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## 20 The benefits of reform

### Key points

- As a major reform, the proposed NDIS will generate substantial economic benefits.
- These benefits arise from many sources: wellbeing gains to people with disabilities and informal carers; efficiency gains in the disability sector; savings to other government services; increased participation, and the resulting fiscal gains.
- The net *economic* cost of the NDIS is not the budgetary cost of around \$6.5 billion (which is a transfer of resources from one group to another). Rather, the economic costs reflect the distortionary impacts of raising the revenue. That represents a cost of around \$1.6 billion. Given this, the NDIS would only have to produce an annual gain of \$3,800 per participant to meet a cost-benefit test. Given the scope of the benefits, that test would be passed easily.
- The most important of the economic benefits are the welfare impacts for people with a disability and their carers. While not counted in official statistics about the performance of the economy, these are genuine and large economic gains. One, partial way of assessing these gains is the value of the implicit income transferred by the NDIS to people with disabilities. Commission estimates suggests benefits of around \$7.8 billion annually. This is likely to significantly understate the benefits.
- It is harder to measure some of the other economic benefits of the NDIS, but it is possible to assess some of its economic effects. These will take some time to emerge. Were Australia to achieve employment ratios for people with disabilities equivalent to the average OECD benchmark — a highly achievable target given the proposed reforms — employment of people with mild to profound disabilities would rise by 100 000 by 2050.
- In fact, the package of measures, including through DSP reforms, would be likely to raise employment by considerably more than 100 000. Under a reasonable scenario, the Commission estimates that there could be additional employment growth of 220 000 by 2050 (including those without core activity limitations).
- By 2050, the collective impact of these two employment gains would be around a one per cent increase in GDP above its counterfactual level, translating to around \$32 billion in additional GDP (in constant price terms) in that year alone.
- However, it is important to note that some of the economic impacts of the NDIS measured in official statistics of employment and output do not include the offsetting reductions in unmeasured informal employment and output.
- There would also be fiscal gains from reductions in DSP beneficiaries and an increase in part-rate DSP payments. These gains materialise slowly, but the value rises steeply. Taking account of the benefits over the longer run, the reforms would produce the equivalent of a \$2.7 billion dollar (constant price) annuity over the next 90 years.
- The bottom line is that benefits of the NDIS would significantly exceed the additional costs of the scheme.

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The NDIS — and the accompanying reforms to the Disability Support Pension and employment supports — will have fundamental impacts on the lives of people with disabilities, and more generally for Australians. This chapter explores the nature of those benefits, and where possible, tries to enumerate their potential value. (There would be additional significant benefits from the NIIS, but many of the benefits — such as through efficiency and early intervention — are canvassed in chapters 17 and 18). Some parts of this chapter are necessarily technical and precise in exposition. This reflects the fact that cost-benefit analysis is a difficult area, and that it depicts costs and benefits in ways that are different from the everyday use of such terms. The difficulties of such analysis are compounded by the importance of, but inherent difficulty in, valuing the many intangible and equity impacts of the NDIS.

Section 20.1 of the chapter defines the scope of economic benefits, since the source and nature of such benefits is commonly misunderstood. Section 20.2 considers the nature and significance of the potential gains from the NDIS, since these inform qualitative judgments about the potential benefits of the scheme. An additional important element of any economic appraisal is not just the potential for gain, but whether a government policy is likely to achieve that potential — the subject of section 20.3. Given the information from section 20.1 to 20.3, it is then possible to undertake a ‘plausibility’ test of the likelihood of a net benefit from the NDIS (section 20.4). The remainder of the chapter (sections 20.5 to 20.8) explores particular types of economic effects and their benefits from implementing the NDIS. Section 20.9 gives the bottom line.

## 20.1 What *are* economic benefits?

In considering the economic benefits of the NDIS, it is critical to understand what economists refer to as costs and benefits.

The separation of economic from social benefits is often not appropriate. Formally, economic benefits are any outcomes (‘goods’) that improve a person’s wellbeing.<sup>1</sup> The supply side — *how* things are produced — is not relevant for wellbeing, except in so far as it creates opportunities for people to buy more goods and services, have greater leisure, lead better lives generally, or contribute more broadly to society.<sup>2</sup>

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<sup>1</sup> In rigorous analysis, when economists refer to ‘utility’ they are referring to wellbeing, and when they refer to goods they mean anything that raises such wellbeing (holidays, good health, friends) and ‘bads’ (such as pollution or crime) as anything that lowers wellbeing.

<sup>2</sup> Gross domestic product — the supply side of an economy — is often closely linked to consumption — but is not an appropriate measure of wellbeing. For example, the destruction of houses from fire or flood may lead to an increase in construction activity, and higher GDP, but clearly to a loss of wellbeing.

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For instance, employment gives people income to finance their consumption, meaningful interactions with others and a sense of self worth (chapter 6). But people also enjoy leisure, and people need to be paid to work. It is the *outcomes* of employment that matter for economic wellbeing, and not necessarily employment itself. Otherwise, retirement would be seen as bad.

Only some goods are adequately measured by economists and statisticians.

*Some economic benefits are measured reasonably well*

Goods and services produced in markets or priced in dollar terms are reasonably well measured. These are the types of consumption reported in national accounts and in the financial media. Measuring consumption in this area provides a useful, but incomplete, estimate of people's wellbeing. As discussed in section 20.5, the prospects of better employment for people with disabilities would raise their prosperity and consumption.

*But many goods are measured badly*

Other kinds of 'goods' are measured less well or poorly. For instance, domestic labour, like caring, cooking a meal, and undertaking your own house renovations, produce goods that people value, but they do not appear in ABS labour market statistics or the national accounts. Moreover, communities and families produce many 'goods' that are not priced, but that improve people's wellbeing (good relationships, hobbies, helping others). While people often do not think of these as economic benefits, they are included within the framework used by economists. Understanding the value of intangibles is particularly important in evaluating policies that have a social as well as an (conventionally defined) economic rationale — as is the case with the NDIS.

While there are difficulties in enumerating them, the above less tangible 'goods' should be counted in cost-benefit analyses of policies that affect the 'production' of such goods. For example, one of the major economic impacts of a policy that reduced crime rates would not just be the avoided costs for the police and justice system, but the reduced emotional trauma for victims. The Commission attempted to incorporate the alleviation of these kinds of intangible costs into its analysis of the benefits of gambling policy and consumer regulation (PC 2008 and PC 2010b).

In its advice on measuring costs and benefits in policy analysis, the Department of Finance and Administration (2006, Appendix II) underlines the importance of counting non-market improvements in the quality of life. In 1996, a group of

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eminent economists, including Nobel laureate, Kenneth Arrow, set down principles for good cost-benefit analysis, noting that:

Not all impacts of a decision can be quantified or expressed in dollar terms. Care should be taken to ensure that quantitative factors do not dominate important qualitative factors in decision making. (Arrow et al. 1996)

## **20.2 Evidence suggests that the *potential* economic gains from the NDIS are large**

The Commission has identified many deficiencies in the current disability system that affects the lives of people with disabilities and the community as whole. These fall into three main categories.

### (i) Low economic participation

First, people with disabilities have low engagement in the labour market and many depend on government social income transfers. The result is that many people with disabilities are poor and cannot afford to buy things customarily purchased by other Australians (going on holiday or owning a car). They also lose the benefits of social interaction associated with employment. Moreover, the community loses the benefits associated with the economic engagement of people with disabilities (such as forgone tax revenue), while having to meet the expenses of income support.

### (ii) Inefficiency

Second, the current system results in the inefficient use of government services. This includes the wasteful use of resources in the current disability system. It also extends to areas of government service provision outside the disability system, such as in the health and justice systems.

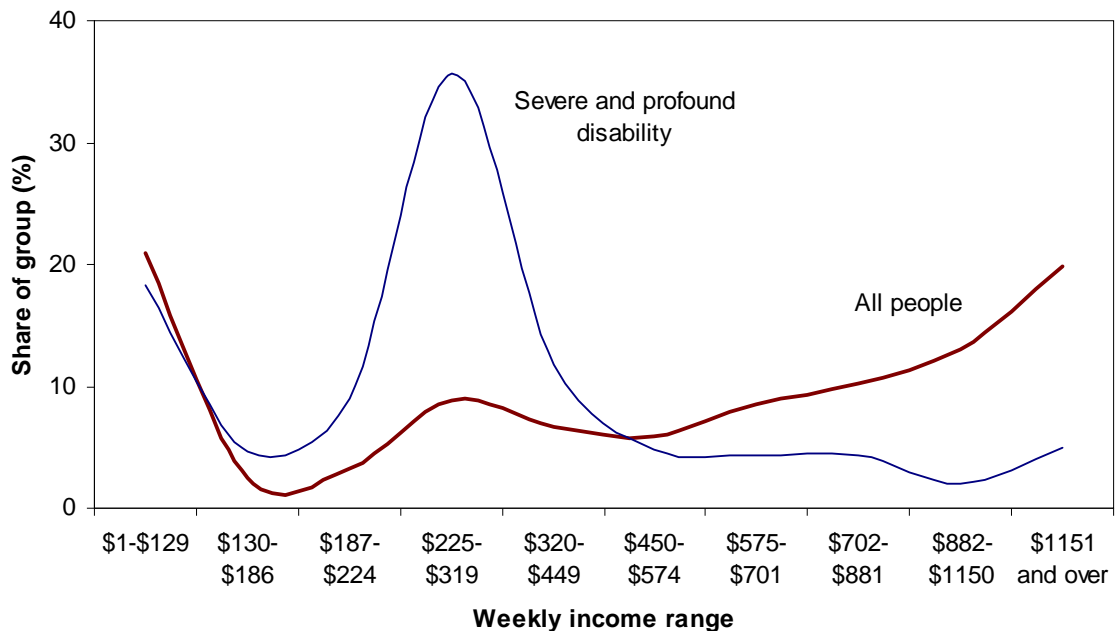
### (iii) Intangible impacts

Thirdly, the system leads to adverse ‘intangible’ impacts that are not easily priced. For people with disabilities, these include loss of opportunity, being dirty and uncomfortable because people with disabilities cannot get adequate access to personal support, indignity, lack of choice, loneliness, and lack of respect. Just the most simple of things — contact with people — can be significantly lacking. ABS survey data (appendix B) show that nearly one in five people with a profound disability have had no social contact with others in a three month period, while nearly all people without disability had at least one contact in that time. The other side of the coin of this social isolation is that the general community faces costs because of its reduced interaction with people with disabilities. There are benefits

for people without disability from an inclusive society. Finally, the adverse impacts of the current system on informal carers are profound.

Three graphs below summarise some of the extreme deficiencies across important aspects of the wellbeing of people with disabilities — income, distress and local disadvantage (Figures 20.1 to 20.3). They demonstrate that, compared with Australians as a whole, people with significant disabilities are often poor, highly distressed and located in areas of general disadvantage.

**Figure 20.1 People with severe disabilities are typically poor**  
2009<sup>a</sup>

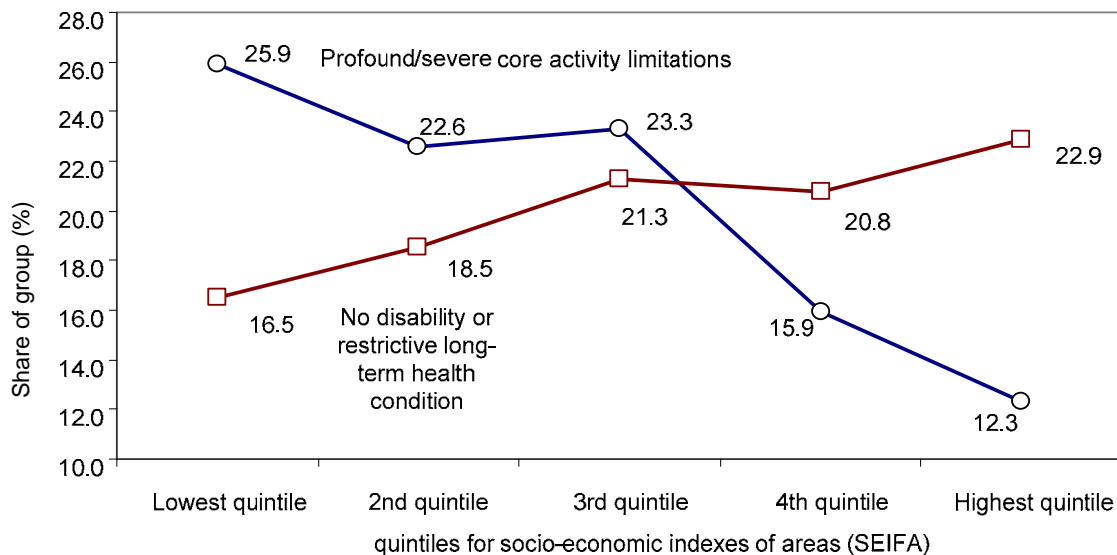


<sup>a</sup> The data are derived from the 2009 SDAC. They relate to people of working age (15-64 years). The data are indicative of the difference in the income distribution of people with disabilities, but should be interpreted carefully. Unlike the ABS's publication, *Household Income and Income Distribution, Australia, 2007-08* (Cat. No. 6523.0), the SDAC is not ideally suited to examination of income distribution. This is best undertaken on an equivalised household basis, which takes account of the number of people in, and other aspects of, a household. An equivalised measure provides an indicator of the economic resources available to a standardised household. Its derivation is complex. The implication is that the chart ignores the fact that (a) many people with a disability who have low personal incomes live in households where another family member earns some income (mainly wages or government transfers, which underestimates their genuine access to resources), (b) some people with significant disability may nevertheless be a significant breadwinner for others in a household (such as children), which overestimates their genuine access to resources and, (c) that a truly equivalised measure should take account of the fact that there are extra resources required for support of people with disabilities, meaning that again, a household with a person with a disability would have a lower capacity for consumption than an otherwise identical household with no person with a disability. It is likely that the above chart underestimates the relative poverty of people with severe disabilities compared with people without disabilities.

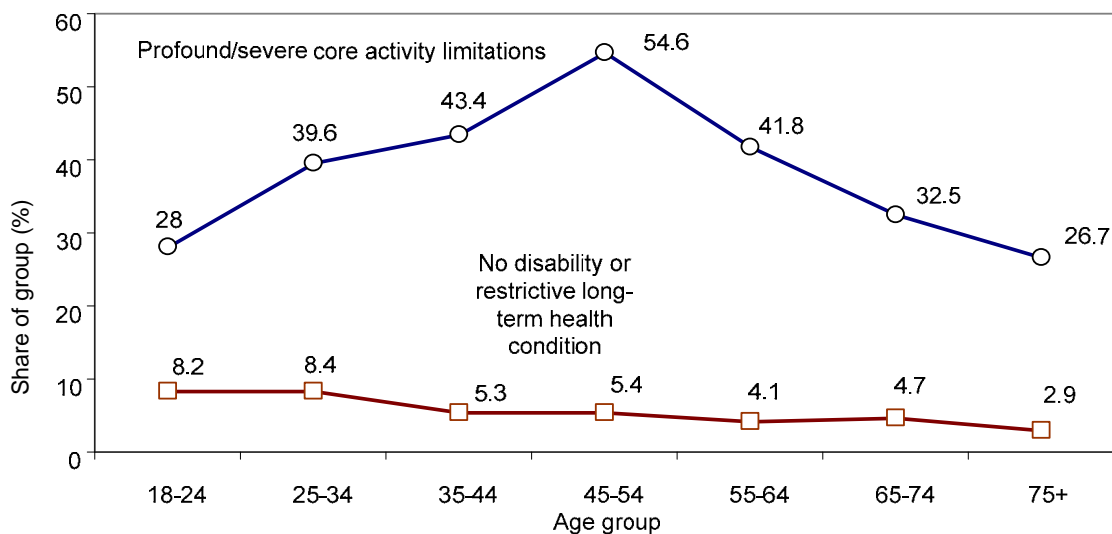
Data source: SDAC 2009 (unpublished data)

**Figure 20.2 There is compelling evidence of low wellbeing**

**People with severe disabilities live in disadvantaged areas<sup>a</sup>**



**A large share of people with severe disabilities suffer severe distress<sup>b</sup>**



<sup>a</sup> The SEIFA is measured in this case as a relative socio-economic disadvantage index, which covers 17 variables, including proportion of low income households in the area; proportion of people who do not speak English well; proportion of households who pay low rent; and proportion of people with no post-school qualifications. A low quintile means the bottom 20 per cent of the most disadvantaged geographic areas.

<sup>b</sup> Stress is measured using the Grouped Kessler 10 score.

Data source: ABS, 2011, *Aspects of Disability and Health in Australia, 2007-2008*, Cat. No. 4367.

Chapter 2 provides a more comprehensive assessment of the low wellbeing and lack of opportunity of people with disabilities.

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A system that cost-effectively reduced the deficiencies above would produce significant economic benefits.

### **20.3 But how much would the NDIS make a difference?**

In cost-benefit analysis, a critical issue is not just identification of a problem, but also assessment of the extent to which a policy intervention would make a difference. Conceptually, that involves comparing the ex post outcomes from the intervention with what would have happened in the absence of policy change (the ‘counterfactual’). That is difficult with even the best methodologies (randomised control trials), but it is particularly hard when the policy intervention has not yet occurred and when the system change is as comprehensive as the NDIS. Nevertheless, many major reforms face this difficulty, and the incapacity to measure impacts precisely is not a basis for policy inertia. In that context, the questions are whether:

- the policy change is large enough to credibly have large effects
- there is *reasonable* evidence about past policies or behaviours that can be used to assess the likely impacts, as well as the judgments of people with disabilities, service providers and carers.

On the former question, the NDIS represents a major change in the current system, including allocating more resources more fairly, giving people greater say, and constructing a disability system designed to maintain efficiency and rigorously contain cost blowouts. Table 1 of the overview provides a qualitative indicator of the scope of the changes, while chapters 14 and 16 indicate the large additional funding involved (roughly a doubling of current resourcing).

On the latter question, the Commission has examined a wide range of evidence in designing the NDIS to address the deficiencies of the current disability system, and in determining the appropriate scope and resource requirements for the scheme. Of course, while some evidence is more credible and reliable than others, ‘evidence’ is much broader than what academic studies show. It can include people’s views and experiences, surveys, expert opinion, results from analogous policy changes, and concordance with accepted understanding of how people behave. The Commission drew from a range of such evidence about the prospective impacts of the NDIS.

*Empirical evidence suggests significant wellbeing gains from reducing unmet need*

Analysis of the Survey of Ageing Disability and Carers (SDAC) provides some indicators on the wellbeing of people with disabilities and carers. In some cases,

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SDAC provides information about wellbeing by the degree of unmet need. This is important for the analysis of the impacts of the NDIS because the scheme would significantly reduce the level of unmet need. Table 20.1 provides an illustration of the potential magnitude of wellbeing effects that might flow for carers from the NDIS. The table shows very low wellbeing outcomes for carers where the formal support needs of the person with a disability support are not being met. The potential gain from alleviating unmet needs is shown in column 4 (shaded) — and are very substantial. The cost of carers' low wellbeing is hard to measure in dollar terms. However, the dollar value of intangible costs that have far smaller impacts on people's lives have been found to be large,<sup>3</sup> implying that the dollar equivalent of low wellbeing of inadequate supports for carers would be very high.

While, the SDAC provides far fewer measures of wellbeing for people with disabilities than carers, table 20.2 shows three areas where the gap in outcomes between those having their needs met and those not are relatively high. Again, the NDIS should significantly close that gap.

Analysis of the survey of Household, Income and Labour Dynamics in Australia (HILDA) — a general survey covering around 20 000 people — has found very high values for increased social and economic participation for people with disabilities (Yu 2010, 2011). (As an indicator of the importance of 'intangibles, this research found that gains of employment are *not* only associated with the extra money). As discussed in greater detail below, there is significant potential for employment gains for people with disabilities from implementing a broad package of reforms, of which the NDIS would be a part (section 20.5).

### *Reducing costs in government services*

As discussed in chapter 2, inadequacies in the current disability system rebound elsewhere — in the health system, income support, the justice system and the wider disability system itself. For instance, inadequate community-based supports sometimes result in long and costly use of hospital beds ('bed-blocking'). Also, proper supports such as appropriate wheelchairs, cushions, mattresses, attendant care and incontinence aids, reduce the likelihood of pressure sores — which are costly to treat and can be life threatening. Better support of informal carers through proper respite and other services would reduce relinquishment rates and blockage of respite beds, and reduce the need for inappropriate and costly full-time accommodation services.

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<sup>3</sup> For instance, in the Commission's inquiry into consumer policy, studies of consumer detriment found large welfare losses from 'nuisance', and this was exemplified by litigation outcomes (PC 2008).

**Table 20.1 Wellbeing of informal carers for people eligible for funded support by the NDIS**  
2009<sup>a</sup>

<i>Impact</i>	<i>Share of carers experiencing impacts</i>		
	Person cared for claims they need additional formal assistance (A)	Claims does not need additional formal assistance (B)	Potential impact of NDIS (B-A)
	%	%	%
<i>Physical and emotional effects of the caring role</i>			
Wellbeing has changed	52.7	32.6	-20.1
Feels satisfied	18.6	24.8	6.2
Feels weary or lacking in energy	50.1	33.6	-16.5
Frequently feels worried or depressed	47.1	33.4	-13.7
Frequently feels angry or resentful	23.3	7.1	-16.1
Has been diagnosed with stress related disorder due to caring role	18.5	10.8	-7.8
Often has sleep interruptions that affect daily functioning	31.7	17.2	-14.5
Lost or losing touch with or changed circle of friends since taking on the caring role	47.5	35.5	-12.0
<i>Relationship with person cared for</i>			
Strained or lacked time together	22.1	16.8	-5.3
Unaffected	37.4	43.5	6.1
Brought closer together	40.5	39.7	-0.7
<i>Relationship with other co-resident family members</i>			
Strained or less time to spend with them	50.2	34.3	-15.9
Unaffected	38.9	49.0	10.1
Brought closer together	9.5	12.3	2.8
<i>Relationship with spouse or partner</i>			
Strained or lacked time together	47.8	30.9	-16.9
Unaffected	30.2	38.0	7.8
Brought closer together	22.0	31.1	9.1

<sup>a</sup> The data relate to co-resident primary carers providing informal supports for people who would qualify for the NDIS. The *potential* impact of the NDIS is the difference between outcomes for people caring for a person with a disability whose has his or her needs met and the outcomes for carers where that is not the case. The assumption is that by significantly reducing unmet need for people with disabilities, the wellbeing gap between the two groups of carers would be narrowed.

Source: SDAC 2009 (unpublished data).

**Table 20.2 Outcomes for people with disabilities clearly reflect the extent of unmet need<sup>a</sup>**

	<i>Needs additional assistance</i>	<i>Does not need assistance</i>	<i>Potential NDIS impacts</i>
Participation rate	26.1	34.5	8.4
Contact a few times a day with non-resident family or friends	15.8	23.6	7.8
Can go out as often as would like	41.9	65.1	23.2

<sup>a</sup> Unfortunately, the SDAC does not pose anywhere as large a set of wellbeing questions to people with disabilities as it does for carers. Many questions relate to very specific social activities, like going to church or attending a cinema, and not surprisingly do not show up many significant gaps between those with met and unmet needs. Moreover, the data do not indicate the *degree* to which needs are met, further weakening the data for the purposes intended.

Source: SDAC CURF 2009.

Studies of early interventions (which would be properly funded under the NDIS) often demonstrate significant and measurable returns for future disability system costs and for the health sector (chapter 13). Table 13.1 provide summaries of seven recent economic studies — involving a range of interventions — often involving savings to the health system (in addition to the unmeasured benefits to people’s wellbeing).

Sometimes early interventions produce gains outside the health system. There is a high proportion of people in the criminal justice system with an acquired brain injury or a mental illness. 37 per cent of prison entrants reported having a mental disorder at some time and 18 per cent reported that they were currently taking medication for a mental health related condition (AIHW 2009b). Similarly, the Department of Justice in Victoria (2007) found that the rate of intellectual disability was 30 per cent higher among the prison population than the general population. These prisoners also had a higher number of prison incidences recorded against them and were assessed as being a higher risk of offending. The NDIS *may* alleviate this.

People that are supported properly may be less likely to offend. For instance, the Commission has recommended community supports for people with enduring and significant psychiatric disability (chapter 3). These people are at a higher risk of homelessness and offending than others, but ongoing assistance to manage in the community is likely to increase their wellbeing, and lower the costs that are borne by other government agencies and the community at large. For instance, the NSW Integrated Services Project (ISP) was aimed at people with challenging behaviours (McDermott, Fisher and Gleeson 2010). Most of the people in this study would be eligible for the NDIS (for example clients had mild intellectual disabilities, acquired

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brain injuries from alcohol and substance abuse, and multiple psychiatric diagnoses). 50 per cent of the clients had spent some time in prison in the 12 months before the ISP. The evaluation found that the number of days spent in prison decreased on average by 87 days per year. (There were also other gains, with the number of hospital emergency presentations decreasing on average by 20 presentations per year and the number of days in hospital decreased on average by 45 days per year).

### *Personalisation has efficiency and wellbeing benefits*

A large body of literature on personalisation and self-directed funding (appendix E and chapter 8) shows major benefits for people with disabilities and carers, at typically no greater cost. Many of these studies have used rigorous randomised control trials. Few people with disabilities have access to self-directed funding currently in Australia (appendix D). If they desired it, most would have this as an option after the introduction of the NDIS. While many people may not initially choose to self-direct by cashing out their packages, most would exercise greater choice (such as having a say in determining their individual package of supports and in choosing service providers).

### *Supplier efficiency and choice*

The existing disability support system is not as efficient as it could be. Much of it has been centred on the contractual relationships between service providers and governments, not supports chosen by people to suit their lives. As one participant noted, a support provided at the wrong time is like ‘sending a bald man to a barber’. An ill-delivered service is waste. A new coherent system would achieve much better value for money.

The NDIS would be structured so that, as much as feasible, competition was strong between service providers, underpinned by choice and information for people with disabilities and intermediaries (disability support organisations), who would act as brokers and build the capacity of people to make informed choices (chapter 10). Over the longer run, competition should encourage more innovative and cost-effective services, especially in major metropolitan areas where there should be a large number of alternative providers.

Moreover, the Commission has recommended an insurance governance arrangement, which would encourage productivity improvements. The Commission widely consulted with insurers and people running motor vehicle accident schemes — such as the Victorian Transport Accident Commission, the NSW Lifetime Care and Support Authority and the New Zealand Accident Compensation Corporation.

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The experiences of these schemes suggested that there are significant efficiencies from adopting insurance principles in the governance of the NDIS (and the NIIS). Such design features are likely to increase the longer-run economic benefits of a properly governed disability system.

The gains could be large. The costing undertaken by the Commission uses existing service prices, which will incorporate any inefficiency in the sector. If the NDIS were to induce just a one per cent improvement in the productivity of the sector, then all other things being equal, that would reduce the costs of the NDIS by around \$130 million per annum. This would provide around a 2 per cent reduction in the incremental budgetary cost of implementing the NDIS (noting that current sector funding is around \$7 billion and the new funding around \$6.5 billion.)

The Commission is not aware of any studies that rigorously assess the potential for productivity gains in the disability sector, but some exist for aged care facilities, which share common features with some disability services, and most particularly exists in a similar, highly regulated market, dominated by not-for-profit agencies. In Australia, the most sophisticated study (undertaken for the Hogan Review) found that the average efficiency of the aged care sector could be improved by about 17 per cent (CEPA 2003). The relevance of this is that it supports the contention that significant gains in productivity may be achievable in disability sector too. Clearly, large improvements in productivity — say 10 percentage points — would drive down the costs of the disability sector by \$1.3 billion, representing a saving of around 20 per cent in the budget required to implement the NDIS.

### *Tax efficiencies*

The Commission has given first preference to a ‘tax swap’ as the vehicle for funding the NDIS. Such a swap has the potential for producing significant economic efficiencies by displacing inefficient state and territory taxes with more efficient Australian Government ones. A reduction in the marginal excess burden of tax of 10 percentage points for the nearly \$5 billion of revenue for disability supports currently raised by state and territory governments represents an economic benefit of \$500 million.

Whether that saving should be counted as a benefit of the NDIS is unclear. On the one hand, governments are always free to negotiate tax swaps that are not connected to any specific deals on new spending proposals. On the other hand, such tax reforms have not occurred (after the GST reforms), and to the extent that an NDIS — which must be funded from somewhere — *induces* such a tax swap, the gain could be seen as an outcome of the NDIS reform.

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### *Diverse groups recognise the benefits*

No group has disputed that the current disability system needs change and more funding, and the majority have agreed that the types of reforms proposed by the Commission would achieve much better outcomes. That includes peak business bodies, state and territory governments, service providers, people with disabilities, and carers. Experts have indicated the scale of the deficiencies and how they could be resolved through reform along the lines of the NDIS. (Expert advice was particularly useful in considering the benefits of incorporating community mental health into the NDIS.) In many areas of public policy, there are winners and losers, with winners strongly endorsing the policy and losers opposing. The tariff reform debate in Australia took this form. This adversarial approach has not been a feature of submissions to this inquiry (of which there were over 1000). Groups usually concerned about the role of government in the community and its spending — such as the business sector — have supported change (Business Council of Australia, sub. DR1015).

### *Gains are readily achievable*

Achieving gains in some areas of social policy — such as indigenous disadvantage, intergenerational poverty and persistent welfare dependence — have proved to be very difficult. This reflects the particularly complex interplay of factors underlying such entrenched disadvantage and the local cultural norms that reinforce them. However, some communities aside (such as Indigenous communities — chapter 11), the kinds of disadvantage related to disability are less complex. Much of severe disability reflects a lottery in life, and can affect any family — a person can be a successful doctor or tradesman one day, and a stroke-victim the next. By providing support, the government and the community can reduce many of the worst disadvantages of disability using simple approaches (like the reasonable resourcing of personal care, certainty of supports, a better chance of a job and assistance in daily management tasks). There remain some complexities in this area, and some changes — such as the greater exercise of choice — may take some years to realise. However, as several participants observed, achieving much better outcomes quickly is not ‘rocket science’ (Sue O’Reilly, sub. 131; LISA Inc, sub. 11; Colin and Rosemary Iverson, sub. 174).

Accordingly, the collective evidence suggests that there are strong prospects that the NDIS would substantially improve people’s lives and improve efficiency — a large economic benefit. Indeed, these economic benefits are likely to eclipse the benefits of many things that are counted as valuable in official statistics.

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The remainder of this chapter sets out some of the specific areas where benefits are likely to be realised, shows some plausible scenarios for certain kinds of benefits and, where possible, indicates the possible dollar values of those benefits. That said, given the nature of some of the intangible economic benefits, the Commission has not attempted to measure the entire net benefits of the NDIS in dollar terms.

## 20.4 A basic plausibility test

One way of testing the plausibility of net benefits from the NDIS and its associated package of reforms is to

- consider the costs of the scheme (using the conventional cost-benefit framework for measuring these) and identify the value of the benefits per scheme participant that would be required to just outweigh these
- make a judgment whether the measure of benefits derived from the above calculation passes a credibility test, taking into account the wide set of benefits described above.

### The costs

*Budgetary costs are not economic costs*

The *budgetary* costs of the NDIS are its incremental costs of around \$6.5 billion, not the gross amount of around \$13.6 billion (chapter 16). However, budgetary amounts are not economic costs. In thinking about the *economic* costs and benefits of \$6.5 billion of spending, several factors are particularly important.

The real economic costs from *financing* the NDIS stem from the fact that raising \$6.5 billion dollars distorts people's decisions in ways that makes them worse off. The size of this effect depends on how the NDIS is financed. The Commission is recommending that, in the first instance, the Australian Government seek to reprioritise its spending to fund the NDIS in preference to increased taxes. From an economist's perspective, this can still be seen as a tax financing method because it would be identical to cutting the relevant government spending, lowering taxes and then raising the forgone revenue using new taxes. Therefore, it raises similar considerations about the distorting effects of taxes as entirely new tax collection.<sup>4</sup>

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<sup>4</sup> However, it would have potentially significant efficiency gains because displacing government spending results in no net economy-wide tax increases, and so would be more efficient. (Tax distortions rise with higher taxes.)

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The distortions from higher taxes arise when people work less when governments tax labour, invest less when governments tax returns on investments, and move less when governments put stamp duties on conveyancing. Chapter 14 sets out one measure of the size of these costs when government increases its taxes by a small amount (the ‘marginal excess burden’ of tax or MEB). As shown in tables 14.1 and 14.2, the size of the MEB varies with the type of tax. The Commission’s approach to financing the NDIS is to use the best set of efficient taxes (noting that tax reform may further enhance such efficiency, reducing the economic costs of the scheme further), rather than to use one new hypothecated tax.

A reasonable assumption is that the relevant marginal excess burden would relate to income tax revenue (such as through increases in tax revenue that occur when tax thresholds do not completely reflect inflation — so-called ‘fiscal drag’ — rather than through changes in marginal tax rates). There are many estimates of the MEB for income tax (for example, Gabbitas and Eldridge 1998). The most recent of these studies undertaken for the Henry Tax review (chapter 14) suggested that the MEB of income tax was around 24 per cent. That suggests that the approximate *economic* cost of funding the NDIS would be around  $0.24 \times \$6.5$  billion or about \$1.56 billion.

#### *Lost consumption benefits to taxpayers who finance the scheme*

The \$6.5 billion reduces the income (and therefore consumption) of one group of people — taxpayers in the general community and raises the consumption of people with disabilities and informal carers by the same dollar amount. In conventional cost-benefit analysis, taxpayers lose from such an exchange (though see section 20.8 for alternatives where this is not true), with the economic impact on them depending on the marginal loss in *welfare* of a lost dollar of income. This is termed the ‘marginal utility of income’ (MUI) by economists and is used widely in cost-benefit analysis of government policies (Farrow 2009; Layard et al. 2008; Stiglitz 1988, pp. 273ff; Summers and Heston 1999; Cowell and Gardiner 1999). The importance of the MUI underlies progressive taxes, which re-distribute income from high to low income people.

That said, there is controversy about the measurement of the MUI and the extent to which cost-benefit analysis should take account at all of the re-distributive effects of government interventions (Harberger 1978, Kaplow 1996). In some cost-benefit analysis, the benefits of any resulting re-distribution are ignored on the grounds that if government wanted to re-distribute income, it should do so directly through the tax/transfer system. However, as noted by Stiglitz:

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... when a government's ability to re-distribute income through non-distortionary means is limited, the distributive effects of a government project should be taken into account (p. 274)

This is an area dogged by complexities, with the results highly dependent on the underlying assumptions (Johansson-Stenman 2001). Nevertheless, it is common practice for cost-benefit analysis to provide higher weights from benefits or costs to people with lower incomes. For example, it is recommended by the UK Treasury where distributional impacts of a policy are important (HM Treasury 2011), and it has undertaken recent methodological research in this area (Fujiwara and Campbell 2011). The Australian Department of Finance and Administration noted:

As a general practice, it is recommended that analysts refrain from attaching distributional weights to cost and benefit streams in the interest of avoiding subjective bias. The exception is where an unambiguous government policy objective can be identified to assist the specific group at which the project or programme is aimed; and where the priority of assistance to this group relative to other groups is also clearly established. These are stringent and restrictive conditions. (DOFA 2006, p. 86)

We explore aspects of this issue further below, but the bottom line is that there are stronger grounds for including distributional impacts in the analysis for two reasons:

- (a) a major motivation for the NDIS is essentially re-distributive (to move resources to people with large unmet needs from taxpayers generally)
- (b) the NDIS would be a more efficient route for such re-distribution than the tax-transfer system (that is just giving people with disabilities extra money without any constraints and letting them buy what they want). Moreover, the usual problems of re-distribution are much less acute for the target group of the NDIS than for re-distributive policies generally applying to other people (see box 20.7 later).

Once the MUI is considered relevant, the welfare loss of taxpayers, and welfare gain from NDIS participants will depend on their incomes and individual circumstances. Nevertheless, other than in the circumstances spelt out in section 20.8, taxpayers experience a wellbeing loss ( $C_1$ ) from the transfer of \$6.5 billion to the NDIS.

## **The benefits**

Section 20.2 described the broad groups of likely benefits — private benefits for people with disabilities, fiscal offsets and economic efficiency gains. It is important to note, given the discussion of the marginal utility of income above, that the private welfare gains from additional resources provided by the NDIS to people with

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disabilities ( $C_2$ ) will be greater than the lost benefits to taxpayers ( $C_1$ ). Box 20.1 gives a concrete example of why that is likely.

### Box 20.1 A tale of two people

To give a concrete example, Mike has an annual income of \$150 000, which he spends on all basics of life, but also holidays, a nice house and a car. In contrast, Mary, who has a severe disability, has an annual income — after government transfers — of \$25 000, and she gets around half of her reasonable personal care needs met. Beyond the basics, she cannot buy the things that Mike can. More particularly, she is sufficiently poor that she cannot afford to top up her support needs to an adequate level. She would need another \$15 000 to do so. She cannot get out much, she needs a nappy because she cannot get enough personal care, and she endures discomfort and indignity. (Later in this chapter, we will also discuss how these circumstances affect her employment, and the consequences this has for her and the community.)

There are many people like Mike in Australia and relatively few people like Mary. Under the NDIS, 15 'Mikes' give up \$1000 each and Mary gets goods valued at \$15 000 to buy the needed supports (closely equivalent to an income supplement of \$15000).<sup>5</sup> Mary now has an income equivalent to around \$40 000 and the 15 'Mikes' have \$149 000 each, only a very little lower than before. The loss in wellbeing experienced by each Mike is low, and is still likely to be low when summed across all 15 of them. The wellbeing gains for Mary in having her needs met are likely to be very large in comparison with aggregate lost wellbeing of the collective Mikes. The incremental consumption benefits in this case are equal to the sum of the losses in wellbeing for the 15 Mikes and the wellbeing gains for Mary. (In some approaches to the cost-benefit analysis, the losses to Mike are more apparent than real — an issue we discuss later).

Accordingly, the NDIS and associated reforms produce three broad economic benefits:

- the excess value of consumption from resources transfers to people with disabilities ( $V$  or  $C_2 - C_1$ )
- efficiency benefits ( $E$ ), such as more efficient service provision
- the economic benefits of fiscal savings, such as those arising from reduced DSP payments ( $F$ ). The economic benefits of fiscal savings are not the dollar value of the savings themselves, though that is what will show up on the government's budget bottom line. Rather, fiscal savings take pressure off taxes, and the gain from doing so is equal to the avoided marginal excess burden on those taxes. In

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<sup>5</sup> Not exactly so, since at the margin, Mary might spend a small amount of the \$15 000 on things outside her individualised package that are not directly related to her disability, in which case the income equivalent of the package is somewhat less than its dollar amount (reflecting the inefficiency sometimes entailed by hypothecation).

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other words, the economic benefits from fiscal gains are symmetric to the economic costs of higher taxes.

The remaining relevant factor is the distorting impacts of taxes (MEB), which as noted earlier, is around \$1.56 billion.

Given there are around 410 000 people funded by the NDIS, the value of V+E+F per participant in the scheme would have to exceed about \$3800 per person to pass a conventional cost-benefit analysis.<sup>6</sup> Given the large intangible costs described above and in chapter 2, and the reasonable prospects for some benefits from both E and F, that prospect seems strongly probable. The NDIS meets the ‘plausibility test’.

## **20.5 The employment impacts on people with disabilities of the NDIS, DSP and employment service reforms**

As discussed in chapter 6 and appendix K, Australia has a relatively poor performance in employment of people with disabilities. The NDIS would provide much greater support for people with disabilities. As shown below, there are around 60 000 adults who would be eligible for the NDIS and who perceive employment as a genuine possibility (table 20.3). Moreover, many of the obstacles to work appear to be surmountable, either through the direct interventions of the NDIS (in school to work transition programs, supported employment and community engagement) or through changes in broader employment supports (for example, in disability employment services, which lies outside the NDIS).

While there is good potential for achieving better job outcomes for people eligible for funded NDIS support, the target for disability employment initiatives is much larger. Changes in community attitudes and individual initiatives can also affect the general employment prospects of people with disabilities outside tier 3 of the NDIS. The Commission has proposed a range of initiatives that are likely to engage the community and business to improve employment outcomes (chapter 4). These are part of the tier 2 functions of the NDIS. Complementary measures from reform of the DSP and additional provision of employment services (chapter 6) and appropriate training would provide greater incentives for employment, provide better support for people in jobs, and improve job matching. Recent analysis by Mavromaras (2011) using Australia’s HILDA survey found that even short VET courses can significantly improve employment prospects for people with

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<sup>6</sup> That is, \$1.56 billion/410 000.

disabilities, increasing their productivity and attractiveness to employees. That study also found that most people in the survey reported that they could work to some extent, despite their disability.

A *package* of reforms, of which the NDIS would be a core part, would be the most effective way of achieving long run gains in disability employment rates.

**Table 20.3 The NDIS would improve employment prospects for people receiving funded support**

	<i>People eligible for funded NDIS supports 15–64</i>	<i>Share of those not working</i>
	Number	% of total
<i>Not in work, but no current employment restrictions</i>	8 117	4.0
<i>Say that they cannot work at all under any circumstances</i>	140 193	69.9
<i>Say they could work, but have employment restrictions</i>	42 647	21.3
Restricted in type of job	7 067	3.5
Restricted in number of hours	1 051	0.5
Difficulty changing jobs or getting a preferred job	7 547	3.8
Need for time off from work (at least one day per week)	5 875	2.9
Need for employer provided equipment and/or special arrangements	6 707	3.3
Need for support person at work or is receiving assistance from a disability job placement program or agency	849	0.4
Need for ongoing supervision or assistance	13 550	6.8
<i>Say they cannot work, but could in fact work if they received further support<sup>a</sup></i>	9 548	4.8
Training	1 119	0.6
Equipment	969	0.5
Working at home	2 471	1.2
Time off	534	0.3
Assistance with work or personal care tasks	2 987	1.5
Other	1 469	0.7
<b>Main target group for employment assistance</b>	<b>60 313</b>	<b>30.1</b>
<i>Total people in the NDIS who are not working</i>	200 505	100.0

<sup>a</sup> Some people initially said that they could not work, but subsequently in the survey indicated that they could do so with some supports. <sup>b</sup> The main target group is everyone not in work, except those who say they could not work under any circumstances.

Source: SDAC 2009 (unpublished data)

The Commission has undertaken detailed, but experimental, calculations of the potential impacts of the combined impacts of the introduction of the NDIS and its proposed DSP/employment reforms. These are similar in vein to the scenario approaches — informed as much as possible by evidence about what may be plausible — used by the Commission in its ex ante assessment of the possible gains from the COAG National Reform Agenda (PC 2006) and Lattimore (2007).

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Conservative assumptions have been used. In particular, change would probably be relatively slow. This reflects the fact that major reforms, like the NDIS and DSP changes, are likely to be most effective for people who are just entering the system for the first time. People in the ‘stock’ would often have missed opportunities for early intervention, had poor educational experiences, been dogged by low expectations by others (‘learned passivity’ as one party put it), faced a community culture not strongly conducive to their employment and had long breaks from employment that erode skills and confidence. The system should try to engage these people, but the success rate could be expected to be higher for people who are entering the disability system for the first time.

Moreover, the implications of employment change for national output needs to take account of the type of jobs being created. As discussed in the Commission’s work on the National Reform Agenda (PC 2006, p. 284), Forbes et al. (2010) and Lattimore (2007), the research suggests that the productivity rates of people leaving (or at the margin, not entering the DSP) tend to be lower than the average worker, and their weekly hours of work lower. It is notable that many have relatively low qualifications (Mavromaras 2011, p. 8) and have had precarious employment experiences, which is why many entered the DSP in the past. This is an *average* phenomenon. There will be some people with disability with advanced skills, who with support, would have much higher than average economy-wide productivity levels and could work longer hours than many others.

That said, even conservative assumptions lead to significant economic and employment effects. Table 20.4 shows the impacts of two ‘what if’ scenarios, both of which have been realistically modelled so as not to exaggerate the gains.

### **The impacts of catching up to OECD average employment**

Were Australia to reach the average OECD relative employment rate for people with mild to profound disabilities (compared with those without such disabilities), then it is estimated that their overall employment would rise by around 100 000 by 2050. This equates to an increase in the employment rate of this group of 11 per cent above its counterfactual level.

This employment increase would in turn increase GDP by around 0.2 percentage points above its counterfactual level. The latter may not sound very high, but it would be a permanent effect, and GDP is a large value. So, in 2050 alone, the increase in constant price terms of GDP would be around \$8 billion.

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## DSP, NDIS and employment services reform

In fact, with a package of reforms, it is likely that Australia could do better than the OECD average in terms of employing people with mild to profound core activity disabilities. This reflects the strong growth prospects of the economy and the fact that the Australian economy has a particularly strong orientation to the production of services (Productivity Commission 2003b, p. 23ff), which may generally better suit the employment of people with disabilities. Moreover, many people have work limiting disabilities — but no core activity limitations — and the prospects of their greater employment are ignored in the ‘catch-up’ calculations above.

While only one source of employment improvement, the Commission has examined some credible ‘what if’ scenarios associated with reform of the DSP (and the associated improvements in employment supports, greater aspirations of people with disabilities, and increased receptiveness of the community and business to the employment of people with disabilities). The reforms proposed by the Commission would be likely to reduce the inflows into the DSP and to increase the outflow rate. It is still expected that absolute DSP numbers would rise, mainly reflecting population growth, but also the ‘momentum’ to the stock by given inflow rates, which can only be expected to fall gradually. The Commission has incorporated some reduction in the inflow rate and an increase in the outflow rates under the counterfactual of no policy change — reflecting the fact that stronger economic growth affects such rates. We have assumed that:

- the DSP inflow rate falls from 0.62 per cent to 0.35 per cent by 2050 through DSP reform. Notably, the inflow rate was just under 0.45 per cent in 2006 (before rising again), so the assumption does not appear excessively optimistic. For our purposes we have assumed that under the counterfactual (without the Commission’s proposals), the inflow rate would fall to 0.45 per cent, reflecting the impacts of pre-announced policies, such as changes to the impairment tables announced by the Australian Government.<sup>7</sup>
- the DSP outflow rate rises only slightly from 6.2 per cent to 7 per cent in line with reversion to recent rates. The Commission has not estimated large increases in outflow rates, since reforms produce two contrary pressures on outflows. On the one hand, people already on the DSP will have more opportunities for jobs. On the other hand, the outflow rate mostly relates to people who have just entered the DSP (appendix K), and the inflow rate will have fallen. The Commission has assumed that these factors cancel each other out, so that the net impact of reforms relative to the counterfactual are approximately zero.

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<sup>7</sup> The Commission has not factored in the proposed expansion of the income tax free threshold associated with the carbon tax, which will also affect work incentives.

Accordingly, the outflow rates are the same under both the policy change and counterfactual and tend to 7 per cent.

A further important aspect of DSP reform is the expectation that the employment rate of people who *remain* on the DSP would rise. We have assumed that a doubling of the employment rate to around 20 per cent (mainly in part-time, lower skilled jobs) is possible.

**Table 20.4 Employment, output and fiscal gains from two scenarios**

<i>Impact</i>	<i>Unit</i>	<i>Impacts of catch-up to OECD</i>
Additional share of people with mild to profound disability in work (2050)	%	10.6
Number of additional people with mild to profound disability employed (2050)	Number	100 795
Increase in GDP over counterfactual (2050)	%	0.22
Increase in GDP over counterfactual (2050)	\$m	8 006
<b>Additional impacts of DSP reform<sup>a</sup></b>		
Reduction in DSP population rate of counterfactual (2050)	%	15.9
Additional increase in employment by people with disability by 2050 <sup>b</sup>	Number	218,250
Increase in GDP over counterfactual (2050)	%	0.66
Increase in GDP over counterfactual (2050)	\$m	23,596
<b>Total impacts</b>		
Additional increase in employment by people with disability by 2050 (a)	Number	319 046
Increase in GDP over counterfactual (2050)	%	0.88
Increase in GDP over counterfactual (2050)	\$m	31 603
Annuity value of net fiscal savings to DSP (2010 to 2101) <sup>c</sup>	\$m	2 834

<sup>a</sup> The impacts of the DSP net out the impacts of achieving 'catch-up' to the OECD employment performance.

<sup>b</sup> The employment gains include people who continue to be eligible for the DSP. <sup>c</sup> The fiscal savings from the DSP reflect the outcomes of 'catch-up' and the other incremental gains from DSP/employment support improvements. All dollars are in 2010-11 constant prices.

Source: Commission calculations.

Collectively, these changes both add to economic growth and lead to fiscal savings from reduced DSP outlays (sometimes in the form of paying part, rather than full rates of DSP). Realistically, some people who do not enter the DSP under the reforms (or who leave it), are likely to receive income support from other sources at times (for example, as a result of periodic unemployment). We have made an assumption about the average level of such payments.

Overall, the impact of these reforms could be a reduction by 2050 in the DSP stock of 15 per cent compared with the counterfactual (with the DSP rate as a share of the

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working age population being 4.9 per cent at that time, compared with a counterfactual rate of 5.9 per cent). Including those people who would work while at least receiving a part pension, employment would be around 220 000 higher than the counterfactual. *In order to avoid double counting, we have made an assumption that nets out the employment changes reflecting achievement of the OECD catch-up scenario discussed above.*<sup>8</sup> This reflects the likelihood that many people with mild to profound disability comprising the ‘catch-up’ group would formerly have been receiving the DSP. Accordingly, the estimated employment impact of 220 000 is additional to the 100 000 employment increase associated with the ‘catch-up’ effect.

The GDP impacts of DSP reform are greater than those associated with the employment gains for people with mild to profound disability rates, mainly reflecting the larger size of the employment changes. Overall, the effect would be an increase in GDP of an estimated further 0.7 percentage points above its counterfactual level. In 2050, that would translate to additional GDP of around \$24 billion.

The fiscal effects begin slowly — and as noted above — are moderated by the fact that many people would continue to access a part pension or sometimes use other income support payments. Nevertheless, the fiscal effects grow over time, and when summed and put in present value terms, can fund a large annuity. For some indicative calculations, the reforms would produce a fiscal saving equal to an annuity of more than \$2.7 billion per year in constant price terms.<sup>9</sup>

### **Some cautions about the Commission’s estimates above**

The results above reflect assumptions. The Commission has attempted to make these as realistic as possible, and has estimated the impacts of policy compared with reasonable counterfactuals. The general approach has been to adapt the methods of the Treasury Intergenerational Report (and the similar approach described in chapter 14) to take account of additional labour inputs generated by a package of reforms aimed at greater employment integration of people with disabilities. However, the results *are* assumption led. The detailed model is available on request.

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<sup>8</sup> However, the fiscal gains discussed below incorporate gains from the employment of both groups.

<sup>9</sup> The annuity value is calculated by initially estimating the present value of fiscal savings over a long period (in this case until 2101, when the ABS population projections cease). The present value of the savings was equal to around \$80 billion. The annuity value is the *fixed* amount paid (in constant price terms) for each of those years, such that the present value of the stream of payments is also equal to \$80 billion. This gives a better idea of the scope of the fiscal savings, when the savings grow over time as a policy reform ‘bites’.

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Secondly, as emphasised earlier in this chapter, not all economic effects are economic gains. For example, employment involves forgone leisure and the lost gains from informal work. Nevertheless, the modelled reforms do generate significant long-run fiscal savings, and do raise employment and economic output. The results ignore any fiscal savings to government from taxes on the additional labour (though such savings are transfers and, given tax-free thresholds, are unlikely to be high) or from GST revenue (which would be more important). While the Australian Government's budget processes do not factor in these indirect types of fiscal offsets in making decisions about whether to adopt spending measures (given their uncertain character), they are nevertheless relevant to the economic analysis of the impacts of the NDIS and the associated package of reforms.

As with many of the other gains from disability reforms, some of the most significant benefits are intangible. In his research using the HILDA survey, Yu (2011) found that the *wellbeing* effects of keeping or getting a job (when the alternative state was unemployment) for someone with a work-limiting disability was more than \$300 000 annually. This is implausibly high, and Yu himself acknowledged that the results varied with different model specifications. Nevertheless, the actual dollar value aside, Yu still found enough supporting evidence that

... income is significant for overall life satisfaction but is much less important than economic and social participation and perceived social support; and, participation and social support are particularly more important among people with work-limiting disability than among others. (p. 14)

### **What do other studies show about the gains?**

There have been few other assessments of the employment and output effects of a major systemic reform to disability supports. However, there have been assessments of some major changes.

PWC (2008) examined the economic impacts from reducing the post-injury time lost at work following the creation of the ACC in New Zealand. The study identified a difference in the average time lost due to illness and injury between Australia and the UK (both 1.44 days annually per worker) and New Zealand (1.02), which was ascribed to the impacts of the ACC. This difference equates to 3 hours per worker per year. Taking the ratio of hours worked to GDP, and multiplying by 3 additional hours suggests a \$315 million GDP benefit from the ACC. This is one area where GDP is a good measure of the economic benefit, as the gain does not come from displacing leisure or non-market labour, but from using productive resources that would otherwise have been wasted. This benefit alone

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exceeded the additional costs of the scheme (above what they would face if they had similar arrangements to Australia). (Moreover, there would be many other benefits, beyond GDP, from reducing time lost due to injury — most particularly wellbeing gains to the workers concerned.)

In this inquiry, National Disability Services Australia (sub.DR836, pp. 3–4) reported modelling from Compelling Economics about the financial effects of employing people with disabilities and carers:

If just 4 per cent of people currently on the DSP found employment within the community services sector (a relatively low-paying sector and one which has limited flow-on effects), the model predicts the economic impact to be about \$5 billion dollars. If, however, these people found employment across all industry sectors (in accordance with the percentage of the workforce working in each major industry sector) the economic impact (the industrial and consumption effects) could be as large as \$25 billion. ... If just 20 per cent of the 187,900 carers in Australia who were of workforce age, not in the workforce and were caring for a person under 65 years returned to work in the community services sector, the benefit to the economy would be \$6.3 billion. If, however, the 20 per cent of carers returning to work found employment across all major industry sectors the economic impact would be around \$32 billion.

These are very significant employment and output effects. However, these results are based on so-called ‘multiplier’ analysis, in which stimulation to one part of the economy has apparent cascading effects on output and employment in other parts of the economy. Multiplier analysis of this kind is problematic because it fails to recognise that resources in an economy are finite, and that expansion in one part of the economy draws resources that would otherwise be used elsewhere. There may be local effects where there is significant local unemployment, but at the economy-wide level, the effects are either modest, or where there is unemployment, better resolved through other policies (macro stabilisation policy). The NSW Treasury (2007, p. 12) noted:

First and foremost, input-output analysis is concerned with measuring economic activity, and is not a tool for the evaluation of projects. Input-output analysis does not take account of the alternative uses (opportunity costs) of resources. Input-output analysis, however, will always indicate positive impacts - activity - without providing guidance as to whether such impacts correspond with net benefits. Poor investments, perhaps in heavily subsidised fields of endeavour, could be associated with greater levels of activity than good investments.

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## 20.6 How many carers could potentially re-enter the workforce?

It is useful to consider the *potential* population of carers who may be able to return to work following the introduction of the NDIS. Overall, the Commission estimated that there were around 220 000 co-resident primary carers of people with disabilities who would be eligible for funded supports by the NDIS. (The estimates exclude people who perform a non-primary caring role or who are not co-residents, and so the real potential population of carers that the NDIS may support would be higher.) Around 120 000 of these carers were not employed (table 20.5). Of these, around 15 000 reported that they had left work because alternative disability supports were not available or too costly, or because they could not change their working arrangements to be compatible with a carer's role. The work prospects of this group are likely to improve the most after the establishment of funded support by the NDIS. The Commission examined a (conservative) scenario in which:

- this group was the only one whose labour supply was responsive to the NDIS
- 50 per cent of them obtained a job. A less than a 100 per cent effect is reasonable because jobs may not always be available or attractive compared with the Carer's Payment; and many carers face obstacles in the formal labour market after years of performing an informal carer's role. Nevertheless, the 50 per cent estimate is probably conservative
- they have the average economy-wide productivity rate
- they have 80 per cent of the average weekly hours of others (equating to around 27 hours a week), reflecting the likelihood that more will work part-time than the average employee.

If the change was instantaneous, this would translate to an increase in GDP of around \$750 million annually. Clearly, the effect would take some time to occur. There would be some savings from reduced Carer Payments. This would be likely to underestimate the true labour supply response by carers:

- As noted earlier, informal carers are sometimes not co-resident, and yet their work capacity may also be affected by their caring role.
- Some people who have left work because of their emotional connection to the person with a disability or because they preferred to care fulltime may be responding to the inadequacy of existing formal supports. Some of these may also enter work — at least on a part-time basis — when the NDIS delivered better supports.
- Many carers — around 100 000 — work while exercising a caring role. Yet around 40 000 of these have reduced their weekly hours, and around one quarter

need to take time off work to undertake their caring role (table 20.6). Assuming that the NDIS allows the former group to increase their weekly hours by 5 hours a week, and that the latter group would take 10 days less off per year would equate to an increase in GDP of a further \$800 million.

**Table 20.5 Primary carers often have lost connection to the labour force<sup>a</sup>**

	Sex of carer		Age group of main recipient of care (years)			Total
	Male	Female	less than 15	15-44	45-64	
	no.	no.	no.	no.	no.	
<i>(a) Employed primary carers</i>	26 138	74 529	52 952	33 000	11 806	100 667
<i>(b) Primary carers who were not employed</i>						
Worked just before taking on the caring role	17 308	36 668	21 296	16 388	14 794	53 976
Did not work just before taking on the caring role	13 791	54 787	29 792	21 435	14 492	68 579
Total primary carers who were not employed	31 100	91 455	51 088	37 822	29 286	122 554
<i>Reason primary carers had left work just before taking on caring role</i>						
To commence or increase care	8 587	25 547	16 212	9 322	8 120	34 133
Retired/became eligible for pension/benefit/other	10 903	14 272	7 698	9 786	6 675	25 175
Total primary carers who had left work just before taking on the caring role	19 490	39 819	23 910	19 108	14 794	59 309
<i>Reasons primary carers had left work to commence or increase care</i>						
Alternative care not available/too expensive/unable to change working arrangements	3 581	12 204	8 094	4 245	3 447	15 784
Emotional obligations/preferred to care full-time/other	5 005	13 343	8 119	5 076	4 673	18 348
Total primary carers not employed who had left work to commence or increase care	8 585	25 547	16 212	9 322	8 120	34 132
<i>Selected effects on income and expenses</i>						
Role has decreased income or caused extra expenses	32 393	92 790	63 602	36 538	21 770	125 183
Has difficulty meeting everyday living costs	25 395	64 844	43 454	27 893	16 726	90 239
Total primary co-resident carers (a+b)	57 238	165 984	104 040	70 822	41 093	223 221

<sup>a</sup> The CURF estimates provide a slightly lower population of people with disabilities covered by the NDIS than the Commission's estimate of the eligible population (which also takes account of evidence from outside the CURF). Accordingly, the results have been re-weighted to address the under-numeration.

Source: SDAC CURF 2009.

**Table 20.6 Carers who do work, often need to reduce their workload<sup>a</sup>**

	Sex of carer		Age group of main recipient of care			Total
	Male	Female	less than 15	15-44	45-64	
	no.	no.	no.	no.	no.	
Needs time off work	8 937	18 584	15 951	8 100	2 338	27 521
Does not need time off work	17 201	55 944	37 000	24 900	9 469	73 146
Weekly hours are unchanged	17 499	43 988	29 002	22 299	7 903	61 487
Weekly hours worked are reduced	8 639	30 541	23 950	10 701	3 903	39 180
Total	26 138	74 529	52 952	33 000	11 806	100 667

<sup>a</sup> Missing data mean that adding across age groups does not add to the total.

Source: See above.

Accordingly, under reasonable assumptions, the NDIS could increase GDP by around \$1.5 billion annually (given existing productivity levels and prices), but the realisation of this effect would be some time off.

It is important to interpret these changes carefully, and to appreciate where the biggest gains may lie. While the above employment and GDP changes are economic *effects* of the NDIS, not all of the gains are economic *benefits*. This is because much of the employment effect represents a shift from formerly unpriced informal work to formal work in markets. One way of illustrating why measured employment can be misleading in this context is to consider a hypothetical case in which there are two families with children with a disability. The carers in each family swap roles. They switch from informal care for their own child to formal paid care for the other's child. The *measured* economy wide level of employment would have risen by two, although caring hours may not have changed at all.

In fact, the economic benefits relating to the employment of carers may sometimes lie elsewhere. One major benefit would be the better utilisation of some carers' skills. Under current arrangements, people with highly valuable specific human capital (such as law, computing science or business skills) can be forced to leave their jobs to take on greater caring roles because of inadequate formal support. In that case, while the NDIS may not increase the (appropriately measured) *number* of employees in the economy, it would allow a more productive allocation of labour. People with skills and qualifications could return to occupations where their productivity is higher. Participants gave personal examples of this, where the gains, just from their own experiences alone, would amount to millions of dollars of economic benefits over a lifetime (box 20.2).

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## Box 20.2 What some participants said about the obstacles to employment

As a communications professional with strong employment history and post-graduate tertiary qualifications, if I had been able to continue a combination of full and part time employment in a two-income household while raising two children I would expect at age 50 to have paid off my mortgage, accumulated \$500K in super and have a property/stock investment. Instead, because one of my two children has a disability, my total income loss has been around \$1.2m and the economy has missed out on my tax payments and consumer spending for over 10 years, as I haven't been able to commit to even part-time employment during school years. This won't change beyond school age as there is no personal care/support available to TAFE/university students. I have not been able to undertake the professional employment for which I am trained due to [no vacation or after school support; the need to personally provide therapy supports to my child], unbelievable amounts of time spent filling in forms... (participant in inquiry)

I have an 8 yr old son, Max who has Angelman Syndrome (a neurodevelopmental disorder that results in a severe intellectual disability, lack of speech and epilepsy). I also have another son who is 10 yrs old. When my first child was born I was working as a project manager at a biotechnology company in Melbourne (salary about \$90k full time) and went back part-time when he was about 6 months old. [After Max was born, I have had an interrupted career, reflecting the fluctuating nature of Max's condition and the poor nature and flexibility of the supports available, such as poor access to after school care.] In a few years time he will be of high school age and there will be no after care options for him and I will probably have to give up work again or work flexible hours if I can get them. (participant in inquiry)

David [who has since died] was the national political correspondent for the Bulletin Magazine, working out of the federal parliamentary press gallery, when our third child, Shane, was born in October 1989. It was a highly prestigious and privileged job that David absolutely loved, and the culmination of his then 20-year career in journalism, most of it as a political reporter for the Australian newspaper. ... Apart from his concerns about my psychological, emotional and physical state, the primary reason David decided to give up his career in mid-1991 was because he wanted to concentrate so intensively on exercising/stimulating/working with Shane every day in the very crucial early intervention years when the brain is still developing. He was totally devoted to Shane - as to our other two children, although they undoubtedly suffered because of Shane's intensive needs, and because David and I were so abandoned and entirely left to our own devices in any sort of therapy/respite sense. (participant in inquiry)

It often affects families more after parents split and by then the mother/father (usually mother) have been out of the workforce for quite some time so therefore their poverty and the dilemma [of working or not] is accepted as being 'normal' in our moral society. After all they were out of the workforce anyway! Give it a few weeks and I will be your subject. I do not have free family care (besides me) in two more weeks, as my youngest daughter who has been providing 'free' care to her sister whilst studying needs to have her own career, not just be a back up to mine. Soon a decision will have to be made whether to quit my job or leave my daughter in respite care – the only alternative available to me after being a sole parent carer for more than two decades.

Words in [ ... ] is paraphrasing by the Commission.

Moreover, as shown in table 20.1, better support for people with disabilities would be associated with significant wellbeing benefits for carers. Some of these may be realised by creating a more diverse life and role through formal paid employment.

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Furthermore, work increases income (a major concern for carers — table 20.3) and the potential for families to live a better life.

## 20.7 A more complex analysis of the ‘re-distributive’ effects of the NDIS

It is useful to isolate the possible magnitude of the re-distributive impacts of the NDIS beyond the qualitative analysis presented in section 20.4. In undertaking this analysis, it is important to understand the nature of these re-distributional effects. Disability has two fundamental impacts on the consumption possibilities of people:

- The low income of people with disabilities and their families often reflects disability. Carers and people with disabilities face significant obstacles to employment, and when working, often do so on a part-time basis and on lower wages than the average (showing up in figure 20.1 and in chapter 6). That alone means they have a lower potential to enjoy the same level of economic wellbeing as other, richer, households. (This is a major reason for trying to achieve better employment outcomes.)
- Given the nature of disability (and indeed one basis for its definition), people with severe disabilities have significant limitations in activities of daily living and in self-management (as in many cognitive impairments). Recalling that non-market work is a large source of (albeit unmeasured) income and consumption, households with a person with a disability cannot ‘produce’ (and therefore consume) as many non-market based goods as others. A simple example would be the capacity for home refurbishment when so much time is spent meeting basic personal needs, but a more important one is that support needs displace the capacity for people with disabilities and carers to enjoy leisure (an important economic good). This means that the *real* income (and wellbeing) of households with a person with a significant disability is considerably less than other households, *even* where the households have the same measured dollar incomes.

The Commission has undertaken some experimental calculations of the economic benefits of the NDIS in providing the equivalent of around \$15 800 of hypothecated disability supports per NDIS participant. There are several assumptions underpinning these calculations (box 20.3).

The results suggest that non-NDIS taxpayers lose welfare equal to around \$3.0 billion, while NDIS participants gain welfare benefits of \$10.8 billion, or a net consumption benefit of \$7.8 billion from re-distribution. Given the distortionary impacts of raising the funding, this would suggest net economic benefits from just this effect of over \$6 billion.

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One possible concern in the calculations is that it is assumed that the dollar value of transfers to NDIS participants are equivalent to an income transfer of the same amount. In conventional economic analysis, the benefits to people of hypothecated payments are less than their equivalent income value. However:

- the considerable freedom people have in fashioning supports means that the value of the packages would be closer to their income equivalent
- as explored in greater detail in chapter 8, the apparent weakness of hypothecation is less clear for some groups of people and for some purchases (for example, in some clinical therapies, or where people might focus on the ‘now’, and downplay the long-term wellbeing benefits of certain investments).

**Box 20.3 The methodology for calculating the benefits of (just one aspect) of the re-distributive impact of the NDIS.**

The analysis of just one of the re-distributive impacts of the NDIS depends on the following assumptions:

- A marginal elasticity of income of 1.24 ( $\rho$ ) as measured by Layard et al. 2008 — which is one of the more careful studies in this area, and consistent with other findings.
- The development of equivalised household income distributions for people eligible for the NDIS and those who are not (taking account of data from the ABS SDAC and the Household Income and Income Distribution, Australia, 2007-08).
- Financing the NDIS through a progressive tax on income<sup>10</sup> (which leads to contribution levels of around \$30 per person with annual incomes of around \$30 000 up to an average \$1400 per annum for people in the top 10 per cent of the income distribution. The parameters for the progressive tax regime are set so they generate the required \$6.5 billion of revenue.

Developing weights based on the usual formulation:

$$w_i = \left\{ \frac{\bar{y}}{y_i} \right\}^\rho \quad \text{where } y_i \text{ is the } i\text{th income value across the population, and } \bar{y} \text{ is the}$$

median income. In the estimates, the weights take account of the significant levels of transfers involved (that is, the same marginal rate is not applied for every dollar of transfer, but alters as transfers decrease or increase incomes).

For tractability (and because of data limitations), it is assumed that all people eligible for funded supports under the NDIS receive the same entitlement.

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<sup>10</sup> Of course the actual financing method may be a reduction in government spending elsewhere, but as noted earlier, there is a tax equivalent to this form of financing.

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Given the above, the assumption of no loss from hypothecation seems reasonable. Moreover, even were there a welfare loss from hypothecation, it would be likely to be relatively small compared with the likely underestimation of benefits arising from other sources. The Commission is likely to have significantly understated the benefits of re-distribution because:

- the value of the marginal utility of income is drawn from analysis of the general population broken down by income levels. It is likely that for families experiencing significant disability, the marginal utility of income, at any given level of income, would be higher than that found for the average person
- the estimates of the benefits excludes the fact that the value of transfers to people with disabilities should reflect that properly measured income would be lower than those recorded by official statistics. Were that effect included, it would raise the weights on the value of the income transfers to people with disabilities and further raise the net benefits.

### **A warning about the use of distributional weights in other cost-benefit analyses**

It is critical to understand that in most circumstances, the analysis of re-distribution benefits taken above should *not* be applied in many cost-benefit analyses, unless the wider efficiency impacts of such re-distribution are also included in the analysis. This reflects a host of reasons:

- *Work disincentives:* Re-distribution not only affects the work incentives, productivity and capital accumulation as governments tax labour and capital income (the marginal excess burden discussed earlier) to acquire the revenue needed to fund the income transfers, but it also affects the work incentives and productivity of people *receiving* the income transfers. This is a major problem in current income transfer systems, and one of the principal targets of attempts by governments to balance the need for equity and the problems doing that has on people's incentives to contribute economically to a society. The Commission examines just such problems in relation to the Disability Support Pension (which covers a much larger population of people with lower disability severity on average than those receiving funded supports from the NDIS).
- *Moral hazard:* Income transfers can create moral hazard. People can reduce the income penalties of risk taking if they can be compensated for bad outcomes, while bearing the full benefits if the outcomes are good. For example, people would be willing to make riskier investments than would be optimal. Moreover, people's care about their health or the riskiness of any other activities would also be reduced.

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- *Encouraging a shift to non-market work:* People would have incentives to shift their effort into unobservable untaxed non-market based work, even if they were relatively inefficient in this activity, knowing that the resulting lower observed income would lead to higher income transfers from government.
  - *Fraud:* It could encourage fraud or reluctance by people to truly reveal changed income or other circumstances. Social security fraud, while rare, still involves significant losses to taxpayers, and sizeable compliance costs. These losses and costs would be significantly more were governments to base income transfers solely on equalising the marginal benefits of income amongst people. These problems become particularly hard if the circumstances justifying transfers were hard to objectively verify. For instance, this already applies to people with less severe and hard to diagnose problems, such as some muscular injuries or anxiety conditions
  - *Intertemporal issues:* Snapshots of people's incomes fail to take account of income over their lifecycle. In a given year, it might seem reasonable to provide large transfers to a high-achieving, but low income PhD student, but those grounds look far weaker when the likely lifetime income of such a person is considered.

These problems are likely to be largely absent among people eligible for the NDIS (table 20.7).

## 20.8 A wrinkle or two

### *Transfers from higher income people may actually raise their own wellbeing*

As raised earlier, the costs of forgone income for taxpayers may not be as large as implied by conventional economic analysis (and indeed may actually be benefits).

One way in which this would arise is if people's own wellbeing improved if they transferred income to people with disabilities. That is true for many people, and is revealed by the significant role played by philanthropy and volunteering by ordinary people in the current disability system (a role the Commission does not want to crowd out — chapter 4). However, it is clear that people have not voluntarily met *all* the unmet needs of people with disabilities in their local communities, as evidenced by the substantial deficiencies discussed in chapter 2.

**Table 20.7 The problems of re-distribution largely disappears for NDIS participants**

<i>Apparent problem of re-distribution</i>	<i>Why the problem does not apply to NDIS participants</i>
Work disincentives	The provision of significant resources under the NDIS is unlikely to reduce the incentives for people with severe and permanent disabilities to seek work. This reflects three factors. First, the obstacles posed by severe disability to employment are already substantial. Second, access to resources under the NDIS is not subject to means testing, as is the case for income support payments. Thirdly, if anything, the provision of supports would be likely to encourage rather than discourage work because it improves the functioning that is a prerequisite for getting a job. As an illustration, a paraplegic with low means and no job would be unlikely to get a job without a well-functioning wheelchair, (and no private financial institution would lend money to buy such a chair). The Commission has been advised that people sometimes have to wait for wheelchairs, or are told that, until more funding is available, they should put up with wheelchairs that they have outgrown.
Moral hazard	Most cases of disability among NDIS participants arise from factors outside their control (such as disease, most accidents, congenital malformations, chromosomal abnormalities and birth trauma). Where moral hazard may apply most — certain types of accidents — it would be the NIIS not the NDIS that would cover new cases. Where it would be appropriate, the NIIS would include the capacity for risk rating.
Encouraging a shift to non-market work	One of the motivations for the NDIS is that without adequate support, people with severe disabilities cannot engage in such non-market ‘work’ — like personal care, cooking and cleaning.
Fraud	The NDIS applies only to people with significant and permanent disabilities — many of which are manifest. Testing for eligibility would involve expert assessments. Consequently, it is much easier to observe disability accurately in the NDIS (than in other areas where people might seek assistance from government, such as more minor disability or emotional trauma from natural disasters). Moreover, the design of the NDIS encourages people to only reveal severe disability if they genuinely have it because the NDIS would provide supports that are generally only relevant to their specifically identified disability needs (a so-called ‘incentive compatible’ design). Even when people cash out their individualised packages under self-directed funding, they must adhere to an appropriate and approved plan. In the main, payments hypothecated to a person’s disability support needs are not valuable for people without significant disability.
Intertemporal issues	The eligibility test for funded support by the NDIS requires disability to be severe and permanent, with the strong likelihood that people have low lifetime incomes as well as low incomes in any given year.

In theory, this might reflect the practical difficulties of unilateral action by taxpayers, such as finding the people who need support, knowing how much support they need and monitoring outcomes. These difficulties can only be met by some system, and that cannot be created by a single taxpayer. As put by Woolley

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(2006), people may want income re-distribution, but are unable to achieve it because of the difficulty of collective action. The NDIS would solve these practical problems, and it is possible that any individual would be willing to commit resources to a coherent system so long as other taxpayers also did so (thus making re-distribution a public good in this case).

To the extent that this was true, the apparent costs from taxpayer transfers identified by conventional cost-benefit analysis above would be too high, and the net economic benefits of the NDIS would be greater. That said, the size of any such effect is uncertain (and, as Woolley notes, empirical evidence about income re-distribution as a public good is not strong).<sup>11</sup>

### *The NDIS raises the benefits of transfers from the current disability system*

The current disability system already provides billions of dollars of support to people with disabilities. However, in many cases, it directs those supports in areas that do not take account of the preferences of people with disabilities. (Outside Western Australia and some parts of the Victorian system, the packages of supports do not allow much choice for people with disabilities.) This implies that under the current system, the ‘excess value of consumption’ (V identified above in section 20.4) is less than it might otherwise be. By providing more individualised funding, the NDIS leverages greater economic benefits from *existing* funding. These represent pure economic benefits, because the economic costs of existing funding have already been borne.

## **20.9 The NDIS as an insurance product**

As discussed earlier, an alternative framework for considering the economic value of the NDIS is that it acts as an insurance product. People show that they value insurance for many risks in their lives — from loss of goods (car and household insurance), the loss of income for themselves and their families (income protection and life insurance), and holiday insurance. People value insurance even if they never claim. This is revealed by the fact that the sales of insurance services in Australia in 2009-10 was \$37 billion. The actual wellbeing benefits of those sales

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<sup>11</sup> It is likely that a half way house applies. People value other people’s wellbeing, but at some point, their willingness to provide further transfers starts to wane. However, all that means is that the marginal welfare gains to the philanthropist from philanthropy decline at some point. They would still assign some value to transfers, even if those transfers exceeded the amount they thought appropriate. Accordingly, once philanthropy is an important motivator for taxpayers, the gains from the NDIS are greater than suggested in the modelling in this chapter.

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(so-called ‘consumer surplus’) is hard to determine because they depend on the nature of the demand. Nevertheless, existing (non-disability) insurance policies could be expected to produce economic benefits to Australians of many billions of dollars.

As discussed in chapter 14, there are no adequate commercial products for providing lifetime care and support for disabilities, so there is no benchmark for the value of the more comprehensive insurance product represented by the NDIS. In that context, to the extent that people see the NDIS as an insurance product, payments to the NDIS insurance pool by taxpayers do not represent welfare losses for themselves and benefits for people with disabilities. Rather, the contributions would reflect the price that (barring market failures) people would willingly pay to purchase peace of mind that they or their family would receive reasonable lifetime care and support if they were to acquire a severe disability. The framework used to value the re-distributive benefits of the NDIS above would still (roughly) apply. The difference would be that the value to people with disabilities in that framework would be equivalent to the sum of the expected benefits to taxpayers of ‘premium’ payments to the common insurance pool. However, it is important to emphasise that the insurance approach is an alternative way of valuing the gains of the NDIS. Counting the insurance value and the re-distributive benefits as separate gains would be double counting.

## **20.10 The bottom line**

Drawing on the above evidence, the Commission considers that the benefits of the NDIS would significantly exceed the additional costs of the scheme (which are — as we explain above — much lower than many people might think).