provide reliable estimates.

The Census of Population and Housing does not include a NDIS participant identifier.

Both the Census and SDAC collect data that allows the disability population to be decomposed to a subset of the population where there is a high probability that the subset population comprises a high proportion of people who either were at the time, or would now be, NDIS participants. Information on these subsets should provide a reasonable picture of labour market outcomes for NDIS participants up to 2018. The subsets are:

- Census—*core activity need for assistance*: The Census disability status categories are 'core activity need for assistance', 'no core activity need for assistance' or 'not stated'. In the 2016 Census, there were 243,262 Queenslanders reporting a core need for assistance.
- SDAC—*profound or severe core activity limitation*: the SDAC disability status categories are profound, severe, moderate and mild. Limitations and restrictions are core activity limitations, schooling or employment restrictions and other activities.

The 2016 Census reported that there were 243,262 people in Queensland with a 'core activity need for assistance'.[244] The 2018 SDAC estimated that there were 306,400 people in Queensland with a 'profound or severe core activity limitation'.[245]

*Source: ABS 2019a; 2016; NDIA 2020aq, p. 251; QPC estimates.*

## Labour market indicators

### Participant and unemployment rates

Queensland participation rates increased between 2006 and 2016 for most age groups excluding some younger age groups, indicating the trend for more young people to study or study longer (Table I.1). Participation rates for people with a core activity need for assistance have increased but this has unlikely led to improved employment outcomes.

[244] 4.1 million Queenslanders reported 'no core activity need for assistance' and 356,257 did not state either.
[245] 261,300 reported in the 2015 SDAC.

**Table I.1 Labour force participation, by age, Queensland, 2006 and 2016**

| | Core activity need for assistance (%) | | No core activity need for assistance (%) | |
|---|---|---|---|---|
| Age | 2006 | 2016 | 2006 | 2016 |
| 15–19 years | 24.6 | 26.3 | 62.0 | 58.0 |
| 20–24 years | 37.7 | 36.9 | 84.0 | 81.5 |
| 25–29 years | 31.3 | 33.3 | 84.1 | 84.9 |
| 30–34 years | 28.5 | 30.9 | 82.7 | 85.1 |
| 35–39 years | 26.0 | 27.2 | 83.6 | 85.7 |
| 40–44 years | 24.4 | 26.1 | 86.0 | 87.3 |
| 45–49 years | 20.5 | 23.2 | 86.3 | 87.5 |
| 50–54 years | 16.7 | 19.8 | 82.6 | 85.3 |
| 55–59 years | 10.4 | 15.7 | 69.6 | 77.6 |
| 60–64 years | 6.5 | 10.5 | 48.4 | 59.4 |

*Note: Changes in participation rates are sensitive to the data source used and years chosen for comparisons. Based on SDAC data, the participation rate for Queensland persons with disability has changed little since 2003 (at 53.7 per cent). There was a dip in the participation rate in 2009, but it recovered by 2012. The participation rate was 54.0 per cent in 2012, 54.2 per cent in 2015 and 54.1 per cent in 2018. Chapter 10, Figure 10.3 shows the participation rates for persons with a profound or severe core activity limitation.*
*Source: ABS 2006, 2016.*

Unemployment rates increased across most age groups between 2006 and 2016 in both Queensland and Australia, however they increased more for people with a core activity need for assistance (Table I.2). The combined fall in unemployment rates and participation rates as age increases suggest that many young people stop looking for work as they age and fall out of the labour force altogether.

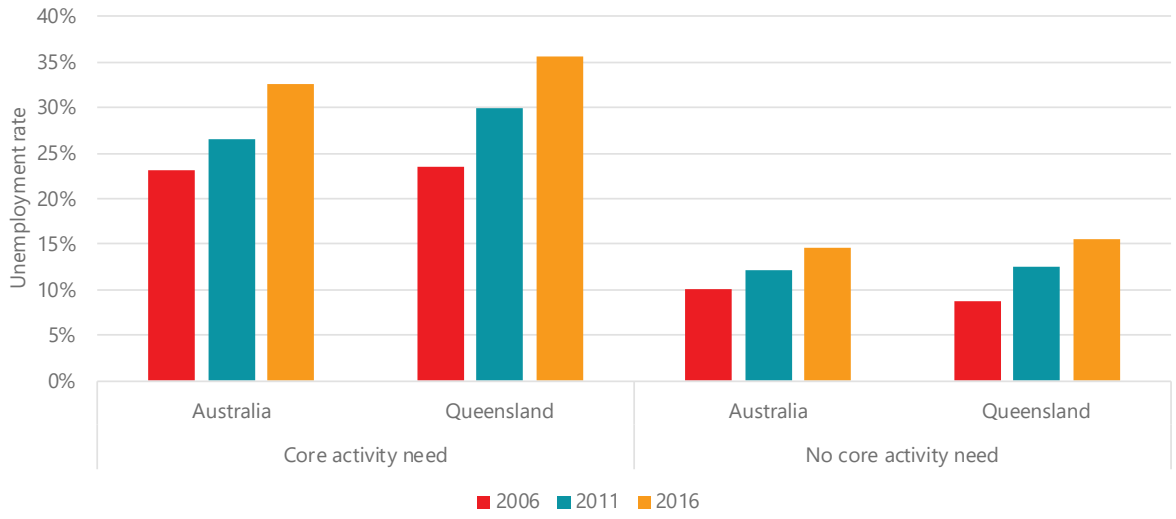
**Table I.2 Unemployment rate, by age, Queensland, 2006 and 2016**

| | Core activity need for assistance (%) | | No core activity need for assistance (%) | |
|---|---|---|---|---|
| Age | 2006 | 2016 | 2006 | 2016 |
| 15–19 years | 26.6 | 38.2 | 11.1 | 20.7 |
| 20–24 years | 21.1 | 33.2 | 7.0 | 12.1 |
| 25–29 years | 16.0 | 24.8 | 5.0 | 7.6 |
| 30–34 years | 15.0 | 20.1 | 4.2 | 6.1 |
| 35–39 years | 12.9 | 16.2 | 3.9 | 5.6 |
| 40–44 years | 11.8 | 15.1 | 3.6 | 5.5 |
| 45–49 years | 11.5 | 13.5 | 3.1 | 5.2 |
| 50–54 years | 10.4 | 14.0 | 3.1 | 5.3 |
| 55–59 years | 9.0 | 13.8 | 3.4 | 5.7 |
| 60–64 years | 8.6 | 16.2 | 4.0 | 6.6 |

*Source: ABS 2006, 2016.*

Unemployment rates are very high for youth (15 to 24 years) with a core activity need for assistance, with one in three looking for work but unable to attain it in 2016 (36 per cent in Queensland and 33 per cent for Australia) (Figure I.1). This is in stark contrast to the unemployment rate for youth without a core activity need for assistance in Queensland and Australia of 15 and 16 per cent, respectively.

**Figure I.1 Youth unemployment, Queensland and Australia**




*Source: ABS 2006, 2011, 2016.*

## Underemployment

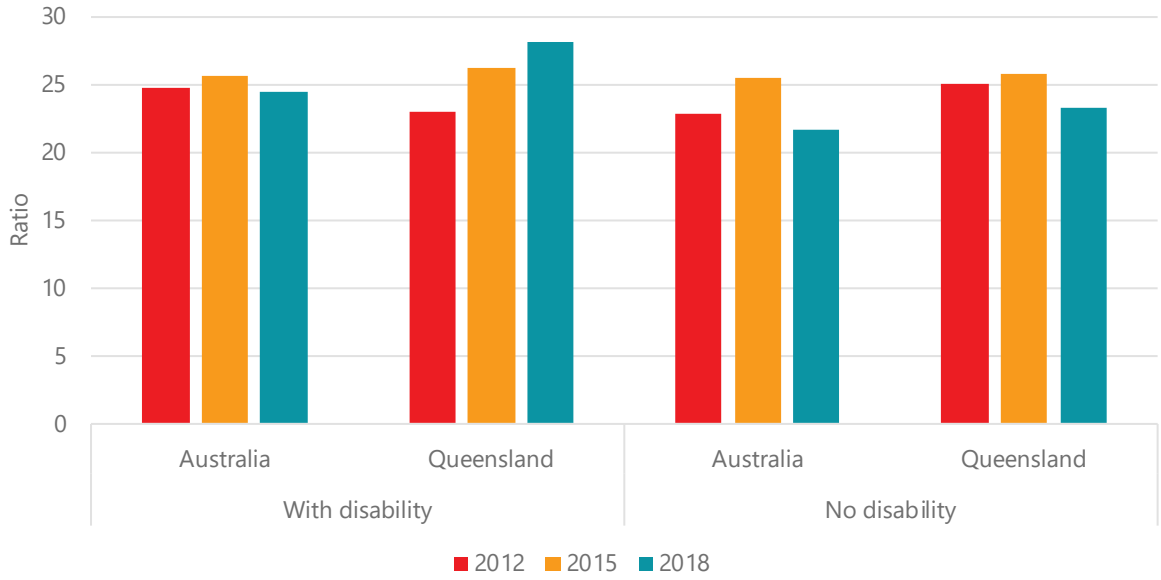
Underemployment refers to employed people who want, and are available for, more hours of work than they currently have. Underemployment generally comprises of people employed part time who want to work more hours.[246]

People reporting a disability are more likely to work part time (35 per cent of those participating in the labour market) than people without a disability (30 per cent). Therefore, in order to compare the rate of underemployment between these two groups, the underemployment rate is standardised by division of the underemployment rate by the part–time employment rate.

Over the period 2012 to 2018, the rate of underemployment in Queensland increased from 23 to 28 per cent, compared to no change nationally at 25 per cent (Figure I.2). Over the same period, the underemployment rate for persons without a disability decreased from 25 to 23 per cent in Queensland, and 23 to 22 per cent nationally.

[246] However, it can also capture people employed full time who worked part time in the reference week for economic reasons—it is assumed these people want to work full time in the reference week and would have been available to do so; these workers account for less than 1 per cent of the labour force more generally (RBA 2017, pp. 38–40).

**Figure I.2 Ratio of underemployment rate to part-time worker rate, Queensland and Australia**




*Notes: Underemployment was not able to be measured for specific types of disability. Therefore, the underemployment measures are for all persons with disability and not those with a 'profound or severe core activity limitation'.*
*Source: ABS 2019a.*

## Incomes

People with disability are much less likely to participate in the labour market than people without a disability, and when they do, they are more likely to be unemployed. Labour market outcomes for more severe types of disability are on average, considerably worse.

As a result of poor employment outcomes compared to people without disability, people with disabilities are much less likely to report their main source of personal income as wages or salary (Table I.3). In 2018, only 5 per cent of Queensland persons with a profound disability reported that their main source of income was wages or salary compared to 77 per cent reporting that their main source of income was government pensions or allowances. For persons with a severe disability and no disability, the percentages were 14 and 68 per cent, and 64 and 13 per cent, respectively.

**Table I.3 Main source of personal income, by disability status, persons aged 15 years and over, Queensland, 2018**

| Income quintile | Profound | Severe | Moderate | Mild | All with disability | No disability | Total |
|---|---|---|---|---|---|---|---|
| Wages or salary | 4.5 | 13.8 | 17.8 | 20.3 | 23.2 | 63.8 | 55.2 |
| Unincorporated business income | 0.0 | 2.1 | 3.1[a] | 3.1 | 3.2 | 5.7 | 5.1 |
| Government pension or allowance | 77.4 | 68.4 | 58.4 | 55.3 | 54.2 | 13.0 | 21.7 |
| Other | 9.4 | 8.0 | 11.3 | 16.2 | 12.6 | 7.4 | 8.5 |
| Not stated | 5.5 | 9.2 | 8.8 | 5.1 | 7.0 | 10.2 | 9.5 |

*Note: [a] Indicates estimate has a high margin of error and should be used with caution.*
*Source: ABS 2019a.*

People with disability are among the most disadvantaged groups in terms of income distribution, compared to the wider population (Table I.4).

In addition to economic disadvantage, there is evidence to suggest people with disability who do not participate in the labour force are also more likely to experience discrimination due to disability (ABS 2019a, table 20.3), though it is unclear which comes first.

**Table I.4 Equivalised gross household income quintiles, persons aged 15 years and over, Queensland, 2018**

| Income quintile | Profound | Severe | Moderate | Mild | All with disability | No disability | Total |
|---|---|---|---|---|---|---|---|
| Lowest quintile | 26.1 | 19.6 | 23.9 | 23.4 | 21.3 | 8.3 | 11.1 |
| Second quintile | 33.2 | 26.8 | 22.7 | 27.4 | 24.1 | 11.4 | 14.2 |
| Third quintile | 10.2 | 13.4 | 13.2 | 9.5 | 11.5 | 15.3 | 14.5 |
| Fourth quintile | 4.7 | 5.3 | 7.9 | 6.1 | 8.8 | 17.0 | 15.3 |
| Highest quintile | 0.0 | 3.1 | 5.4 | 5.5 | 6.2 | 13.8 | 12.3 |
| Income not known | 26.0 | 30.4 | 24.3 | 27.5 | 28.3 | 34.1 | 32.8 |

*Source: ABS 2019a.*

## Queensland carers

Carers are restricted in participating in the workforce, particularly primary carers, due to their caring responsibilities but when they do seek work they are able to find it at a rate similar to people who are not carers (i.e. their unemployment rates are similar).

However, caring responsibilities can reduce carers' participation rate in the labour market.

Caring responsibilities can reduce carers' participation rate in the labour market. In 2018, the labour force participation rate for primary carers was 46 per cent in Queensland compared to 70 per cent for persons who did

not have caring responsibilities (Table I.5). For both primary and other carers, Queensland participation rates were lower than nationally.

While carer participation rates are lower, their unemployment rates are similar to persons who are not a carer. In Queensland, the unemployment rate for all carers (primary plus other carers) was 5.1 per cent in 2018 compared to 5.4 per cent for persons who are not carers. Nationally, 5.8 per cent of carers were unemployed compared to 4.8 per cent of persons who are not carers.

Carers are more likely to work in the government sector (20 per cent of all carers work in the government sector) compared to non-carers (16 per cent) (ABS 2019a).

As shown in Chapter 4, there has been a marginal improvement in the percentage of families/carers of NDIS participants working in a paid job over time.

**Table I.5 Labour market outcomes, by carer status, Queensland and Australia, 2018 SDAC**

| | Primary carer | Other carer | Total carers | Not a carer |
|---|---|---|---|---|
| **Queensland** | | | | |
| Participation rate | 45.8 | 59.4 | 54.5 | 70.0 |
| Unemployment rate | 4.8 | 5.2 | 5.1 | 5.4 |
| **Australia** | | | | |
| Participation rate | 47.1 | 61.9 | 56.9 | 69.8 |
| Unemployment rate | 5.3 | 5.9 | 5.8 | 4.8 |

*Source: ABS 2019a.*

## I.2 There are significant barriers to increasing workforce participation

People with disability commonly face barriers to their ongoing participation in the workforce which may, at least partly, explain the differences in employment outcomes compared to people with no reported disabilities.

Fernandez et al. (2016, p. 17) note that, in general, individuals of working age with weak labour-market attachments are likely to face employment barriers that prevent them from fully engaging in the labour market in one or more of the following categories:

- **Weak incentives to look for or accept a 'good' job** due to low remuneration, government support payments, or 'high standards'.
- **Insufficient work-related capabilities or 'readiness'** which may limit individuals' capacity for performing specific tasks. This can include a lack of education, skills or work experience, or health-related limitations.
- **Scarce employment opportunities** due to general or industry specific economic or labour-market conditions, or other workplace or employment challenges arising from 'information asymmetries, skills mismatch, or discrimination in the workplace'.

Barriers facing people with disability depend on their individual circumstances. For example:

- A survey of NDIS trial participants by Mavromaras et al. (2018, p. 175) noted that their 'own health/disability' was the most frequently mentioned barrier to getting a job by people with disability (between 71 and 79 per cent), followed by 'lack of opportunities' and 'what employers think about people with disability.'
- Khayatzadeh-Mahani et al. (2020, p. 2697) noted that barriers to employment for those with developmental disabilities can represent both individual/personal (such relationship and social skills difficulties and impairments in communication) or external/environmental challenges (such as employer characteristics and attitudes, work setting and stigma).

There are a range of possible barriers—both for people with disability participating in employment and for employers in recruiting and retaining people with disability in employment (Box I.2).

## Box I.2 Possible barriers to labour force participation

**Barriers for people with disability** include**:**

- challenges with the person's health and disability
- a lack of opportunities
- disability support needs unable to be met at work
- difficulty in negotiating reasonable adjustments/accommodation in the workplace
- difficulties using facilities or equipment
- lack of accessible infrastructure and transport
- discriminatory attitudes and behaviours during recruitment, and in the workplace, from employers and others
- poor customisation of jobs to match skills and abilities
- overly complex legislative and policy frameworks
- perceived disincentives in the income support system (including reduction of loss in income from employment)
- government programs not working well together
- lack of suitable transition supports, for example, leaving school or changing jobs
- lack of assistance in finding, securing and maintaining employment
- sense of isolation in workplaces
- lower education attainment or access to inclusive education
- limited opportunities in, or difficulty in accessing supported work experience, training and education.

**Barriers for employers** include**:**

- difficulties ensuring access and flexibility for workers with disability
- limited resources, particularly for small business
- difficulties in complying, or low levels of awareness, with multiple laws and regulations related to anti-discrimination, employment, work, health and safety, workers compensation and insurance
- difficulties associated with compliance with monitoring and reporting requirements
- lack of knowledge or confidence regarding what is needed to support workers with disability.

*Source: Adapted from NDIA 2019t, p. 6; Mavromaras et al. 2016, p. 92; Truth Serum & Council of Small Business Organisations Australia 2018, pp. 23–28; Kantar Public 2017, pp. 23–27.*

The main barriers identified in the literature and in submissions and consultation are discussed in further detail below.

## Barriers—financial incentives

People's employment decisions can be affected by the strength of the financial incentives to work. For example, incentives to work can be weakened if the remuneration from work is considered too low, or there are other effects from working—such as a reduction or elimination of other benefits (Fernandez et al. 2016).

### Support payments

People who are unable to work, due to permanent physical, intellectual or psychiatric conditions, may be eligible for financial assistance through a Disability Support Pension (DSP). The maximum payment rate including supplements, for a person 21 or older, is $952.70 per fortnight (Services Australia 2020c). These payments can reduce based on changes in the income or assets of the person or their partner.

It has been argued that government disability income programs can result in a disincentive to work (and therefore lower rates of employment for people with disability)—especially where people's take-home pay is reduced when they receive employment payments (Schur 2002; PC 2011).

The OECD also notes that there may be a substitution effect between general unemployment benefits and disability benefits, reflecting:

> *[t]he relative generosity of disability programmes, as well as increasingly stricter work requirements in unemployment and social assistance programmes, and gradual retrenchment of early retirement systems ... (2010, p. 34)*

### Other disincentives and work barriers

There are likely to be other barriers and disincentives preventing people with disability working, such as:

- **Lack of accessible transport**: People with physical disabilities report that a lack of 'cheap and accessible' transport prevents them from going to work (NDIA 2019t, p. 6; PC 2011, p. 251). These difficulties are likely compounded in rural and regional areas.
- **Administrative processes**: Some stakeholders noted in consultation their concerns with the administrative processes to register for employment support, noting that it was time consuming and unnecessarily complex (comment to inquiry no. 3).

### The financial incentives to work are determined by wages on offer combined with the income support and tax system

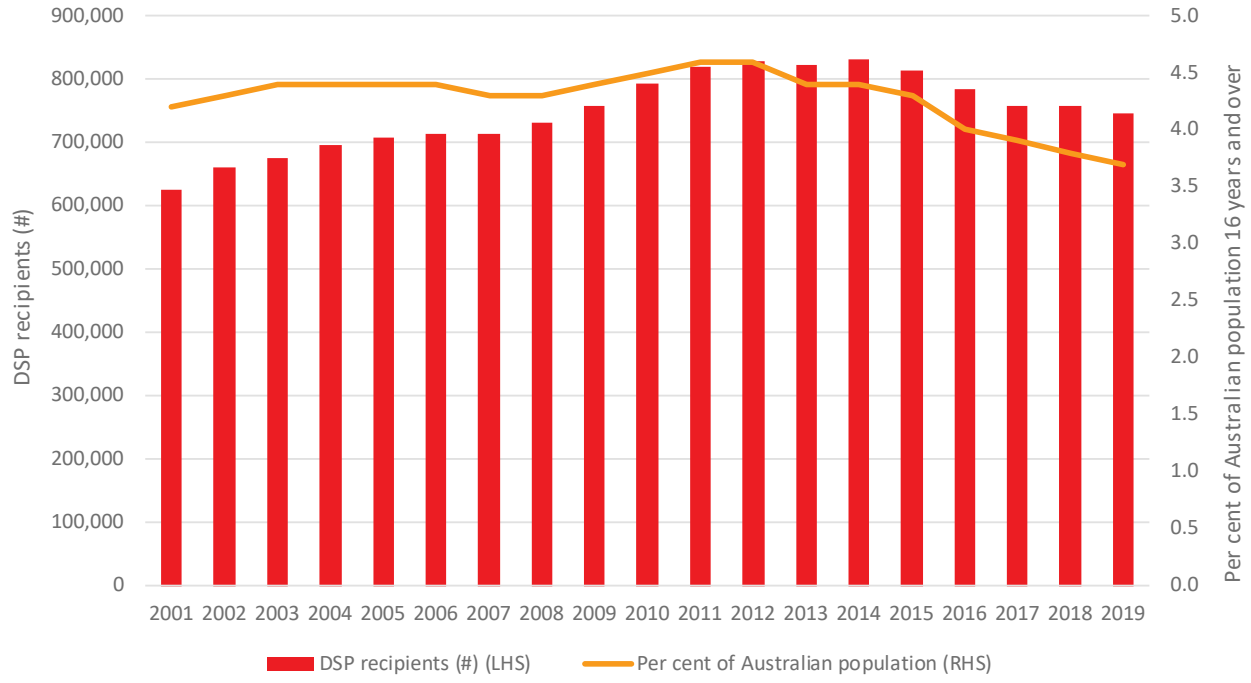
At the time of the NDIS reforms around 2011 there were significant financial disincentives for persons on the DSP to seek work. These were reinforced by generally low community expectations concerning the capabilities of persons with disability to work. The DSP reflected these expectations structured in the way it was as a system of 'passive welfare'—low expectations, few requirements to seek work and financial disincentives for those who did seek and find employment.

Any disincentives to work arising from the DSP could have a significant impact on the ability of the NDIS to achieve improved employment outcomes given that a large share of NDIS participants are also DSP recipients. Across all ages, 77 per cent of NDIS participants were also in receipt of the DSP at July 2018 nationally (state-level data was not identified in the NDIA report which provided the outcomes of a study linking NDIA participant data with DSP recipient data). The DSP recipient population is much larger than the NDIA population with only seven per cent of DSP recipients also being NDIS participants (NDIA 2018j, p. 14).

At June 2019, the proportion of DSP recipients aged 16–64 earning an income was 8.4 per cent—double the 3–4 per cent at the time of the NDIS reforms (AIHW 2020c, p. 328).

The number of DSP recipients has declined nationally since 2014, and as a proportion of the population since 2012 (Figure I.3).

**Figure I.3 DSP recipients and as a proportion of the Australian population aged 16 and over, 2001–2019**




*Source: AIHW 2020c.*

Since the introduction of the NDIS, the financial incentives to work have increased modestly, including tightening eligibility and work requirements criteria for those on DSP (AIHW 2020c, p. 319). Access to assistance was tightened by moving some people on DSP to Newstart or Youth allowance under 'welfare to work' reforms. This raised effective marginal tax rates at low incomes but reduced them at middle incomes (Ingles & Plunkett 2016, p. 16).

In parallel to the reductions in the DSP, the proportion of Newstart Allowance recipients assessed as having a partial capacity to work has steadily increased from 26 per cent of recipients in June 2014 to 31 per cent in June 2016 to 42 per cent in June 2019 (DSS 2019 cited in AIHW 2020c, p. 320).

## Barriers—work related capabilities

Some people with disability who would like to work may be unable to do so or may not be able to meet the type or duration of work required by some employers. This can have the effect of potentially reducing both the quantity of labour that is available to, or demanded by, employers.

### Type and severity of disability

People with disability are a heterogeneous group, meaning that employment outcomes vary across a range of characteristics of disability (Hogan et al. 2012, p. 7). The type and severity of disability can therefore influence workforce participation outcomes and introduce different specific challenges for people with disability:

- Mavromaras et al. (2007, p. 4) noted that workforce participation decreases with severity of disability (as opposed to a disability with no restrictions) or the presence of multiple disabilities.

- People who were born with disability or become disabled at an early age were likely to have more positive labour market experiences than those who subject to the onset of disability later in life (Jones et al. 2007, p. 486; Mavromaras et al. 2007, p. 4)
- People with sensory disabilities are less likely to be associated with negative labour market outcomes, while people with mental disabilities or severe psychotic disorders appear to more likely to experience challenges in being employed or participating in the workforce than people with other forms of disability (Jones et al. 2007; Hemphill & Kulik 2016; Mavromaras et al. 2007). Further the NDIA (2018j, p. 14) has reported that NDIS participants with intellectual disabilities are the least likely to be in open employment—which may explain why those with an intellectual disability are the most likely, out of all disability groups, to have employment supports in their NDIS support plans (PC 2017b, p. 145).

However, while the type and severity of disability may restrict the types of employment for people with disability, Mavromaras et al. (2007, p. 71) note that other indicators of 'employment difficulty' such as restrictions in employee mobility or the hours they can work, 'do not appear to have a statistically significant association with labour market participation'.

### Education, skills and work experience

People with higher work-related skills and educational attainment are generally seen to have improved prospects for finding employment, better wages and better general labour market outcomes than those with lower skills or education (Fernandez et al. 2016, p. 19).

For both people with and without a disability, more work experience and higher levels of education have been associated with higher labour force participation (Mavromaras et al. 2007; Hogan et al. 2012; Wilkins 2004). Fernandez et al. (2020, p. 9) also note that people with lower levels of education 'more often state being jobless because of illness and disability'.

In addition, the OECD (2010, p. 10) notes that 'skills biased technological changes' and the exit of 'lower-skilled activities' away from more developed countries such as Australia 'have had negative effects on the employment opportunities of low-skilled workers'. This is likely to result in a barrier to employment for people with disability, given their lower average levels of education compared to people without a disability—a gap the OECD (2010, p. 27) notes is worsening for younger age groups.

## Barriers—employment opportunities and work availability

The availability of work generally relates to the demand for employment in the particular labour market. However, for people with disability, other workplace or employment challenges are likely to arise, including through employer attitudes or preferences.

### General economic and labour market conditions

The employment of people with disability is likely impacted by general labour market forces. However, there is some evidence that adverse economic conditions are likely to worsen labour market opportunities for people with disability and impact them more than people without disability (OECD 2010, p. 31). With COVID-19 and associated health responses having an impact on the labour market and broader economic conditions, there is some concern that these events may have a further detrimental impact on employment outcomes for people with disability (Queensland Government sub. 38, p. 22).

There is also likely to be differences depending on the region and distribution of people with disability. For example:

- Fernandez et al. (2020, p. 6) note that disability plays 'a relatively more important role for non-employment in countries where the extent of joblessness is low' potentially reflecting, at least partly, disability support

payments and 'the more limited potential of employment-oriented policies to address work-related health limitations'.

- Jones et al. (2007) noted, in a study of the United Kingdom, that areas with 'slacker' labour markets, including those experiencing a transition from traditional industries such as manufacturing, also experienced higher rates of disability, and lower rates of employment for people with disability. The experience of high unemployment in these areas may have contributed to a culture of benefit dependence which remains long after the demise of these industries. Furthermore, lower average earnings in these areas increase the replacement rate of disability benefits. However this study also noted that the pattern of high disability-low employment rates may be explained, in part, by health problems associated with heavy industry and that 'younger, better educated individuals' are more likely to leave to seek opportunities elsewhere—leaving an ageing and often low-skilled population behind.

The types of jobs undertaken may also partly explain differences in earnings between people with disability and people without. For example, Hogan et al. note that

> *people with disability earn significantly less compared to those without disability (Jones, 2008), and experience more underemployment. They are overrepresented in manual occupations and underrepresented in 'white collar' jobs (Kidd et al., 2000), and are more likely to be working in nonstandard forms of employment, such as part-time and temporary jobs (Jones, 2008). (2012, p. 1)*

## Employer attitudes and concerns

The attitudes and concerns of employers are likely to have a large influence on the likelihood of people with disability finding employment (Kantar Public 2017, p. 22). These attitudes and concerns may range from discrimination and misconceptions, lack of experience in recruiting or working with people with disability, through to concerns regarding suitability of roles and accessibility in the workplace (PC 2011; Truth Serum & Council of Small Business Organisations Australia 2018; Kantar Public 2017)

While there is some evidence of changing attitudes and an 'openness' amongst employers to consider hiring people with disability, this has yet to result in a broad-based increase in employment opportunities for people with disability (Truth Serum & Council of Small Business Organisations Australia 2018, Hemphill & Kulik 2016, p. 301).

**Discrimination**

Under the *Disability Discrimination Act 1992* (Cth), it is against the law for an employer to discriminate against someone on the grounds of a person's disability. This includes both discrimination that impedes recruitment of people with disability as well as 'the failure to provide reasonable adjustments or insufficient adjustments to allow the employee to access supports to complete their work' (Royal Commission into Violence, Abuse, Neglect and Exploitation of People with Disability 2020a, p. 5).

While there are many factors to explain differences in employment and earnings outcomes between people with disability and people without disability, prejudice and discrimination likely still play a role (Ameri et al. 2015, pp. 5–7; Schur 2002). Instances of discrimination can include the 'screening out' of candidates because of their disability—even when the disability is unlikely to affect the person's aptitude or suitability for the role (Ameri et al. 2015)

Recent surveys of employer perceptions of disability employment showed that only eight per cent of Australian employers were considered to be 'advocates' for change in disability outcomes—meaning they were 'less likely to demonstrate negative attitudes towards employing people with disability' than other employer segments (Kantar Public 2017, p. 12).

**Lack of knowledge, experience or applicant interest**

However, the barriers to employing people with disability may relate less to prejudice or discrimination than 'low levels of confidence around the process of employing people with disability' (Kantar Public 2017, p. 2).

For many employers, there is likely a genuine lack of information or experience of how to employ a person with disability:

- Stakeholders told the inquiry that while there is a desire to employ people with disability, many employers 'just don't know how'.
- A recent survey of Australian small to medium enterprises (SMEs) noted that a majority of employers considered there was both a lack of accessible information and advice about hiring a person with disability and that they were unclear what the expectations are for the employer when employing a person with disability. In addition, 'many were not sure where to start' (Truth Serum & Council of Small Business Organisations Australia 2018, p. 26). The same survey noted that 'business owners who have not had the experience employing a person with disability are significantly less likely to employ a person in the future' (Truth Serum & Council of Small Business Organisations Australia 2018, p. 15).

Further studies suggest that more experience and exposure to persons with disability, including whether an employer has hired people with disability is likely to increase confidence in future hiring practices (Truth Serum & Council of Small Business Organisations Australia 2018; Hemphill & Kulik 2016).

A 'lack of applications' has also been cited as a primary reason for why employers have not employed a person with disability, with 67 per cent stating that a person with disability had never applied for an advertised position (Truth Serum & Council of Small Business Organisations Australia 2018, p. 19). One reason for this could be that hiring and recruitment practices themselves may create barriers to applications, with studies showing the application process may 'inadvertently discourage participation' due to poor accessibility features or 'disability' being omitted from employer diversity statements (Bonaccio et al. 2019, p. 143).

**Concern regarding suitability, costs and integration**

Many employers have 'objective and tangible concerns' about hiring of people with disability (Hemphill & Kulik 2016, p. 301). These can include:

- concern about the suitability and 'fit' of people with disability to the roles on offer (Kantar Public 2017; PC 2011)
- worry about the cost of adapting or modifying the physical working environment or systems, and the time that is required to make these adjustments (Hemphill & Kulik 2016; Kantar Public 2017; Truth Serum & Council of Small Business Organisations Australia 2018)
- concern about the potential need for adjustment to workplace policies, processes and staff environment to assist in the integration and inclusion of people with disability (Kantar Public 2017; Bonaccio et al. 2019)
- a belief that people with disability are 'unreliable and unpredictable' (PC 2011, p. 295)
- the perception that people with disability requiring greater supervision and support, which lead to concerns of a need for extra time and investment to employ people with disability (PC 2011)
- a belief that there is a higher level of general compliance and 'red-tape' involved, compared to hiring staff without disability (Truth Serum & Council of Small Business Organisations Australia 2018).

A further assessment of concerns regarding suitability of roles and workplace adjustments are discussed in Box I.3.

## Box I.3 Employer concerns

**Suitability of roles**

Many people with disability are restricted in the type or number of hours of work they can perform (Deloitte Access Economics 2011, p. 10). As noted by Jones et al. (2007, pp. 491–492), an individual who is equally productive in one occupation may be unable to work in another. In addition, some people with disability may match well with an element of a job, but not a whole job. This is likely to result in two different outcomes, dependent on both the industry/position and employer attitude:

- Some employers may determine there are no roles in their business that would be suitable for people with disability (Truth Serum & Council of Small Business Organisations Australia 2018, p. 19). Further, there are likely to be variances between industries (Hemphill & Kulik 2016, p. 305). For example, employers in traditionally manual industries appear to have more concerns about role suitability than employers in service industries—resulting in employers in service industries employing more people with disability (Kantar Public 2017, p. 26). However, consultation indicated some businesses are shifting their view on what jobs suit people with disability.
- Employers, who are either more open to employing people with disability or have more suitable roles, seek to assess potential employees 'on a case-by-case basis', taking into account 'the match between candidate skills, aptitudes and perceived capabilities (or, more commonly, restrictions) and the type and nature of the role in question' (Kantar Public 2017, p. 23). In addition, some people with certain disabilities (such as autism, due to a high attention to detail for repetitive tasks) may be particularly in demand in certain occupations (Truth Serum & Council of Small Business Organisations Australia 2018, p. 25).

**Workplace adjustments and accommodations**

Under legislation, employers are required to provide ‘reasonable adjustments’ to allow employees to access supports to complete their work. Such adjustments can include 'changes to a process, practice, procedure or environment that allows an employee with disability to perform their job' (Royal Commission into Violence, Abuse, Neglect and Exploitation of People with Disability 2020a, p. 5).

A recent survey of Australian small and medium enterprises noted that a majority of employers considered workplace adjustments a barrier to the recruitment of a person with disability, given concerns regarding 'the time and budget that is required to make these workplace adjustments' (Truth Serum & Council of Small Business Organisations Australia 2018, p. 27).

It is argued however that there is a misunderstanding in the community about the cost of workplace adjustments, and that the costs are often considerably overestimated (Australian Government 2009, p. 39). In addition, a study by Deloitte Access Economics found that of those that are restricted in the type of work they can perform, 15 per cent of those with disability who are able to work need special employer arrangements, like equipment, modifications or supervision' (2011, p. 10).

To mitigate some of the costs that may arise from workplace adjustments, ‘unjustifiable hardship’ can also be claimed by employers and government funding may be available—although businesses may have to outlay money on modifications before the funding is received, impacting business cash flow (Truth Serum & Council of Small Business Organisations Australia 2018, p. 27).

## I.3 Disability Employment Services

Disability Employment Services (DES) help people with disability find work and keep a job and is an initiative of the Department of Social Services (DSS). Through DES, people with disability, injury or health condition may be able to receive assistance to prepare for, find and keep a job.

DES has two parts:

- *Disability Management Service* is for job seekers with disability, injury or health condition who need assistance to find a job and occasional support in the workplace to keep a job
- *Employment Support Service* provides assistance to job seekers with permanent disability to find a job and who need regular, ongoing support in the workplace to keep a job.

DES providers are a mix of large, medium and small, for-profit and not-for-profit organisations that are experienced in supporting people with disability as well as providing assistance to employers to put in place practices that support the employee in the workplace (DSS 2019b).

A key distinguishing feature of DES providers is their capacity to support and manage a person's condition in the workplace, along with providing ongoing support in the workplace for as long as it is required.

DES providers help job seekers with disability to access individually tailored employment services, with strong links to training and skills development, including in areas of skills shortages. Providers offer a range of free services to employers of people with disability, injury or health condition including:

- professional recruitment advice and job matching
- help with job design for employees with disability
- on-the-job or off-site support to ensure new employees with disability settle into their job
- ongoing support for as long as it is required, for employees and employers who require support to maintain their employment
- training information and awareness activities for employers and staff
- help for employees whose job may be in jeopardy as a result of their disability (DESE 2019).

Support offered by DES providers may include career advice, assistance to prepare resumes and job applications, job readiness skills training (e.g. interview skills, searching and applying for work), identifying appropriate education and training courses, as well as supporting employers and job seekers to access wage subsidies or implement workplace modifications (Melbourne Disability Institute & Brotherhood of St Laurence 2020, p. 6).

Reforms in July 2018 allowed greater choice for DES participants, enabling them to determine the provider they use and to change providers if they are not satisfied with the service they receive (DSS 2019b).

The eligibility for the DES program is being changed from 1 July 2021. The program is being more tightly targeted on those most in need of assistance. Jobseekers will be redirected to generalist employment services if they:

- have a disability impacting employment but have been assessed as having a work capacity of 30 or more hours per week
- have a partial work capacity but do not get income support payments (Services Australia 2020a).

Through DES providers, a person may also be eligible to access other supports such as:

- the National Work Experience Program
- a Youth Jobs PaTH internship
- AccessAbility Day
- Disability Employment Services.

## I.4 School Leaver Employment Supports (SLES)

The NDIS is responsible for funding supports to assist people with disability to prepare for, and take part in work, where the person has work capacity but needs some more support before receiving ongoing employment support through existing systems.

SLES supports are designed to plan and implement a pathway to inclusive employment, focussing on capacity building for goal achievement. With appropriate supports, it is expected that the majority of SLES participants will transition to DES to undertake the job seeking, placement and post placement support phases of their pathway. These supports will have an individualised approach, with a strong emphasis on "try and test" work experience opportunities, (generally in workplaces that would pay award wages). Capacity building should focus on hard and soft skill development. Supports, more generally, should facilitate positive experiences that contribute to developing an understanding of work capability and confidence to step into employment. SLES should also help inform the level and nature of future supports needed to obtain and sustain employment (NDIA 2021g, p. 91).

Some students may already be engaged with the mainstream Disability Employment Service (DES) Eligible School Leaver program during Year 12 and therefore not require SLES.

### Types of supports

Depending on the participant's employment goals and their current skill level, the supports to develop 'hard and soft skills' may include, but are not limited to:

- social and business communication
- money management
- travel training
- personal hygiene and personal presentation
- workplace norms, behaviours and expectations
- understanding rights and responsibilities in the workplace
- teamwork
- decision making and problem solving
- planning and organising
- working independently
- time management and prioritising
- conflict resolution and negotiation
- building resilience
- accountability
- flexibility
- self motivation and self determination
- computer literacy
- life skills and personal administration
- how a participant can sell themselves and their unique service offering
- resume preparation and job search strategies
- submitting a job application

- interview preparation
- recruitment paperwork preparation
- preparing for a participant's first day and induction (NDIA 2020bd, p. 7).

Participants and providers must also discuss the different employment pathways and employment types. This will help participants to better understand their work options.

## Funding

Providers claim for SLES supports provided under the support category 'Finding and keeping a job'.

Participant funding for SLES is an annualised 'average' amount, rather than based on a set number of hours (NDIA 2020bd, p. 10). The full annualised amount for 2020–21 is $22,789. To achieve a SLES outcome, providers will incur costs less than the average amount for some participants and more than the average amount for other participants (CIE 2021, p. 23). The funding arrangements, introduced in 2018, replaced the previous arrangements which provided incentives to keep participants 'on the books' rather than achieving earlier employment outcomes.

The price limits for other employment supports under finding and keeping a job are presented in Table I.6.

**Table I.6 Price limits for support category 'finding and keeping a job'**

| Rego. Group # | Registration Group | Support Item | Unit | Price limits - Queensland | | |
|---|---|---|---|---|---|---|
| | | | | Non-Remote (MMM 1–5) | Remote (MMM 6) | Very Remote (MMM 7) |
| 128 | Therapeutic supports | Employment related assessment & counselling | H | $193.99 | $271.59 | $290.99 |
| 102 | Assist. Access/Maintain Employment or higher education | Employment support | H | $63.21 | $88.49 | $94.82 |
| 102 | Assist. Access/Maintain Employment or higher education | School leaver employment supports | E | | | |
| 102 | Assist. Access/Maintain Employment or higher education | Activity based transport | E | | | |
| 133 | Specialised supported employment | Activity based transport | E | | | |
| 133 | Specialised supported employment | Centre capital cost | H | $2.15 | $3.00 | $3.22 |
| 102 | Assist. Access/Maintain Employment or higher education | Provider travel - non-labour costs | E | | | |
| 128 | Therapeutic supports | Provider travel - non-labour costs | E | | | |
| 133 | Specialised supported employment | Provider travel - non-labour costs | E | | | |
| 133 | Specialised supported employment | Supports in Employment - Weekday Daytime* | H | $55.47 | $77.66 | $83.21 |
| 133 | Specialised supported employment | Supports in employment - weekday evening* | H | $61.05 | $85.47 | $91.58 |
| 133 | Specialised supported employment | Supports in employment - Saturday* | H | $77.81 | $108.93 | $116.72 |
| 133 | Specialised supported employment | Supports in employment - Sunday* | H | $100.16 | $140.22 | $150.24 |
| 133 | Specialised supported employment | Supports in employment - public holiday* | H | $122.51 | $171.51 | $183.77 |

*Notes: Units: 'H' is Hours; 'E' is Each. Price limits for other states and territories are equivalent to the Queensland rates and effective from 1 March 2021. * Price limits are higher for providers claiming TTP prices.*
*Source: NDIA 2021g, pp. 65–66, 90–93.*

## Outcome measures and reporting

Providers of school leaver employment supports must regularly track progress towards the participant's goals, in accordance with their individualised plan. This is an opportunity to look ahead, refine agreed actions and review past achievements.

Goals can be short, medium and longer term. They should be specific, measurable, achievable, relevant and time-bound (SMART) and outlined in the participant's individual plan.

The reports should be easily understood by participants and include the following:

- a summary of the goals, milestones, timelines, and services to be delivered through the plan
- detail on the progress made towards goals since the start of the plan and during the current reporting period
- evidence of progress towards the plan goals including photographs, videos, audio recordings, work experience and other reports
- a rating scale with an indication of the level the participant is currently at for each goal or skill area and comments to justify the rating (NDIA 2020bd, p. 9).

Providers need to report on the nature and outcomes of school leaver employment supports through the NDIS provider reporting tool. This information allows the NDIA to monitor and evaluate funding outcomes. Some of the information collected includes:

- SLES status or outcome
  - Job in the open labour market with full award wages
  - Job in the open labour maket with supported wages
  - Job in the open labour market with full award wages, with assistance of Disability Employment Service (DES)
  - Job in the open labour market with supported wages, with assistance of Disability Employment Service (DES)
  - Job in an Australian Disability Enterprise (ADE)
  - Self-employed/micro-enterprise
  - Volunteering or other unpaid work
  - Education or further study
  - Referred to another provider
  - Exit from SLES with reasons specified (e.g. personal/ family circumstances, exited NDIS, to study)
- Employment status
  - Full-time, part-time, casual, temporary/contract, work experience, or self-employed/micro-enterprise
- Industry of employment/work experience
- Hours worked per week
  - 0-7 hours
  - 8-14 hours
  - 15-21 hours
  - 22-28 hours
  - 29-35 hours
  - 36 hours or more

# Table of acronyms and abbreviations

| | Definition |
|---|---|
| AASW | Australian Association of Social Workers |
| AAT | Administrative Appeals Tribunal |
| ABI | Acquired Brain Injury |
| ABS | Australian Bureau of Statistics |
| ACCC | Australian Competition and Consumer Commission |
| ACCHO | Aboriginal and Torres Strait Islander Community Controlled Health Organisation |
| ACCI | Australian Chamber of Commerce and Industry |
| ACCO | Aboriginal Community Controlled Organisation |
| ACSO | Australian Community Support Organisation |
| ADE | Australian Disability Enterprise |
| ADII | Australian Digital Inclusion Index |
| AFDO | Australian Federation of Disability Organisations |
| AHA | Allied Health Assistant |
| AHP | Allied Health Professional |
| AHPA | Allied Health Professions Australia |
| AHPRA | Australian Health Practitioner Regulation Agency |
| AHURI | Australian Housing and Urban Research Institute |
| AIHW | Australian Institute of Health and Welfare |
| AMS | Aboriginal Medical Service |
| ANAO | Australian National Audit Office |
| APA | Australian Physiotherapy Association |
| API | Application Programming Interface |
| APTOS | Applied Principles and Table of Services |
| ARF | Access Request Form |
| ART | Assessment and Referral Team |
| AS&RS | Accommodation Support and Respite Services |
| ASIC | Australian Securities and Investment Commission |
| AT | Assistive technology |
| ATSA | Assistive Technology Suppliers Australia |
| BoT | Board of Treasurers |
| CALD | Culturally and Linguistically Diverse |

| | Definition |
|---|---|
| COAG | Council of Australian Governments |
| CSIA | Community Services Industry Alliance |
| CSTDA | Commonwealth, State and Territory Disability Agreement |
| CVP | Community Visitor Program |
| DCAF | DisabilityCare Australia Fund |
| DCDSS | Department of Communities, Disability Services and Seniors (Queensland Government) |
| DCSYW | Department of Child Safety, Youth and Women (Queensland Government) |
| DES | Disability Employment Services |
| DESBT | Department of Employment, Small Business and Training (Queensland Government) |
| DESE | Department of Education, Skills and Employment (Australian Government) |
| DESSFB | Department of Employment, Skills, Small and Family Business (Australian Government) |
| DH | Department of Health (Australian Government) |
| DIA | Disability Intermediaries Australia |
| DoE | Department of Education (Queensland Government) |
| DPC | Department of Premier and Cabinet (Queensland Government) |
| DPO | Disabled People's Organisations |
| DPP | Digital Partnership Program |
| DRC | Standing Council on Disability Reform |
| DRMM | Disability Reform Ministers' Meeting |
| DSDSATSIP | Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships (Queensland Government) |
| DSP | Disability Support Pension |
| DSS | Department of Social Services (Australian Government) |
| DSW | Disability support worker |
| DVA | Department of Veteran's Affairs (Australian Government) |
| ECEI | Early Childhood Early Intervention |
| ESL | Eligible School Leaver |
| ESS | Employment Support Service |
| ESSA | Exercise and Sports Science Australia |
| HHI | Herfindahl–Hirschman Index |
| FIFO | Fly-in fly-out |
| GP | General practitioner |
| IA | Independent Assessments |
| IAA | Independent Audiologists Australia |

| | Definition |
|---|---|
| IAC | Independent Advisory Council |
| IEO | ABS Index of Education and Occupation |
| IGA | Intergovernmental Agreement |
| IHPA | Independent Hospital Pricing Authority |
| ILC | Information, Linkages and Capacity Building |
| ILO | Independent living options |
| IOPO | Institute of Professional Organisers |
| IUIH | Institute for Urban Indigenous Health |
| JSCNDIS | Joint Standing Committee on the National Disability Insurance Scheme |
| LAC | Local Area Coordinator |
| LGA | Local Government Area |
| LGBTQIA+ | Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Pansexual, Asexual, Genderqueer, Agender and Ally community |
| LHA | Liveable Housing Australia |
| MASS | Medical Aid Subsidy Scheme |
| MBL | Maurice Blackburn Lawyers |
| MEF | Market Enablement Framework |
| MOWG | Market Oversight Working Group |
| MMM | Modified Monash Model |
| MPS | Multi-Purpose Services |
| MTA | Medium Term Accommodation |
| NACCHO | National Aboriginal Community Controlled Health Organisation |
| NCC | National Construction Code |
| NCCP | National Community Connector Program |
| NDA | National Disability Agreement |
| NDAP | National Disability Advocacy Program |
| NDDA | National Disability Data Asset |
| NDIA | National Disability Insurance Agency |
| NDIS | National Disability Insurance Scheme |
| NDS | National Disability Services |
| NIIS | National Injury Insurance Scheme |
| NILS | National Institute of Labour Studies |
| NTSSS | NDIS Training and Skills Support Strategy |
| NZPC | New Zealand Productivity Commission |

| | Definition |
|---|---|
| ODEP | Office of Disability Employment Policy (US Department of Labor) |
| OECD | Organisation for Economic Co-operation and Development |
| OHS | Occupational health and safety |
| OLS | Ordinary Least Squares |
| OPG | Office of the Public Guardian (Queensland) |
| OT | Occupational therapist |
| OTA | Occupational Therapy Australia |
| PBSP | Positive Behaviour Support Plan |
| PC | Australian Productivity Commission |
| PCA | Property Council of Australia |
| PMC | Department of Prime Minister and Cabinet (Australian Government) |
| PPE | Personal protective equipment |
| PRG | Pricing Reference Group |
| PSC | Public Service Commission (Queensland) |
| RCC | Remote Community Connectors |
| QAI | Queensland Advocacy Incorporated |
| QAIHC | Queensland Aboriginal and Islander Health Council |
| QAMH | Queensland Alliance for Mental Health |
| QAO | Queensland Audit Office |
| QCA | Queensland Competition Authority |
| QCAT | Queensland Civil and Administrative Tribunal |
| QCS | Queensland Corrective Services |
| QDN | Queenslanders with Disability Network |
| QFCC | Queensland Family and Child Commission |
| QHRC | Queensland Human Rights Commission |
| QMHC | Queensland Mental Health Commission |
| QNMU | Queensland Nurses and Midwives Union |
| QPC | Queensland Productivity Commission |
| QSBC | Queensland Small Business Commissioner |
| QSC | NDIS Quality and Safeguards Commission |
| RACGP | Royal Australian College of General Practitioners |
| RANZCP | The Royal Australian and New Zealand College of Psychiatrists |
| RCC | Remote Community Connectors |
| RHOF | Rural Health Outreach Fund |

| | Definition |
|---|---|
| RIS | Regulatory impact statement |
| RoGS | Report on Government Services |
| SCHADS | Social, Community, Home Care and Disability Services |
| SCP | Structure–Conduct–Performance |
| SCRGSP | Steering Committee for the Review of Government Service Provision |
| SDA | Specialist Disability Accommodation |
| SDAC | ABS Survey of Disability, Ageing and Carers |
| SEQ | South East Queensland |
| SIL | Supported Independent Living |
| SLES | School Leaver Employment Supports |
| SMHIDS | Specialist Mental Health and Intellectual Disability Service |
| SOWG | Senior Officials Working Group |
| STA | Short Term Accommodation |
| TAFE | Technical and Further Education |
| TSP | Typical Support Package |
| TSS | Taxi Subsidy Scheme |
| TTP | Temporary Transformation Payment |
| URP | Unauthorised restrictive practices |
| VET | Vocational Education and Training |
| XCA | XtremeCARE Australia |

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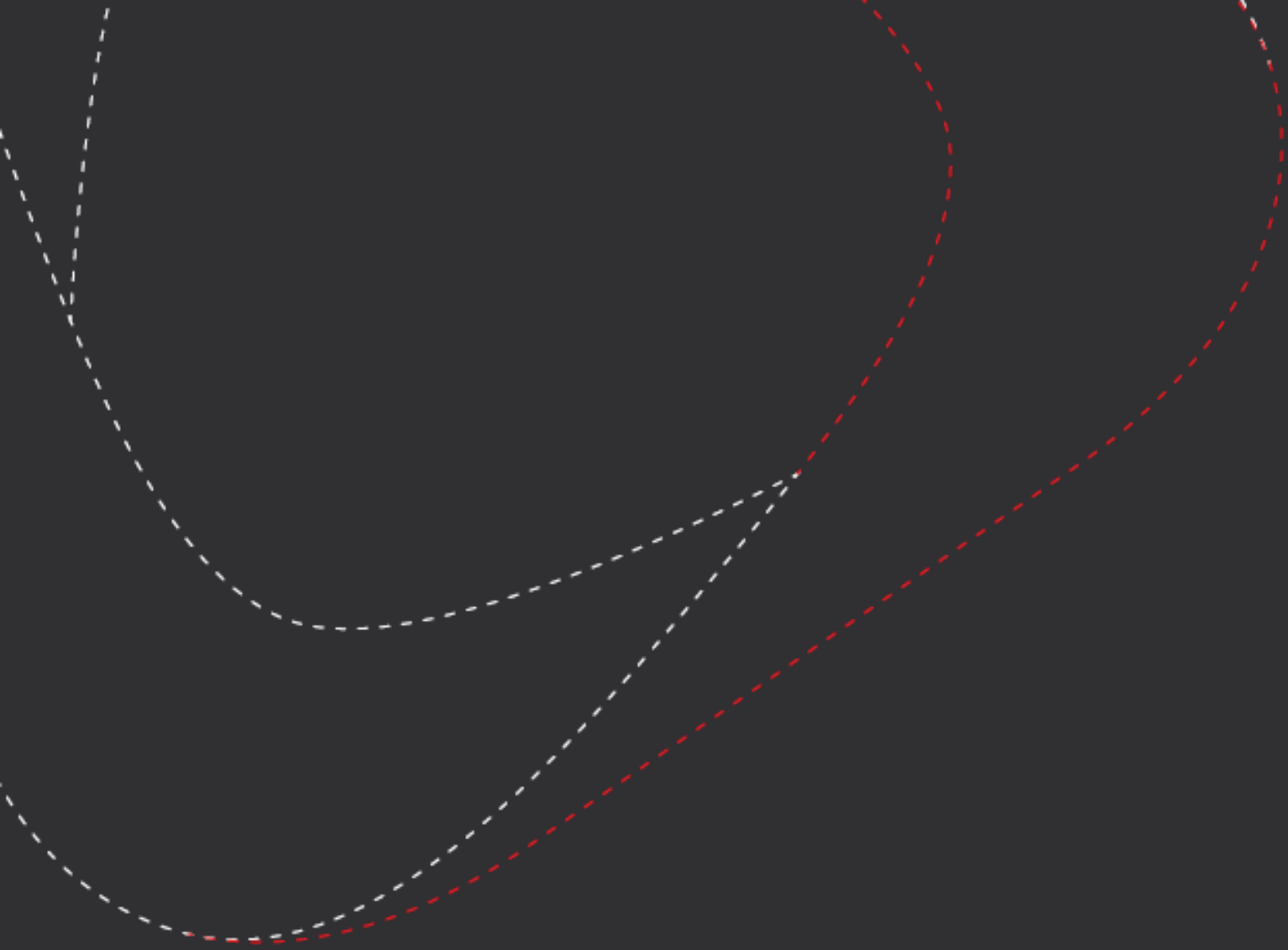

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