
**Chapter 5: Cost, Political Visibility and the Early
Adoption of Accrual Reporting**

5.1 Introduction

This chapter presents the results of the statistical testing applied to the two research questions stated in Sections 4.2 and 4.4 of Chapter 4.

All hypotheses were tested across three alternative groupings of departments, as outlined in Section 4.8. For convenience, these groupings were called:

1. *grouping 1*, departments classified into:
 1. those departments which first adopted accrual reporting in 1992-93,
 2. those departments which first adopted accrual reporting in 1993-94, and
 3. those departments which will first adopt accrual reporting in the 1994-95 financial year.

2. *grouping 2*, departments classified into:
 1. those departments which first adopted accrual reporting for the first financial year in which it was allowed (1992-93), and
 2. all other departments.

3. *grouping 3*, departments classified into:
 1. those departments which adopted accrual reporting in either of the two financial periods before it was mandated (1992-93 and 1993-94), and
 2. all other departments.

Though the results discussed in Section 5.2 show that there was some *prima facie* support to suggest that the ‘ability to pay’ of those departments that adopted accrual reporting early was greater than the ‘ability to pay’ of the remaining departments, this difference was not statistically significant (see Section 5.2.1).

Section 5.3 outlines the methods and hypotheses used to test

Research Question 2:

Did the political visibility of those departments which adopted accrual reporting early differ from the political visibility of the other departments?

In particular, Section 5.3.1 discusses the variables used to measure the proxies for political visibility. These variables were generally all significantly correlated, indicating that they were attempting to measure the same underlying construct. This conclusion was reinforced by the calculation of the *Kendall Co-efficient of Concordance*, which indicated that the individual variables were ranking the departments across the same scale.

This finding gives additional support to the variables used to measure the proxy for the composite political visibility of the departments.

Section 5.3.2 lists the null hypotheses against which Research Question 2 was tested, and the non-parametric statistic tests employed.

When the political visibility of departments was measured using the variables for the individual proxies for political visibility, there were apparent differences in the political visibility between the groups relative to the median political visibility of the sample. However, in most cases these distinctions were not statistically significant.

When the variables representing the composite political visibility of departments were used, the differences in political visibility between the groups, relative to the median ranking for the sample, was significant for two of the alternative groupings.

When departments were classified using grouping 1, then:

1. those departments which adopted accrual reporting in the first financial period such reporting was allowed were more likely to have lower political visibility than the sample median, and
2. those departments which adopted accrual reporting in the second year were more likely to have higher political visibility than the sample median.

When departments were classified using grouping 2, then, again, those departments which adopted accrual reporting in the first financial period such reporting was allowed were more likely to have lower political visibility than the sample median and the remaining departments.

However, when departments were classified using grouping 3, there was no statistically significant difference, relative to the median political visibility of the sample, between those departments which adopted accrual reporting before the mandated financial period, and the remaining departments.

The implications of these findings are discussed in Section 5.3.4. The overall conclusion drawn is that though the physical costs may have had an influence on the timing of the decision to adopt accrual reporting, this cost was overridden by the influence of political visibility.

5.2 The Relationship between Cost and the Move to Accrual Reporting

In the Chapter 4, the following proposition:

Proposition 1: the physical cost of adopting accrual reporting influenced the timing of the decision made by the by departmental Secretary to adopt accrual reporting

was developed into an empirically testable research question:

Research Question 1:

Did those departments which adopted accrual reporting early have a higher ‘ability to pay’ than the other departments?

The proxy for ‘ability to pay’, indicating the ability of the department to pay for modifications to their accounting system and/or to re-train their staff or employ new staff to operate these modified systems, was drawn from prior research.

A variable to measure this proxy, *ABPYNN*, was developed in Section 4.2. Table 9 displays the mathematical average of *ABPYNN* for each of the groupings of departments, for each financial year.

Basis for Classification	Average ability to pay in		
	1991-92	1992-93	1993-94
<i>Grouping 1</i>			
First year to adopt accrual reporting was 1992-93	65.58	79.54	91.26
First year to adopt accrual reporting was 1993-94	64.84	74.72	87.08
Will adopt accrual reporting for the first time in 1994-95	64.23	78.06	82.74
average across all groups	64.72	77.29	86.01
<i>Grouping 2</i>			
First reported on an accrual basis in 1992-93	65.58	79.54	91.26
Other departments	64.48	76.67	84.55
average across both groups	64.72	77.29	86.01
<i>Grouping 3</i>			
Adopted accrual reporting before the mandated financial period	65.14	76.65	88.76
Will not adopt accrual reporting until the mandated financial period	64.23	78.06	82.74
average across both groups	64.72	77.29	86.01

Table 9 - Average Ability to Pay for each grouping of departments

Table 9 shows that the average ‘ability to pay’ for those departments that reported on an accrual basis in 1992-93 was higher than for the other departments. This finding is consistent with Research Question 1 that the ‘ability to pay’ of those departments which adopted accrual reporting early was higher than the ‘ability to pay’ of the remaining departments.

In contrast, using grouping 1, those departments which adopted accrual reporting for the first time in 1993-94 had the lowest average ability to pay in 1992-93. As these departments were also adopting accrual reporting ‘early’, this result is the opposite to that predicted, for that financial year. However, in 1993-94, the year in which these departments first adopted accrual reporting, these groups did have a higher ability to pay than the departments which did not adopt accrual reporting until the mandated period.

The results are illustrated in the chart below for the 1992-93 financial year.

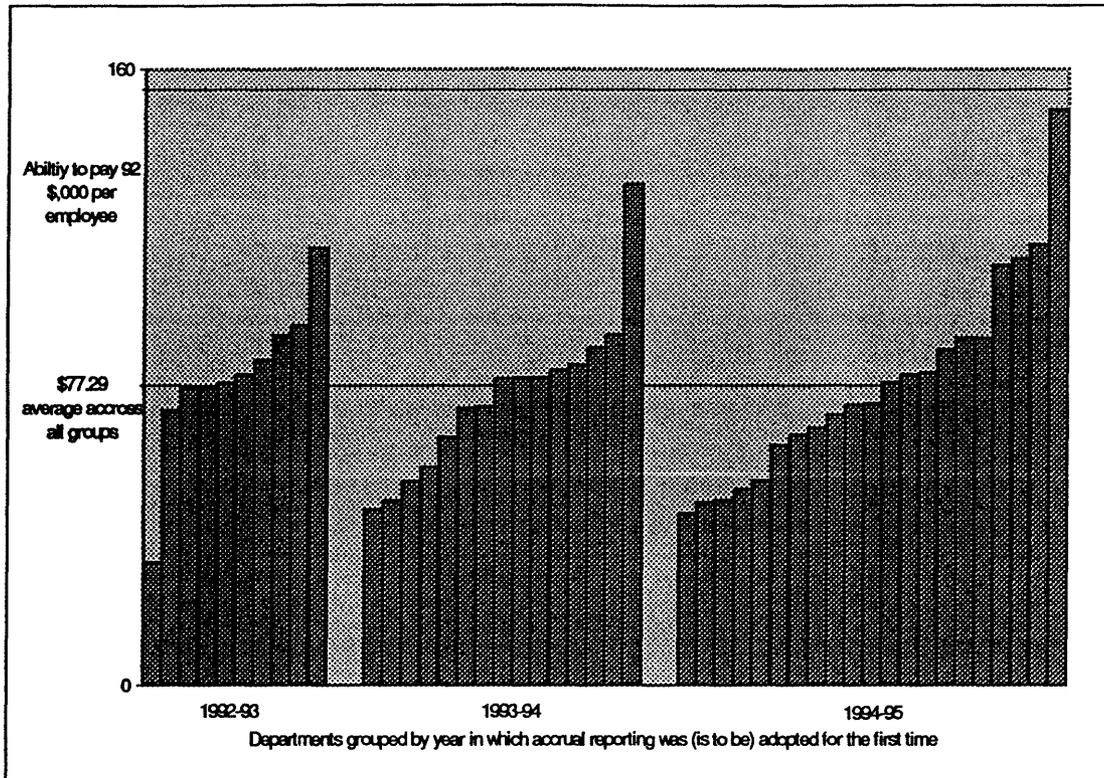


Figure 3 - Ability to pay in 1992-93, \$,000 per employee

Figure 3 provides a graphic indication that those departments which reported on an accrual basis in 1992-93 were more likely to have a higher ability to pay than other departments. However, the question becomes whether this difference is statistically significant.

Table 6, on page 107, showed that *ABPYNN* was not normally distributed. However, as discussed in Section 4.10, this variable is measured on a ratio scale, and therefore is suitable for transformation to a normal distribution to allow the application of parametric statistical tests.

Therefore, a new variable was calculated, *LGBPYN*, equal to the base 10 log of *ABPYN*. This transformation produced a variable which exhibited less deviation from the assumptions of a normal distribution, as shown in Table 10 , below.

Variable	Mean	Median	Std Dev	Min	Max	Skewness	Kurtosis	Shapiro-Wilks (sig)
<i>Log 10 transformation of the 'Ability to Pay' variable</i>								
LGBP91	1.7966	1.7821	.1118	1.5984	2.0549	.3439	-.4095	.9678 (.3810)
LGBP92	1.8692	1.8928	.1316	1.5027	2.1738	-.3438	.5899	.9701 (.4255)
LGBP93	1.9157	1.9202	.1299	1.5133	2.2265	-.1905	1.6702	.9671 (.3682)

Table 10 - Summary Statistics for transformed 'Ability to Pay' variable (LGBYN)

Though *LGBYN* was skewed for each financial period, and was not mesokurtic, the Shapiro-Wilks statistic was not significant for any financial period. Therefore it is reasonable to accept that the variables are normally distributed. It is therefore possible to apply parametric tests to this data.

The *one-way classification analysis of variance* (one-way ANOVA) was used to test whether, when the departments were grouped according to the timing of the adoption of accrual reporting, the difference in the mean *LGBPYN* between the groups was statistically significant.

A significant difference in the mean *LGBPYN* between the groupings, would suggest that the groupings of departments could be distinguished by this factor. If the departments which adopted accrual reporting earlier had a higher 'ability to pay' than the remaining departments, then one inference that could be made is that the departments which adopted accrual accounting first did so because they could afford to.

5.2.1 Results of One-Way ANOVA on Ability to Pay

The null hypothesis that is rejected by a significant 'F ratio' under one-way ANOVA is that:

the means of each of the groups being compared is the same
(Emory & Cooper 1991, p. 549).

For Research Question 1, the specific null hypotheses²⁶ tested were as follows²⁷:

For grouping 1:

H₀1.1.1 there is no difference in the mean 'ability to pay' in 1991-92 of those departments which first adopted accrual reporting in 1992-93, those departments which first adopted accrual reporting in 1993-94 and those departments which will first adopt accrual reporting in 1994-95, (Table 31, page 193);

H₀1.1.2 there is no difference in the mean 'ability to pay' in 1992-93 of those departments which first adopted accrual reporting in 1992-93, those departments which first adopted accrual reporting in 1993-94 and those departments which will first adopt accrual reporting in 1994-95, (Table 32, page 193);

²⁶ The system adopted to number the null hypotheses is as follows:

- the first number relates to the research question - '1' indicates the first research question and '2' indicates the second;
- the second number relates to the grouping of the classification of the departments; and
- the third number to the financial period to which the independent variable relates - '1' indicates 1991-92, '2' indicates 1992-93 and '3' indicates 1993-94.

²⁷ The details provided in the brackets after each hypothesis indicate the table, and the page reference, for the statistical results relating to that hypothesis.

H₀1.1.3 there is no difference in the mean 'ability to pay' in 1993-94 of those departments which first adopted accrual reporting in 1992-93, those departments which first adopted accrual reporting in 1993-94 and those departments which will first adopt accrual reporting in 1994-95, (Table 33, page 193);

For grouping 2:

H₀1.2.1 there is no difference in the mean 'ability to pay' in 1991-92 of those departments which first adopted accrual reporting in 1992-93 and the remaining departments, (Table 34, page 194);

H₀1.2.2 there is no difference in the mean 'ability to pay' in 1992-93 of those departments which first adopted accrual reporting in 1992-93 and the remaining departments, (Table 35, page 194);

H₀1.2.3 there is no difference in the mean 'ability to pay' in 1993-94 of those departments which first adopted accrual reporting in 1992-93 and the remaining departments, (Table 36, page 194);

For grouping 3:

H₀1.3.1 there is no difference in the mean 'ability to pay' in 1991-92 of those departments which adopted accrual reporting before the mandated financial period and the remaining departments, (Table 37, page 195);

H₀1.3.2 there is no difference in the mean 'ability to pay' in 1992-93 of those departments which adopted accrual reporting before the mandated financial period and the remaining departments, (Table 38, page 195);

H₀1.3.3 there is no difference in the mean 'ability to pay' in 1993-94 of those departments which adopted accrual reporting before the mandated financial period and the remaining departments, (Table 39, page 195);

The results of the statistical analysis are contained in the tables referenced in brackets for each hypothesis. Those tables show that the *one-way ANOVA* did not identify a significant difference between the mean of the variable *LGBPYN* for any year, regardless of how the departments were grouped. Thus it is not possible to reject the null hypotheses that the mean ability to pay between the grouped departments were equal.

Therefore, though mathematically it would appear that the departments which adopted accrual reporting did have a slightly greater average 'ability to pay', the difference was not statistically significant.

Again it should be remembered that these results do not necessarily imply that the physical cost of the move to accrual reporting was not a significant factor in the decision. The lack of statistical empirical support may be the result of limitations in the proxy and/or the variables. For example, the actual cost of modifying the accounting systems to comply with accrual reporting obligations was not directly measured in this study.

Future research studies may be able to develop methods to address this factor more directly, perhaps through a questionnaire approach, or through the development of a measure to indicate the complexity of the accounting system in place.

Finally, it should be remembered that, as noted in Section 3.3, the deliberate management of agency costs, political costs, political visibility and cultural influences, may provide a

source of benefit sufficient to outweigh the physical cost of changing an accounting system or of adopting a new accounting policy (Neu 1992). The results reported in this section, together with those discussed in Section 5.3, are consistent with this suggestion.

5.3 The Relationship between Political Visibility and the Timing of Adoption of Accrual Reporting

In Section 4.4, the research proposition resulting from the analysis in Section 3.3.3:

Proposition 2: the political visibility of the department influenced the timing of the decision made by departmental Secretaries to adopt accrual reporting

was developed into the following empirically testable research question:

Research Question 2:

Did the political visibility of those departments which adopted accrual reporting early differ from the political visibility of the other departments?

A number of proxies for political visibility were developed, and variables created to measure these proxies. The following section analyses the relationships identified between these variables. This analysis provides further support for the use of both the proxies, and the variables.

5.3.1 Measures of Political Visibility

Table 40 to Table 48, on pages 197 to 205, contain the *Spearman rank-order correlation coefficients* for all the variables representing the individual political visibility proxies. This coefficient provides a measure of association between two variables which are at least ordinal (Siegel & Castellan 1988, p. 235). As has been previously argued, ordinal interpretation of the political visibility variables is the most valid interpretation, therefore the requirements of this statistic are met.

The tables in the Appendix have been sorted so that each table reports the correlation coefficients for one proxy. To ease interpretation, the results have been classified as having:

1. a high correlation when the statistic is greater than or equal to 0.7000,
2. a medium correlation when the statistic is greater than or equal to 0.4000 but less than 0.7000, and
3. a low correlation when the statistic is less than 0.4000.

As can be seen from those tables, most proxies exhibit medium to high correlation with the other variables, which are significant at less than the 5% level.

Not surprisingly, *QUALNN*, a dichotomous variable indicating whether or not the audit opinion on the financial statements was qualified, showed lower levels of correlation than the other variables. This variable was the main one to consistently show Spearman rank-order correlation coefficients which were not significant at generally accepted levels.

PCPGNN, the variable measuring the amount of disclosure in the annual report discussing scrutiny by Parliamentary committees, also showed minimal correlation with the other variables, though most correlation statistics for *PCPGNN* were significant.

Correlation coefficients with the composite proxies were not included as it was felt the provision of this statistic would be meaningless given the method by which the variable was calculated.

The fact that the variables to represent the new proxies were strongly correlated with the variables representing traditional proxies for political visibility, being size and employee

numbers, provides an additional measure of comfort. These traditional proxies have had strong explanatory power in prior research (Christie 1990). The findings of this study support those of Panchapakesan and Lim (1992) which found that size, as measured by revenue, was highly correlated with more theoretically sound proxies for political visibility.

The consistent significant correlation coefficients found in this study between the variables, and across the time periods, provide an indication that the variables, and thus the proxies for political visibility, are measuring the same underlying construct.

This suggestion is supported by the results of the *Kendall co-efficient of concordance* test, calculated between the individual variables. This non-parametric statistic measures the extent to which the ranking of departments by the variables is applying essentially the same standard (Siegel & Castellan 1988, p. 271).

As shown in Table 11, this co-efficient is significant at all levels of significance for all three financial periods:

Across all proxies for year	W	Chi-Square	d.f	significance
NN=91	.5183	235.4164	45	.0000
NN=92	.6403	259.3362	45	.0000
NN=93	.6122	247.9427	45	.0000

Table 11 - Results of Kendall Co-efficient of Concordance on Political Visibility Proxies

Siegel and Castellan (1988, p. 271) state that when the Kendall coefficient of concordance is significant, and there is no relevant external criterion for ordering the objects, the 'true' ranking is provided by the order of the sum of the ranks. Therefore,

the results provided in Table 11 provide additional support for the use of the variables developed to measure the composite proxy for political visibility, being the sum of the rank of the individual proxies for political visibility.

5.3.2 Identifying Differences in the Political Visibility of Departments which Adopted Accrual Reporting Early

Research Question 2 requires a comparison of the political visibility of those departments which adopted accrual reporting early and the other departments.

The non-parametric test most suited to this type of analysis is the *extension of the median* test. This test can be used when the variable under study is measured on at least an ordinal scale, to determine whether independent samples have been drawn from populations with equal medians (Siegel & Castellan 1988: 200).

The specific null hypotheses which were tested were as follows:

For grouping 1²⁸:

H₀2.1.1 there is no difference, relative to the median, between the political visibility in 1991-92 of those departments which first adopted accrual reporting in 1992-93, those departments which first adopted accrual reporting in 1993-94 and those departments which will first adopt accrual reporting in 1994-95,

H₀2.1.2 there is no difference, relative to the median, between the political visibility in 1992-93 of those departments which first adopted accrual reporting in 1992-

²⁸ Political visibility was represented by a different variable for nine tests of each of the first three hypotheses. The tables in which these results are contained are: RCNN - Table 49, page 207; EMPNN - Table 50, page 207; OMNN - Table 51, page 208; FOINN - Table 52, page 208; QUALNN - Table 53, page 209; AUDNN - Table 54, page 209; RECNN - Table 55, page 210; PARLNN - Table 56, page 210; PCPGNN - Table 57, page 211.

93, those departments which first adopted accrual reporting in 1993-94 and those departments which will first adopt accrual reporting in 1994-95,

H₀2.1.3 there is no difference, relative to the median, between the political visibility in 1993-94 of those departments which first adopted accrual reporting in 1992-93, those departments which first adopted accrual reporting in 1993-94 and those departments which will first adopt accrual reporting in 1994-95,

H₀2.1.4 there is no difference, relative to the median, between the political visibility in 1991-92 of those departments which first adopted accrual reporting in 1992-93, those departments which first adopted accrual reporting in 1993-94 and those departments which will first adopt accrual reporting in 1994-95. (results for PVANN are in Table 12, page 132, whilst the results for PVBNN, are in Table 76, page 222),

H₀2.1.5 there is no difference, relative to the median, between the political visibility in 1992-93 of those departments which first adopted accrual reporting in 1992-93, those departments which first adopted accrual reporting in 1993-94 and those departments which will first adopt accrual reporting in 1994-95. (results for PVANN are in Table 12 below, whilst the results for PVBNN, are in Table 76, page 222),

H₀2.1.6 there is no difference, relative to the median, between the political visibility in 1993-94 of those departments which first adopted accrual reporting in 1992-93, those departments which first adopted accrual reporting in 1993-94 and those departments which will first adopt accrual reporting in 1994-95.

(results for PVANN are in Table 12 below, whilst the results for PVBNN, are in Table 76, page 222), and

H₀2.1.6 there is no difference, relative to the median, between the average composite political visibility of those departments which first adopted accrual reporting in 1992-93, those departments which first adopted accrual reporting in 1993-94 and those departments which will first adopt accrual reporting in 1994-95. (Table 15, page 134).

For grouping 2²⁹:

H₀2.2.1 there is no difference, relative to the median, between the political visibility in 1991-92 of those departments which first adopted accrual reporting in 1992-93 and the remaining departments,

H₀2.2.2 there is no difference, relative to the median, between the political visibility in 1992-93 of those departments which first adopted accrual reporting in 1992-93 and the remaining departments,

H₀2.2.3 there is no difference, relative to the median, between the political visibility in 1993-94 of those departments which first adopted accrual reporting in 1992-93 and the remaining departments,

²⁹ Political visibility was represented by a different variable for nine tests of each of the first three hypotheses. The tables in which these results are contained are: RCNN - Table 58, page 212; EMPNN - Table 59, page 212; OMNN - Table 60, page 213; FOINN - Table 61, page 213; QUALNN - Table 62, page 214; AUDNN - Table 63, page 214; RECNN - Table 64, page 215; PARLNN - Table 65, page 215; PCPGNN - Table 66, page 216.

- H₀2.2.4 there is no difference, relative to the median, between the composite political visibility in 1991-92 of those departments which first adopted accrual reporting in 1992-93 and the remaining departments (results for PVANN are in Table 13, page 133, whilst the results for PVBNN, are in Table 77, page 222),
- H₀2.2.5 there is no difference, relative to the median, between the composite political visibility in 1992-93 of those departments which first adopted accrual reporting in 1992-93 and the remaining departments (results for PVANN are in Table 13, page 133, whilst the results for PVBNN, are in Table 77, page 222),
- H₀2.2.6 there is no difference, relative to the median, between composite political visibility in 1993-94 of those departments which first adopted accrual reporting in 1992-93 and the remaining departments (results for PVANN are in Table 13, page 133, whilst the results for PVBNN, are in Table 77, page 222),
- H₀2.2.7 there is no difference, relative to the median, between the average composite political visibility of those departments which first adopted accrual reporting in 1992-93 and the remaining departments (Table 16, page 134)

For grouping 3³⁰:

- H₀2.3.1 there is no difference, relative to the median, between the political visibility in 1991-92 of those departments which adopted accrual reporting before the mandated financial period and the remaining departments,
- H₀2.3.2 there is no difference, relative to the median, between the political visibility in 1992-93 of those departments which adopted accrual reporting before the mandated financial period and the remaining departments,
- H₀2.3.3 there is no difference, relative to the median, between the political visibility in 1994-94 of those departments which adopted accrual reporting before the mandated financial period and the remaining departments,
- H₀2.3.4 there is no difference, relative to the median, between the political visibility in 1991-92 of those departments which adopted accrual reporting before the mandated financial period and the remaining departments (results for PVANN are in Table 14 page 133, whilst the results for PVBNN, are in Table 78, page 223),
- H₀2.3.5 there is no difference, relative to the median, between the political visibility in 1992-93 of those departments which adopted accrual reporting before the mandated financial period and the remaining departments (results for

³⁰ Political visibility was represented by a different variable for nine tests of each of the first three hypotheses. The tables in which these results are: RCNN - Table 67, page 217; EMPNN - Table 68, page 217; OMNN - Table 69, page 218; FOINN - Table 70, page 218 QUALNN - Table 71, page 219; AUDNN - Table 72, page 219; RECNN - Table 73, page 220; PARLNN - Table 74, page 220; PCPGNN - Table 75, page 221.

PVANN are in Table 14 page 133, whilst the results for PVBNN, are in Table 78, page 223))

H₀2.3.6 there is no difference, relative to the median, between the political visibility in 1993-94 of those departments which adopted accrual reporting before the mandated financial period and the remaining departments (results for PVANN are in Table 14 page 133, whilst the results for PVBNN, are in Table 78, page 223))

H₀2.3.7 there is no difference, relative to the median, between the average political visibility of those departments which adopted accrual reporting before the mandated financial period and the remaining departments (Table 17, page 134)

5.3.3 Results Relating to the Variables representing Individual Proxies for Political Visibility

The statistics reported in the tables indicated for each hypothesis, show that for most of the variables representing the individual proxies political visibility (*RCNN*, *EMPNN*, *OMNN*, *FOINN*, *QUALNN*, *AUDNN*, *RECNN*, *PARLNN*, *PCPGNN*) the results of the *extension of the median* test were not significant at a 10 % level. The exceptions to this were:

1. *EMP92*, which returned a significant classification for grouping 1 (Table 50, page 207),
2. *FOI92*, which also returned a significant classification for grouping 1 (Table 52, page 208), and

3. *QUAL92*, which provided a significant classification across all three groupings.(Table 53, page 209; Table 62, page 214; Table 71, page 219).

The first two instances could possibly be interpreted as anomalous results. However, the results in relation to *QUAL92* provide an interesting perspective. This variable reflects whether or not the audit opinion on the financial statements were qualified in 1992-93. The *extension of the median* tests show that those departments which did adopt accrual reporting earlier were less likely to have had qualified audit opinions on their financial statements in 1992-93 than were the other departments.

There were no significant findings for any other period in relation to audit qualifications (ie for *QUAL91* or *QUAL93*). The finding in relation to *QUAL92* is mainly a result of the fact that none of the departments which first adopted accrual reporting in 1992-93 had qualified audit reports on their financial statements in that year.

This could indicate that these departments were in a better position to adopt accrual reporting than the remaining departments, either because their financial systems were in a sound state to produce the required information, and/or because the likelihood of failure was lower. Such an implication provides support for Proposition 1.

Alternatively, it could indicate that the ANAO, which had a vested interest in the success of the introduction of accrual reporting, were more lenient on these first volunteer departments. However, the fact that only one of these departments, the Department of Tourism, had received a qualified audit report in either the year preceding or following 1992-93, makes this latter interpretation appear cynical.

5.3.4 Results relating to the Variables representing the Composite Proxy for Political Visibility

In contrast to the results achieved with the individual variable, the variables representing the composite proxy did provide statistically significant findings.

Table 12, on page 132, Table 13, on page 133, Table 14, on page 133 provide the results of the *extension of the median* tests for *PVANN* for groupings 1, 2 and 3, respectively. Table 15, on page 134, to Table 17, on page 134, provide the results for the average variables to represent the composite visibility proxy, *PVA* and *PVB*. Since *PVBNN* provided essentially the same results as *PVANN*, the results for *PVBNN* are in Table 76, on page 222, to Table 78, on page 223.

These results show that the variables for the composite proxy generally provided statistically significant classifications for groupings 1 and 2, but not for grouping 3. This situation applied to both the variables measured for each financial period and the average variable across the three financial periods.

<i>Classification based on the sum of the ranks of political visibility proxies in 1991-92 (PVA91)</i>									
		1st year of accrual reporting			Chi-Square			classification	
		1992-93	1993-94	1994-95	statistic	d.f	sig.	significant < 0.1	
> median	2	10	11	median	5.3143	2	.0701	✓	
< median	8	5	10	142.5					
<i>Classification based on the sum of the ranks of political visibility proxies in 1992-93 (PVA92)</i>									
		1st year of accrual reporting			Chi-Square			classification	
		1992-93	1993-94	1994-95	statistic	d.f	sig.	significant < 0.1	
> median	3	10	10	median	3.143	2	.1907	✗	
< median	7	5	11	141.25					
<i>Classification based on the sum of the ranks of political visibility proxies in 1993-94 (PVA93)</i>									
		1st year of accrual reporting			Chi-Square			classification	
		1992-93	1993-94	1994-95	statistic	d.f	sig.	significant < 0.1	
> median	2	10	11	median	5.3143	2	.0701	✓	
< median	8	5	10	145.7					

Table 12 - Extension of the Median Test using *PVANN* and Grouping 1.

Classification based on the sum of the ranks of political visibility proxies in 1991-92 (PVA91)

		basis of reporting in 1992-93		median	Chi-Square		classification
		modified cash	accrual		statistic	sig.	
> median	21	2		145.25	3.1944	.0739	significant < 0.1 ✓
< median	15	8					

Classification based on the sum of the ranks of political visibility proxies in 1992-93 (PVA92)

		basis of reporting in 1992-93		median	Chi-Square		classification
		modified cash	accrual		statistic	sig.	
> median	20	3		141.25	1.15	.2835	significant < 0.1 ✗
< median	16	7					

Classification based on the sum of the ranks of political visibility proxies in 1993-94 (PVA93)

		basis of reporting in 1993-94		median	Chi-Square		classification
		modified cash	accrual		statistic	sig.	
> median	21	2		145.7	3.1944	.0739	significant < 0.1 ✓
< median	15	8					

Table 13- Extension of the Median Test using PVANN and Grouping 2.

Classification based on the sum of the ranks of political visibility proxies in 1991-92 (PVA91)

		basis of reporting in 1993-94		median	Chi-Square		classification
		modified cash	accrual		statistic	sig.	
> median	11	12		145.25	0	1	significant < 0.1 ✗
< median	10	13					

Classification based on the sum of the ranks of political visibility proxies in 1992-93 (PVA92)

		basis of reporting in 1993-94		median	Chi-Square		classification
		modified cash	accrual		statistic	sig.	
> median	11	13		141.2	0	1	significant < 0.1 ✗
< median	10	12					

Classification based on the sum of the ranks of political visibility proxies in 1993-94 (PVA93)

		basis of reporting in 1993-94		median	Chi-Square		classification
		modified cash	accrual		statistic	sig.	
> median	11	12		145.75	0	1	significant < 0.1 ✗
< median	10	13					

Table 14 - Extension of the Median Test using PVANN and Grouping 3.

Classification based on the average sum of the ranks of political visibility proxies across the three years (PVA)

		1st year of accrual reporting							
		1992-93	1993-94	1994-95	median	Chi-Square statistic	d.f	sig.	classification significant < 0.1
> median	2	10	11						
< median	8	5	10	152.7	5.3143	2	.0701	✓	

Classification based on the average sum of the ranks of political visibility proxies across the three years (PVB)

		1st year of accrual reporting							
		1992-93	1993-94	1994-95	median	Chi-Square statistic	d.f	sig.	classification significant < 0.1
> median	2	10	11						
< median	8	5	10	152.3	5.3143	2	.0701	✓	

Table 15 - Extension of the Median Test using PVA and PVB and Grouping 1.

Classification based on the average sum of the ranks of political visibility proxies across the three years (PVA)

		basis of reporting in 1992-93					
		modified cash	accrual	median	Chi-Square statistic	sig.	classification significant < 0.1
> median	21	2					
< median	15	8		152.2	3.194	.0739	✓

Classification based on the average sum of the ranks of political visibility proxies across the three years (PVB)

		basis of reporting in 1992-93					
		modified cash	accrual	median	Chi-Square statistic	sig.	classification significant < 0.1
> median	21	2					
< median	15	8		152.3	3.1944	.0739	✓

Table 16 - Extension of the Median Test using PVA and PVB and Grouping 2.

Classification based on the average sum of the ranks of political visibility proxies across the three years (PVA)

		basis of reporting in 1993-94					
		modified cash	accrual	median	Chi-Square statistic	sig.	classification significant < 0.1
> median	11	12					
< median	10	13		152.2	0	1	✗

Classification based on the average sum of the ranks of political visibility proxies across the three years (PVB)

		basis of reporting in 1993-94					
		modified cash	accrual	median	Chi-Square statistic	sig.	classification significant < 0.1
> median	11	12					
< median	10	13		152.3	0	1	✗

Table 17- Extension of the Median Test using PVA and PVB and Grouping 3.

The results of the *extension of the median* test on the variables representing the composite proxy for political visibility do allow the rejection of the null hypotheses for groupings 1 and 2, but not for grouping 3.

When the departments were classified by whether they adopted accrual reporting before the mandated period or not (grouping 3), there was no statistically significant difference in the political visibility between the two groups, relative to the median of the sample. Even on a judgemental basis, without referring to the statistics, the pattern of ranking relative to the median was almost evenly split for both groups of departments.

However, when the departments were split on the basis of those that adopted accrual reporting in the first year and the remaining departments (grouping 2), or when a three-way split based on the first year in which accrual reporting is adopted was used (grouping 1), the difference in the relative composite political visibility of these groups was statistically significant at less than 10%..

These tests showed that the political visibility of those departments that adopted accrual reporting in 1992-93, as measured by the variables for composite political visibility, tended to be lower than the median political visibility of the other departments. In contrast the political visibility of those departments which adopted accrual reporting in the second year was generally higher than the median political visibility of the other departments.

For example, Table 15, on page 134, shows that:

1. only two of the ten departments which first reported on an accrual basis in 1992-93 were ranked higher by *PVA* than the sample median, whilst

2. ten of the fifteen departments which first reported on an accrual basis in 1993-94 were ranked higher by *PVA* than the sample median, and
3. eleven of the twenty one departments which will first report on an accrual basis in 1994-95 were ranked higher by *PVA* than the sample median.

This pattern was reflected in the results of the test against the other variables for composite political visibility. Though the results for *PVA92* and *PVB92*, were not statistically significant for either grouping 1 or 2, the change in pattern was quite minimal and resulted from a reclassification relative to the median of one department in each of those departments that first reported on an accrual basis in 1992-93 and those departments that will first report on an accrual basis in 1994-95.

The pattern is demonstrated in Figure 4, below.

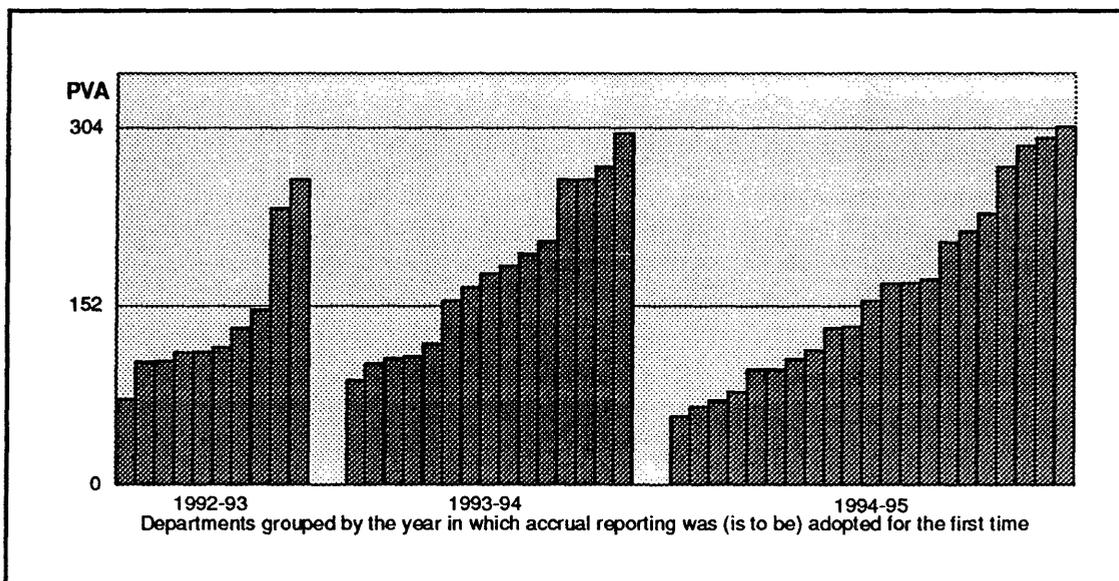


Figure 4 - PVA and the first year in which accrual reporting was adopted

The results of the *extension of the median* test are statistically significant at the 10% level and do allow the statistical rejection of the related null hypotheses. Therefore, it can be concluded, in response to Research Question 2 that:

the political visibility of those departments which adopted accrual reporting early did differ from the political visibility of the other departments.

This in turn provides support for Proposition 1, that the political visibility of the department did influence the decision made by the departmental Secretary to adopt accrual reporting.

Further, the fact that those departments which first adopted accrual reporting ranked consistently lower across all the political visibility proxies, as indicated from the results in relation to *PVA* and *PVB*, does provide support for the suggestion in Chapter 3 that, in a truly political environment, to be politically invisible is almost as detrimental as being highly politically visible.

Finally, the relatively higher levels of political visibility of those departments which adopted accrual reporting in the second year, being the last period before such reporting was mandated, provides support for the suggestion that high political visibility was a motivating factor, for those departments.

The fact that these departments did not adopt accrual reporting in the first year could be indicative of an unwillingness to fail, and so expose themselves to further critical attention. All departments which advised DoF of an intention to adopt accrual reporting before the mandated period participated in a pilot program where issues and experiences in the adoption of accrual reporting were discussed (ANAO 1994, xxiv). This would

have assisted those departments which did not adopt accrual reporting in the first year to benefit from the experiences of the other departments.

5.4 Summary

This chapter has outlined the results of the statistical methods employed to test the two research questions posed in Chapter 4.

There was no statistically significant results to allow rejection of the null hypothesis that there was not difference in the mean ability to pay between those departments which adopted accrual reporting early and the other departments. Therefore it was not possible to show, conclusively, that physical cost was a factor in the decision to adopt accrual reporting.

In relation to the second research question, the results of the *extension of the median* test on the variables representing composite political visibility did provide statistically significant differences. Those departments which first adopted accrual reporting in 1992-93, were more likely to have relatively low levels of political visibility than the remaining departments, whilst those departments which first adopted accrual reporting in 1993-94 exhibited relatively high levels of accrual reporting.

These results, though quite appealing, should be interpreted with caution. In particular, the finding that those departments which adopted accrual reporting 'early' could not, as a whole, be distinguished from the remaining departments (grouping 3), could indicate either that departmental Secretaries respond differently to the same pressures, or that the results were caused by an intervening variable.

Further, the entire analysis is dependent on the interpretation of the various proxies as indicative of the relative level of political visibility. However, the results of the *Kendall co-efficient of concordance* test did indicate quite strongly that the proposed variables employed the same ranking system across the departments. This is also reflected in the generally significant correlation between the variables, which occurred despite the fact that each of the new proxies was directed at a distinct element of public sector accountability.

These findings certainly suggest that the variables were measuring the same underlying factor. The labelling of this factor as political visibility is subjective, however, the justification provided in Chapter 4 for the proxies used, particularly in relation to the new proxies developed, is sound.

Chapter 6: Conclusion

6.1 Review of Previous Chapters

The objective of this dissertation was to address and identify selected factors which may have contributed to the early adoption of a recommended accounting policy in the Commonwealth public sector.

The adoption of accrual reporting in the financial statements of Commonwealth government departments was identified as an ideal case study for this investigation because it was a clearly visible signal which was likely to represent a significant outlay of resources.

Chapter 2 presented an overview of prior research in accounting policy choice in both the private sector and the public sector. Though, *prima facie*, it may have been assumed that the theory developed specifically to address financial reporting practices in the public sector was likely to prove more fruitful than comparable research in relation to the private sector, this proved not to be the case. On the contrary, the focus in public sector research on the motivations of the elected official responsible for the policy underlying the delivery of services by public sector agencies, limited the application of such theories to the Commonwealth public sector.

In Section 2.3.1, it was shown that departmental financial statements are treated by both accounting standard setters and the Commonwealth Parliament as an accountability document reflecting the performance of the departmental Secretary in managing the resources entrusted to him. As outlined in Section 2.2, this relationship closely parallels that between external financial statements and the manager of a firm in private sector accounting policy choice research,

For these reasons, this research study applied the framework to explain and predict accounting policy choice in the private sector to the accounting policy choices of Commonwealth departmental Secretaries.

The analysis contained in Section 2.2 identified four categories of influence on the accounting policy choices of the managers of firms. These four categories are:

1. physical costs;
2. agency costs;
3. political visibility and political costs; and
4. social influences.

In Section 3.3.2 agency costs were identified as having little relevance to the financial reporting practices of Commonwealth departments, though they may be relevant to the specific circumstances of other government entities.

Of the remaining three factors, social influences were assessed as possibly contributory but not decisive (Section 3.3.4), whilst the physical costs (Section 3.3.1) and impact of political visibility (Section 3.3.3) were considered suitable for empirical testing.

A review of the background to the introduction of accrual reporting to the Commonwealth public sector (Section 3.3.1) indicated that the cost of adopting accrual reporting was likely to be significant. Further, the move was closely associated with suggestions of improved efficiency, effectiveness and accountability, and of a commitment to other government financial reforms, particularly the Financial Management Improvement Program (Section 3.2).

This led to the development of two propositions, being:

Proposition 1: the physical cost of adopting accrual reporting influenced the timing of the decision made by the departmental Secretary to adopt accrual reporting (Section 3.3.1)

and

Proposition 2: the political visibility of the department influenced the timing of the decision made by the departmental Secretary to adopt accrual reporting. (Section 3.3.3)

where 'political visibility' is defined as:

the relative share of scrutiny by politicians, organised groups such as trade unions, and the general public

Having regard to the way in which the cost of the move to accrual reporting could be measured, these propositions were subsequently developed into research questions:

Research Question 1:
Did those departments which adopted accrual reporting early have a higher 'ability to pay' than the other departments? (Section 4.2),

where 'ability to pay' was defined as:

the fiscal ability of a department to pay for the costs resulting from a change in accounting policy,

and

Research Question 2:
Did the political visibility of those departments which adopted accrual reporting early differ from the political visibility of the other departments? (Section 4.4)

Proxies were proposed for both 'ability to pay;' and 'political visibility', and variables identified to measure these proxies. The proxy for 'ability to pay' was based on prior

research (Section 4.2), as were two of the proxies for ‘political visibility’, size (Section 4.4.1) and employee numbers (Section 4.4.3). In addition, five new proxies were identified to reflect the unique accountability mechanisms which operate in the public sector. The specific mechanisms chosen were investigations conducted by the Commonwealth Ombudsman (Section 4.5.1), rights of access to information under the *Freedom of Information Act 1982* (Section 4.5.3), audits conducted by the Auditor-General (Section 4.5.5) and scrutiny by Parliamentary Committees (Section 4.5.6). In addition, a composite proxy was developed (Section 4.5.7) which incorporated all the above factors. This composite proxy gave a high ranking to those departments which consistently ranked highly against the other proxies for political visibility, and a low ranking to those departments which consistently ranked low against the other proxies for political visibility.

6.2 Findings

Chapter 5 presents the results of the statistical tests conducted.

The results in relation to the testing of Research Question 1 were not significant at a 10% level (Section 5.2) though there were some indirect indications that physical cost may have influenced the timing of the decision to adopt accrual reporting. For example, the mathematical mean ‘ability to pay’ of those departments which adopted accrual reporting in the first year such reporting was allowed, was higher than the mean ‘ability to pay’ of the remaining departments. In addition, those departments that did adopt accrual reporting in 1992-93, had a relatively lower burden of political costs (Section 6.3).

In relation to Research Question 2, statistical analysis showed that when the departments were classified by the first year in which they adopted accrual reporting then (Section 5.3):

1. those departments which adopted accrual reporting in the first year generally had a lower political visibility than the median of the sample;
2. those departments which adopted accrual reporting in the second year generally had a higher political visibility than the sample; and
3. the remaining departments were evenly spread.

However, when the departments were simply grouped by whether they adopted accrual reporting before the mandated period (ie. in either 1992-93 or 1993-94) or not (ie. 1994-95), there was no statistically significant difference between the two classifications.

6.3 Implications

Though the findings in relation to the Research Question 1 were not statistically significant, it should be noted that many of the variables selected to represent political visibility are also likely to be correlated with political costs, such as freedom of information applications and complaints to the Ombudsman. This association with political costs may be indirect, such as through preparation of responses and defences to allegations of mismanagement. However, such costs are likely to vary proportionately to the indicator for political visibility.

From this point of view, the fact that those departments which adopted accrual reporting in the first year generally had a lower political visibility than the sample median, could be

interpreted to suggest that such departments shared a lower burden of political costs and so had fewer external demands on their funds.

Similarly, it may be possible that since most of the proxies for political visibility were related to suggestions of poor management or poor administration, then those departments which showed low political visibility were better managed and so simply in a stronger position to take advantage of the opportunity when it arose.

These two conditions do provide some support for the suggestion that cost was one factor which drove the timing of the decision to adopt accrual reporting for these departments.

However, those departments which adopted accrual reporting in 1993-94 generally had a higher level of political visibility than the sample median. Using the same reasoning, these departments bore a heavier burden of political costs and had to overcome more administrative problems. For this group of departments there is less support to suggest that cost was a key factor.

Therefore it was not possible to find direct support for Proposition 1.

The results in relation to Research Question 2 did indicate that political visibility was a key factor. However, this influence was not solely in the direction that implied by analysis of private sector incentives.

Prior research has focused on the influence of high political visibility, suggesting that actions taken to provide a more favourable image, provide greater benefits to more highly political visible entities (Deegan & Carroll 1993, p. 222). In contrast, the statistical tests in relation to Research Question 2 showed that low political visibility may

also be a motivating factor. This may reflect the fact that the public sector is a truly political environment, where to be politically invisible may be as detrimental as being politically visible.

The fact that political visibility had greater explanatory power than did the ability to pay is consistent with prior research that the deliberate management of agency costs, political costs and cultural concerns creates a potential source of benefit sufficient to outweigh the physical cost of changing an accounting system or adopting a new accounting policy, even if there is no direct, or even indirect, economic benefit (Neu 1992).

Therefore, the overall conclusion drawn is that though the physical costs may have had an influence on the timing of the decision to adopt accrual reporting, this factor was overridden by the influence of political visibility.

Therefore direct support was provided for Proposition 2.

If this finding is accepted then accounting standard setters and those responsible for future reforms in public sector accounting policies and practices,³¹ should identify possible ways of taking advantage of this situation to encourage greater acceptance of such reforms. The fact that classification of departments into those which adopted accrual reporting before the mandated period and those that did not (grouping 3) did not return statistically significant results suggests that individual departmental Secretaries did not perceive the same benefit in the adoption of accrual reporting as a signal of efficient and effective management.

³¹ See Section 1.3, for a discussion of foreshadowed changes.

One way to address this situation may be through the provision of greater recognition for those who adopt new reforms in a short time-frame, such as through the presentation of awards. This suggestion is consistent with findings of Deegan and Carroll (1993) that political visibility may have influenced the decision by firm managers to apply for annual report awards.

In developing such strategies, it should be noted that the discussion in Section 3.3.4, concluded that the cultural influences on departmental Secretaries was not likely to have been a key element for this reform. This conclusion was drawn from the fact that those departments with professionally qualified accountants at senior levels did not appear to have adopted accrual reporting any earlier than the other departments. However, a large proportion of the activities conducted to 'sell' accrual reporting appeared to be targeted at accountants (see, for example, the list of activities in Section 3.2).

Two tentative conclusions may be drawn from this situation are that:

1. either the justifications provided were not persuasive enough to cause these accountants to enthusiastically support the reform, or
2. these accountants did not have a strong say in the decision and so the wrong audience was addressed.

This latter possibility highlights the point that the target audience, in this situation the departmental Secretary, should be specifically addressed. Providing justifications that appeal to accountants, even though a particular reform may be technically an 'accounting' reform, may not be adequate.

6.4 Limitations

There are a number of limitations to the findings presented in this dissertation. The limitations in relation to the measurement of the proxies, and related variables, for 'ability to pay' and 'political visibility' have been well covered in Chapter 4.

In relation to the 'ability to pay' proxy, it is acknowledged that this approach provides only an indirect measure of the influence of the cost of adopting accrual reporting. There were problems in relation to interpreting this proxy between departments, due to such matters as the relative complexity of accounting systems or employee profiles, and even within a department, due to the possibility of cross-subsidisation of departmental activities with program funds (Section 4.3)

However, 'ability to pay' does provide a broad indicator of the revenue available to a department to undertake such changes, particularly as no additional funding was provided for this activity (JCPA 1995, p. 26). Finally, this proxy has been used in prior research.

Limitations in relation to the variables representing the proxies for political visibility are also detailed throughout Chapter 4. These limitations include the fact that no attempt was made to capture the impact of 'snowball' effects, such as when an issue is picked up in more than one forum. For disclosure in the financial statements of scrutiny by Parliamentary Committees, the possibility of non-disclosure bias also exists.

Despite these limitations, the Spearman rank-order correlation coefficients between the proxies generally returned statistically significant levels of correlation at 5% or less. This result suggests that despite representing diverse mechanisms, the proxies were measuring the same underlying construct. In particular, the correlation between the new proxies

and those traditionally used to represent political visibility, being size and number of employees, was consistently significant, and generally at a medium to high level.³²

This finding in relation to size provides a link between these new proxies and one element in private sector studies that has been shown to be a significant influence in empirical studies of accounting policy choice (Christie 1990). In addition, it further confirms prior studies that size does appear to be correlated with more theoretically sound proxies for political visibility (Deegan & Carroll 1993; Lim & McKinnon 1993; Panchapakesan & McKinnon 1992).

Finally, the *Kendall co-efficient of concordance* showed that the variable representing political visibility proxies were employing the same scale in ranking the departments. This result was significant at all normal levels of significance. This again provides support for the suggestion that the proxies were attempting to measure the same underlying factor.

The labelling of this factor as 'political visibility' is a subjective judgement. However the justification for the usage of each proxy does provide fairly direct links between 'political visibility' and the proxies in way that is not possible in private sector research.

A further limitation relates to the fact that the departments tested were only a sample, though a fairly significant proportion of the population. It is possible that those departments which were excluded from the sample because they were not in existence at the end of each of the three financial periods should be assessed as being highly politically visible, simply because of the fact that they were subject to a change of

³² See Table 40 on page 197 and Table 41 on page 198

administrative orders. Since none of these departments adopted accrual reporting early, such a ranking would have raised the profile of those departments which did not adopt accrual reporting until the final year.

An alternative explanation for these latter departments is that, having been recently restructured, it would have been significantly more difficult to adopt a more sophisticated reporting system than was in place prior to the change. This situation would imply that cost was the motivating factor.

It is therefore not possible to draw conclusions about the impact of sampling error on the findings.

6.5 Future Research

This paper has provided a basis for the application of private sector accounting policy choice theory to the accounting policy choices of Australian public sector entities. Future research in this area can address whether, as suggested in this paper, low political visibility, as well as high political visibility, may influence accounting policy choice decisions in the public sector.

With the introduction of accrual reporting to the public sector, and the raft of judgemental choices which must now be made, such as selection of depreciation rates, valuation of assets, capitalisation of intangible assets and recognition of environmental risks, comparative studies between the two sectors can now be made.

The proxies, and associated variables, developed in this paper would prove useful in conducting such research. Certain of these variables would benefit from further refinement. For example, the measure of scrutiny by Parliamentary Committees could be

modified by developing a weighting system to place on the reports of various committees.

Since these new proxies are not relevant to the private sector, the full implementation of accrual reporting will open the way for further testing of other traditional measures to allow the use of the same proxies between the sectors.

In summary, research into accounting policy choice in the public sector is in its infancy. This paper is one of the first to take advantage of recent developments in public sector reporting in Australia, and to provide a valid approach for taking such research much further.