

Expanding the coverage of
private disability insurance
to reduce the economic
burden of social disability
insurance

The Financial Services Council

March 2014

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Glossary

ABS	Australian Bureau of Statistics
ADL	activities of daily living
AIHW	Australian Institute of Health and Welfare
DSP	Disability Support Pension
DLS	Disability Levy Surcharge (modelled)
FAHCSIA	Department of Families, Housing, Community Services and Indigenous Affairs (now the Department of Social Services)
FSC	Financial Services Council
LTCI	long term care insurance
MLS	Medicare Levy Surcharge
NDA	National Disability Agreement
NDIA	National Disability Insurance Agency
NDIS	National Disability Insurance Scheme
PDI	private disability insurance
PHI	private health insurance
PHIAC	Private Health Insurance Administration Council
SDAC	Survey of Disability, Ageing and Carers
US	United States (of America)

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Executive summary

The National Disability Insurance Scheme (NDIS) is a social insurance scheme created to provide individualised long-term support for people with permanent and significant disability under the age of 65 years and their families and carers, irrespective of how the disabilities are acquired. The trial site introduction of the NDIS aims to enhance service coverage for people with disabilities by increasing choice and control in relation to services they receive.

However, the sustainability of funding for the NDIS has been a subject of policy debate. Long term sustainability of the NDIS will depend upon the ability of the revenue raised through the 0.5% added to the Medicare Levy, which Treasury has projected to raise \$3.3 billion in the 2014-15 financial year and \$20.4 billion by 2018-19. As a result of significant reorganisation in the provision of services, relative to the previous state and territory funded programs, and a lack of clarity around the pre-existing cost base, it is unclear to what extent this will be sufficient to meet the additional costs of expanded eligibility and the increased range of supports available under the NDIS.

As in the private health insurance (PHI) sector, an enhanced private disability insurance (PDI) product offering, relative to the limited and restrictive range of disability insurance products that are currently on the market, could provide additional opportunities to those who opt to purchase it. Such PDI products could cover income protection and affordable access to the consumer's choice of a range of disability services and supports. These PDI products may also carry benefits in terms of the sustainability of Australian Government funding for the NDIS. With appropriately structured incentives, PDI would help ensure that those people with a greater ability to pay would seek coverage under the private sector rather than relying on the NDIS.

In view of this policy context, the Financial Services Council has commissioned Deloitte Access Economics to undertake a modelling study that assesses the monetary impacts of introducing financial incentives and disincentives for encouraging more Australian tax payers to hold adequate PDI that offers the same or superior benefits to those of the NDIS.

The modelling presented in this report indicates that government support for PDI, in a similar manner to that provided for PHI (i.e. base case), could generate savings to the government as shown below.

Parameters	Savings / (Expenditure) (\$billion)
Savings to the government programs	
NDIS	\$10.3
DSP	\$3.4
Gross savings	\$13.7
Commonwealth rebates for PDI*	(\$5.2)
Net savings to governments	
Commonwealth*	\$3.7
States and Territories	\$4.8
Total net savings	\$8.5

*The model assumed total cost of incentives were borne by the Commonwealth

As can be seen in the table above, the NDIS and DSP contribute savings of \$10.3 billion and \$3.4 billion respectively over a 5-year period ending 2019. This includes \$3.7 billion of savings for the Australian Government (after accounting for \$5.2 billion in PDI rebates) and \$4.8 billion for state and territory governments.

Assuming all else remains the same and individuals have access to correct information, the model provides the following key assumptions and findings:

- All individuals aged less than 65 years were assumed to have a PDI cover if the individuals or the household they belonged to had earnings above the thresholds of \$88,000 or \$176,000 per year, respectively. This was estimated to be approximately 10% of the population;
- The insurance product has no underwriting and individuals with PDI coverage was assumed to have a similar risk profile to the general population;
- the current coverage for NDIS-type PDI in Australia is zero;
- The insurance premium would need to be set between about \$1,050 and \$2,500 in order to avoid a net cost to the Commonwealth Government (at the high end) and a negative revenue effect on private insurers (at the low end);
- The revenue of private disability insurers would drop if the cost of providing disability services grows at more than 6.8% annually. It would therefore be important to closely monitor the cost of service provision and to provide policy mechanisms to control prices of disability services.

The operation of the Disability Levy Surcharge (DLS) is perhaps the strongest policy measure that would “push” individuals to take up PDI. PDI rebates then, as for PHI, would support the affordability of PDI among those who are liable for the DLS (i.e. who earn above the minimum income level). Rebates may also generate some level of consumer surplus among those who would choose to hold PDI without the rebate.

From a policy perspective, PDI, supported by a broader base of consumers, would potentially provide a more equitable distribution of the financial burden of disability insurance across people who can afford to pay and need not fall back on the safety net provided by the NDIS. It would also avoid the crowding out of private expenditure among those who can afford to pay, and reduce financial risk to the Australian Government (and, by extension, tax payers).

There is an equally strong argument for government to support the income protection elements, through growth of the PDI market. DSP currently represents a significant liability for the Australian Government. The modelling presented in this report suggests that growth of the PDI market could reduce Australian Government expenditure on DSP by \$3.4 billion over 2014-15 to 2018-19.

In summary, implementing PDI alongside the NDIS, with appropriately structured incentives to encourage uptake particularly among those people who have greater ability to pay, may be a policy option for consideration. The analysis presented in this study found that such a policy option would not only ensure adequate coverage for disability in Australia, but would also have the private sector sharing a considerable proportion of the projected Government’s expenditure on the NDIS. In the long run, having PDI may enhance the sustainability of the NDIS.

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1 Background

Australia has an inadequate level of support for people living with disability, particularly those people disabled prior to retirement age of 65 years. People with disability in Australia receive support from a range of sources, including:

- family and friends;
- income support (e.g. Disability Support Pension, DSP, and carer allowance);
- disability support services from government or non-government organisations; and
- generic services such as health services, public transport, education and training, employment assistance, and housing and accommodation assistance.

However, people with disability often experience difficulty in navigating the complex funding system and accessing these services, particularly for services embedded within the mainstream provision. The Productivity Commission's seminal report in 2011 confirmed that "The current disability support system is underfunded, unfair, fragmented, and inefficient. It gives people with a disability little choice, no certainty of access to appropriate supports and little scope to participate in the community" (p.2).

In response, the Australian Governments introduced the National Disability Insurance Scheme (NDIS) – a social insurance scheme created to provide individualised long-term support for people with permanent and significant disability, their families and carers, irrespective of how the disabilities are acquired. The NDIS aims to enhance service coverage for people with disabilities by increasing choice and control in relation to services received. A key reform in the trial sites is that the fund holder role is shifted from the jurisdictional government and service provider to the person with disability and their family and/or carer.

The sustainability of funding for the NDIS has been a subject of policy debate. As with funding in healthcare, the economic arguments for government funding of services relate to equity considerations: people who experience socioeconomic or health disadvantages should not be excluded from services due to a lack of ability to pay. A complicating factor for health services is that socioeconomic disadvantage is also a risk factor for many health conditions, along with age, which can skew the risk pool from an insurance perspective (i.e. those least able to pay may present the highest risks). The principle of 'community rating' in Private Health Insurance (PHI) regulation aims to ensure that risk is spread across the pool and that people are not individually risk rated.

There are thus strong arguments to consider measures that encourage a complementary public-private disability services system in the context of the introduction of the NDIS, albeit noting that there are differences between the two service delivery systems. Notably, unlike in the health system, a significant share of disability is congenital, overall the age distribution is younger, and the NDIS is limited to those aged under 65 years. The nature of services are also quite different, with health services being largely clinical while disability services have a high proportion of home and personal services, education, employment and accommodation services, respite and support services.

1.1 Government support for people with disability and the role of private disability insurance in Australia

The introduction of the NDIS represents a significant shift in the approach to funding disability services across Australia. The Australian Government will take on an additional, direct role in the funding of disability services and supports provided under the NDIS, in order to expand coverage and increase choice for eligible Australians. An increase in the Medicare levy from 1 July 2014, from 1.5% to 2.0%, will support the additional costs of delivering the NDIS.

There are two components to the supports required by people with disability:

- income protection while the individual is incapable of working; and
- payment for disability services and supports, as long as these are required.

In terms of public coverage, the Australian Government provides a means tested income stream to people with disability who are incapable of working, via the DSP. Disability services and supports will transition to funding through the NDIS, which will afford universal coverage, subject to meeting eligibility criteria¹.

Private disability insurance (PDI) does not currently occupy a substantial role in the provision of disability care in Australia. PDI products that are available are limited, in terms of the types of coverage and the extent of protection that is offered to consumers. Although the following products, which are currently available in the market, may pay out to a claimant in the event of that person requiring long term care due to disablement, these products are not close substitutes for PDI because of the fundamental differences between what they offer and what the NDIS offers.

- Income protection is more common than coverage for service and support costs. These products typically provide ongoing income replacement at a higher level than the DSP, although the terms of cover vary from 1 year, to age 65 years, or to death.
- Products assisting in covering the costs of services and supports, such as Total and Permanent Disability or Trauma Insurances, tend to be paid in lump sums and are not directly related to long term care costs. There are no restrictions on the type of expenditure allowed with the payment.

PDI products are typically purchased as a component of or an adjunct to a life insurance product, or indirectly as a component of a superannuation product. Where disability insurance is a component of superannuation, purchasers may not be aware that they hold a PDI product, and frequently do not face clear choices regarding their level of cover.

There is no requirement on insurers to provide PDI to a purchaser, and no restriction on charging risk-rated premiums. This enables insurers to refuse coverage, or charge higher

¹ Traditionally, state and territory governments have had responsibility for funding and service delivery (provided by a mix of government agencies, community organisations and, to a lesser extent the private sector).

premiums, to those facing a higher risk of disablement, thus reducing the attractiveness of PDI to some consumers.

A recent report commissioned by the Financial Services Council (FSC) found that:

- 35% of working age Australians (18-64 years) do not have any disability insurance (KPMG 2014);
- there is a significant degree of underinsurance for disability, particularly among Australians aged 45-64 years, 77% of whom are underinsured; and
- the majority of disability insurance coverage relates to limited income protection².

As a result of low PDI coverage, people with disability frequently fall back on the public system for income, services and supports. This is supplemented by out of pocket private expenditure, and can result in gaps or delays in service access.

1.2 Appropriately structured incentives may encourage uptake of PDI

1.2.1 Experience from the private health insurance sector

The mix of public and private insurance in the health sector differs markedly from that in the disability sector. While the universal coverage for the costs of disability services and supports under the NDIS is comparable to the universal health cover provided under Medicare, private health insurance (PHI) covers a substantially higher proportion of the relevant population than does PDI. In September 2013, 47.0% of Australians held private hospital cover (PHIAC 2014).

PHI has historically played a different role in the Australian health sector to that of PDI in the disability sector. The key differences relate are:

- prior to the introduction of Medicare, PHI coverage was already substantial in Australia, relative to PDI coverage today; and
- following the introduction of Medicare, a set of government incentives was put in place to ensure that PHI coverage remains high, thus mitigating some of the financial risks to public expenditure associated with Medicare.

The key incentives that are currently in place are:

- the **Medicare Levy Surcharge** (MLS), under which taxpayers are liable for a 1% to 1.5% levy on income (means tested) if they do not hold an adequate level of PHI;
- the **PHI rebate**, under which government contributes to PHI premiums held by eligible taxpayers, ranging from 10% to 30% of the premium cost (means tested);
- **Lifetime Health Cover** (LHC), under which individuals who do not purchase and continue to hold an adequate level of PHI on and after the age of 30 must pay higher premiums when they do choose to take up PHI.

² This does not include workers compensation and traffic accident insurance, which are covered by specific schemes in each state and territory and cover individuals for disability that arises due to specific work- or traffic-related accidents or trauma. These schemes will remain separate from the NDIS and are not considered in this report.

The ability of private health insurers to provide coverage to high risk individuals (who might otherwise fall back onto Medicare) is to some extent dependent upon the principle of community rating. This principle prevents insurers from differentiating PHI product prices according to an individual's relative risk rating. Insurers that take on greater risk are compensated through a risk equalisation pool. If PHI products were risk rated, the most costly claimants would face higher premiums, or may be refused coverage, making PHI less affordable, unattractive, or impossible to obtain. Similar regulation may be required in relation to PDI in order to ensure equity and the effects modelled in this analysis.

1.2.2 Experience from long-term care in other countries

Long term care insurance schemes are a relatively new addition to governments' delivery of care to those who require it. Globally, these schemes have generally been aimed at sharing the costs across all generations of the care for the ageing population. The cost of care of the ageing population is becoming more and more important due to the pace of demographic ageing as well as the changing of attitudes to the care of elderly by their families. Schemes targeting the care of the long term disabled, not just the elderly, have been explored in countries such as Singapore, Germany and Japan. However, in each of these countries, the scheme appears to have been designed primarily for older clients.

Although there are no exact equivalent schemes to the NDIS globally, there are schemes that cover long term care more broadly targeted at aged care but that also cover those people below retirement age who require long term care. As these products/schemes are generally aimed at care of the elderly, there is a significant difference in the expected length of care required. For products within the United States, for example, 87% of claims are less than 3 years, with only 1.5% of claims exceeding 5 years (Milliman 2011).

There are a variety of different funding models for long term care globally, with the type of scheme mainly driven by the health care system model of the country. These schemes can be government run and funded by taxes, co-funded by working populations and government revenue, or with a private and public insurance combination. In addition to minimum cover provided by government schemes, there are top up cover insurance schemes to reduce out of pocket expenses.

Appendix C provides a discussion about different types of long-term care insurance in other countries.

1.2.3 The potential impacts of a greater role for PDI in Australia

As with PHI, an enhanced PDI product offering relative to products currently on the market, and covering a higher proportion of the population, could provide additional opportunities to those who opt to purchase it. These opportunities would span income protection and affordable access to a choice of disability services and supports.

A better PDI product offering may also carry benefits in terms of the sustainability of Australian Government funding for the NDIS. The additional commitment to provide growth funding for the NDIS carries substantial financial risk.

Traditionally, state and territory schemes have rationed access to services in order to contain expenditure, and individuals unable to access an appropriate level of service through these schemes have contributed substantial private funds. The NDIS is intended to address this inequity. However, similar to the role that PHI plays in the Australian health system, it is not necessary to entirely crowd out private funds in order to achieve equity. Options to draw in private funds by promoting PDI, in a similar manner to PHI, might well be explored.

It may be necessary to consider applying a principle similar to community rating, which does not currently apply to life insurance or related disability insurance products. A lack of community rating may be a limiting factor in achieving broader coverage in Australia. Applying community rating would assist with ensuring that private funding sources share the risk of higher cost claimants.

Policy should adhere to principles of fairness and equity, promoting choice and affordability, while supporting the sustainability of publicly funded services provided to those who need them most.

1.3 Purpose of this report

The FSC has commissioned Deloitte Access Economics to undertake a modelling study that assesses the monetary impacts of introducing financial incentives and disincentives for encouraging more Australian tax payers to hold adequate PDI that offers the same or superior benefits to those of the NDIS. The following chapters first outline the modelling approach and data sources, followed by the findings of the modelling in Chapter 3.

2 Modelling approach and data sources

This chapter provides an outline of the model developed to estimate the financial impacts of introducing financial incentives and disincentives for encouraging more Australian tax payers to hold adequate PDI that offers at least the same benefits as the NDIS and income protection as offered by the DSP. It describes the types of variables used in the model, and outlines the bases of various model assumptions.

The model forecasts the financial impacts during a five-year period between 2014-15 and 2018-19, with an assumed introduction of a PDI product and a policy to create incentives (and disincentives) for taking up PDI (or not) occurring from 2014-15. Projecting over five years is similar to the federal government's approach to measuring budgetary impacts on policy decisions. It has also been necessary to project the current NDIS expenditure over this period without the introduction of this change, in order to establish the base case. Expected impacts are estimated by taking the difference between output variables under the base case and under the new environment when the PDI product is made available and the policy is in place.

Broadly speaking the model consists of six types of variables, including:

- demographic and socioeconomic variables;
- disability care expenditure and disability income support variables;
- PDI variables;
- policy variables;
- response variables; and
- output variables.

These are discussed further below along with the data sources for each type of variable. For ease of reading, the following section will refer the two counterfactuals as the 'base case' and the 'modelled scenario'.

2.1 Demographic and socioeconomic variables

Demographic and socioeconomic variables have been selected based on their relevance to the purchase of PDI, disability services, and income support following disablement. Causality flows from demographic and socioeconomic variables to response variables, and subsequently output variables. Demographic and socioeconomic variables include:

- current population and projections below 65 years;
- personal and household income below 65 years; and
- population receiving disability services under the National Disability Agreement 2009.
- population receiving income support from the DSP.

Current population and projections were sourced from the Australian Bureau of Statistics (ABS) Series B population projection³ (2013a). The gross household income for Australia was derived from the ABS's survey on household income and income distribution in 2011-2012 (ABS 2013b), and adjusted to 2014 values using the Wage-Price Index (ABS 2013c).

The model estimated the number of recipients of disability services from 2014-15 to 2018-19, using linear trends of the historical number of people who received disability support services under the National Disability Agreement (NDA) from 2007-2011 (AIHW 2013a). An alternative approach is to make linear projections based on the findings from the 2012 ABS Survey of Disability, Ageing and Carers (SDAC) which estimated the prevalence of different levels and types of disability in Australia. However, not all individuals living with disability as defined in SDAC would be eligible to receive services under the NDIS's disability requirements. As such, using data from service provision is considered the most appropriate and conservative.

The approach is conservative for at least three reasons. Firstly, as the NDIS intends to expand the scope of disability services to address existing unmet needs, the number of recipients is expected to grow at a higher rate than the historical trend, at least in the short term. For example, according to the SDAC, 5.7% to 48.5% of survey respondents indicated that individuals aged below 65 years with profound or severe core activity limitations did not have their needs for assistance fully met (Table 14 in SDAC 2012). Secondly, only 61.4% of people with profound or severe core activity limitation received formal assistance from government, private non-profit organisations and/or private commercial organisations (Table 15 in SDAC 2012). As such, the introduction of the NDIS may result in service provision shifted from the informal sector to formal service providers. Thirdly, the NDIS also intends to provide early intervention to mitigate the effects of impairment with a view to alleviating or preventing the deterioration of functional capacity and/or strengthening informal supports. The report by the Productivity Commission estimated that 80,000 individuals would be eligible for early intervention under the NDIS (Productivity Commission 2011).

To estimate the population aged between 16 and 64 years who received income support from the DSP, the model used data from the Department of Families, Housing, Community Services and Indigenous Affairs⁴ (FaHCSIA). Similar to the estimation of disability service recipients, the model estimated the number of DSP recipients during the modelling timeframe based on the historical trend reported for 2007-2011.

2.2 Expenditure variables

To calculate the impact on jurisdictional and federal budgets due to individuals purchasing a PDI product, the model requires estimates of the average cost per recipient of disability services, and the proportion of this cost funded by jurisdictional and federal governments.

³ Series B assumes the Total Fertility Rate will decrease to 1.8 babies per woman by 2026 and then remain constant, life expectancy at birth will continue to increase each year until 2061, though at a declining rate (reaching 85.2 years for males and 88.3 years for females), Net overseas migration will remain constant at 240,000 per year throughout the projection period, and medium interstate migration flows.

⁴ Now the Commonwealth Government Department of Social Services

According to the AIHW (2013b), the expenditure per disability service recipient in 2011-12 under the NDA 2009 was \$19,646. However, the expected expenditure per recipient under the NDIS is likely to be higher than that reported by the AIHW given the increase in the scope of service. In the quarterly report by the National Disability Insurance Agency (NDIA), **the average annualised committed amount in approved plans from the NDIS to date is at \$40,466** (NDIA 2013). At the full implementation sites in Barwon and Hunter regions⁵, the annualised committed amount per recipient was as high as approximately \$61,000 during the initial months of implementation, although it has decreased over the six-month reporting period to December 2013.

Based on the Federal Budget paper 2013-14, the **Commonwealth government will provide \$11.7 billion in funding** (52.7%) for the estimated \$22.2 billion scheme (Australian Government 2013a), and the jurisdictional governments will cover the remaining amount.

The new PDI product would also provide at least the same level of income protection as the Commonwealth government's DSP. The **average DSP payment per recipient is estimated to be \$17,707 per year**, calculated based on the reported total expense of \$14,493 million for disability support pension (Australian Government 2013b) and 818,500 DSP recipients in 2011 (FaHCSIA 2011).

2.3 PDI variables

PDI variables represent characteristics of the proposed PDI product, including:

- current and projected PDI coverage among those aged below 65 years;
- inflation in the premium of PDI products over time; and
- annual benefits paid to people with PDI coverage based on expected cost inflation.

2.3.1 PDI coverage

As discussed in Chapter 1, private insurers in Australia currently do not offer PDI products with a similar scope of benefits to those offered by the NDIS. There are two types of insurance products that provide long-term income protection following disablement:

- **Disability Income Insurance or Group Salary Continuance:** these products typically provide up to a certain level of benefits monthly (e.g. 75% of income) in the event of disablement.
- **Total and permanent disability insurance:** these products provide payment in lump sum when one experiences total and permanent disability and is considered unlikely to be able to work.

Although these products may provide financial supports to individuals acquiring disability, these products are unlikely to be a substitute for the NDIS because of several key differences. For example, these products provide either a single lump sum payment to assist in the cost of an injury, or income protection rather than service provision. Furthermore, products typically require the claimant to be absent from work for at least

⁵ These two sites implemented NDIS for people aged 0-64 years, whereas the programs in South Australia and Tasmania only provided services to people aged 0-14 years, and 15-24 years, respectively.

three to six months due to sickness or injury, and never be able to return to work again. For these reasons, **the model assumed that the current coverage for NDIS-type PDI in Australia is zero.**

2.3.2 PDI premium and inflation

In the absence of a PDI product in Australia with similar scope of benefits to the NDIS, the model applied a range of **assumed premiums of between \$1,000 and \$3,500 per year**. The range of values was based on the typical premium rates of PHI in Australia and reasonably comparable products from overseas (e.g. a long-term care product in Canada⁶). The model assumed that the premium would grow at the same rates as in the PHI sector. Based on historical trends over 2010-2014, the premium would grow at 5.90% to 6.26% per year (Table 2.1).

Table 2.1: Published and projected average premium increases, 2010-2019

Year	Published average premium increases*	Year	Projected average premium increases^
2010	5.78%	2015	5.90%
2011	5.56%	2016	5.99%
2012	5.06%	2017	6.08%
2013	5.60%	2018	6.17%
2014	6.20%	2019	6.26%

* Australian Government Department of Health 2014

^Projected based on linear trend.

2.3.3 Annual benefits paid to PDI claimants and cost inflation

As noted, the proposed PDI would provide at least the same benefits as the NDIS and DSP. Accordingly, the model assumed that **each PDI claimant would receive an annual amount of \$58,173** (\$40,466 + \$17,707, see section 2.2). This amount is assumed to grow at the same rate as health expenditure. Expected annual service cost inflation was assumed to be between 2.7% and 6.8% per annum, as reported by AIHW (2013c) on the real growth in health expenditure between 2001-02 and 2011-12.

Table 2.2: Annual rates of change for health expenditure in constant price

Year	Change from previous year	Year	Change from previous year
2002-03	5.8%	2007-08	6.8%
2003-04	3.3%	2008-09	6.8%
2004-05	6.5%	2009-10	4.2%
2005-06	2.7%	2010-11	6.2%
2006-07	5.9%	2011-12	5.8%
Average annual growth			
2001-02 to 2006-07	4.8%		
2006-07 to 2011-12	6.0%		
2001-02 to 2011-12	5.4%		

Source: AIHW 2013c

⁶ See premium rates published at www.caalife.ca/caa/pdf/CAA_Life_LTC_Rates_90Day_E.pdf, with adjustments to Purchasing Power Parity and the Gross Domestic Product per capita.

2.4 Policy variables

Policy variables represent the range of government policies that are expected to have an impact on the output variables included within the model. They include:

- an assumed Disability Levy Surcharge (DLS); and
- assumed PDI rebate levels based on income.

The DLS was based on current policy for Medicare Levy Surcharge (MLS) for PHI, which includes a **surcharge of up to 1.5% on taxable income** (in addition to the 2.0% Medicare levy) for those individuals and households that do not have the appropriate level of hospital cover and earn over \$88,000 and \$176,000 respectively (PHI Ombudsman 2013).

Similar to the DLS, the PDI rebate level is assumed to be the same as the policy for PHI, that is, between a **10% and 30% rebate** for those aged less than 65 years with annual taxable personal and household income less than \$136,000 and \$272,000, respectively (PHI Ombudsman 2013).

2.5 Response variables

These variables represent expected behavioural changes after the introduction of a PDI product into the market. They include:

- coverage of PDI products; and
- probability of using services provided by PDI and claiming for DSP.

It is problematic to develop response variables for a new product and policy when there are no market data. Alternatively, stated preference techniques such as discrete choice methods (e.g. conjoint analysis and choice modelling) could be used to estimate the demand for a combined PDI product in Australia given a hypothetical list of characteristics. Yet this requires a relatively large survey and considerable econometric modelling, which is outside the scope of this project. For this reason, response variables in the model were developed largely based on historically observed market responses in the PHI sector, discussed below.

2.5.1 Coverage of PDI product

The model assumed that all individuals with 1.5% of taxable income greater than the post-rebate premium would purchase a PDI product. For example, an individual with a taxable income of \$88,000 would purchase a PDI product if the annual premium for PDI is less than \$1,320.

We were not able to obtain detailed statistics on taxable income restricted to Australians aged less than 65 years within the timeframe of this project. Using gross household income per week reported by the ABS as a proxy (ABS 2013b) and assuming that each under-65 household has two wage-earning adults⁷, the model estimated that about 12% of

⁷ The average household size in Australia is reported to be 2.6 persons in 2011 (ABS 2013)

individuals have earnings more than \$88,000. On this basis, the model applied a base coverage rate of 10%.

The quantity demanded for PDI is modelled according to the following inverse exponential demand function suggested by de Jong and Ferris 2006 (cited in Thomas 2009):

$$d_i(\pi) = P_i e^{1 - (\frac{\pi}{\mu_i})^{\gamma_i}}$$

where
 P_i is the number of population of risk class i who would buy insurance at an actuarially fair premium (i.e. $\pi = \mu$)
 μ_i is the risk (expectation of claim) for population i
 π_i is the premium
 γ_i is the absolute value of the price elasticity of demand of population i

The model assumed the price elasticity of demand (γ_i) to be between -0.10 and -0.70, in line with the range of -0.36 to -0.5 reported by Butler (2002) for PHI in Australia, and the range of -0.405 to -0.578 reported by Pauly et al (2003) for the life insurance market in the US.

2.5.2 Probability of using services provided by PDI

The model assumed that all individuals with PDI would not be eligible to receive services under the NDIS. The probability of using services provided through PDI is derived from the projected number of disability service users. Overall, the probability of using disability services provided by private insurers is between 0.0195 and 0.0217.

Table 2.3: Estimated probability of using disability services

Year	Estimated number of service users aged 0-64 years	Population aged 0-64 years	Estimated population probability
2014-15	392,260	20,073,540	0.0195
2015-16	409,837	20,373,033	0.0201
2016-17	427,415	20,673,678	0.0207
2017-18	444,992	20,976,351	0.0212
2018-19	462,570	21,272,036	0.0217

2.6 Output variables

Output variables represent the estimated impacts from introducing a PDI product and incentives/disincentives in the Australian market, and are a function of the data included in the model and model assumptions. They include:

- number of people covered by PDI;
- net impact on federal government revenue;
- net impact on jurisdictional governments' revenue;
- net impact on insurers; and
- net impact on insured individuals.

As the model used for the analysis is a partial equilibrium model, greater impacts to the economy through changes to total savings, and human capital investment were not estimated. The implicit assumption is that the PDI scheme is not of sufficient size in its impacts to influence overall clearing of labour and product markets across Australia.

A summary of key assumptions can be found in Appendix A.

3 Model findings and discussion

This chapter presents the results of modelling the introduction of a PDI product that offers at least the same benefits as the NDIS and income protection as offered by the DSP, with various policy incentives and disincentives to encourage uptake of PDI. It provides estimates of PDI coverage, private expenditure for the purchase of PDI, and changes in insurer and government revenue. The results are presented by modifying five variables individually and independently of all other variables (i.e. one-way sensitivity analysis), as outlined in Table 3.1. Appendix B presents all numerical results included in this section.

Table 3.1: Variables and the range of values tested in sensitivity analysis

Variables	Base case value	Low	Medium	High
Insurance premium	\$1,400	\$1,000	\$2,000	\$3,500
Government rebate	30.0%	10%	20%	40%
Price elasticity of demand	-0.36	-0.1	-0.5	-0.7
Annual growth in the cost of disability services	5.40%	2.70%	4.80%	6.80%
Baseline^ PDI coverage	10%	15%	20%	25%

^Baseline coverage determined by DLS

3.1 Number of people with PDI cover

For the base case scenario, the model estimated there would be 2.1 million PDI holders in Australia in 2014-15, growing to 2.29 million in 2018-19. This is illustrated as the dark blue columns in Chart 3.1 (p. 14).

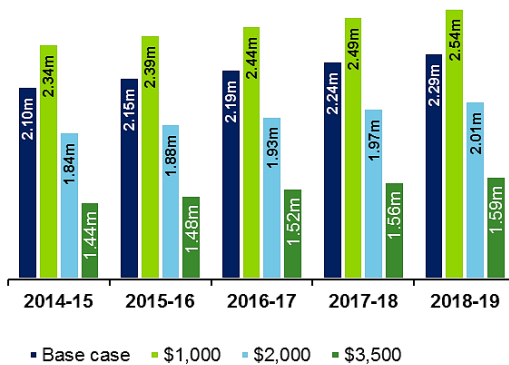
Decreasing the premium to \$1,000 would increase the number of people expected to purchase PDI to 2.34 million in 2014-15 and 2.54 million in 2018-19. This increase is due to individuals responding to, on the assumption of access to correct information, the relatively lower premium compared to the expectation of claim of between \$1,100 and \$1,524. As the level of premium rises to \$3,500 per year, the number of PDI holders would reduce significantly to between 1.44 million and 1.59 million over the modelling time horizon (Chart 3.1). In this case, some individuals who would have purchased PDI would bear the DLS.

The number of people purchasing PDI would also increase as the gap between the expected cost of disability services and the PDI premium widens, if the costs of disability services grows at a rate higher than that of the PDI premium. The model estimated that there would be 2.34 million PDI holders in 2018-19 if the cost of disability services grows at 6.80% per annum, as per the highest real growth rate in health expenditure in 2007-09. In contrast, the expected number of PDI holders would reduce to 2.19 million if the cost of

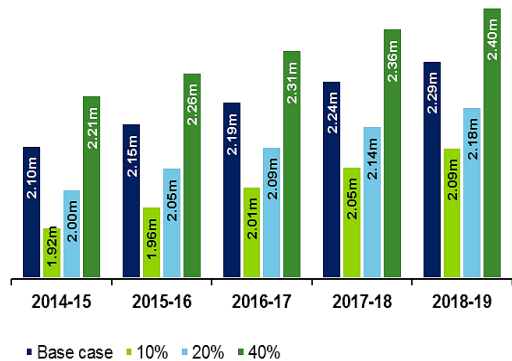
disability services only grows at 2.7% per annum, as per the lowest growth rate observed in health expenditure in 2005-06 (Chart 3.1).

Chart 3.1: Number of people with PDI

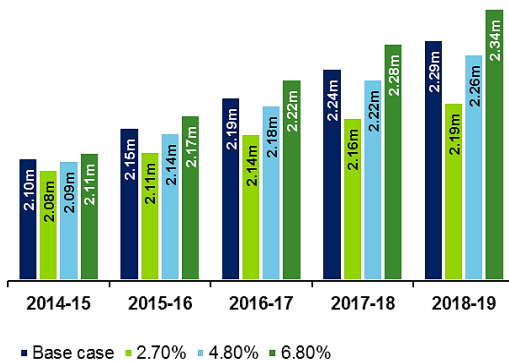
Number of people with PDI, by premium



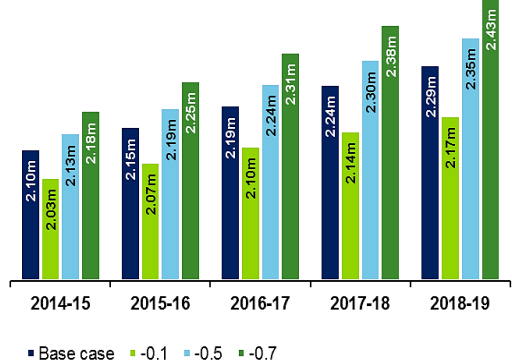
Number of people with PDI, by rebate level



Number of people with PDI, by annual growth rate of service expenditure



Number of people with PDI, by price elasticity of demand



Source: Deloitte Access Economics 2014

The relativity between the PDI premium and the expectation of claim would also be influenced by the level of rebate provided to the PDI purchasers by the Australian Government. The model found that varying the level of rebate between 10% and 40% would result in average changes of between -8.53% and +5.21% in the number of people with PDI during the modelling period, compared to the number of individuals under the base case scenario when the rebate level is set at 30%.

The base case scenario assumed a price elasticity of demand for PDI of -0.36, as per the PDI. If Australian tax payers were relatively more responsive to price changes (e.g. $\gamma = -0.07$), the number of people taking up PDI would expect to grow to 2.43 million people in 2018-19. Conversely, there would be fewer people taking up PDI (between 2.03 million and 2.17 million) if the quantity demanded reduces by 10% for every percentage increase in price.

3.2 Financial impacts

This section presents the modelled financial impacts on different stakeholders as the provision of disability services is transferred from the NDIS to the private sector by encouraging individuals to have PDI coverage.

3.2.1 Base case

Table 3.2 shows the estimated expenditure and changes in revenue under the status quo and with the introduction of PDI under the base case scenario. The model estimated that Australian federal and jurisdictional governments would provide up to \$24.3 billion to support the full implementation of the NDIS in 2018-19. This is higher than the \$22.2 billion estimated by the Treasury because the current model incorporated a higher average cost of disability services provided within the NDIS (see Section 2.2).

The introduction of a PDI would result in a revenue gain of up to \$1.04 billion and \$1.23 billion for the federal and jurisdictional governments, respectively. Assuming no changes to the relative contribution to the NDIS, the jurisdictional governments would benefit from the introduction of PDI because the rebate to PDI holders would be provided by the Australian government. In the base case, 2.10 million to 2.29 million individuals would pay up to \$2.83 billion for PDI. After payments for claims of disability services, the model found that insurers would have a revenue gain of \$423.3 million in 2014-15 to \$284.3 million in 2018-19, declining due to a combined effect of increasing expected probability of claims and growth in the cost of providing disability services.

Table 3.2: Expenditure and changes in revenue in million dollars, by sector

	Program			Stakeholder			
	NDIS	DSP	Rebate	Federal	State	Insurer	Individual
Status quo							
2014-15	-\$15,873.2	-\$5,263.2	\$0	-\$13,676.0	-\$7,460.4	\$0	\$0
2015-16	-\$17,480.0	-\$5,796.0	\$0	-\$15,060.4	-\$8,215.6	\$0	\$0
2016-17	-\$19,214.1	-\$6,370.9	\$0	-\$16,554.4	-\$9,030.6	\$0	\$0
2017-18	-\$21,084.6	-\$6,991.1	\$0	-\$18,165.9	-\$9,909.7	\$0	\$0
2018-19	-\$23,100.9	-\$7,659.7	\$0	-\$19,903.2	-\$10,857.4	\$0	\$0
Proposed PDI (base case)							
2014-15	-\$14,214.8	-\$4,713.3	-\$880.8	-\$13,128.0	-\$6,681.0	+\$727.8	-\$2,055.3
2015-16	-\$15,638.5	-\$5,185.4	-\$954.7	-\$14,428.4	-\$7,350.1	+\$730.1	-\$2,227.5
2016-17	-\$17,174.9	-\$5,694.8	-\$1,034.4	-\$15,831.9	-\$8,072.2	+\$732.7	-\$2,413.6
2017-18	-\$18,832.2	-\$6,244.3	-\$1,120.7	-\$17,346.0	-\$8,851.1	+\$736.3	-\$2,614.9
2018-19	-\$20,618.7	-\$6,836.7	-\$1,213.6	-\$18,978.2	-\$9,690.8	+\$740.1	-\$2,831.8
Incremental difference							
2014-15	+\$1,658.4	+\$549.9	-\$880.8	+\$548.0	+\$779.4	+\$727.8	-\$2,055.3
2015-16	+\$1,841.5	+\$610.6	-\$954.7	+\$631.9	+\$865.5	+\$730.1	-\$2,227.5
2016-17	+\$2,039.2	+\$676.1	-\$1,034.4	+\$722.5	+\$958.4	+\$732.7	-\$2,413.6
2017-18	+\$2,252.4	+\$746.8	-\$1,120.7	+\$819.9	+\$1,058.6	+\$736.3	-\$2,614.9
2018-19	+\$2,482.3	+\$823.1	-\$1,213.6	+\$925.0	+\$1,166.7	+\$740.1	-\$2,831.8

Note: NDIS= National Disability Insurance Scheme; DSP = Disability Support Pension; PDI= Private Disability Insurance; All figures are in millions of Australian dollars; Numbers may not sum to the total due to rounding.

Source: Deloitte Access Economics 2014

3.2.2 PDI premium

Chart 3.2 (p.17) shows the effects of varying the PDI premium on different stakeholders affected by the introduction of PDI into the Australian market. As discussed in Section 3.1, increasing the premium would be expected to decrease the uptake of PDI. The model found that there would be a net cost to the Commonwealth Government if the PDI is set above about \$2,500. This is because the 30% PDI rebate the Commonwealth Government offers to insurance purchasers to incentivise uptake would offset any savings generated from transferring the risk to the private sector. Conversely, premiums lower than about \$1,050 would result in negative revenue for private insurers.

3.2.3 Commonwealth Government's rebate for PDI holders

Chart 3.3 (p.18) shows the effects of varying the level of government incentives through PDI rebates. As expected, the model found that the Commonwealth Government and people who purchase PDI would be most affected by varying the level of rebate. A rebate level set at 40% would result in a reduction in revenue gain for the Commonwealth Government to \$0.5 billion in 2018-19, from \$1.6 billion of revenue gain when the rebate rate is at 10%. In contrast, individuals would pay \$1.3 billion less for PDI if the Commonwealth Government were to provide a 40% rebate on the cost of PDI instead of 10%. The effects on jurisdictional governments and private insurers were a result of the changes in the number of people with PDI, as consumers respond to the changes in the post-rebate premium price.

3.2.4 Price elasticity of demand for PDI

Chart 3.4 (p.19) shows the effects of the price elasticity of demand for PDI. As consumers are expected to be relatively non-responsive to prices of PDI, the model found that changing the price elasticity of demand for PDI would have relatively smaller financial impacts on all stakeholders.

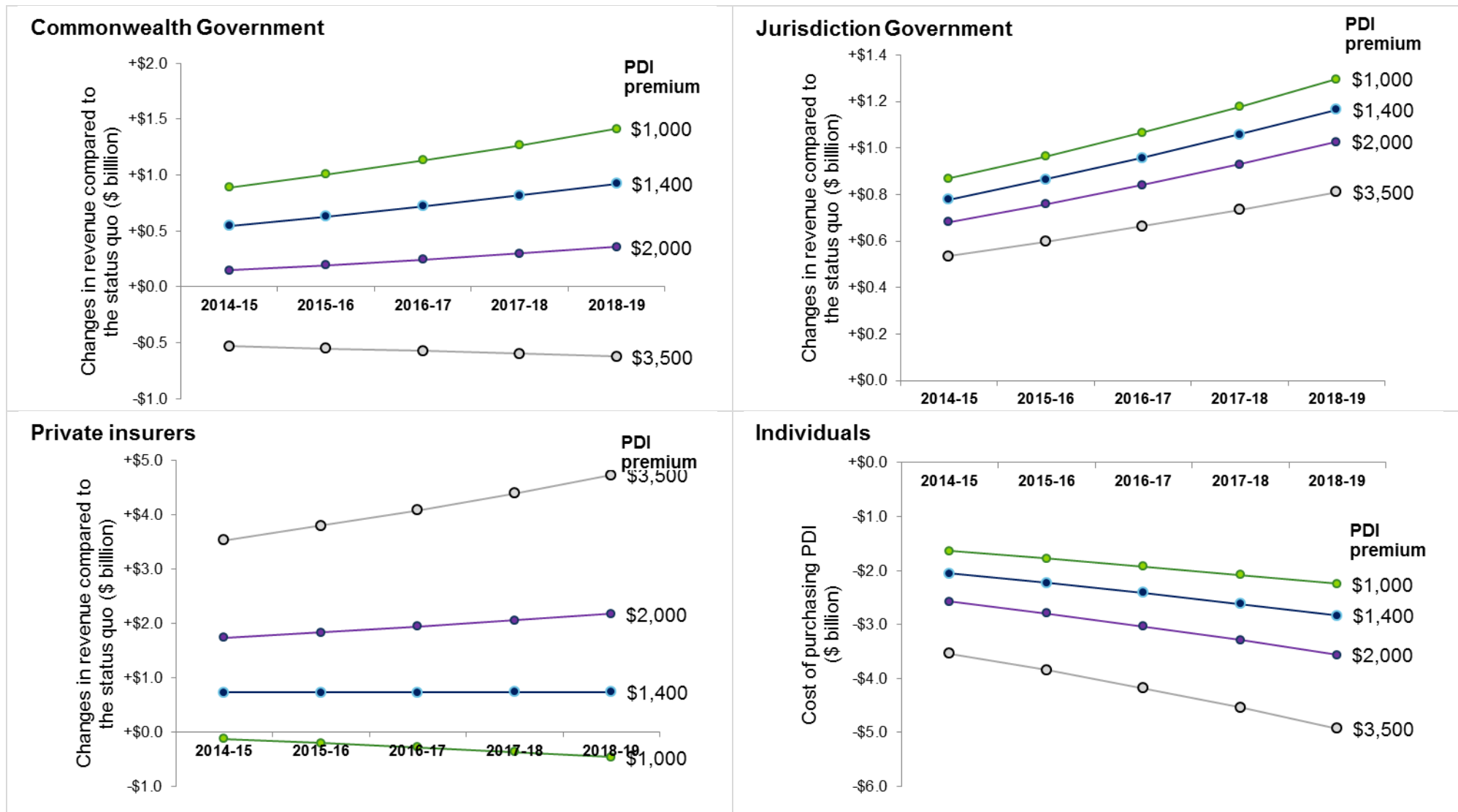
3.2.5 Growth in the cost of providing disability services

The model found that the rate of growth in the cost of providing disability services has a considerable impact on the sustainability of private insurers. As shown in Chart 3.5 (p.20), the revenue gain for private insurers would remain reasonably stable if the annual growth rate in the expenditure per claimant could be contained at 5.4%, assuming all else remains the same as specified in the base case scenario. The revenue of private insurers drops if the cost of providing disability services grows at more than 6.8% annually. It would therefore be important to closely monitor the cost of service provision and provide policy mechanisms to control prices of disability services.

3.2.6 PDI coverage

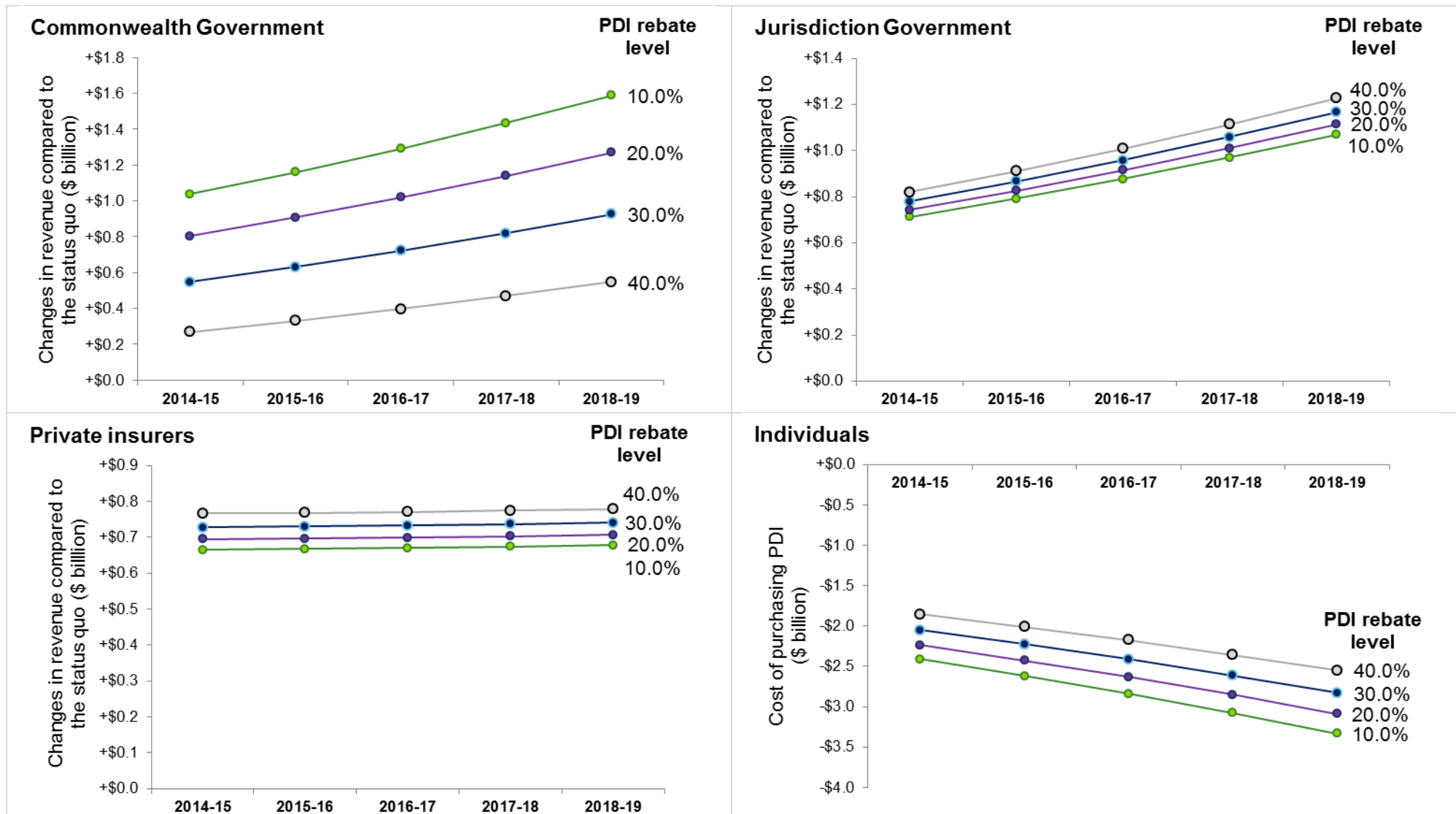
As expected, a higher level of PDI coverage, as likely to be induced by higher levels of PDI levy surcharge, would generate greater levels of revenue gains for the Commonwealth and jurisdictional governments as risk is transferred to the private sector (Chart 3.6, p.21). Further detailed assessment on the population distribution of taxable income to determine the most probable PDI coverage with an appropriately structured PDI levy surcharge is warranted.

Chart 3.2: Effects of PDI premium, by year and stakeholder



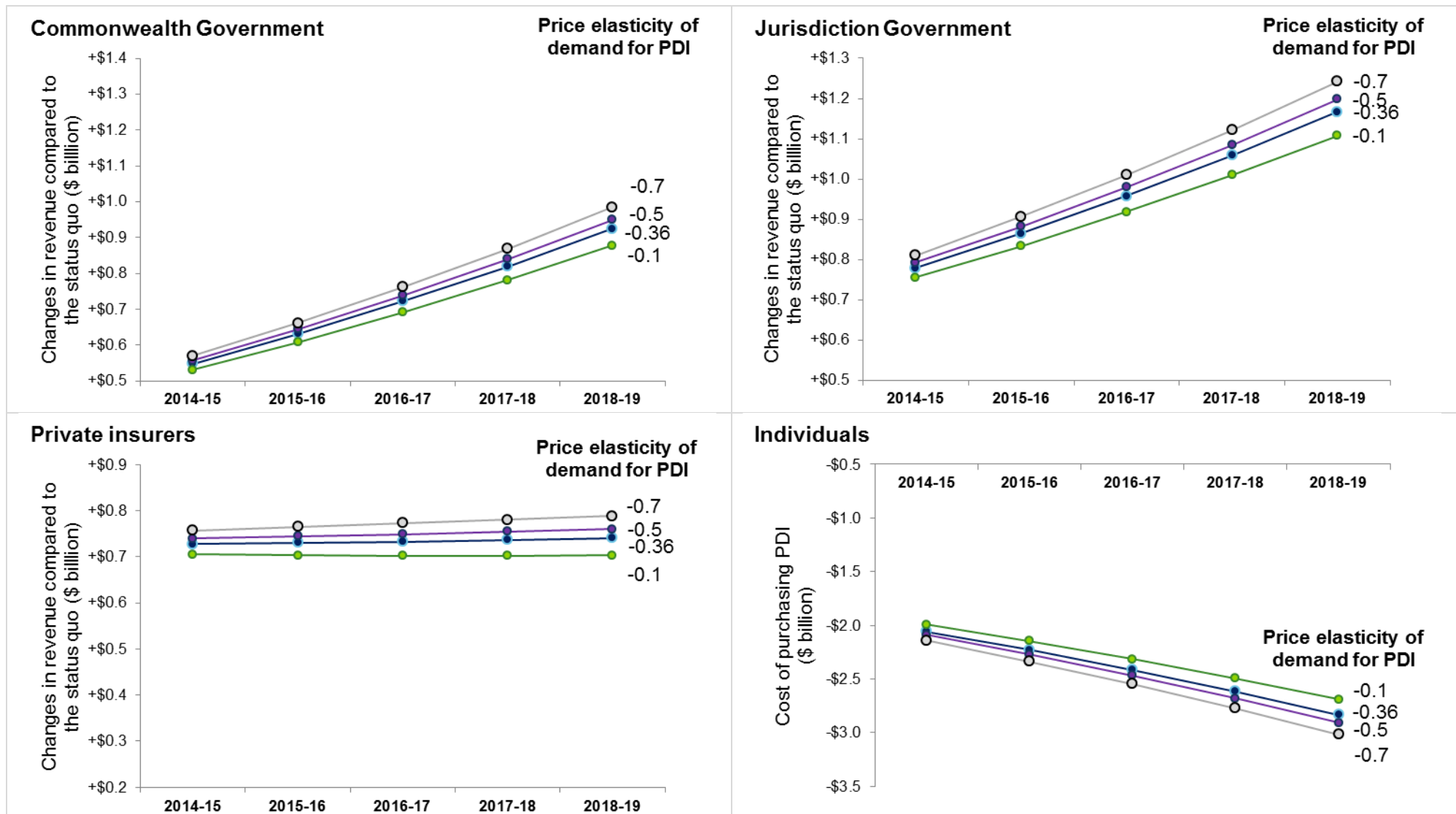
Source: Deloitte Access Economics 2014

Chart 3.3: Effects of Government rebate, by year and stakeholder



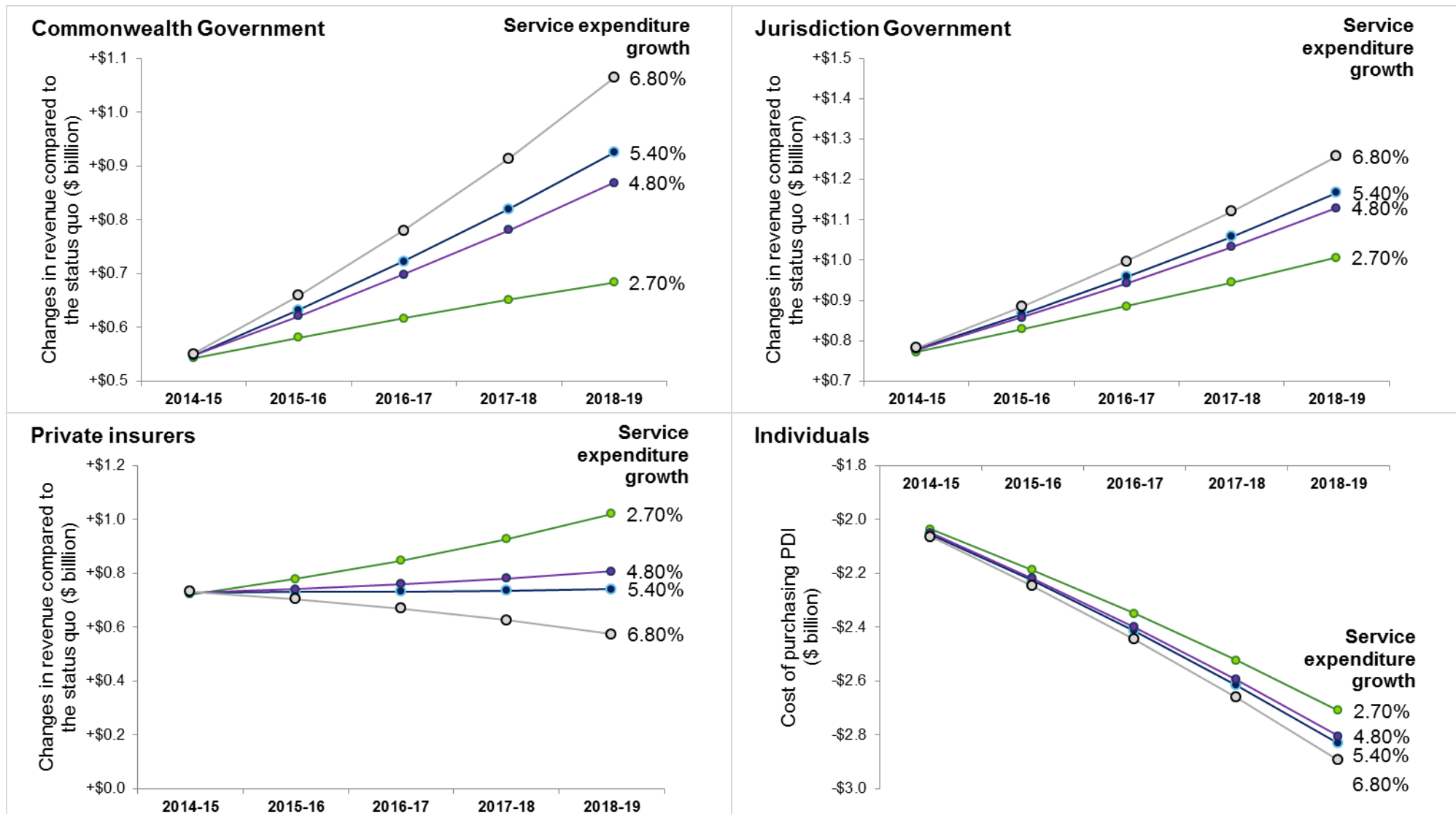
Source: Deloitte Access Economics 2014

Chart 3.4: Effects of price elasticity of demand, by year and stakeholder



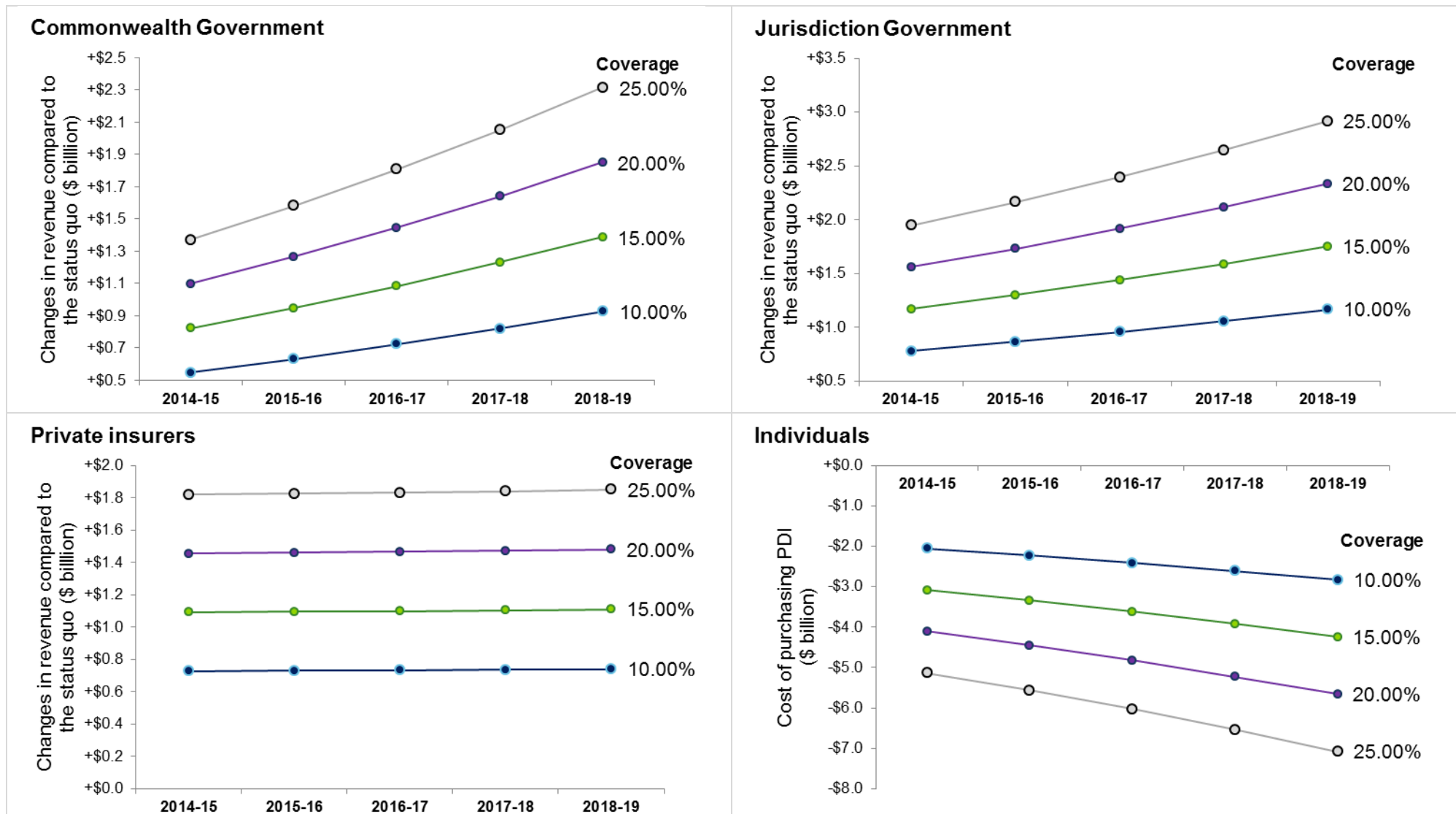
Source: Deloitte Access Economics 2014

Chart 3.5: Effects of growth in the cost of disability services, by year and stakeholder



Source: Deloitte Access Economics 2014

Chart 3.6: Effects of PDI coverage, by year and stakeholder



Source: Deloitte Access Economics 2014

3.3 Discussion

The Australian Government's commitment to support growth funding to the NDIS represents a significant financial risk. Long term sustainability of the NDIS will depend upon the ability of the revenue raised through the 0.5% added to the Medicare Levy, which Treasury has projected will raise \$3.3 billion in the 2014-15 and \$20.4 billion by 2018-19. As a result of significant reorganisation in the provision of services, relative to the previous state and territory funded programs, and lack of clarity around the pre-existing cost base, it is unclear to what extent this will be sufficient to meet the additional costs of increased eligibility and the range of supports available under the NDIS.

It is also true that under the previous state and territory government disability programs, private financing made a substantial contribution to funding, due to the rationing of government-funded disability services. As the Productivity Commission rightly noted, this resulted in an inequitable distribution of the financial burden – in some cases, people who were unable to access government-funded services were forced to contribute significant out of pocket expenditure in order to receive services to assist them with daily living. These people may have been more disadvantaged than those receiving services.

PDI, supported by a broader base of consumers, would potentially provide a more equitable distribution of the financial burden of disability insurance across people who can afford to pay and thus need not fall back on the safety net provided by the NDIS. It would also avoid the crowding out of private expenditure among those who can afford to pay, and reduce financial risk to the Australian Government (and, by extension, tax payers).

The operation of the disability levy surcharge (DLS) is perhaps the strongest policy measure that would “push” individuals to take up PDI. PDI rebates then, as for PHI, would support the affordability of PDI among those who are liable for the DLS (i.e. who earn above the minimum income level). Rebates may also generate some level of consumer surplus among those who would choose to hold PDI without the rebate.

The modelling presented in this report indicates that government support for PDI, in a similar manner to that provided for PHI, could generate savings to the NDIS and DSP of \$10.3 billion and \$3.4 billion respectively over a 5-year period ending 2019, including \$3.7 billion for the Australian Government (after accounting for \$5.2 billion in PDI rebates) and \$4.8 billion for state and territory governments.

There is an equally strong argument for government to support the income protection elements, through growth of the PDI market. DSP currently represents a significant liability for the Australian Government. The modelling presented in this report suggests that growth of the PDI market could reduce Australian Government expenditure on DSP by \$3.4 billion over 2014-15 to 2018-19.

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Appendix A: Key model assumptions

Variables	Key assumptions
Demographic and socioeconomic variables	<ul style="list-style-type: none"> The model estimated the number of recipients of disability services from 2014-15 to 2018-19, using linear trends of the historical number of people who received disability support services under the National Disability Agreement from 2007-2011. The model used data from the Department of Families, Housing, Community Services and Indigenous Affairs to estimate the population aged between 16 and 64 years who received income support from the DSP.
Expenditure variables	<ul style="list-style-type: none"> The model assumed the cost per claimant under PDI to be \$40,466. This is the same as the average annualised committed amount in approved plans from the NDIS to date. The average DSP payment per recipient is estimated to be \$17,707 per year, calculated based on the reported total expense of \$14,493 million for disability support pension (Australian Government 2013b) and 818,500 DSP recipients in 2011.
Current PDI coverage	<ul style="list-style-type: none"> The model assumed that the current coverage for NDIS-type PDI in Australia is zero.
PDI premium and inflation	<ul style="list-style-type: none"> The model applied a range of assumed premiums of between \$1,000 and \$3,500 per year per person covered, based on the typical premium rates of PHI in Australia and reasonably comparable products from overseas The premium would grow at 5.90% to 6.26% per year, as per the historical trends over 2010-2014 in the PDI sector
Annual benefits paid to PDI claimants and cost inflation	<ul style="list-style-type: none"> Each PDI claimant would receive an annual amount of \$58,173 (\$40,466 + \$17,707) Expected annual service cost inflation was assumed to be between 2.7% and 6.8% per annum, as reported by AIHW
Policy variable	<ul style="list-style-type: none"> Disability Levy Surcharge (DLS) was assumed based on current policy for Medicare Levy Surcharge (MLS) for PHI, which includes a surcharge of up to 1.5% on taxable income (in addition to the 2.0% Medicare levy) for those individuals and households that do not have the appropriate level of hospital cover and earn over \$88,000 and \$176,000 respectively. The PDI rebate level is assumed to be the same as the policy for PHI, that is, between a 10% and 30% rebate.
Response variable	<ul style="list-style-type: none"> Based on reported distribution of household incomes, the model assumed that 10% of individuals aged below 65 years would be covered by PDI to avoid the DLS. To quantity demanded for PDI is modelled according to the following inverse exponential demand function suggested by de Jong and Ferris 2006 (see page 11) The model assumed the price elasticity of demand (ϵ_i) to be between -0.10 and -0.70, in line with the range of -0.36 to -0.5 reported by Butler (2002) for PHI in Australia, and the range of -0.405 to -0.578 reported by Pauly et al (2003) for the life insurance market in the US.
Probability of using service provided by PDI	<ul style="list-style-type: none"> The insurance product has no underwriting and individuals with PDI coverage was assumed to have a similar risk profile to the general population. The probability of using disability services provided by private insurers is between 0.0195 and 0.0217, as in the general population.
Output variables	<ul style="list-style-type: none"> The model did not estimate greater impacts to the economy through changes to total savings, and human capital investment. The implicit assumption is that the PDI scheme is not of sufficient size in its impacts to influence overall clearing of labour and product markets across Australia

Appendix B: Detailed numerical results by scenarios

Table B.1: Financial impacts of varying PDI premium

Varying premium	NDIS	DSP	Rebate	Commonwealth Government	Jurisdiction Government	Private insurers	Individuals	Number with PDI
Premium	\$1,000							
2014-15	+\$1,849,515,052	+\$613,253,979	-\$701,679,602	+\$891,817,355	+\$869,272,074	-\$123,837,025	-\$1,637,252,404	2,338,932
2015-16	+\$2,051,797,931	+\$680,326,037	-\$759,768,833	+\$1,008,010,108	+\$964,345,028	-\$199,561,193	-\$1,772,793,943	2,391,376
2016-17	+\$2,270,162,266	+\$752,730,312	-\$822,546,291	+\$1,133,370,022	+\$1,066,976,265	-\$281,071,607	-\$1,919,274,680	2,442,607
2017-18	+\$2,505,593,217	+\$830,793,461	-\$890,463,782	+\$1,268,294,084	+\$1,177,628,812	-\$368,174,072	-\$2,077,748,824	2,492,735
2018-19	+\$2,759,499,989	+\$914,982,739	-\$963,703,734	+\$1,413,813,999	+\$1,296,964,995	-\$462,136,948	-\$2,248,642,046	2,541,029
Premium	\$2,000							
2014-15	+\$1,454,739,532	+\$482,356,067	-\$1,103,814,813	+\$149,553,206	+\$683,727,580	+\$1,742,287,111	-\$2,575,567,896	1,839,691
2015-16	+\$1,617,217,777	+\$536,229,881	-\$1,197,692,662	+\$195,662,642	+\$760,092,355	+\$1,838,861,213	-\$2,794,616,210	1,884,872
2016-17	+\$1,792,655,368	+\$594,400,698	-\$1,299,063,108	+\$245,444,935	+\$842,548,023	+\$1,943,154,296	-\$3,031,147,253	1,928,828
2017-18	+\$1,981,809,598	+\$657,119,617	-\$1,408,632,222	+\$298,846,482	+\$931,450,511	+\$2,056,511,524	-\$3,286,808,517	1,971,639
2018-19	+\$2,185,851,988	+\$724,775,085	-\$1,526,735,809	+\$356,540,831	+\$1,027,350,435	+\$2,178,492,288	-\$3,562,383,554	2,012,797
Premium	\$3,500							
2014-15	+\$1,141,303,475	+\$378,428,333	-\$1,515,479,847	-\$532,160,673	+\$536,412,633	+\$3,531,867,682	-\$3,536,119,643	1,443,314
2015-16	+\$1,271,453,897	+\$421,583,031	-\$1,647,841,923	-\$552,388,327	+\$597,583,331	+\$3,799,769,484	-\$3,844,964,488	1,481,883
2016-17	+\$1,412,028,602	+\$468,194,167	-\$1,790,667,644	-\$574,098,318	+\$663,653,443	+\$4,088,669,378	-\$4,178,224,503	1,519,288
2017-18	+\$1,563,607,182	+\$518,453,919	-\$1,944,918,451	-\$597,752,725	+\$734,895,376	+\$4,401,000,401	-\$4,538,143,051	1,555,583
2018-19	+\$1,727,158,853	+\$572,683,655	-\$2,111,122,685	-\$623,044,838	+\$811,764,661	+\$4,737,233,109	-\$4,925,952,932	1,590,419

Table B.2: Financial impacts of varying PDI rebate

Varying PDI rebate level	NDIS	DSP	Rebate	Commonwealth Government	Jurisdiction Government	Private insurers	Individuals	Number with PDI
PDI rebate level	10.0%							
2014-15	+\$1,514,813,905	+\$502,275,261	-\$268,192,757	+\$1,036,933,873	+\$711,962,535	+\$664,838,408	-\$2,413,734,816	1,915,663
2015-16	+\$1,683,409,446	+\$558,177,421	-\$290,899,803	+\$1,159,484,624	+\$791,202,440	+\$667,411,162	-\$2,618,098,226	1,962,018
2016-17	+\$1,865,444,011	+\$618,535,633	-\$315,422,339	+\$1,291,798,619	+\$876,758,685	+\$670,243,745	-\$2,838,801,049	2,007,146
2017-18	+\$2,061,709,308	+\$683,612,407	-\$341,932,127	+\$1,434,386,214	+\$969,003,375	+\$673,999,555	-\$3,077,389,143	2,051,129
2018-19	+\$2,273,414,156	+\$753,808,560	-\$370,508,765	+\$1,588,209,298	+\$1,068,504,653	+\$677,864,931	-\$3,334,578,882	2,093,427
PDI rebate level	20.0%							
2014-15	+\$1,582,093,726	+\$524,583,605	-\$560,208,851	+\$802,884,428	+\$743,584,051	+\$694,366,926	-\$2,240,835,405	2,000,746
2015-16	+\$1,757,513,232	+\$582,748,425	-\$607,410,460	+\$906,819,978	+\$826,031,219	+\$696,790,642	-\$2,429,641,839	2,048,386
2016-17	+\$1,946,906,890	+\$645,546,732	-\$658,393,306	+\$1,019,014,078	+\$915,046,238	+\$699,512,908	-\$2,633,573,224	2,094,797
2017-18	+\$2,151,105,071	+\$713,253,857	-\$713,516,624	+\$1,139,822,921	+\$1,011,019,383	+\$703,224,191	-\$2,854,066,495	2,140,066
2018-19	+\$2,371,357,857	+\$786,284,297	-\$772,942,201	+\$1,270,161,761	+\$1,114,538,193	+\$707,068,849	-\$3,091,768,802	2,183,617
PDI rebate level	40.0%							
2014-15	+\$1,746,225,489	+\$579,005,685	-\$1,236,653,631	+\$267,851,563	+\$820,725,980	+\$766,402,904	-\$1,854,980,447	2,208,310
2015-16	+\$1,938,179,618	+\$642,652,982	-\$1,339,700,381	+\$330,187,799	+\$910,944,421	+\$768,418,352	-\$2,009,550,571	2,258,953
2016-17	+\$2,145,404,796	+\$711,363,785	-\$1,451,040,277	+\$397,388,050	+\$1,008,340,254	+\$770,832,111	-\$2,176,560,416	2,308,373
2017-18	+\$2,368,826,200	+\$785,444,861	-\$1,571,468,447	+\$469,454,300	+\$1,113,348,314	+\$774,400,057	-\$2,357,202,671	2,356,669
2018-19	+\$2,609,792,459	+\$865,343,382	-\$1,701,319,537	+\$547,213,848	+\$1,226,602,456	+\$778,163,002	-\$2,551,979,306	2,403,174

Table B.3: Financial impacts of varying the price elasticity of demand for PDI

Price elasticity of demand	NDIS	DSP	Rebate	Commonwealth Government	Jurisdiction Government	Private insurers	Individuals	Number with PDI
Price elasticity of demand for PDI		-0.1						
2014-15	+\$1,607,062,787	+\$532,862,735	-\$853,575,344	+\$531,030,668	+\$755,319,510	+\$705,325,626	-\$1,991,675,803	2,032,322
2015-16	+\$1,773,985,850	+\$588,210,342	-\$919,655,290	+\$608,767,553	+\$833,773,350	+\$703,321,441	-\$2,145,862,344	2,067,585
2016-17	+\$1,954,151,074	+\$647,948,726	-\$991,264,651	+\$692,384,144	+\$918,451,005	+\$702,115,704	-\$2,312,950,853	2,102,591
2017-18	+\$2,148,455,602	+\$712,375,358	-\$1,068,956,702	+\$782,100,126	+\$1,009,774,133	+\$702,358,045	-\$2,494,232,304	2,137,430
2018-19	+\$2,357,957,769	+\$781,841,155	-\$1,152,861,679	+\$878,697,094	+\$1,108,240,151	+\$703,073,338	-\$2,690,010,584	2,171,277
Price elasticity of demand for PDI		-0.5						
2014-15	+\$1,685,977,459	+\$559,028,911	-\$895,490,084	+\$557,106,880	+\$792,409,406	+\$739,960,577	-\$2,089,476,863	2,132,119
2015-16	+\$1,877,800,722	+\$622,632,816	-\$973,474,150	+\$644,393,049	+\$882,566,339	+\$744,480,296	-\$2,271,439,684	2,188,582
2016-17	+\$2,084,912,634	+\$691,306,063	-\$1,057,594,892	+\$738,714,867	+\$979,908,938	+\$749,097,611	-\$2,467,721,415	2,243,286
2017-18	+\$2,308,174,887	+\$765,334,368	-\$1,148,424,483	+\$840,242,576	+\$1,084,842,197	+\$754,572,354	-\$2,679,657,127	2,296,329
2018-19	+\$2,549,010,802	+\$845,189,671	-\$1,246,272,054	+\$949,893,342	+\$1,198,035,077	+\$760,039,708	-\$2,907,968,127	2,347,205
Price elasticity of demand for PDI		-0.7						
2014-15	+\$1,725,357,776	+\$572,086,461	-\$916,406,546	+\$570,119,537	+\$810,918,154	+\$757,244,249	-\$2,138,281,940	2,181,920
2015-16	+\$1,929,564,337	+\$639,796,365	-\$1,000,309,021	+\$662,156,442	+\$906,895,238	+\$765,002,703	-\$2,334,054,383	2,248,912
2016-17	+\$2,150,056,678	+\$712,906,235	-\$1,090,639,926	+\$761,796,349	+\$1,010,526,639	+\$772,503,507	-\$2,544,826,494	2,313,378
2017-18	+\$2,387,677,756	+\$791,695,576	-\$1,187,980,862	+\$869,183,925	+\$1,122,208,545	+\$780,562,875	-\$2,771,955,345	2,375,424
2018-19	+\$2,644,030,536	+\$876,695,892	-\$1,292,729,464	+\$985,302,612	+\$1,242,694,352	+\$788,371,785	-\$3,016,368,749	2,434,702

Table B.4: Financial impacts of varying the assumed rate of expenditure growth for disability services

Expenditure growths	NDIS	DSP	Rebate	Commonwealth Government	Jurisdiction Government	Private insurers	Individuals	Number with PDI
Service expenditure growths 2.7%								
2014-15	+\$1,643,557,512	+\$544,963,494	-\$872,959,153	+\$543,089,822	+\$772,472,030	+\$721,342,837	-\$2,036,904,690	2,078,474
2015-16	+\$1,762,532,282	+\$584,412,619	-\$937,739,412	+\$580,815,316	+\$828,390,173	+\$778,853,140	-\$2,188,058,629	2,108,242
2016-17	+\$1,884,993,698	+\$625,017,831	-\$1,007,121,160	+\$616,943,331	+\$885,947,038	+\$847,059,005	-\$2,349,949,373	2,136,225
2017-18	+\$2,010,859,894	+\$666,751,985	-\$1,081,498,808	+\$651,008,920	+\$945,104,150	+\$927,384,148	-\$2,523,497,218	2,162,508
2018-19	+\$2,140,382,410	+\$709,698,485	-\$1,160,949,218	+\$683,151,945	+\$1,005,979,733	+\$1,019,749,830	-\$2,708,881,508	2,186,509
Service expenditure growths 4.8%								
2014-15	+\$1,655,115,559	+\$548,795,860	-\$879,098,094	+\$546,909,012	+\$777,904,313	+\$726,415,562	-\$2,051,228,886	2,093,091
2015-16	+\$1,823,880,396	+\$604,754,154	-\$950,934,504	+\$620,476,261	+\$857,223,786	+\$741,147,128	-\$2,218,847,175	2,137,908
2016-17	+\$2,004,356,524	+\$664,595,626	-\$1,028,407,213	+\$698,497,371	+\$942,047,566	+\$759,071,894	-\$2,399,616,831	2,181,375
2017-18	+\$2,197,103,053	+\$728,505,664	-\$1,112,044,440	+\$780,925,841	+\$1,032,638,435	+\$781,206,085	-\$2,594,770,361	2,223,586
2018-19	+\$2,403,068,548	+\$796,798,787	-\$1,202,055,868	+\$868,369,249	+\$1,129,442,217	+\$806,985,560	-\$2,804,797,026	2,263,929
Service expenditure growths 6.8%								
2014-15	+\$1,665,906,721	+\$552,373,945	-\$884,829,712	+\$550,474,795	+\$782,976,159	+\$731,151,707	-\$2,064,602,661	2,106,737
2015-16	+\$1,882,757,842	+\$624,276,476	-\$963,249,396	+\$658,888,736	+\$884,896,186	+\$703,797,002	-\$2,247,581,923	2,165,594
2016-17	+\$2,121,781,432	+\$703,530,855	-\$1,048,264,418	+\$779,810,596	+\$997,237,273	+\$668,902,440	-\$2,445,950,309	2,223,495
2017-18	+\$2,384,861,492	+\$790,761,772	-\$1,140,525,413	+\$914,212,950	+\$1,120,884,901	+\$626,128,113	-\$2,661,225,964	2,280,535
2018-19	+\$2,674,424,253	+\$886,773,705	-\$1,240,363,322	+\$1,063,855,237	+\$1,256,979,399	+\$573,346,449	-\$2,894,181,084	2,336,076

Table B.5: Financial impacts of varying the anticipated population coverage of PDI

Coverage	NDIS	DSP	Rebate	Commonwealth Government	Jurisdiction Government	Private insurers	Individuals	Number with PDI
Coverage	15.0%							
2014-15	+\$2,487,562,090	+\$824,814,780	-\$1,321,243,753	+\$821,978,935	+\$1,169,154,182	+\$1,091,768,973	-\$3,082,902,090	3,145,818
2015-16	+\$2,762,247,112	+\$915,893,618	-\$1,431,981,641	+\$947,902,947	+\$1,298,256,143	+\$1,095,131,407	-\$3,341,290,496	3,219,406
2016-17	+\$3,058,799,657	+\$1,014,223,193	-\$1,551,609,809	+\$1,083,777,202	+\$1,437,635,839	+\$1,099,009,847	-\$3,620,422,888	3,291,151
2017-18	+\$3,378,531,249	+\$1,120,238,373	-\$1,680,976,613	+\$1,229,883,322	+\$1,587,909,687	+\$1,104,485,753	-\$3,922,278,763	3,361,193
2018-19	+\$3,723,386,257	+\$1,234,583,864	-\$1,820,452,167	+\$1,387,526,412	+\$1,749,991,541	+\$1,110,203,770	-\$4,247,721,724	3,428,604
Coverage	20.0%							
2014-15	+\$3,316,749,453	+\$1,099,753,040	-\$1,761,658,337	+\$1,095,971,913	+\$1,558,872,243	+\$1,455,691,964	-\$4,110,536,120	4,194,425
2015-16	+\$3,682,996,149	+\$1,221,191,491	-\$1,909,308,855	+\$1,263,870,595	+\$1,731,008,190	+\$1,460,175,209	-\$4,455,053,995	4,292,542
2016-17	+\$4,078,399,542	+\$1,352,297,590	-\$2,068,813,079	+\$1,445,036,269	+\$1,916,847,785	+\$1,465,346,463	-\$4,827,230,517	4,388,201
2017-18	+\$4,504,708,333	+\$1,493,651,164	-\$2,241,302,150	+\$1,639,844,430	+\$2,117,212,916	+\$1,472,647,671	-\$5,229,705,017	4,481,590
2018-19	+\$4,964,515,010	+\$1,646,111,818	-\$2,427,269,557	+\$1,850,035,217	+\$2,333,322,055	+\$1,480,271,694	-\$5,663,628,965	4,571,473
Coverage	25.0%							
2014-15	+\$4,145,936,817	+\$1,374,691,300	-\$2,202,072,921	+\$1,369,964,891	+\$1,948,590,304	+\$1,819,614,955	-\$5,138,170,150	5,243,031
2015-16	+\$4,603,745,187	+\$1,526,489,364	-\$2,386,636,069	+\$1,579,838,244	+\$2,163,760,238	+\$1,825,219,012	-\$5,568,817,494	5,365,677
2016-17	+\$5,097,999,428	+\$1,690,371,988	-\$2,586,016,348	+\$1,806,295,336	+\$2,396,059,731	+\$1,831,683,079	-\$6,034,038,146	5,485,251
2017-18	+\$5,630,885,416	+\$1,867,063,955	-\$2,801,627,688	+\$2,049,805,537	+\$2,646,516,145	+\$1,840,809,589	-\$6,537,131,272	5,601,988
2018-19	+\$6,205,643,762	+\$2,057,639,773	-\$3,034,086,946	+\$2,312,544,021	+\$2,916,652,568	+\$1,850,339,617	-\$7,079,536,207	5,714,341

Appendix C: International Comparisons

Germany

Germany created a social LTCI program in the mid-1990s. The scheme comprises a mandatory public scheme and an associated private insurance scheme. Currently the public scheme covers approximate 70 million people and the private scheme covers around 8.5 million. When the German government set up the program, it did so with two major goals. Firstly, the government wanted to reduce the amount of people on general government assistance to cover the costs of long term care. Secondly it desired to increase the independence of those in care, in part by increasing the proportion of people in care within their own home. The implementation of this is similar to the desired outcomes of the NDIS.

The creation of the social and private LTCI policies included the requirement of no underwriting of the insured. This ensured that coverage was universal and that there was no pooling of bad risks. Those covered by private insurance are those that are insured by PHI. The implementation of the LTCI scheme is linked to the type of health insurance of the individuals, such that policy holders are covered for long term care and their health related expenses through the one insurer. The combined system currently has around 12.5% of eligible people insured privately.

As the LTCI and Health Insurance is covered by one provider, those people who have opted to use private health insurance are required to use this insurer for the LTCI and cannot use the public system.

As part of the arrangements in the establishment of the scheme, consideration was given to the ability of higher income earners to pay both additional levies to cover the public LTCI as well as ongoing costs associated with their own potential long term care.

In a similar manner to the Japanese scheme, the German scheme does not specify age related requirements; it is purely based upon assistance in performing ADL for an extended period of time.

The German scheme is funded solely by contributions from the population, both those working age and those retired. There is no contribution from government general revenue to support the ongoing operation/finance of the scheme. The contributions made into the scheme, both the private and public schemes, are equivalent to the individual insurance premiums. However, it should be noted that dependants of the insured can be covered under the same contribution for no additional expense.

For the publicly funded system, the premium is purely a portion of income, up to a monthly cap. The original premium was 1.7% up to €57.38/month, with no age related premium factors. This led to the scheme running at a loss. Subsequently, the premium model has changed slightly to increase the base premium, as well as to increase premiums for those people with no dependent children (Arntz, 2007).

The private insurance scheme is priced based upon an age-dependent premium amount. However, it also has a premium rate ceiling based on that of the social insurance scheme premium. This ceiling is enforced on when adequate health insurance has been purchased for over 5 years. By using private insurance, the individual is able to tailor their insurance cover to the level of cover that they require and are not constrained by the government scheme requirements.

The government (social) insurance scheme does not cover all expenses associated with long term care. For those who are in the social scheme, this has resulted in a growing insurance market for products that cover the payment gap when someone is receiving benefits for care. These products are generally written by life insurance firms as Long Term Care Annuities. Insurers pay out when an individual is able to make a claim under their LTCI policy. This has been a product innovation by the German life insurance companies to increase their sales to over 60 year olds.

Japan

Japan implemented a public long term care insurance (LTCI) program in the late 1990s to cover the known and growing issue of the cost of care of their ageing population. This program is designed to ensure adequate acceptable care of the aged population while minimising the financial burden on the government's general revenue.

In creating the LTCI program the Japanese set up three major goals of the LTCI program:

- To establish a system which responds to society's major concern about ageing – the care problem – whereby citizens can be assured that they will receive care and be supported by society as a whole.
- The efficient delivery of user-centred, quality long-term care services, by organising a system where consumers can use services of their choice and where the necessary welfare, health and medical care services are provided in a comprehensive and unified manner to people requiring long-term care.
- To separate long-term care from medical care insurance and establish a system as a first step towards revising the structure of social security.

Although the main aim of Japan's LTCI is for the care of the elderly, i.e. those of retirement age, the scheme's goals do allow for those people under the age of 65 to receive care. This is completed in a similar way to the NDIS in that the level of funding/care is determined based upon the assistance required to complete a certain number of activities of daily living (ADL).

The scheme's ultimate goals of independent choice and removing long term care from the medical system are similar to the goals of the NDIS. However, the current delivery is similar to the previous Australian jurisdictional scheme where benefits are paid via services from approved providers.

The funding of the LTCI in Japan is covered by government general revenue and specific levies placed upon both those working and those not working. The working population covers approximately 32% of the total cost of the scheme, with those on pensions contributing 18% to the total cost of the scheme through deductions to any pension payment. The remaining 50% of the funding is covered by various levels of the government, with the federal government contributing 25%, the regions 12.5% and the local municipalities 12.5% (OECD 2005). The level of premium imposed upon the working population is dependent on their income level.

The exact premium rate is dependent on the municipal region, with both the cost and final level of care determined at a municipal level. This has led to premium levels in some municipalities being double those in other municipalities.

The cost of care is also not completely covered by the government scheme, there is a co-payment requirement when people are claiming for services. This co-payment is means tested and ultimately hits a threshold to cap expenditure for long term, high cost claims.

Table C.1: Premium rate of long-term care insurance in Japan, by eligibility criteria

Level	Eligible persons	Premium rate	Population distribution
1	Low income earners	Basic amount* x 0.5	About 2%
2	Municipal tax-exempted households	Basic amount x 0.75	About 29%
3	Municipal tax-exempted persons	Basic amount x 1	About 43%
4	Municipal tax payer: The insured person's total amount of income is less than 2,500,000 yen	Basic amount x 1.25	About 16%
5	Municipal tax payer: The insured person's total amount of income is 2,500,000 yen or more	Basic amount x 1.5	About 10%

Note: * The level premium amount

Source: Japanese Ministry of Health, Labour and Welfare 2002

United States (US)

The US population is covered for long term care by the Medicaid system. Medicaid was set up to finance long term care for low income people and those who have become poor due to medical costs. However, there is no cover for any of the population who have any ability to service the cost of long term care. It is at this point where private insurers step in. However, the spending attributable to private LTCI policies only covers approximately 7% of the overall spending on long term care.

In the year 2000 the US had more than 12 million people over 65 years of age and 1.5 million people below 65 years of age who required a level of long term care. The funding system of long term care through Medicaid creates a disincentive for people to purchase any level of insurance to cover these costs. It should be noted that this is generally associated with aged care and not disability care (Feder 2000).

Singapore

In 2002 the government in Singapore, through its Ministry of Health, launched the ElderShield scheme. This LTCI is arranged quite differently to other schemes around the world. It is a product that is designed by the government but is completely underwritten by private insurers, who tender for the role. Although there is automatic acceptance and enrolment in the scheme at age 40 years, there is an opt-out option for anyone at that time.

Although the overall design of the system is completed by the Singapore Ministry of Health, the introduction of private insurers has enabled product innovation and competitive pricing. The innovation has included the creation by authorised insurers of supplemental insurance cover ("ElderShield Plus"), which gives holders additional benefits when they experience adverse health events. There are a variety of designs for these products, including variations in the scope and/or timeframe of cover.

Authorisation of Eldershield and Eldershield Plus products by the Ministry of Health enables customers to pay premiums from their national health savings account ("MediSave"), and insurers to use the "ElderShield" brand. In this way the Ministry keeps control of the scheme.

Other countries

The LTCI schemes operated by Japan, Germany and the US are indicative of the global market in long term care support. There are, however, other notable government schemes that cover long term care, including:

- **Austria:** wholly government funded with cash payments to individuals;
- **Luxembourg:** funded through government contributions, levy on electricity and tax payer special contributions; cash payments to individuals as well as payments in kind via services rendered; and
- **the Netherlands:** mainly funded by salary based taxes; cash payments to individuals or payments in kind via services rendered, dependent on care type.

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Contact us

Deloitte Access Economics
ACN: 49 633 116

Level 1
9 Sydney Avenue
Barton ACT 2600
PO Box 6334
Kingston ACT 2604 Australia

Tel: +61 2 6175 2000
Fax: +61 2 6175 2001

www.deloitteaccesseconomics.com.au

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