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Commonwealth Grants Commission

2016 UPDATE

WAGE COSTS ASSESSMENT

**STAFF DISCUSSION PAPER
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INTRODUCTION

- 1 In the 2015 Review Report, the Commission committed to a comprehensive review of the Wage Costs assessment. It said *'when the new data are available ... we will need to review whether a conceptual case for the disability continues to exist, and if it does, the most appropriate method to assess it.'*
- 2 As we identified in the work plan sent to States in early June, the next stages of this process are:
 - the distribution of this paper
 - State submissions in response to this paper (30 September)
 - new data and results available (October)
 - Labour Market Research Workshop (November)
 - final State submissions (early December)
 - Commission decision announced in the Update report (February).
- 3 This paper sets out the conceptual case on which the current assessment is based, State views on that case based on submissions received up to and including the 2015 Review, and views on the estimation methodology.
- 4 To help focus the discussion, at times in this paper Commission staff have provided their current views on some key issues. Over the course of this year, we expect to have access to a new data source, and to be informed on the conceptual underpinnings of the assessment by a range of independent experts and by further consultation with States. The recommendations we put to the Commission will evolve through this process.
- 5 In your responses to this paper, we are particularly interested in:
 - whether we have accurately captured the essence of each State's arguments
 - whether our assessment of those arguments adequately addresses them, and
 - any new arguments States wish to present.
- 6 The Commission's usual approach when considering if differences between States should affect assessed fiscal capacities and thus the GST distribution is to ask:
 - is there a conceptual case supported by evidence that, putting aside policy differences, States face different costs in the delivery of services, and
 - can a reliable assessment of those costs be developed from the available evidence, and if so what is the most appropriate methodology?
- 7 This paper follows that structure, although at times there is some duplication of material to avoid excessive cross-referencing.

THE CONCEPTUAL CASE

- 8 We observe that public sector employees in the same occupation in different States are paid different wages. While some of these differences are certainly influenced by the policy choices of State governments, successive Commissions have held the view that part of these differences are due to influences beyond the policy control of States. A paper on the history of the Commission's assessment of this disability is on the Commission's website.
- 9 At the highest conceptual level, the Commission is concerned about interstate differences in the cost of delivering State services. The focus of this assessment is on differences in wage costs brought about by differences in the cost of State employees. While it is possible that differences in the cost of labour among States could see differences in the use of labour (and capital), Commission staff cannot see how a reliable assessment of such a dynamic could be made using available data. As a result, we propose to assume that States employ the same quantum of comparable labour in delivering a comparable service.
- 10 Staff currently consider that there is a linkage between the wages paid by the State public sector and the wages of the larger community in which States operate.
- 11 The conceptual case for such a position may take a number of forms.
 - Various strands of economic theory support the persistence of differences in nominal wages for comparable private and public sector employees across regional labour markets. For example:
 - *Compensating differentials*: The theory of compensating differentials suggests that real wages will equalise between regions but that nominal wages may not. In determining what nominal wage to accept in a particular region, workers take account of housing costs, other cost of living differences, and positive or negative region-specific amenities. As many of these factors are not traded across regions, nominal wages adjust to take account of them.
 - *Macroeconomic factors*: At any particular time, regions within an economy may be at different stages of their business cycles. As a result, some may have excess labour demand and others excess labour supply. This can cause wages in high demand regions to rise relative to low demand regions, especially in the short run.
 - *Attachment and migration costs*: People can also be attached to the place they live in, (known as attachment to place), due to family, cultural or other social factors. This means they may be resistant to migration to take advantage of wage differentials across regions. In addition, the costs of migrating to high wage regions may be relatively high. It is well known that both attachment to place and migration costs can contribute to wage

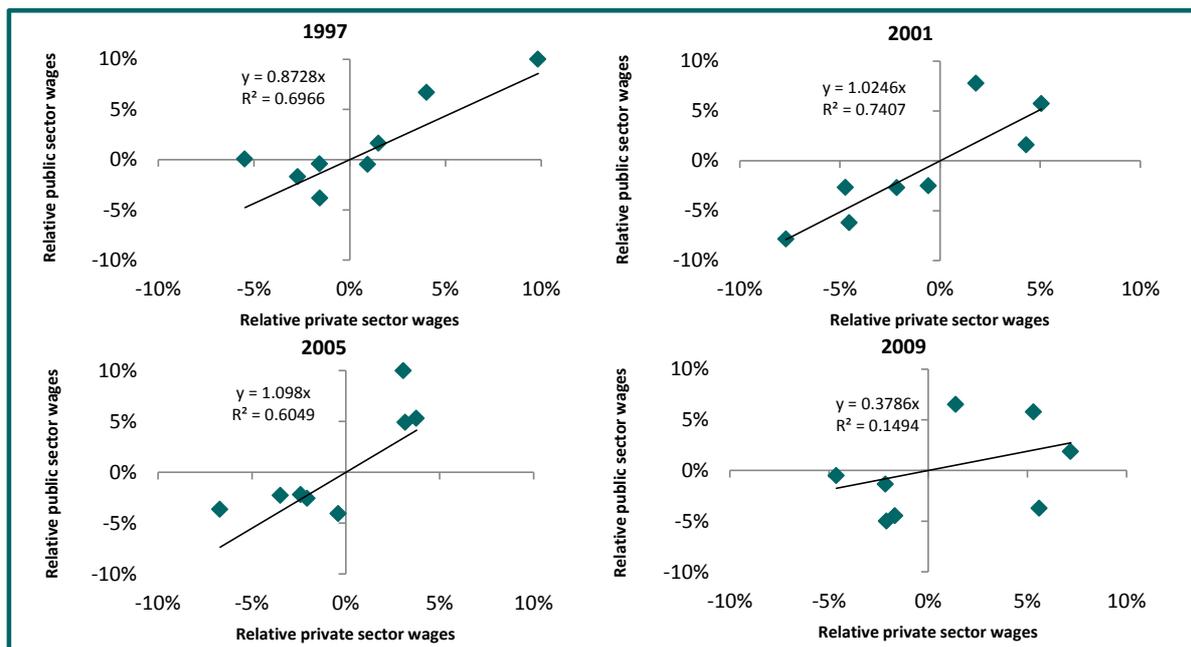
differentials between regions. The implication is that an economy's labour market can behave as separate regional labour markets.

- 12 Some theories may predict wage levels will eventually equalise. However, from the perspective of HFE we are not concerned with long term equilibria, but rather, markets as they operate in given assessment years. It should also be noted that the relative importance of these theories in driving relative wage differences is likely to vary across States and over time.
- 13 It is difficult to sustain an argument that the markets for public and private employment are distinct and independent. This is especially so as we observe that some types of workers do move between the public and private sectors (e.g. teachers, nurses, engineers). Hence, differences in comparable private sector wages across States are also likely to influence, and constrain, what States can pay for comparable employees, if they all follow the same wage policy.
- 14 Whether we simply observe that wage differences across States exist, or whether we also support this with economic theories such as those discussed above, we conclude that as employers constrained by geographic boundaries, State governments are likely to face non-policy influences on the wages they pay to their workers.
- 15 The average public sector wage paid by different States will vary because they choose to deliver services using staff with differing mixes of skill and experience. Each group will attract a different wage. In focusing on the impact of different regional labour markets, we need to abstract from these policy choices. To do this, we use the concept of a comparable public employee, one with the average profile of employee characteristics. When an assessment is made, it seeks to use an indicator of what comparable employees in different States would be paid if their employers had the same wage policy.
- 16 Recent Commissions have used differences in the wages paid to comparable private sector employees in different States as an indicator of the differences in wages that would need to be paid to public sector employees in different States. This is because they considered it not possible to remove the influence of State policy choice on observed public sector data. We propose to retain that indicator.

Relationship between public and private State coefficients

- 17 The Commission, in several past reports, has cited the relationship between State coefficients for public and private sector relative wages as measured by the ABS Survey of Education and Training (SET) as supporting evidence for the conceptual case. These data are shown in Figure 1.
- 18 These results suggest that, at the points in time the data were collected, high relative public sector wages have generally been observed in States with high relative private sector wages. The alternatives have occurred much more rarely.

Figure 1 Public-private wage levels for comparable employees for States, 1997-2009



Source: Commission analysis of ABS *Survey of Education and Training*, 1997, 2001, 2005 and 2009.

- 19 States have differing views on the weight which should be placed on the observed relationships in deciding if there is a conceptual case which warrants an assessment.
- 20 Queensland has in recent submissions argued that the relationship in the 2009 data is less strong than previously observed ($R^2 = 0.15$), is not statistically significant, and that therefore the assessment should be discontinued or heavily discounted.
- 21 Western Australia has stated that the statistical strength of this relationship is not relevant at all. It considers that the conceptual case is valid, and whether individual States choose to follow average policy or not is not relevant.
- 22 Dr. A. M. Dockery, who was commissioned by Western Australia as part of the 2004 Review, in his critique of the assessment said:

When the statistical significance of the estimates are taken into account, I do not feel the figures strongly support the Commission’s case. Nor, given different wage setting processes and the timings of adjustments in different sectors, would I expect strong correlations between the estimated location effects for the two sectors at given points in time. Rather, convergence towards an equilibrium compensating differential over the longer term can be expected. In any case, I think the theoretical arguments in support of using private sector differentials are already sufficiently compelling.
- 23 Western Australia has also argued that even if States paid uniform wages for some or all State government employees, the conceptual case would still be valid. Higher cost States would effectively be offering lower real wages, and so would be constrained to

accept lower productivity workers. Lower cost States would have the capacity to attract higher productivity employees. As such, Western Australia argues that the Commission should perform an assessment regardless of the relationship in future surveys.

- 24 We consider that some care needs to be exercised in interpreting the results of this analysis, especially as the observed public sector differentials are likely to be influenced by differences in State policy. A low correlation may reflect either that relative community wage levels have little impact on public sector wages, or that States have divergent policies at that point in time. It may also simply reflect sampling errors in the data.
- 25 While we note the Queensland analysis, we do not consider that this is conclusive evidence that the conceptual case no longer holds, given the possible influences of State policy on the public sector data.
- 26 Staff consider the correlation between the two variables can only be used to shed light on the conceptual case regarding the functioning of these labour markets, not prove the validity of the case. We propose to perform similar analysis using new data and then consider it and any other information on labour markets that may inform the Commission on this issue.
- 27 Some States have presented arguments that oppose the conceptual basis for the assessment, which are summarised below.

National Market

- 28 Queensland, South Australia and Tasmania have argued that State Government wages are not impacted by regional influences, and are instead driven primarily by national market pressures. These States also argue that State public sector wages will therefore converge under these common influences. This view implies that any observed differences reflect either a policy choice of the States or timing differences in wage setting, and thus no assessment of disabilities is required.
- 29 There is no evidence of the convergence in public sector wages presupposed by this theory. Figure 2 shows that public sector wages have been persistently unequal for the two decades shown. The differential observed in these data has regularly been around 20% for the period shown, around 10% excluding the ACT.

Figure 2 Relative public sector average weekly earnings by State

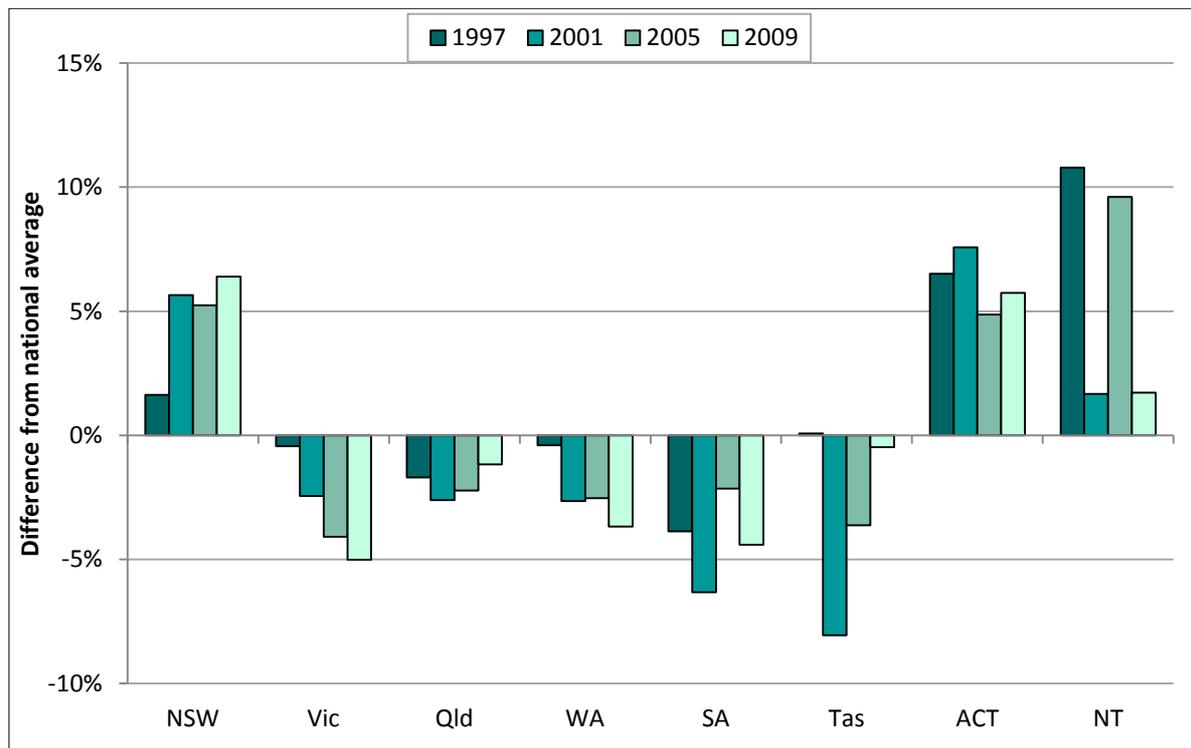


Note: The ACT reflects the concentration of senior Commonwealth public servants in Canberra.

Source: ABS, 6302.0 *Average Weekly Earnings Australia*, November 2014, Tables 14A-14H.

30 Of course, this difference may reflect a combination of different characteristics of public sector employees in each State, such as differences in experience or qualifications, persistent policy differences, and, in our view, the underlying wage disability. Controlling for observable characteristics, the evidence in Figure 3 indicates that there have been persistent differences in the wages paid to comparable public sector employees. This analysis gives no indication that these differences have disappeared or even been moderated by 2009. We consider that regardless of whether these differences are driven by underlying pressures, or policy choice, they undermine the argument for no regional market influences in the public sector.

Figure 3 Relative public sector wages for comparable employees, by State



Source: Commission analysis of ABS *Survey of Education and Training*, 1997, 2001, 2005 and 2009.

31 South Australia argues that ‘material wage differentials do not exist in public sector occupations where States are the dominant employer and where local private sector employment opportunities are limited (teachers, nurses, police)’¹. Table 1, Table 2 and Table 3 list the annual salaries of comparable nurses, police officers and teachers in each State. It is clear that there are significant differences in the wages of these employees.

¹ From South Australia’s first submission to the 2015 Review (July 2013).

Table 1 Australian nurse salary comparison (public system) annual base salaries

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	\$	\$	\$	\$	\$	\$	\$	\$
Enrolled Nurse	49 852	46 972	53 293	52 230	49 750	51 727	53 501	52 564
Registered Nurse/ Midwife	56 529	52 473	61 988	60 734	58 178	57 286	58 989	59 419
Clinical Nurse / Midwives	82 612	71 495	81 025	82 433	67 149	74 129	81 918	91 894
Nurse Practitioner	109 439	96 252	112 213	102 171	102 762	101 357	113 699	106 466
Nurse Unit Manager	99 304	88 520	99 606	98 993	97 325	89 075	93 917	n.a

Source: healthtimes.com.au (Apr 2015), taken from State nursing enterprise agreements.

Table 2 Australian police salary comparison (entry level)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	\$	\$	\$	\$	\$	\$	\$	\$
Constable	63 615	57 035	52 823	66 960	59 225	55 865	n.a	60 202
Senior Constable	79 223	69 648	65 962	84 187	71 585	n.a	n.a	75 545
Sergeant	93 623	87 272	79 486	93 724	87 035	80 819	n.a	90 270
Senior Sergeant	106 826	97 784	92 667	104 941	97 850	n.a	n.a	99 554
Inspector	119 710	115 783	123 003	128 977	122 055	123 204	n.a	n.a

Note: ACT excluded due to differences in AFP classifications.

Source: Western Australian Parliament document tabled 24th February 2013.

Table 3 Australian teacher salary comparison, 2014

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	\$	\$	\$	\$	\$	\$	\$	\$
Graduate Teacher	61 061	59 106	61 636	63 118	63 260	59 890	60 384	62 017
3rd Year Teacher	67 352	64 152	66 400	75 793	69 787	66 213	66 813	68 239

Source: Australian Education Union factsheet, taken from State enterprise agreements.

- 32 Staff have not observed evidence that public sector wages are equal across States, even in those occupations for which the State government is a major employer. We do accept that there may be pressures on wages that are common to all States, such as the need to meet productivity and budgetary targets. However, we currently consider that this does not negate the impact of regional labour market influences. The two can, and we consider do, exist together, and on average States appear to respond to both.
- 33 Should it become evident that States elect to establish nationally consistent wages for their employees, the Commission would need to consider if there is a role for equalisation in that context.

Productivity differences

- 34 South Australia and Queensland have argued that differences in State productivity may account for all of the differences in wages observed in both the public and private sectors across States. They argue that it is not sufficient to observe wage differences if it is not established that the differences are between genuinely comparable employees.
- 35 We agree that there could be productivity differences between the public sectors of different States. However, it is less clear what impact those differences should have on the equalisation process.
- To the extent those productivity differences are likely to be influenced by State policy choice on how they organise the delivery of services, they should not be recognised in the equalisation process, as is the Commission’s usual approach.
 - To the extent productivity differences are due to other influences outside State control, they should be recognised and, in the case of administrative scale and service delivery scale differences between States, they are.
- 36 There might be still other reasons outside State control. However, as the data to either measure differences in State public sector productivity or isolate the impact of policy choice or other as yet unidentified influences on those differences are unavailable, we do not consider that there is a basis for any assessment of their impact on State service delivery costs.
- 37 These State comments do, however, raise the question of whether differences in private sector productivity which are reflected in our estimate of wage differentials for comparable private sector employees among States should be incorporated into our assessment of public sector wage costs. This is discussed from paragraph 55.

Segmentation of private and public markets

- 38 Victoria and Queensland have argued that State public and private labour markets are inherently different from each other, and that parity with the level of private sector wages has never formed an explicit part of the wage setting process in any State. Instead, these States argue that the primary focus when setting wages has been:
- the wages paid to comparable employees in the other States,
 - cost of living increases, and
 - their budgetary constraints.
- 39 Staff agree that States are free to set wages as they see fit, but consider that States will not be able to ignore fundamental labour market dynamics for long.
- 40 To the extent that States do take account of cost of living, then this will also reflect differences in the cost of living between the States. It is difficult to imagine a

Tasmanian public sector enterprise arguing for cost-of-living wage increases on the basis of the cost of living in Perth, for instance.

Other issues

- 41 Queensland has for many years opposed this assessment on the grounds that the conceptual case is flawed. It argues that location is an insufficient explanation for the observed differences in wages between the States, and instead submits these are purely the result of policy choices on behalf of the State governments. It considers the economic theories used by the Commission to explain wage differences between regions do not apply to the Australian labour market. Queensland has put forward a number of arguments concerning the existence and drivers of the disability.
- 42 Queensland has argued on the subject of cost of living impacting wage differentials that 'inflation [is] broadly the same everywhere'², and therefore cannot be responsible for persistent differences in wages. However, there is considerable evidence of differences in cost of living between States. Studies suggest that there is considerable and growing spatial variation in prices in Australia³, and considerable heterogeneity in housing in particular⁴.
- 43 Queensland has also suggested that due to the free and open labour market in Australia, internal migration will over time eliminate any private or public sector wage differentials between States, arguing that there is 'no compelling reason for these differences to remain so persistent'. We accept the view that when internal migration eliminates disparities that the assessment should have no impact on the GST distribution. However we also note that it is current conditions we are interested in, and that under some economic theories, differences in nominal wages can exist over the long term.
- 44 Queensland has also argued that because public sector average weekly earnings are generally higher than private earnings, that the existence of similar wage pressures on both markets is disproved. Staff consider that it is not that public sector employees are paid more or less than the private sector, but that there are differences in the relative wages of private sector employees among States that are also reflected in the relative wages of public sector employees among States.
- 45 Queensland has suggested that the persistence of wage differences may in fact be due to the Commission compensating State governments for high wage costs, suggesting that this may be a 'significant restriction on market forces'. Queensland

² Presentation by Peter Crossman, Queensland Statistician, 2008.

³ See: Mishra & Ray (2014).

⁴ See: Otto (2007).

argues that New South Wales does not have any non-policy reason to pay high wages, and does so only because of the grants received as a result of this assessment. This seems an unlikely argument because any assessment for higher wages only provides untied funds to a State; it need not allocate that to higher wages. Further, it appears inconsistent with New South Wales recording higher wages prior to the assessment being in operation.

- 46 Queensland has also argued that if differences in the cost of housing drive the wage costs assessment, it effectively ‘compensates’ States for higher house prices, representing a transfer from residents in asset-poor States to residents in asset-rich States. Queensland argues this does not represent a case for equalisation. Staff consider that if housing does indeed put pressure on wages, then to not compensate States for this disability would not achieve HFE. We are tasked with equalising State fiscal positions, not household incomes.

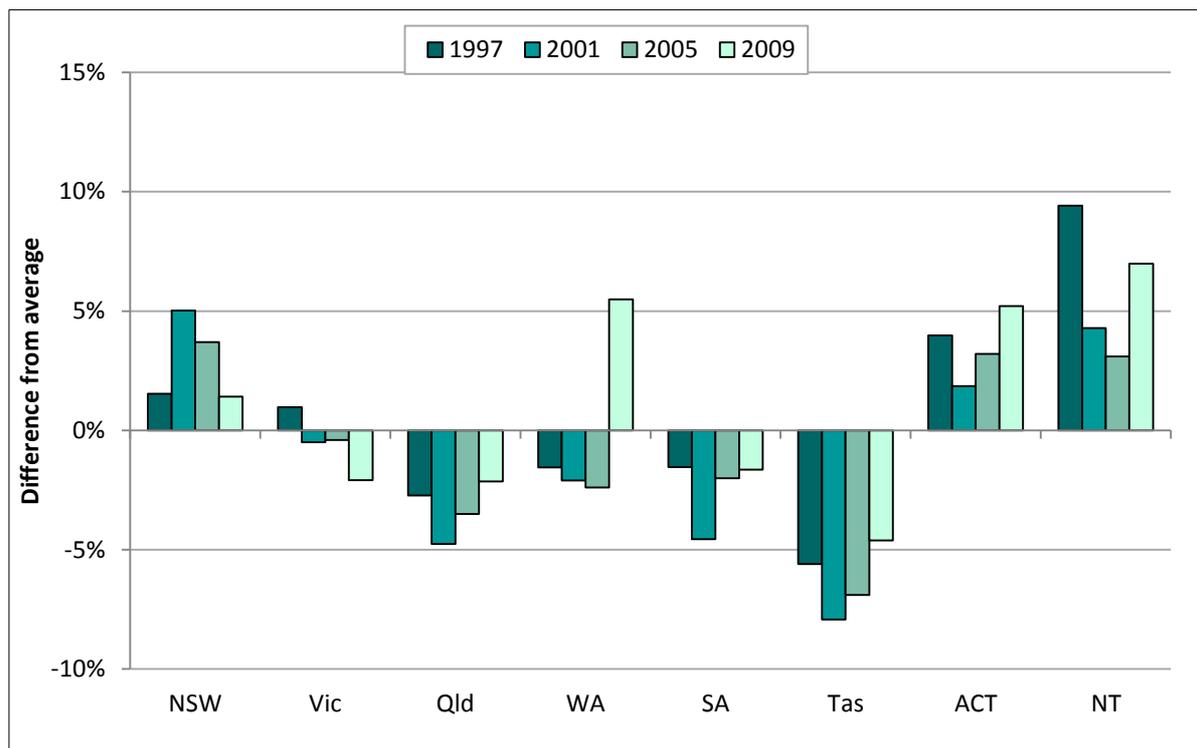
DOES A REGRESSION APPROACH MEASURE THE DISABILITY?

- 47 On the assumption that there is a case for a disability faced by States in wage setting, the Commission requires a method of measuring it that is robust, reliable, and policy neutral. We consider that using direct public sector wage levels is inappropriate, as they are influenced by State government policies and priorities, and may not solely reflect the underlying disabilities.
- 48 If there are underlying location influences which put pressure on wages, then they will not be confined to the public sector but will also be evident in the wages of the general community. To this end, the Commission looks for evidence of such influences on private sector wage levels, as measured by the wage received in each State by the average private sector employee.
- 49 To estimate the wage of the ‘average’ or ‘comparable’ worker, we must remove the influence of differences in worker characteristics. As an example: doctors receive higher wages than cleaners. If one State had many more doctors than cleaners, not considering this difference would lead us to estimate a higher average wage where more doctors were located. This higher wage would not be due to location, but due to the difference in occupation structure. We want to estimate the degree to which the wages of a doctor in one State differ from the average doctor, and how much a given cleaner’s wage differs from the average cleaners. This can be achieved for individual occupations; for example as shown in Table 1 to Table 3. It can be achieved in aggregate either through standardisation or regression, both of which capture the same underlying concept.
- 50 Since 2004, we have used a regression model which controls for a large number of observable employee characteristics. The data source has been the SET. This

approach has been critiqued by a number of expert consultants, both labour market economists and econometricians, on behalf of the Commission and the States. The Commission considers the model fit for purpose.

- 51 In this manner, we take the relative private sector wage level of the national average private sector employee in each State to be a policy neutral measure of the disability created by location influences on wages.
- 52 The results of this model are shown below in Figure 4. They show that New South Wales, the ACT and the Northern Territory have had consistently higher than average wages, Queensland, South Australia, Tasmania and to a lesser extent Victoria lower than average wages, and Western Australia above average wages more recently.
- 53 The ABS has indicated it will replace the SET survey with an expanded annual survey known as the Characteristics of Employees (CoE) survey. This survey was run in August 2014 and data should be available by August 2015. Staff expect to be able to apply a similar econometric model to these data to produce relativities on an annual basis.

Figure 4 Relative private sector wages for comparable employees, by State



Source: Commission analysis of ABS Survey of Education and Training, 1997, 2001, 2005 and 2009.

- 54 New South Wales, Western Australia, the ACT and the Northern Territory all agree that the wage level of the average private sector employee is an appropriate measure of the disability. Victoria, Queensland, South Australia and Tasmania do not. These States have a range of concerns, outlined below.

Adjusting for private sector productivity differences

- 55 Staff accept that while productivity may cause differences in wages between States, it will not be the only driver of these differences. Staff consider the case of Western Australia in recent years to be an example of regional labour market dynamics leading to differences in relative wages.
- 56 Table 4 provides a sample of occupations from Western Australia. It shows that a wide array of occupations receive much higher wages in that State compared to the national average. In this analysis, 48 of 51 occupations at the Australian and New Zealand Standard Classification of Occupation (ANZCO) 2-digit level received higher than average wages in Western Australia.

Table 4 Average wage for selected occupations, Western Australia and Australia

2-digit Occupation	Western Australia	Australia	Difference
	\$	\$	\$
Hospitality, Retail and Service Managers	57 593	53 676	3 917
Design, Engineering, Science and Transport Professionals	92 295	78 078	14 217
Food Trades Workers	43 065	36 584	6 480
Skilled Animal and Horticultural Workers	39 546	36 229	3 317
Protective Service Workers	55 811	47 151	8 660
Construction and Mining Labourers	69 165	55 476	13 689
Other Clerical and Administrative Workers	60 095	52 805	7 290

Source: Commission analysis of 2011 Census data.

- 57 While there may be productivity differences between States in certain occupations or industries, it seems unlikely that there would be similar productivity differences across virtually all industries. Staff acknowledge that productivity differences may be reflected to some extent in our measured wage differentials, but we are not of the view that productivity is the sole or even a major explanation for the observed differences.
- 58 Private sector productivity may vary among States in two ways:
- Different industries have different average productivity levels, and because States have different industry mixes, their aggregate productivity levels will vary.
 - An industry within a State can be more or less productive than the average for that industry, for example mining output per employee could be higher or lower than the national average for mining.
- 59 We readily accept that productivity differences can influence wage differences in the private sector so that the productivity determined wage component would vary between industries and could vary among States within an industry.

- 60 The current indicator of the private sector wage differential for a State excludes that part of productivity determined wage differences due to differences in the average wage of different industries (and for different occupations, and so on). However, it does capture that part due to a State's industry having above or below average wages because its productivity varied from the national average.
- 61 We consider this is appropriate because it is a regional impact. Similarly, if for example, mining wages in a State are above the average mining wage for other non-State policy related reasons, that too will, and should be, included in our measure. In any case, we cannot separate out any part due to higher productivity.
- 62 While some States might consider that a comparable employee, by definition, should have the same productivity in each State, for our assessment purposes, comparability is not so encompassing and their productivity and wages differentials can and should differ for region specific reasons.
- 63 Some States consider that region specific wage differences based on productivity should be excluded because those productivity differences also affect the public sector. Not to do so would, in their view, over compensate States with above average productivity based wages. (They would be assessed as requiring the average staff level and be recognised as requiring a higher productivity-based wage – but should not need both).
- 64 While we can understand the conceptual case, we do not propose to make any productivity related adjustment to our estimates of public sector wage differentials. This is because we cannot isolate productivity effects in our estimate of State wage differentials, and we have no way of analysing public sector productivity free of policy choice to see if it is related to that in the private sector.

Omitted variable bias

- 65 As with any analytical method, there are likely to be omitted variables which can explain variations in wages between individuals. In terms of our regression approach, such omissions are only problematic if they are systematically related to State of residence. In this case, our measurement of State effects would be systematically biased.
- 66 South Australia has argued that there are likely to be such unobserved attributes that mean workers relocate to certain States that favour or reward these abilities. This is more generally known as worker sorting in the economic literature⁵. They argue that such effects lead to an overstatement of South Australia's disability. Western Australia argues the same influences must lead to an understatement of its disability.

⁵ For instance see Combes et al (2008).

- 67 If the unobserved attribute were ambition, and South Australians with ambition tend to move interstate to the same job, because career opportunities are greater, then the average quality of a South Australian would be lower than it appeared in our regression. This could explain some of the differences in wages.
- 68 Western Australia contends that in a State with labour shortages, people are recruited or promoted to jobs they would not be qualified for in other States. The wage required to attract a person of national average standard would be higher than the wage measured in the regression model.
- 69 Staff consider that either impact is plausible, and both phenomena probably occur to a certain extent. However, we cannot assign a higher prevalence to one or the other. Given no evidence that either gross effect is large, let alone the net effect, we have no basis to consider that such dynamics cause a significant bias in either direction.

Wage pressures from labour market structure

- 70 New South Wales and Western Australia have suggested that not all variables need to be standardised for, arguing that differences in labour market structure may simply represent unavoidable wage differences between States, and hence unavoidable costs.
- 71 Staff accept that differences in industry structure between regions are likely to impact the community wage level. However, to the extent that they do, this will be reflected across many industries and occupations and hence captured by our current approach. States making this argument would need to explain how a high cost industry is not able to impact the community wage level, but can nonetheless impact the wages of the public sector.

Policy influence on private sector wages

- 72 Some States have argued that differences in State policy influence differences in private sector wages. For instance:
- State governments can impact the amenity of areas, which may cause workers to accept higher or lower nominal wages.
 - Planning and land release policies may affect land prices.
 - State governments, through industry or environmental policy, may be able to impact the macroeconomic conditions in their State over the longer term.
 - States still have some role, although smaller than in the past, in wage setting and industrial relations in their State.
- 73 Therefore, in an indirect sense, the relative wage level of a State may to varying degrees be impacted by the policy choices of current and previous governments. It is well beyond our capacity to calculate the wage rate that would prevail if all States

had followed average policy throughout time. There is no reason to believe that policy and non-policy influences would work in the same direction for all States. Therefore, discounting is unlikely to achieve a result closer to HFE. The Commission will need to decide whether it considers the policy or non-policy reasons to be more significant. Staff would recommend that, if the Commission concluded that differences in private sector wages are primarily driven by non-policy differences, it should retain the assessment. If it considered that policy reasons predominate, it should discontinue the assessment.

Alternatives to the regression approach

- 74 Victoria has argued that differences in public sector wages are driven by differences in cost of living between areas over the longer term, and that using private sector wages is not an appropriate proxy to measure this influence. It has proposed ‘The Commission ... investigate the use of a broad spatial cost of living indicator to provide a simple, transparent proxy measure for the underlying wage differentials between States.’⁶
- 75 While we are attracted to the idea of a simpler measure of the wage cost disability, staff do not at present consider that an assessment focused on only one of the possible drivers of location costs (cost of living) would deliver a more robust outcome. We consider the current approach provides for a more appropriate proxy for the many channels through which location may impact wages. Additionally, we are not currently aware of a reliable spatial cost of living measure for Australia.

Greater variance in private than public sector wages

- 76 Victoria has also argued that the current measurement approach may overstate interstate differences in wages, as average weekly earnings data show greater interstate variance for the private sector than for the public sector. Staff note that the assessment does not consider average wages between regions, but relative wages for comparable employees. Figure 1 illustrates that variance in relative private sector wages is generally similar to that of the public sector once differences in worker characteristics are controlled for.

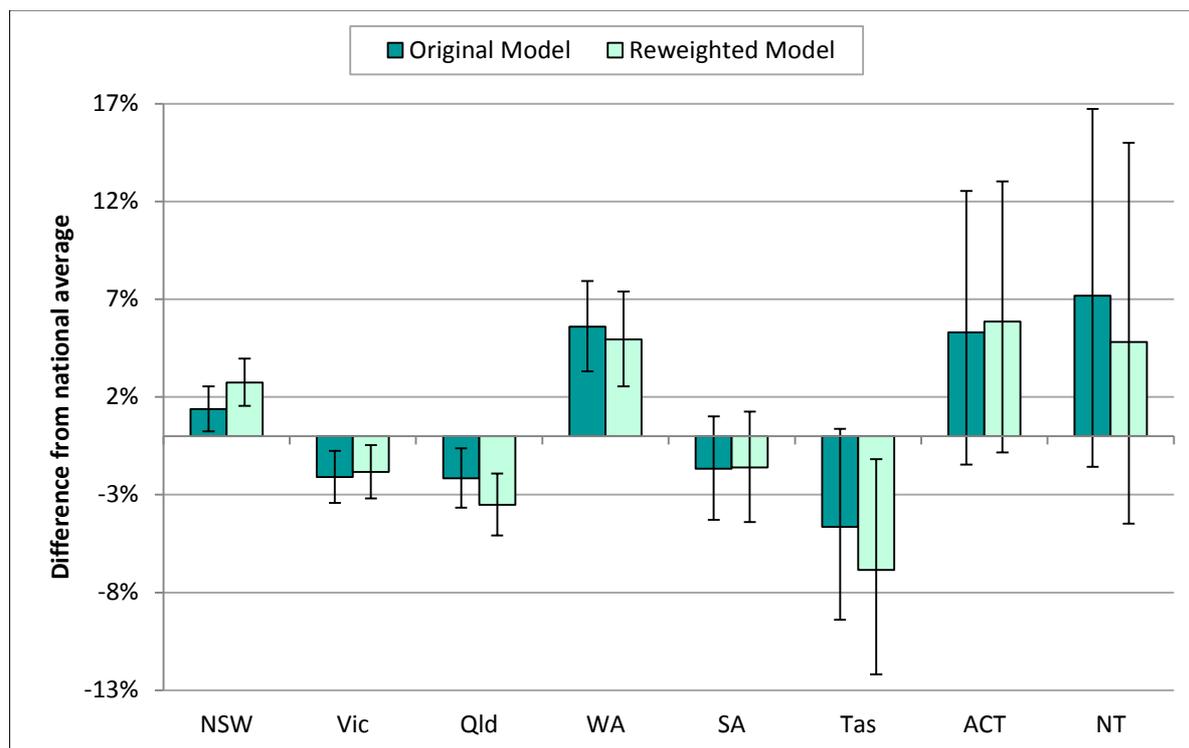
⁶ From Victoria’s first submission to the 2015 Review (July 2013).

STATE SPECIFIC ADJUSTMENTS

Private sector in Tasmania

- 77 Tasmania has for many years argued that the private sector is not an appropriate proxy for the wage pressures faced by the Tasmanian Government. It argues that the conditions faced by the Tasmanian private sector are so different from those faced by the public sector that Tasmania must set wages at levels high enough to attract and retain qualified employees from similar occupations interstate. Effectively, Tasmania argues that it operates in a national market for public sector labour, even if other States do not.
- 78 The Commission has since the 2011 Update not accepted Tasmania's case, as the 2009 SET data showed that relative public sector wage levels could fall as low as the relative private sector wage levels in a State. The Commission considers the current estimate a reasonable approximation of the wage pressure faced by the Tasmanian Government.
- 79 Staff also note that reweighting the regression to reflect the public sector education profile lowers Tasmania's relative wages (Figure 5). This indicates that private sector workers with similar levels of qualifications to public servants are paid even lower relative wages in Tasmania. We note that while the results are not significantly different to the results including those workers, they nonetheless do not offer support for the theory that Tasmania is operating in a national labour market for public sector type employees.

Figure 5 Original and qualification reweighted (a) SET estimates, private sector



(a) Survey sample weighted to represent the public sector distribution of different levels of qualification in each State.

Source: Commission analysis of SET 2009.

80 In past reviews however, the Commission has considered there may be a floor to wage relativities, below which relative public sector wages cannot reasonably fall. This issue could affect any State in the new data. We are asking for academic comment on whether any State would be fully or partially exempt from any pressures, but State views on the merits of this argument would also be appreciated.

Commonwealth sector influence on the ACT

81 The ACT has at times argued that the influence of the Commonwealth government is the greatest driver of wages in the national capital. Prior to the introduction of SET data in 2004, the Commission used the entire non-State sector as the policy neutral benchmark for the wages assessment. However, limitations in the SET data mean that Commonwealth workers could not be differentiated from State government workers. Therefore, since 2004, private sector wages have served as the policy neutral benchmark. The CoE survey will also not identify Commonwealth employees separately.

82 The Commission accepted the ACT’s case until the 2011 Update. It decided then that the private sector wage level was an appropriate proxy for the ACT, as the public and private relativities were sufficiently similar. The judgment based adjustment was discontinued.

83 The impact of the Commonwealth on our wages assessment is only a potential issue in the ACT. If we were to find that this, or future, CoE surveys showed the ACT's relative public sector wages (primarily Commonwealth public servants) were significantly higher than its relative private sector wages, there could be an argument that wage pressures facing the ACT government would be higher than those measured by the private sector. We would like to consider the appropriate response to such a result. However, as discussed in paragraph 71, the ACT would need to explain why Commonwealth wages would not exert an influence on the wider community wage but would affect the public sector.

IMPROVING THE MODEL

Capital city and regional loadings

- 84 The use of State average private sector wages provides the capacity for States to pay more (less) than average in those areas where private sector wages are above (below) average. For example, this could allow New South Wales to pay teachers above average salaries in Sydney and below average salaries in some regional areas. However, this is not necessarily what States do. We observe that State governments generally negotiate and set wages on a State-wide basis, so a Sydney teacher and an equivalent regional teacher generally earn the same salary (location loadings notwithstanding). If private sector wages vary within a State, but public sector wages do not, it is worth considering whether the private sector wage level for the entire State or for some subset of the State best reflects the pressure on the public sector wage levels.
- 85 States presumably set their wages at a level which allows them to recruit and retain staff in most locations. Setting wages at a level lower than the capital city level is likely to mean a State will face difficulty recruiting staff in the capital, although it may still be easy to attract staff in lower wage areas.
- 86 In cases where regional wages are much higher than capital city wages, a State may again have trouble retaining staff, and so may pay a regional loading above what would normally be expected. In such instances, the Commission could assess an additional State specific regional wage loading. Staff provided a discussion paper covering this issue during the 2015 Review (CGC-2013-07-S). The relevant section of that paper is included in Attachment A.
- 87 New South Wales, Victoria and Tasmania support the concept of a capital-city based assessment, arguing it is closer to what States do in setting wages. Queensland, Western Australia, South Australia and the ACT are opposed to the proposal. Queensland and the ACT argue that the conceptual case is unconvincing and that

such an approach would serve only to reduce sample size and decrease the reliability of the assessment.

- 88 Queensland has in the past argued that State-wide wage agreements support 'uneconomic' wages in some areas, citing the example of different wages being paid in Albury-Wodonga by the New South Wales and Victorian Governments in the same labour market. Staff note that while there may be some wage savings associated with paying regional wages, there may be offsetting costs associated with a decentralised wage setting system. However, regardless of whether centralised or decentralised wage setting is more efficient, we observe that what States do is to have centralised wage setting for their public servants.
- 89 Western Australia considers that to use capital city wage levels would mean that we would give States with high regional wages the capacity to recruit average quality staff (as we would assess their wage level both in and out of the capital city at its measured level). However, States with low regional wages would be given the capacity to recruit higher quality staff, (as we would assess their wage level outside the capital at above its measured level). Western Australia contends that this is contrary to the HFE objective. It contends we should give all States the capacity to recruit average level staff everywhere, and how States implement their own policies is their own concern.
- 90 The Western Australian solution, of assuming that States can recruit average staff everywhere is in conflict with our 'what States do' principle. We accept that in providing for high capital city wages to staff in low wage regional areas, we are providing certain States with an above average capacity in their regional areas. However, we consider that to not do so, would not provide them with the capacity to provide the average standard of service. We consider that equalising their fiscal capacity if they follow average policy is the key to our definition. We acknowledge that this may provide windfall gains to certain States.
- 91 The Northern Territory supports the application of a regional loading, but notes that current data limitations do not support the calculation of such a loading for the Northern Territory. It provided a submission using 2011 Census data that suggested that wages are considerably higher outside of Darwin, warranting a regional loading. However, we note that for States with higher regional than capital city wages, we would calculate the same wage level using a whole of State estimate, as using separate capital city and balance of State estimates. This is because we would assess such a State as needing the prevailing wages in both capital cities and in regional areas (which is equivalent to needing prevailing wages across the State). It is only for States with low regional wages that a difference emerges. We also note that the CoE may be able to provide more fine level geographic analysis than the SET was able to provide.

92 Queensland has also suggested that if States do set capital city wage levels, that the appropriate benchmark level is the Major Cities classification of the Accessibility/Remoteness Index for Australia (ARIA). This would mean that the Gold and Sunshine Coasts are included with Brisbane, and Newcastle and Wollongong included with Sydney. Queensland argues that these areas are likely to comprise a single labour market and thus be subject to the same wage pressures. Staff are currently inclined toward using the Greater Capital City Statistical Areas as defined by the ABS, which are agglomerations of SA4 regions. SA4s are designed to encompass local labour markets⁷. We welcome State views on the correct labour market area to use if such an assessment were to be performed.

Dominant employer effects (policy neutrality)

93 Some States, in particular South Australia, have argued that for particular occupations, such as nurses, teachers and police, private sector wages cannot be a policy neutral measure of the disability. They argue that because the public sector is a dominant employer in certain occupations and that private sector employers of those occupations are likely to follow the wages set by the State employers, that there is a level of policy contamination in private sector wages.

94 The wages paid to private sector health and education professionals may reflect both State policy contamination as well as the same wage pressures as the rest of the private sector. It is possible to remove the 4% of private sector workers in these two groups from our sample. Using the 2009 SET, the results were not material at the \$30 per capita level, but were material for some States at the \$10 per capita level.

Simplification

95 Some States have expressed concern that the model is difficult to interpret and would prefer it greatly simplified, while other States have argued that the removal of variables may lead to the size of the disabilities assessed being overstated.

96 The disability estimates currently in use are created by an econometric model which accounts for 15 dimensions of observable employee characteristics, as well as interactions, comprising 219 variables in total.

97 Queensland considers there are additional variables available in the SET data which are likely to be significant determinants of wages, such as self-assessed health status.

98 While the State location effects are not particularly sensitive in a statistical sense to the addition or removal of variables beyond a certain point of complexity, very small movements in relative disabilities can produce material impacts on the GST

⁷ From ABS *Australian Statistical Geography Standard (ASGS): Volume 1 – Main Structure and Greater Capital City Statistical Areas*, Australia, July 2011, pg. 27.

distribution. Early discussions with the ABS concerning the CoE survey suggest that a similar number of variables will be available in that dataset, which is slated to replace the SET.

- 99 Queensland considers that minor arbitrary adjustments are not warranted. The Northern Territory considers that removing variables that are material and significant is not justified.
- 100 After considering these views, staff now consider that any simplification is not warranted, as it does not significantly improve the quality of the regression, it does not significantly assist in the transparency of the assessment, and complicates comparison of results over time. As such, we no longer propose to simplify the regression.
- 101 Staff preference is that the model control for any employee characteristic that could reasonably impact on wages, provided that impact is significant, and provided the information is available in the CoE data. Interpretation of the model outside of the location coefficients is of secondary concern. Staff feel this provides for both accuracy and simplicity. Therefore, if those variables suggested by Queensland are still found to be significant, staff are inclined to include them in the model.

Staff conclusions on measurement approach

- 102 Staff currently consider that the private sector is sufficiently free of the influence of State governments to be an appropriate way to measure a wage costs disability without compromising the condition of policy neutrality.
- 103 It is our current preference that the disability be measured by the application of an econometric model of private sector wages to ABS microdata from the upcoming Characteristics of Employees survey, provided the data are of sufficient quality and meet our requirements. It is our expectation that these data will be available on an annual basis, and so the current method of indexing the results annually by the Wage Price Index will no longer be required.
- 104 How the factors produced will be applied, and the level of discounting that may be required will be best considered in light of the quality of the data source, and any State views forthcoming. As signalled in the 2015 Review Report, we consider it unnecessary to update the proportion of wages expenses in each category, as these proportions have been relatively stable over time.

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ATTACHMENT A: CAPITAL CITY WAGES⁸

- 1 The interstate wages assessment in the 2010 Review used the private sector wage level of comparable employees in each State to measure the relative wage levels at which States could employ staff. The purpose of this section is to consider whether using the average private sector wage level for the whole State is the most appropriate benchmark for estimating public sector wages. No State has raised this as an issue.
- 2 Using State average private sector wage relativities as a proxy for State average public sector wage relativities gives States the capacity to pay wages at the same difference from the national average as the private sector pays in different regions.⁹ That is, States can pay public servants more than average in regions where private sector workers are paid more than average such as Sydney and regional Western Australia; and States can pay public servants less than average in regions where private sector workers are paid less than average.
- 3 However, this is not necessarily what States do. States generally pay comparable public servants a single wage set in a State-wide agreement. A State may have some regions where private sector wages are below the national average and other regions where private sector wages are above the national average. However, it negotiates a constant wage across the State. Whether it does this at the State average private sector level, as the current assessment assumes, or at some other level is worth considering.
- 4 While it is a policy choice for a State to negotiate constant wages across the State, it appears to be one shared by most States. What States appear to do is to negotiate State-wide agreements with their staff, and set a wage level for the entire State.
- 5 The level at which States set their wages is, presumably, one at which they can recruit and retain staff in most locations. During the 2010 Review, we found that the Australian Government has national wage rates for some jobs, paying the same wage for the same position everywhere in the country. For example, Centrelink said it sets its wage rates at levels that enable it to recruit staff in most areas. In some areas, Centrelink could fill all available positions at a lower wage, but it chooses to have a national wage rate. In some regions, it is easier to fill positions than in other regions.

⁸ This section is reproduced from Staff Discussion Paper CGC-2013-07-S, p. 244-252, paragraphs 81-107, sent to States October 2013.

⁹ Assuming that the proportion of workers in the public sector is comparable across different regions in each State

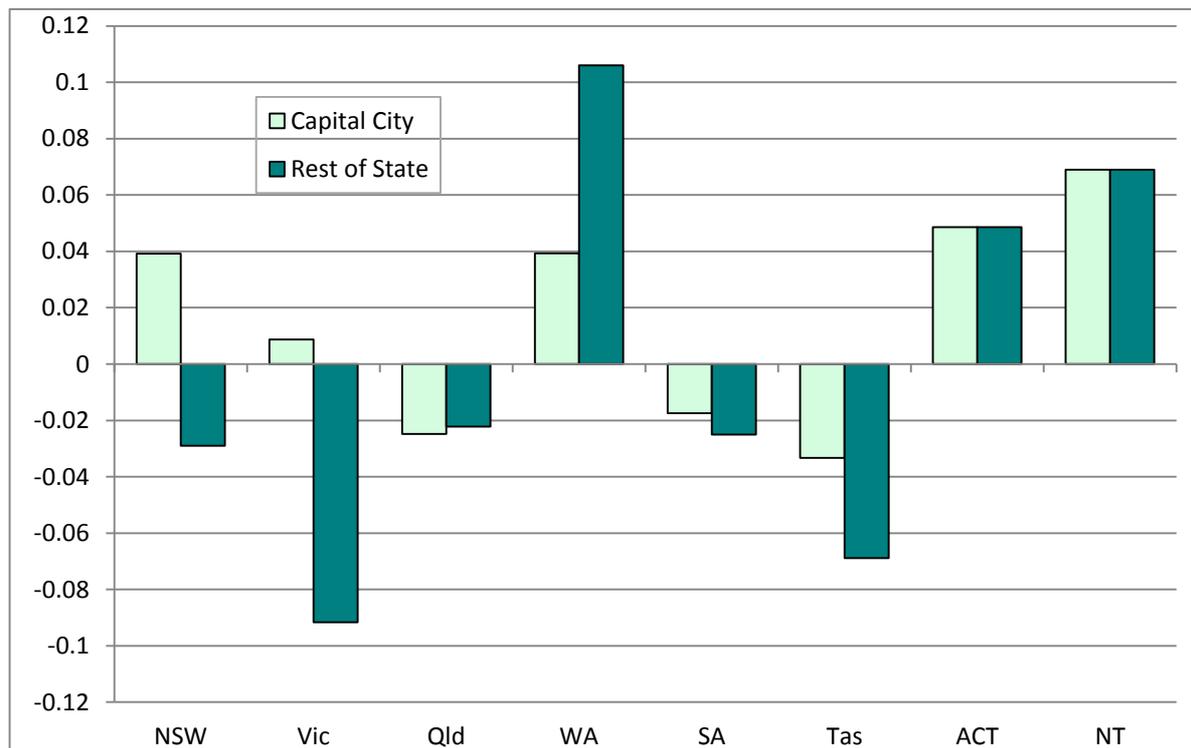
This has some impact on where it locates services. For example, Centrelink chose to relocate one of its national call centres from Western Australia to Tasmania. This relocation did not lower its wages bill, but did make it easier to fill positions. In order to recruit and retain staff in most areas Centrelink presumably sets a wage at, or close to, that of the highest wage region. By doing so, Centrelink has competitive or attractive wages in most areas. We presume States follow a similar process to determine and maintain State-wide wages.

- 6 If States pay wages based on State-wide agreements, then assessing public sector wage differences based on the State-wide average private sector wage level is not consistent with how public sector wages are determined. Rather, public sector wage differences might be more accurately assessed against private sector wages where they are the highest in each State. In most States, this is in the capital cities.

Do States pay the same wage throughout the State?

- 7 Our research of State policies has shown, at least for teachers and nurses, State-wide agreements set a single wage for the entire State. If New South Wales' State-wide agreements set teachers or nurses wages at 1% above the national average (its average difference from the national average), New South Wales would not be able to compete for staff in the Sydney labour market where private sector wages are 4% above the national average, as shown in Figure A- 1.
- 8 Figure A- 1 shows 2009 private sector SET results for capital cities and the remainder of the State. It shows that there are significant differences between the private sector wage levels in capital cities and those in the rest of the State, with private sector wages generally higher in capital cities than in regional areas.

Figure A- 1 Relative private sector wages for comparable employees by region, 2009

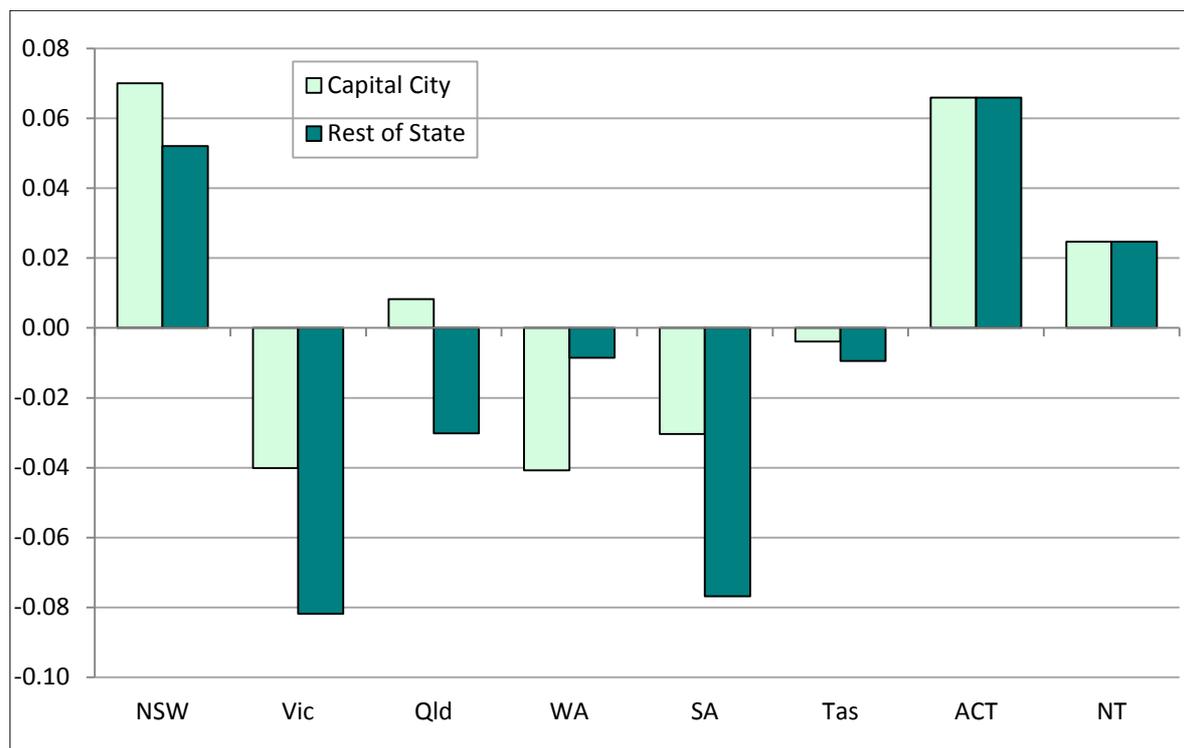


Note: Data are not available to split the ACT and the Northern Territory, so capital city estimates for these States reflects the whole of State wage levels.

Source: 2009 SET.

- 9 Figure A- 2 shows 2009 public sector SET results for capital cities and the remainder of the State. It shows that the differences in wages between capital city and rest of State are not as large in the public sector as in the private sector. In fact in most States, the differences between capital city and regional public sector wages are not statistically significant.
- 10 While private sector wages differ in capital cities to the rest of State, this difference is not significant in the public sector. Public sector wages are more homogenous between capital cities and the remainder of the State than private sector wages, suggesting that States do use whole of State agreements considerably more than the private sector does.

Figure A- 2 Relative public sector wages for comparable employees by region, 2009



Note: Data are not available to split the ACT and the Northern Territory, so capital city estimates for these States reflects the whole of State wage levels.

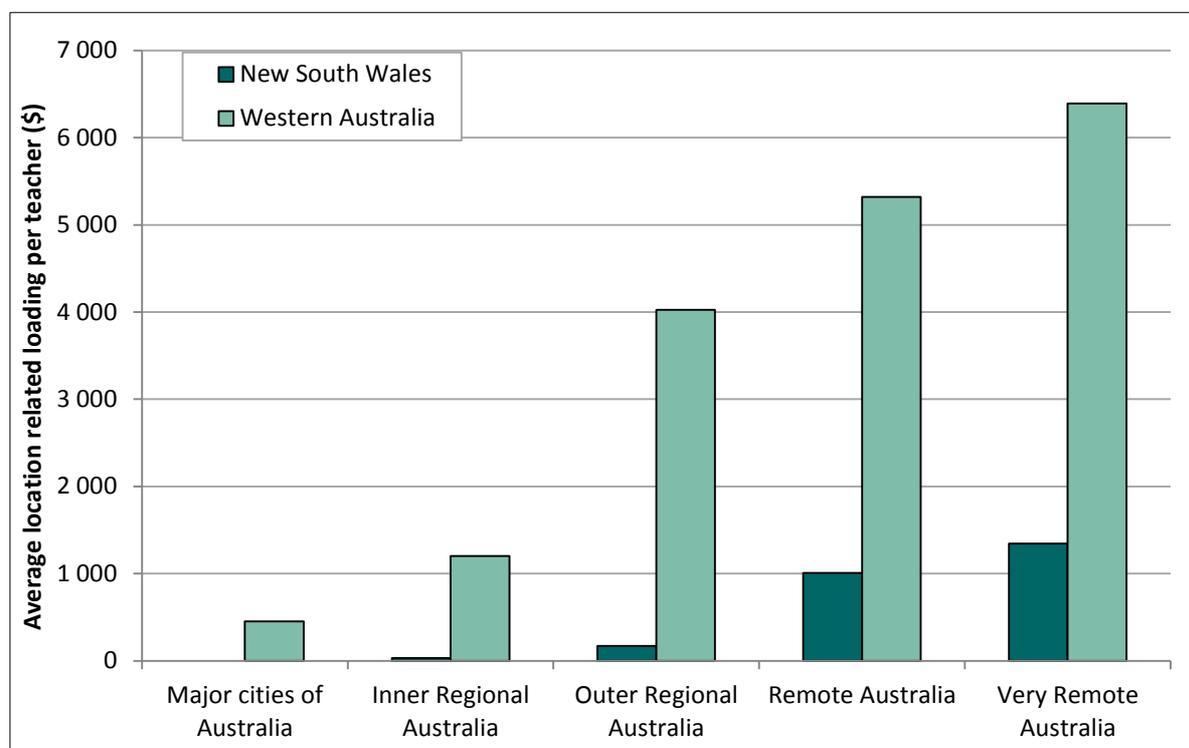
Source: 2009 SET

Proposed assessment

- 11 In determining wage levels, a State must consider the wage level which will allow it to recruit staff in most areas of the State. In most States, the capital cities have the highest private sector wage level. In States where regional private sector wages are high (Western Australia), public sector employees are offered regional loadings.
- 12 Figure A- 3 shows analysis of New South Wales’ and Western Australia’s teacher certified agreements that shows that is what at least some States do. This suggests the State-wide agreement wage level is likely to reflect the private sector wage level prevailing in the capital cities while additional regional allowances may be offered to remote employees.
- 13 Because Western Australia’s private sector wages in regional areas are considerably higher than in Perth, offering regional Western Australian staff Perth wages may mean that it may not be able to retain staff in these areas. In this case, staff consider it would most likely offer a regional loading in more areas, or at higher levels, than other States do, to ensure that regional wages were competitive with local private sector wages (as shown in Figure A- 3). This would mean Western Australia would offer Perth wages in Perth and regional wages in regional areas.

- 14 While it would be possible for New South Wales to set its wages at regional levels, and offer regional allowances in Sydney, that does not seem to be what States do.

Figure A-3 Average location related loadings paid to teachers in New South Wales and Western Australia, 2012



Note: Loadings only relate to remoteness or similar allowances. Career progression opportunities, subsidised housing and other in-kind support are excluded.

Source: New South Wales and Western Australia teachers’ enterprise agreements. New South Wales: <http://www.dec.nsw.gov.au/about-us/careers-centre/school-careers/teaching/our-programs-and-initiatives/explore-your-future/teaching-in-rural-nsw/incentive-schools>
 Western Australia: <http://det.wa.edu.au/labourrelations/detcms/navigation/awards-and-general-agreements/?oid=MultiPartArticle-id-2757333>

- 15 This suggests we should give each State an interstate wage factor based on capital city wages. Outside of capital cities, we recognise that States with high private sector wages in regional areas, in particular Western Australia, pay loadings above this base wage rate. This State specific regional wage loading is in addition to the national average based regional cost assessment.

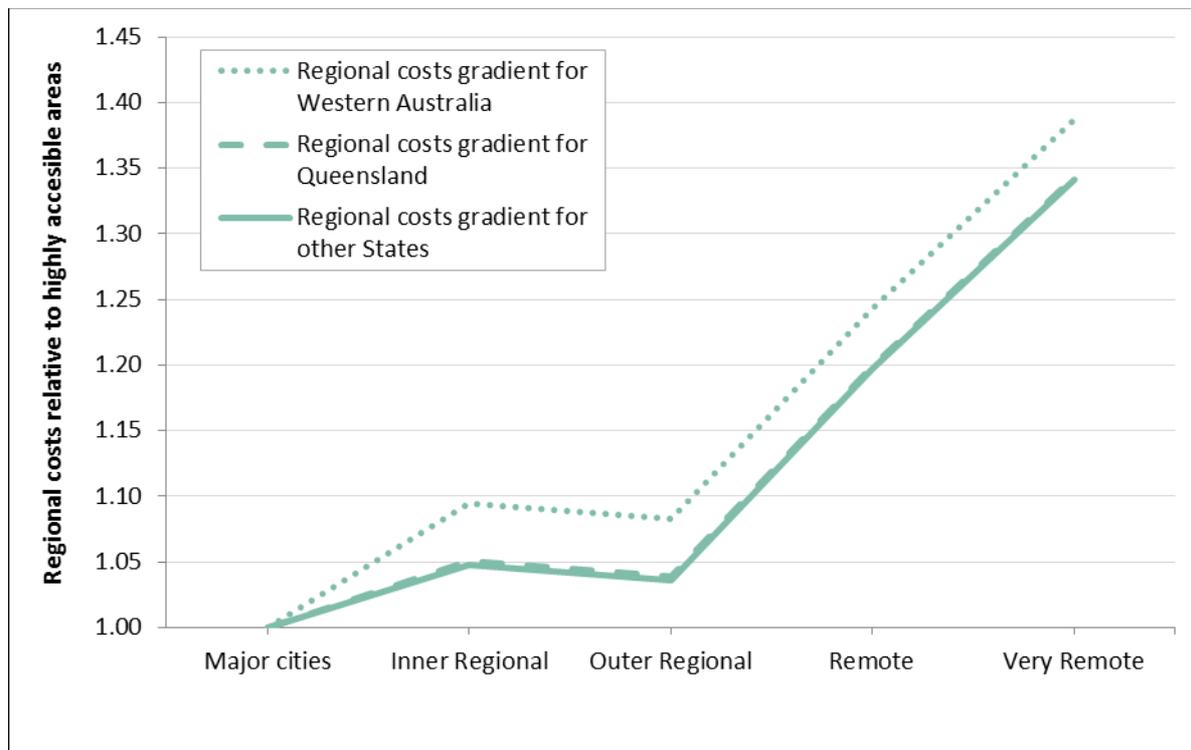
State specific regional wage loadings

- 16 A State specific regional cost gradient is an issue raised in the context of the Regional costs assessment, and is an idea proposed by Western Australia. The merits of this assessment are briefly considered in the Regional costs chapter. However, because of interaction with staff’s proposal to change from a whole of State to a capital city basis

for the wages assessment the mechanics of our proposed State specific regional wage loading assessment is considered here.

- 17 We consider that the capital city private sector wage level reflects the relative wage levels at which States would (under policy neutral settings) set their base wage levels. Outside of capital cities, we consider that States would pay loadings above the base wage rate to public sector employees in regional areas. These loadings are assessed in the Regional cost assessment. For most States, this means that in regional areas public sector wages are higher than private sector wages. For States with high regional private sector wages, we assume that under average policy States would pay regional loadings plus an additional allowance to compete with high regional private sector wages. For these States we consider that they require additional State specific regional loadings.
- 18 Staff propose that a State specific regional loading be assessed for States with high regional wages based on the difference between the rest of State private sector wage level and the capital city private sector wage level. From the 2009 SET, such an assessment would affect Western Australia and, to a significantly lesser extent, Queensland.
- 19 Figure A- 1 indicates, in a policy neutral setting, Western Australia needs to pay higher regional loadings than other States. Western Australia's higher than average regional private sector wages increase the regional wage levels calculated through the regression of Australia Curriculum, Assessment and Reporting Authority (ACARA) data in the Regional cost assessment. To assess Western Australia as needing both a State specific regional loading and a national average regional loading that includes its actual loading could result in double counting.
- 20 As Figure A- 1 shows, Western Australian wages outside of Perth are 7% higher than in Perth itself. Applying the regional cost gradient to Western Australia in addition to this adjustment would provide the State with an additional weighting for remote areas. However, Western Australia only contributes around 10% of the sample to the overall regional cost model and it does not materially affect the coefficients for remoteness. Ideally, we would like to use only one model to produce estimates of regional costs, service delivery scale, Indigeneity and SES. This model is discussed in *Technical appendix 1: Deriving cost weights from ACARA data*. As including Western Australia in the regional costs model is not likely to result in material double counting, we recommend that, in the interests of simplicity, the model include all States.
- 21 The State specific regional loadings will result in a different regional costs curve for Western Australia and Queensland. Figure A- 4 shows how these two impacts fit together to make this adjustment. The State specific loading is applied only to the wage component of State costs.

Figure A- 4 Interaction between regional costs gradient and State specific wage loading



Source: Commission calculation.

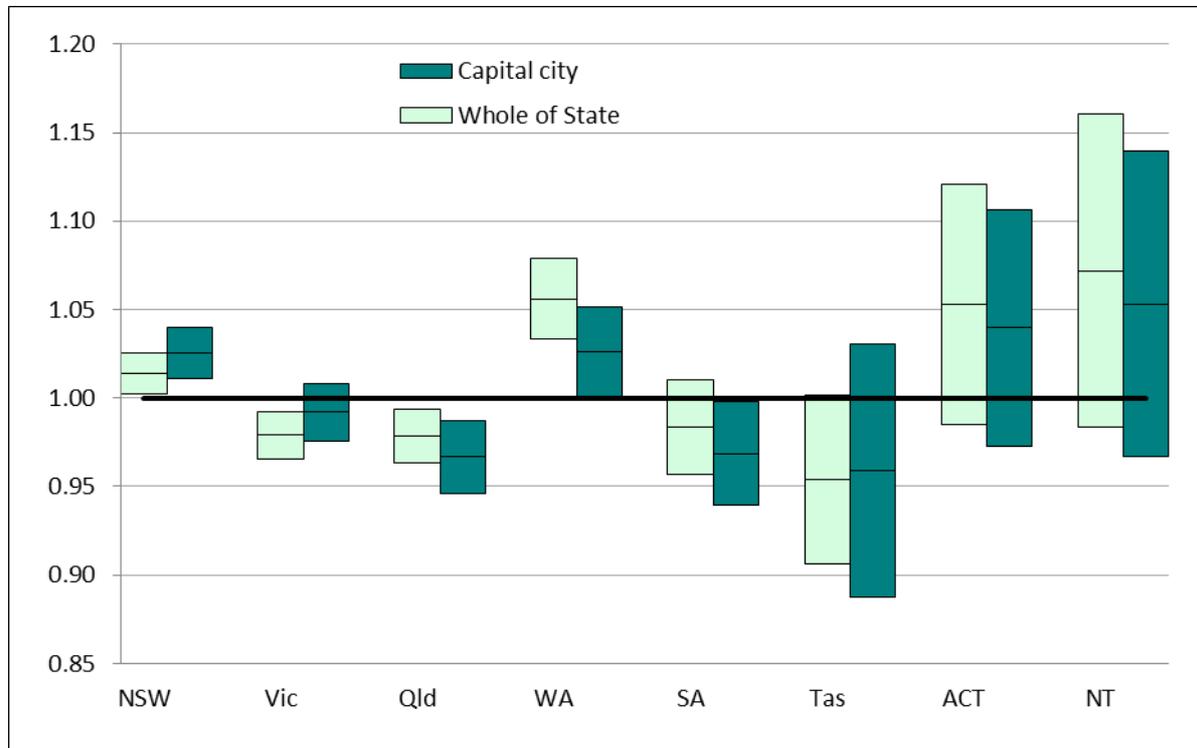
- 22 Western Australia made a case in its submission that median rents are higher in remote Western Australia than in remote areas of other States. We consider that the private sector, which usually does not provide employee housing, would have to offer wages that reflect the cost of living in remote Western Australia to attract staff. As such, the State specific regional wage loading will generally incorporate the higher cost of housing in Western Australia. To use it as a measure of the costs State governments would face seems appropriate.

Data quality

- 23 Staff consider an assessment based on a capital city based factor (combined with a State specific regional loading included in the regional cost assessment) best reflects the policy neutral pressure on wage costs. However, in developing an assessment, we must also consider the data available to model what States do.
- 24 Figure A- 5 shows that the sampling error associated with measuring capital city wages is slightly greater than that associated with measuring whole of State wages.
- 25 However, as a result of the SET being discontinued, staff intend to use the CoE as its replacement for the wages assessment. The CoE will have a substantially larger sample size than the SET and will be conducted annually. These two improvements

should more than offset the increased volatility from limiting the wages regression to include only private sector employees in capital cities.

Figure A- 5 Relative private sector wages for comparable employees by region, 2009



Note: Capital city estimates are relative to the weighted average of capital cities. Whole of State estimates are relative to the national average. Data are not available to split the ACT and the Northern Territory, so capital city estimates for these States reflects the whole of State wage levels. The bars represent 95% confidence intervals.

Source: 2009 SET.

Impact of proposed changes to assessment

26 The proposed changes to the interstate wages and regional costs assessments are likely to have a relatively large redistributive impact, as can be seen in Table A- 1. Western Australia will be assessed as needing to pay Perth wages in Perth, and regional Western Australian wages in regional areas. This is the equivalent of what it is assessed as needing to spend under the current approach. However, New South Wales and Victoria will be assessed as needing to spend Sydney and Melbourne wages not only in Sydney and Melbourne, but also in the regional areas of those States. This would lead to a significant increase in the assessed needs of those States. Table A- 1 shows that the proposed changes lead to a redistribution toward States with capital city wages considerably higher than their regional wages, and away from other States.

Table A- 1 GST impact of use of SET regression data

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m								
2010 Review approach									
Interstate wages (whole of State)	427	-601	-423	674	-157	-99	92	87	1 280
2015 Review approach									
Interstate wages (capital city)	800	-288	-699	372	-245	-91	75	75	1 322
State specific regional costs	-55	-42	-16	133	-12	-4	-3	-2	133
Total impact from SET regression	746	-330	-714	504	-257	-95	73	73	1 455
Difference	319	271	-291	-170	-100	4	-19	-15	175
	\$pc								
2010 Review approach									
Interstate wages (whole of State)	58	-106	-92	274	-95	-192	243	373	56
2015 Review approach									
Interstate wages (capital city)	109	-51	-152	151	-147	-177	199	319	58
State specific regional costs	-7	-7	-3	54	-7	-7	-7	-9	6
Total impact from SET regression	102	-58	-155	205	-155	-184	192	311	64
Difference	44	48	-63	-69	-60	8	-51	-63	8

Source: Commission calculation.

Conclusions

- 27 We have found that, at least for some parts of the public sector, States set wages through the negotiation of State-wide agreements. Our analysis of SET results is consistent with this finding. This is not consistent with the current wages assessment. Therefore, staff consider a wages assessment based on capital city wages is more consistent with how States set wages.