# MEANS, MOTIVE AND OPPORTUNITY – DISTORTION OF PUBLIC POLICY MAKING PERFORMANCE MANAGEMENT DATA

ABSTRACT:

*Regulatory authorities are increasingly relying on performance data for public policy making purposes. However, this reliance necessarily assumes that the data is free from material distortion. This paper provides a conceptual framework for understanding the 'means', 'motive' and 'opportunity' for distorting data employed in high stakes performance management programmes. We present empirical evidence which suggests that the use of data drawn entirely from financial statements is by no means a guarantee of a distortion free depiction of performance. In addition, we provide econometric evidence of some important determinants of performance data distortion. Taken as a whole, the following analysis provides a comprehensive picture of the salient matters which must be addressed in order to ensure accurate data for public policy making purposes.*

Keywords: data distortion, gaming, performance management, accountability, Fit for the Future

**Introduction**

Regulatory authorities are increasingly relying on local government performance data for public policy making purposes. For instance, the Queensland Local Government Reform Commission placed heavy emphasis on the assessment of local government financial sustainability in prosecuting the case for reducing the number of councils in the state from 157 to just 73 in 2007/08 (Drew et al. 2016). In similar vein, the New South Wales (NSW) Office of Local Government recently emphasised the achievement of financial ratio benchmarks as a crucial element of its *Fit for the Future* (FFTF) programme.

*FFTF* was a programme of local government reform designed to enhance the financial sustainability of the NSW local government sector. It was primarily a response to a report by the Independent Local Government Review Panel (ILGRP 2013: 7) which concluded that 'the financial sustainability of many councils – and their capacity to deliver services communities need – has declined, and a significant number are near crisis point'. Arguably, the ILGRP report contained a number of good suggestions on the need to reform rate pegging, introduce mandatory professional development for councillors, adopt minimum two year terms for mayors and introduce central auditing (ILGRP 2013). However, in its response to the Report the NSW government focussed primarily on the controversial recommendation that 'structural reform – including amalgamations – is another essential component of reform' (ILGRP 2013: 15). Thus, in September 2014 the NSW government released its *FFTF* programme which focussed on the assessment of council performance according to seven ratios drawn from the financial statements along with the scale recommendations made by the ILGRP. Ultimately, these criteria were used to justify public policy centred on forced amalgamation.

For good public policy decisions to be made it is clearly critical for performance data to be free of material distortion. In this regard one might reasonably expect that data drawn from

audited financial statements would be a sound basis for compiling performance indicators. We evaluate this assumption by testing for the presence of unexpected accounting estimates in the financial statements of NSW councils. Specifically, we identify unexplained changes to: (i) depreciation accruals, (ii) estimated cost to bring assets to a satisfactory standard and (iii) estimates of required annual maintenance. This is largely achieved by comparing the estimates provided for the financial year relevant to the *FFTF* programme with estimates which had been provided in earlier periods (with adjustments to reflect relevant expenditure over the current period). Because *FFTF* was a high stakes performance management programme an analysis of this type can shed important light on both the reliability of financial data for public policy making and also on the determinants of data distortion. We note that an analysis of *financial* data distortion in the context of high stakes performance management has not been comprehensively dealt with in the scholarly literature – this study therefore remedies an important gap. Moreover, knowledge of the determinants of data distortion can help inform the design of future performance management regimes and thus lead to better decision making.

This paper extends Bevan and Hood's (2006) seminal work on 'motive' and 'opportunity' for gaming in public policy programmes in a number of important ways. First, we address the missing third element of all good detective mysteries – 'means' – by recourse to the pioneering work of Copeland (1968) on income smoothing. In particular, we note that Copeland's (1968) ideal attributes for accounting devices which might be successfully employed to shift profits from more successful periods to less successful periods by executives of private business also lend themselves to the practice of improving the appearance of performance by public sector executives. The second way in which we extend the extant literature is by demonstrating an empirical technique to discern common 'motive' for a set of unexplained accounting items. The last way in which we contribute to the corpus

of scholarly literature on public policy performance management distortion is by exploiting the unique combination of unaudited and audited financial statement data to demonstrate the relative importance of an audit hole for providing 'opportunity'.

The paper itself is divided into six main parts. Section two provides important contextual information including details of the performance indicators employed by the NSW government to establish empirical legitimacy for the policy process. Section three sets out the categorical trinity of detection method as it applies to public policy process and the hypotheses which we test in response to 'means', 'motive' and 'opportunity'. Section four provides detail of the empirical strategy employed whilst section five discusses the results in terms of the aforementioned hypotheses. We conclude our paper with some observations on the importance of the analysis for the design of future public policy reform programmes.

**2. Fit For The Future as Policy Process**

This study is located within the broader policy failure literature, with specific reference to public policy which is predicated on empirical evidence. Success in public policy can be assessed according to a number of potentially independent dimensions: 'programmatic success' which emphasises the effectiveness, efficiency and resilience indicators associated with an intervention; 'political success' which focusses on media and public perceptions, political inquiries and political fatalities and 'process success' which emphasises political legitimacy in formulation of options as well as innovation and influence (Marsh and McConnell, 2010). We believe that the 'process success' of a public policy might also be profitably assessed with reference to its empirical legitimacy. To this end we examine the degree of data distortion (referred to as 'gaming' in the literature) associated with the FFTF metrics. Moreover, we seek to explicate on the 'means', 'motives' and 'opportunities' in order to understand the determinants of 'process success' in an empirical legitimacy sense.

New South Wales is Australia's largest state representing just under a third of the nation's population in the most recent census (ABS 2011). At the time of *FFTF*, Local government in NSW was comprised of 152 general-purpose councils regulated by the state Office of Local Government (OLG) directed by the NSW Minister for Local Government. Local government in Australia is not recognised in the national constitution and thus exists as a creature of state statute – able to be forcibly amalgamated, put into administration or have its boundaries and responsibilities changed at the direction of the Minister (subject to the constraint of procedural fairness which applies to administrative decision making; Twomey 2012). In contrast to most other developed nations, local government in NSW has a limited remit of services – concentrated on waste collection, provision of road infrastructure, development planning and recreation facilities. Welfare services are largely the task of the Commonwealth whilst the state government is responsible for most education, health and policing services.

NSW municipal elections are conducted on the second Saturday of September every four years (Electoral Commission NSW 2014). Mayors are directly elected for just over a fifth of NSW councils – in all other cases councillors themselves elect the Mayor annually. Elected representatives are responsible for appointing a General Manager (GM) as and when the position becomes available, for a maximum contracted period of five years. The GM is tasked with implementing the vision of the elected representatives and is responsible for the appointment of all staff including the responsible accounting officer (RAO). In most metropolitan councils (principally the 43 councils of the Greater Sydney region) the RAO is a member of one of Australia's two peak accounting bodies, Certified Practising Accountants (CPA) or the Australian Institute of Chartered Accountants (ICAA). However, there is no legislative requirement for membership of these bodies. Regional and rural councils (which form the bulk of NSW local government) mostly struggle to attract CPAs or Chartered Accountants.

All financial statements are required to be passed by a resolution of the elected representatives and include a statement pursuant to s413(2)(c) of the *Local Government Act (1993)* that the information contained is a fair representation of the council's financial position and that the financial report is not false or misleading in any way. This statement of fair representation is signed by the Mayor, one councillor, the GM and the RAO. A recent report by the NSW Auditor-General (Audit Office NSW 2012) decried the lack of significant penalties for councillor and staff misconduct under the *Local Government Act (1993)*. Further, the Minister is only able to apply a maximum penalty of suspension for one month for serious misconduct, whilst the NSW Governor has the discretion to disqualify an individual from holding civic office for a maximum period of five years. Only about half of the NSW councils have audit committees – most of which have little independence – commonly chaired by the RAO or a councillor (ILGRP 2013). The council executive is responsible for selecting the Auditor of financial statements. PWC is the only 'Big 4' auditor operating in the sector and audits just 21 councils, all of which are located in metropolitan areas.

In August 2011 the Minister for Local Government established the Independent Local Government Review Panel (ILGRP) to provide recommendations to improve the financial sustainability of the sector. Due to a change of Premier and subsequent cabinet reshuffle the government did not respond to the final report of the ILGRP (October 2013) until October 2014. The state government's response – *FFTF* – required councils to demonstrate that they were financially sustainable according to seven financial ratios derived entirely from municipal financial reports (see Table 1). Councils which were unable to show that they were both 'fit' (according to the seven financial ratios) alongside possessing the required scale were instructed to complete a voluntary amalgamation proposal. However, just four councils took up the option to outline plans for voluntary amalgamation. This was despite the offer of

generous incentives for voluntary amalgamation (see, Drew and Dollery 2015b). As a result *FFTF* was recast as a forced amalgamation programme in December 2015. At the time of writing, the final number of forced amalgamations is uncertain owing to a number of outstanding legal challenges (NSW Government 2016).

[TABLE 1 HERE]

Significantly, all but one of the *FFTF* performance management ratios were derived entirely from financial statement inputs (the 'efficiency' ratio incorporated a population size input derived from the ABS). However, not all of the financial data contained within the NSW local government financial statements is subjected to auditing – in particular, two of the items used to calculate the FFTF ratios are derived from the unaudited special schedules. Moreover, the scholarly literature has long identified inconsistencies in audited depreciation accrual data. In this study we focus on three items from the financial statements in order to test hypotheses associated with our explication of 'means', 'motive' and 'opportunity':

(i) *Depreciation*: Depreciation is the allocation of the cost of a non-current asset over the course of its useful life. Allocation of depreciation expense requires a good deal of professional judgement, specifically in terms of deciding on an appropriate depreciation methodology (from a virtually unlimited number of options) and estimating the useful life of the asset. Moreover, it has long been identified as a 'means' for municipal executives to manipulate performance data (see, for instance, Pilcher (2005; 2006; Pilcher and Van Der Zahn 2010; Drew and Dollery 2015a). Manipulation of depreciation accruals has the potential to distort the Operating, 'efficiency', and Buildings and Infrastructure Renewal ratios (Drew and Dollery, 2015b). Moreover, the quantum of depreciation

accruals (which is just over a fifth of total council expenditure in NSW) means that small shifts in depreciation accrual practice can result in very material increases to performance management ratios.

(ii) *Cost to Bring to Satisfactory Standard*: This information is provided in the unaudited Special Schedule 7 and is used to calculate the infrastructure backlog ratio (TCorp 2013). The financial statements define this quantum as:

'[S]atisfying expectations or needs, leaving no room for complaint …. The estimated cost to bring assets to a satisfactory standard is the amount of money that is required to be spent on an asset to ensure that it is in a satisfactory standard. This estimated cost should not include any planned enhancements (i.e.: to heighten, intensify or improve the facilities)' (see, for instance, Hay Shire Council, 2014).

Because the data is not audited, it represents an important opportunity for deliberate distortion. However, one should be mindful that the Special Schedule is part of the financial statements and therefore needs to be passed by the elected body of the council and certified as fair and free from false and misleading claims.

(iii) *Required Annual Maintenance*: This information is also provided solely in Special Schedule 7 and is used to calculate the Asset Maintenance ratio. Required Annual Maintenance is defined as 'what should be spent to maintain assets in a satisfactory standard' (see, for instance, Hay Shire Council, 2014).

It will be noted that these three financial statement items hold the potential to materially distort five of the seven performance management ratios employed in the *FFTF* program. We now review the literature on the categorical trinity of detection in order to develop hypotheses which will allow us to assess the process dimension of the NSW forced amalgamation public policy.

**3. The Categorical Trinity of Detection and Public Policy Performance Management**

Gaming of public performance management regimes predicated on data drawn principally from financial statement items has largely escaped the attention of public administration scholars. This neglect might have arisen due to a common misconception that audited financial statements contain objective error free accounting data (Drew and Dollery, 2015). However, Copeland's (1968) time series study of income smoothing amongst New York Stock Exchange companies should alert us to the fact that audited financial data is merely an abstraction of reality and thus far from ontological truth – it also suggests the types of accounting items most likely to suffer distortion. We suggest that the practice of income smoothing by private business executives is not entirely dissimilar to the practice of performance management gaming by public sector executives: in both cases the emphasis is on manipulating accounting data which is most likely to project a favourable impression of performance without detection. Moreover, the motivation for income smoothing – self-interest – is the same as the motivation generally attributed to individuals which participate in public performance management gaming (more on this below).

Of particular interest to our current inquiry is Copeland's (1968) articulation of attributes which make certain accounting items attractive to executives wishing to project a favourable impression of performance. First, Copeland (1968) draws our attention to the desirability of

manipulating accounting items which do not commit the unit to any further action. Manipulation of data that commits the council to future actions may (i) have a deleterious effect on future performance and is thus unsatisfactory in a continuous performance management system; similarly, it may (ii) increase the likelihood of detection; and (iii) increase the difficulty in manipulating performance in future years. The second desirable attribute of 'malleable' accounting data is that the item in question is based on professional judgement. Professional judgement – unlike other accounting 'facts' – is neither right nor wrong. Moreover, the complexity of a given professional judgement is proportional to the range of data manipulation possible. This is because complex professional judgements involve a larger number of salient factors, each of which can be 'adjusted' to alter the final financial figure. The third important characteristic of data which might make it suitable for distorting the picture of performance is its ability to result in material shifts. The final attribute of accounting data which lends itself to selection for manipulative purposes is where the figures do not involve a real transaction with a second party. The object of data manipulation is to give the appearance of improved performance without actually changing performance.

In the following empirical work we test the hypothesis that accounting data can become the means of distorting public policy performance management regimes. Specifically we test the degree of unexpected (or unexplained) movement in the depreciation accrual data in the first accounting period subsequent to communication of the performance ratios which would be used for the empirical legitimisation of FFTF[1].

Now that we have explored the 'means' for manipulating public policy management regimes based on financial data one naturally turns to the question of why an executive would choose to do so. Perhaps the best known work on public sector motivation is Julian Le Grand's

(2003) dichotomy of ‘knights’ and ‘knaves’. Le Grand (2003, p. 25) defines a ‘knave’ as an ‘individual whose principal concern is to further his or her self-interest…by any means, legal or illegal’. By way of contrast, ‘knights’ are ‘individuals who are motivated to help others for no private reward, and indeed who may undertake such activities to the detriment of their own private interests’ (Le Grand, 2003, p. 27). The literature largely assumes that gaming is the result of knaves responding to self-interest incentives (see, for instance, Le Grand 2010; Bevan and Hood 2006; Bohte and Meier, 2000). However, it is clear to us that certain circumstances could give rise to gaming by knights. For instance, several council executives drew attention to the fact that local governments were often the major employer in rural and regional areas and that job losses associated with amalgamation would ‘devastate local families and our local economy’ reducing many former council bureaucracies to ‘little more than a lawn mowing service’ (Tweed Daily News, 2013). Thus, it is clear that in high stakes environments such as this, concern for the effect on families and local economies might motivate knights to also ‘game’ the data. In this respect, the beliefs of executives about the likelihood of detection and the personal outcomes arising from the forced amalgamations would seem critical to any evaluation of motive: gaming under the circumstances of likely detection (and consequences) suggests knightly motives as does gaming when there might be reasonable cause for belief that the executive would be successful in gaining a comparable position in a newly amalgamated entity. Unfortunately, ‘assessing intent in any administrative process is difficult’ – those who have committed data distortion offences are unlikely to admit to their behaviour, let alone co-operate with inquiries aimed at uncovering intent (Bohte and Meier, 2000, p. 177; Copeland, 1968). However, it is certainly the case that *prima facie* motives existed for both knaves *and* knights in relation to FFTF. Moreover, there were widespread ‘accus[ations] that some councils, deemed to have passed the financial

sustainability test, “played games” with their books by extending the useful life of their public assets to an “unrealistic” age’ (Bell, 2015).

One way of identifying deliberate distortion – as opposed to recording error – is to examine whether distortions of the three accounting items tend to operate in the same direction. Whether prompted by knightly altruism or knavish self-interest the behaviour should be directed towards achieving a common goal. Accordingly, in the following empirical work we test the hypothesis that unexpected accounting items are attributable to a single motive by subjecting the unexpected depreciation, estimated cost to bring assets to a satisfactory standard and required annual maintenance items to a multiple regression analysis aimed at establishing the statistical significance and direction of association.

The matter of ‘opportunity’ has been comprehensively addressed in the literature. In particular, it has long been recognised that advanced knowledge of metrics and associated benchmarks has clear implications for providing potential ‘gamers’ with the time to distort data. This is particularly important in the case of financial data given that it is subject to fixed reporting times: in the case of FFTF councils were made aware of the broad empirical approach and data to be used in council assessments in the April 2013 TCorp report, well in advance of the June 30 2014 accounting reporting date. Related to the issue of advanced knowledge of metrics and benchmarks is the matter of unpredictability – in particular, introducing temporal unpredictability has been identified in the scholarly literature as an efficacious means of preventing deliberate data distortions (Bevan and Hood, 2006). However, temporal unpredictability is difficult to achieve when financial statement data is employed.

The presence of an audit hole has also been identified in the literature as creating the opportunity for distortion of public performance data (Bevan and Hood, 2006). When it comes to performance management based on financial data one might be forgiven for

assuming that this problem is of little relevance. However, the Australian Auditing Standard (ASA 200) only requires *reasonable* assurance that financial statements are free of *material* misstatement, not absolute assurance (Drew and Dollery, 2015a). Moreover, what might be an immaterial error in an accounting sense could very well be critical in a performance management regime – particularly if the extant performance of a council only fell marginally short of a benchmark known in advance. In addition, as we have seen, not all of the data contained in the NSW council financial statements is subject to audit opinion: for instance, the estimated cost to bring assets to a satisfactory standard and required annual maintenance data is not audited. To compound matters somewhat the two pieces of critical unaudited data were not satisfactorily defined – creating 'interpretation' space for would be gamers. Moreover, the literature points to enhanced 'opportunity' when there is an absence of public scrutiny. Gaming of financial data requires sophisticated analysis to detect and often also involves high information costs. If potential 'gamers' believe that there is an absence of public scrutiny – particularly academic scrutiny – then they may feel that there is little chance of detection (as we have seen this is also important in the calculus of potential knaves). Likewise, if executives feel that a Nelsonian eye will be applied to the data – that politicians and regulators are more concerned with the appearance of improvement rather than actual improvement – then this may be seen as a tacit invitation to distort data (Bevan and Hood, 2006).

We can test the hypothesis that gaming is more likely to occur when an audit hole exists by comparing the levels of distortion present in audited financial data (depreciation accruals) to those present in the unaudited special schedule items (estimated cost to bring assets to a satisfactory standard and required annual maintenance).

We now outline the empirical strategy adopted to calculate the unexpected movement in the three pieces of accounting data at the heart of the FFTF public policy process.

## 4. Empirical Strategy for Estimating Unexpected Financial Statement Items

In order to determine the extent of data manipulation for the three chosen measures we adopted the general approach for calculating unexpected financial statement items employed by Marquardt and Wiedman (2004) developed from the earlier work of Hribar and Collins (2002) and Mulford and Comiskey (2002). This is the approach also adopted by Pilcher and Van der Zahn (2010) in the context of NSW municipal income smoothing. Unexpected accounting data is essentially the unexplained movement in items from one accounting period to the next. We use these measures of data distortion to test our three hypotheses derived from the categorical trinity of detection – including, our test of common motive which discerns deliberate distortion (or gaming) from mere recording error. We define the unexpected financial statement items as:

$$U_{j,t} = ((R_{j,t} - E_{j,t}) / R_{j,t-1}) *100$$

Where U is the unexpected change for council j at time t (UDEPR is unexpected depreciation; USS is unexpected cost to bring to a satisfactory standard and UREQ is unexpected required maintenance), R is the reported quantum and E is the expected quantum for each item. It will be noted that we have chosen to deflate the unexpected quantum (the numerator in the expression above) by the item under consideration rather than using a constant denominator (total assets) as per Marquardt and Wiedman (2004). This is because our study focuses on how the individual financial statement items might be manipulated with respect to performance management instruments rather than the earnings management considerations at the heart of the earlier cited works.

A key variable in the unexpected change algorithm is the expected quantum. This variable is defined for each item thus:

*Unexpected Depreciation*

$$EDepr_{j,t} = (Depr_{j,t-1}/IPPE_{j,t-1}) * IPPE_{j,t}$$

Where EDepr is the expected depreciation of council j at time t, Depr is the reported depreciation of council j at time t-1, and IPPE is the depreciable infrastructure, property, plant and equipment values (drawn from the notes to the financial statements) at the time indicated by the subscript. It will be noted that we have elected to use the *depreciable* portion of IPPE rather than the *gross* IPPE used in the ground-breaking work of Pilcher and Van der Zahn (2010) and Marquardt and Wiedman (2004). This is an important innovation given that only the depreciable component of IPPE has any relevance to the rate of depreciation employed in the previous period (represented by the numerator above). Given that just over 37% of gross IPPE items from NSW municipalities are non-depreciable (such as bulk earthworks), failure to adjust for these items could compromise the results. A limitation of this work (acknowledged also in previous studies) is that the exact timing of asset acquisitions during the financial year is not publicly available and thus could result in minor distortion of data.

*Unexpected Cost to Bring to Satisfactory Standard*

$$ESS_{j,t} = SS_{j,t-1} - (ACT_{j,t-1} - REQ_{j,t-1})$$

Where ESS is the estimated cost to bring assets to a satisfactory standard for council j at time t, SS is the cost to bring assets to a satisfactory standard reported in the previous period, ACT is the actual maintenance reported for the asset base in the previous period and REQ is the required maintenance reported for the asset base in the previous period. Thus the ESS represents the previous cost to bring assets to a satisfactory standard adjusted for required maintenance *not* undertaken. It is acknowledged that there is potential for upside (but not downside) adjustments to ESS over a financial year owing to an unpredicted deterioration of assets arising from, for instance, a natural disaster.

*Unexpected Required Maintenance*

$$EREQ = REQ_{j,t-1} + (REQ_{j,t-1} - ACT_{j,t-1})$$

Where EREQ is the estimated required maintenance and all other terms are defined as per the previous expression. Essentially, EREQ is the required maintenance from the previous financial statement adjusted for the maintenance deficit (or surplus) stated in the previous period. Once again there is some potential for slight upward (but not downward) revisions owing to unpredicted movements in maintenance requirements. However, as we shall see below, possible revisions do not explain the scale or the direction of unexpected changes to financial statement items identified in our analysis.

Table 2 provides descriptive data for each of the variables which we test.

[TABLE 2 HERE]

## 5. Evidence of Means, Motive and Opportunity

The first matter which we have set out to address is the question regarding whether basing performance management data on financial statement inputs is in any way a guarantee of empirical legitimacy in public policy process. We have argued that the attributes which make some accounting items attractive for income smoothing purposes also lend themselves to performance management gaming objectives. All three accounting items which we have set out to examine fit Copeland's criteria: however, only one item (depreciation accruals) is subject to auditor examination. Therefore, in order for us to avoid conflating our 'means' hypothesis with our 'opportunity' hypothesis we will restrict our comments to the unexpected depreciation data at this point.

Table 3 provides the descriptive statistics for the unexpected financial statement items relating to the financial year ending 30 June 2014. Data on various measures of central tendency and spread are presented for the entire state, before being disaggregated into Greater Sydney and Outside Greater Sydney cohorts. The typical NSW council (represented by the median) had unexplained depreciation of just 0.2% which is probably really a reflection of the minor upside error which we recognised in our discussion of the empirical strategy employed. However, when we move to quartile one data we are faced with the fact that 25 percent of councils had unexplained reduction in depreciation greater than 6.3%. As noted earlier depreciation accounts for around a fifth of NSW council expenditure so it is clear that this degree of distortion would have had a material effect on the empirical legitimacy of three of the seven metrics employed in FFTF. Moreover, the far majority of councils which lay between the median and first quartile also had unexplained reductions in depreciation, thus suggesting that around half of the councils assessed may have gamed the performance management regime. Indeed, one council had unexplained reduction in depreciation of over seventy percent. Thus, our evidence clearly demonstrates that accounting data which fits the

ideal attributes articulated by Copeland (1968) can be used as a 'means' for distortion of performance management regimes.

[TABLE 3 HERE]

Somewhat puzzling is the fact that around half of the councils had unexplained increases in depreciation accruals. As noted, the empirical technique is subject to some upside error. However, it is clear that at least the top quartile of councils made significant positive adjustments to their depreciation accrual data. Part of the explanation for this observation may lay in the fact that many councils took the opportunity to revise their depreciation schedules as part of the FFTF process. Where this occurred the unexpected data really reflects measurement error from previous periods, rather than a deliberate attempt to game the performance management regime. However, there is also the possibility that some councils may have deliberately revised their depreciation expense up, in order to avoid amalgamation. As it stood, FFTF required councils to seek out their own amalgamation partners in the event that they did not meet the criteria (and did not have an attainable plan to do so)[2]. This necessarily implied that one had to find an attractive partner. Thus by exaggerating the poor state that a council might have found itself in (as measured by the FFTF criteria) it might have been possible to become such an unattractive prospect that no adjoining municipality was willing to even countenance amalgamation! If this explanation for the upward revision of depreciation expense (which incidentally is supported by anecdotal evidence) is valid then we might reasonably expect to find that the adjustments to the other two accounting items also occurred in the same direction.

If the movement in the various unexpected items derive from a single motive, then we would expect there to be a statistically significant association between the three accounting items which we examine. Table 4 presents the results of three multiple regression models which take each of the financial statement items in turn as regressands. The regressors are consonant

with the model employed by Pilcher and Van der Zahn (2010) (with the addition of the Special Schedule 7 items and the depreciation rate (defined as the depreciation accrual as a percentage of depreciable IPPE) which have resulted in a much higher coefficient of determination). We find evidence of statistically significant associations for each of the three accounting items. Moreover, for each of the statistically significant associations the sign of the coefficient suggests that manipulation generally occurred in the same direction. For instance unexpected depreciation was positively associated with unexpected cost to bring assets to a satisfactory standard (at the 5% level of statistical significance) as was unexpected required annual maintenance (at the 1% level of statistical significance). When one considers the potential for minor upside error arising from the unexpected item algorithms and the fact that in some cases distortions may have been due to measurement error the level of statistical significance and size of the coefficients is rather startling. We therefore conclude that the explanation of distortions arising in the main from a single 'motive' – gaming – is validated by the empirical evidence. Moreover, we have demonstrated an important advance in the empirical detection of gaming in performance management regimes.

[TABLE 4 HERE]

Two other points of interest may be derived from the regressions presented in Table 4. First, the existing depreciation rate is a highly statistically significant determinant of unexpected depreciation. That is, low depreciation rates are associated with further understatement of depreciation and vice versa. This may suggest that council executives may tend towards serial offending and that there is thus a certain predictability about this particular type of data manipulation. The result also provides strong support for the call by Drew and Dollery (2015a) for regulatory bodies to include a depreciation rate indicator as part of all performance monitoring regimes. Second, there was a statistically significant negative association between the size of the council (as proxied by number of households) and

unexpected cost to bring assets to a satisfactory standard. Specifically a 1% increase in the number of households was associated with a 0.4% underestimate of unexpected cost to bring assets to a satisfactory standard. *Prima facie* this suggests that larger councils are more likely to underestimate unexpected cost to bring assets to a satisfactory standard, once again providing a basis for predicting performance data distortion.

The third hypothesis arising from our explication of the categorical trinity of detection tests whether the amount of data distortion might be relatively greater for unaudited items than for audited items. FFTF represents a unique opportunity to test the relative influence of audit oversight on data distortion because it employs both audited and unaudited financial data. Table 3 clearly demonstrates that distortion of the two unaudited accounting items was far greater than the distortion of the audited item. For instance, whilst the typical council (as measured by the median) only had negligible levels of movement in unexpected depreciation accruals, the typical movement in the estimated cost to bring assets to a satisfactory standard and required annual maintenance was relatively large (an unexplained reduction of 13.5% and 11.4% respectively). Moreover the first quartile data suggests even larger disparities: unexpected downward adjustment of depreciation accruals in the order of 6.3% compared to unexpected reductions of estimated cost to bring assets to a satisfactory standard and required annual maintenance of 48.6% and 48.8% respectively. It is thus reasonable on the basis of this evidence to suggest that auditing of accounting data mutes the 'opportunity' for gaming of financial statement items.



## 6. Conclusion

The scholarly literature suggests that public policy success can be appraised according to three dimensions: process, programmatic and political success (Marsh and McConnell, 2010). Our analysis suggests that the process dimension of the forced council amalgamation policy

cannot be viewed as a success. In particular the data upon which empirical legitimacy rested has been shown to be the subject of high levels of deliberate distortion. Whether this process failure is subsequently translated into programmatic or political failure only time can tell. However, if the decision to amalgamate councils has been based on heavily distorted data then one could assume that the chances of programmatic success (as measured by the objective of enhanced financial sustainability) are less likely. Moreover, if programmatic success is not forthcoming before the next NSW state government election in March 2019, then it is not unreasonable to suspect that this might result also in political failure (Grant et al. 2015).

The broad aim of this paper was to explicate on the categorical trinity of detection with reference to public policy performance management regimes. In so doing we developed three hypotheses related to 'means', 'motive' and 'opportunity' which were amenable to empirical testing.

First, we borrowed from the income smoothing literature to outline the characteristics of accounting data items which best lend themselves to manipulation aimed at enhancing the impression of performance. We then tested one such item (depreciation), and demonstrated that it was indeed subject to high levels of unexplained distortions.

Second, we argued that the common interpretation of a prominent dichotomy of public sector motivation drawn from the literature need not always hold true – showing how knightly motivations could also result in gaming behaviour in circumstances such as the ones which faced NSW councils during the FFTF process. Whilst agreeing with other prominent scholars that it was difficult to obtain data on motivation for gaming *per se*, we were able to develop a hypothesis and empirical strategy to discern deliberate distortions arising from a common 'motive' from measurement error. Our evidence showed that there was a statistically significant association between all three distorted accounting items suggesting that gaming

was indeed a valid explanation of the observed unexpected movement in data. In addition, our econometric evidence pointed to other determinants of gaming in accounting data used to establish empirical legitimacy in public policy process. Specifically, we found empirical evidence which suggested serial offending with regards to data distortion as well as an association between the size of the council and unexplained data distortion.

Our third hypothesis drawn from the explication of the categorical trinity of detection, related to the matter of 'opportunity'. It has long been conjectured that the presence of an audit hole provides opportunity for individuals intending to subvert performance management regimes. The unique combination of unaudited and audited financial statement data employed in the FFTF policy provided us with an ideal natural experiment to test what had hitherto been conjecture. Our comparison of unexpected movements in audited depreciation items against unaudited special schedule 7 items confirmed that audit practice does indeed mute – but not eliminate – accounting data distortion.

We have thus advanced the state of performance management scholarship by: (i) articulating the complete categorical trinity of detection as it relates to performance management, (ii) demonstrating the means by which accounting data can be distorted, (iii) demonstrating an empirical technique for discerning gaming from mere measurement error and (iv) empirically demonstrating the effect of audit practice on muting the level of gaming of accounting data used for performance management purposes. However, we recognise that some questions raised in the scholarly literature on performance management remain to be answered.

In particular, we believe that it is important to do further work to identify the motivations of council executives which appear to have been involved in data distortion, notwithstanding the recognised obstacles to this sort of investigation. One way forward might be to conduct an anonymous survey of council executives which our empirical strategies suggest were involved in gaming to investigate both whether executives were prepared to admit intent and,

where intent was admitted, the motivations for doing so. It might also be helpful to refine the empirical strategies which have hitherto been used in the scholarly literature to identify unexpected movements in accounting data with a view to mitigating the problems which give rise to minor upside error in order to provide more nuanced analysis of gaming behaviours.

In sum, this study confirms the assertion of Bird et al. (2005: 10) that 'failure to design, and audit properly, a robust PM protocol is false economy because to buy cheap methodology is to buy dear in the longer term if subsequent audit or independent critique discovers problems with performance data which have been influential in public policy debate'.



## Endnotes

[1.] The April 2013 TCorp report detailed the broad empirical process used in FFTF – we therefore analyse data from the June 30 2014 financial year statements.

[2] The ILGRP (2013) provided a table of suggested amalgamation partners for councils that they believed should consider amalgamation. However, the OLG (2014) left it to the councils themselves to negotiate with potential amalgamation partners. In October 2015 the majority of the 152 councils in NSW councils had been assessed as 'unfit for the future' – despite their claims to the contrary – by an arms-length authority of the NSW Government, the Independent Pricing and Regulatory Tribunal (IPART; see IPART 2015). At the time of writing the outcomes of the reform process, despite it being initiated in 2011, were by no means clear. For instance, several councils are currently contesting amalgamation directives in the Courts (Davies 2016).

[3] One council is missing from the following analysis owing to the fact that it was under administration during the 2013/14 financial year.

## References


Andrews, R., Boyne, G., Law, J. and Walker, R. 2005. 'External Constraints on Local Service Standards: The Case of Comprehensive Performance Assessment in English Local Government'. *Public Administration* 83(3): 639-656.

AO NSW [Audit Office, Auditor General, New South Wales Government] 2012. *New South Wales Auditor-General's Report Performance Audit – Management Local Government*. Sydney: AO NSW, http://www.audit.nsw.gov.au/ArticleDocuments/249/01_Management_Local_Government_Full_Report_3.pdf.aspx?Embed=Y (accessed 13 July 2015).

ABS [Australian Bureau of Statistics] 2011. *Census of Population and Housing*. Canberra: ABS.

Bell, A. (2015). Blacktown Mayor Stephen Bali Rejects IPART Fit for the Future Findings. Daily Telegraph, 20 October, 2015.

Bevan, G. and Hood, C. 2006. 'What's Measured is What Matters: Targets and Gaming in the English Public Health Care System'. *Public Administration* 84(3): 517-538.

Bird, S., Cox, D., Farewell, V., Goldstein, H., Holt, T. and Smith, P. 2005. 'Performance Indicators: Good, Bad, and Ugly'. *Journal of Royal Statistical Society*. 168(1): 1-27.

Bohte, J. and Meier, K. 2000. 'Goal Displacement: Assessing the Motivation for Organizational Cheating'. *Public Administration Review*, 60(2): 173-182.

Copeland, R. 1968. 'Income Smoothing'. *Journal of Accounting Research* 6: 101-116.

Davies, A. 2016. 'Council merger rebellion spreads to the bush'. *Sydney Morning Herald* http://www.smh.com.au/nsw/councils-merger-rebellion-spreads-to-the-bush-20160415-go7en9.html (accessed 24 April 2016).

Drew, J. and Dollery, B.E. 2015a. 'Inconsistent Depreciation Practice and Public Policymaking: Local Government Reform in New South Wales'. *Australian Accounting Review* 25(1): 28-37.

Drew, J. and Dollery, B. 2015b. Less Haste More Speed: The Fit for Future Reform Program in New South Wales Local Government. *Australian Journal of Public Administration* 75(1): 78-88.

Electoral Commission NSW. 2014. *Local Government*. https://www.elections.nsw.gov.au/about_elections/Elections_for_each_level_of_government/local (accessed 13 July 2015).

Grant, B., Dollery, B. and Kortt, M. 2015a. Is there a case for mandating directly elected 'semi-executive' mayors in Australian local government? Lessons from the 2012 Queensland local government elections. *Australian Journal of Public Administration* 74(4): 484–-494.

Hay Shire Council. 2014. *General Purpose Financial Statements 2013/14*. Hay: Hay Shire Council.

Hood, C. 2002. 'Control, Bargains and Cheating: The Politics of Public-Service Reform'. *Journal of Public Administration Research and Theory* 12(3): 309-332.

Hribar, P. and Collins, D. 2002. 'Errors in Estimating Accruals: Implications for Empirical Research'. *Accounting Research* 40(1): 105-134.

ILGRP [Independent Local Government Review Panel]. 2013. *Revitalising Local Government*. Sydney: Independent Local Government Review.

IPART [Independent Pricing and Regulatory Tribunal]. 2015. *Assessment of Council Fit for the Future Proposals*. Sydney: IPART.

Le Grand, J. 2003. *Motivation, Agency and Public Policy: Of Knights & Knaves, Pawns & Queens*. Oxford: Oxford University Press.

Le Grand, J. 2010. 'Knights and Knaves Return: Public Service Motivation and the Delivery of Public Services'. *International Public Management Journal* 13(1): 56-71.

Marquardt, C. and Wiedman, C. 2004. 'How Are Earnings Managed? An Examination of Specific Accruals'. *Conte*

*mporary Accounting Research* 21(2): 461-491.

Marsh, D. and McConnell, A. 2010. 'Towards a Framework for Establishing Policy Success'. *Public Administration* 88(2): 564-583.

Mulford, C. and Comiskey, E. 2002. *The Financial Numbers Game: Detecting Creative Accounting Practices*. New York: John Wiley and Sons.

NSW Government. 2016. Stronger councils stronger communities. Background > Consultation. https://www.strongercouncils.nsw.gov.au/background/ (accessed 23 June 2016).

OLG [Office of Local Government]. 2014. *Becoming Fit For The Future*. http://www.fitforthefuture.nsw.gov.au/for-councils (accessed 13 July 2015).

Pilcher, R. 2005. 'Local Government Financial Key Performance Indicators – Not So Relevant, Reliable and Accountable'. *International Journal of Productivity and Performance Management* 54(5/6): 451.467.

Pilcher, R. 2006. 'The Smoothing Potential of Depreciation for Local Authorities'. *Journal of Contemporary Issues in Business and Government*, 12(2): 67-80.

Pilcher, R. and Van Der Zahn, M. 2010. 'Local Governments Unexpected Depreciation and Financial Performance Adjustment'. *Financial Accountability & Management* 26(3): 299-323.

TCorp [Treasury Corporation of NSW]. 2013. *Financial Sustainability of the New South Wales Local Government Sector*. Sydney: TCorp, http://www.olg.nsw.gov.au/sites/default/files/TCorp-Report-Financial-Sustainability-of-the-New-South-Wales-Local-Government-Sector-April-2013.pdf (accessed 13 July 2015).

Tweed Daily News. 2013. Elliot Attacks Government Over Tweed Amalgamation. *Tweed Daily News*, 30th April, 2013.

Twomey, A. 2012. 'Always the Bridesmaid – Constitutional Recognition of Local Government'. *Monash University Law Review* 38(2): 142-180.

**Table 1: Fit For Future Performance Management Ratios for NSW Local Governments.**

| Financial Ratio | Definition | Fit For The Future |
|---|---|---|
| **Operating ratio** | (operating revenue † - operating expenses) / operating revenue †. | >0.0% over 3 years |
| **Own Source** | rates, utilities and charges / total operating revenue ‡. | >60% over 3 years |
| **Debt Service** | EBITDA / (principal repayments + borrowing costs). | 0 to 20% over 3 years |
| **Infrastructure backlog** | estimated cost to bring assets to a satisfactory condition / total infrastructure assets. | <2% no time frame specified |
| **Asset Maintenance** | actual asset maintenance / required asset maintenance. | >100% over 3 years |
| **Building and Infrastructure Renewal** | Asset renewals / depreciation of building and infrastructure assets. | >100% over 3 years |
| **Efficiency** | Real operating expenditure per capita | Five years – no threshold articulated |

Source: Office of Local Government (2014)

† revenue excludes capital grants and contributions

‡ revenue includes capital grants and contributions

**Table 2. Descriptive Statistics for the Means of Performance Management Manipulation, 2013/14 ($000)**

| Financial Statement Item | Quartile 1 (Q1) | Median | Quartile 3 (Q3) |
|---|---|---|---|
| **Depreciation** | 5,387 | 9,361 | 17,749 |
| **Estimated Cost to Bring to a Satisfactory Standard** | 6,764 | 19,506 | 45,116 |

| | | | |
|---|---|---|---|
| **Required Annual Maintenance** | 3,291 | 6,330 | 11,610 |

**Table 3. Descriptive Statistics For Unexpected Financial Statement Items, 2013/14 Financial Year**

| Financial Statement Element | Smallest | Largest | Q1 | Median | Q 3 | IQR |
|---|---|---|---|---|---|---|
| **Entire State** | | | | | | |
| Depreciation | -70.5% | 113.1% | -6.3% | 0.2% | 4.9% | 11.2% |
| Cost to Bring to Satisfactory Standard | -124.5% | 462.8% | -48.6% | -13.5% | 8.4% | 57% |
| Required Annual Maintenance | -151.6% | 950% | -48.8% | -11.4% | 14.1% | 62.9% |
| **Greater Sydney** | | | | | | |
| Depreciation | -70.5% | 27.7% | -6.5% | 2.0% | 7.1% | 13.6% |
| Cost to Bring to Satisfactory Standard | -124.5% | 345.6% | -36.7% | -9.0% | 9.7% | 46.4% |
| Required Annual Maintenance | -127.1% | 723.3% | -29.4% | 1.4% | 32.9% | 62.3% |
| **Outside Greater Sydney** | | | | | | |
| Depreciation | -65.5% | 113.1% | -6.0% | -0.1% | 3.8% | 9.8% |
| Cost to Bring to Satisfactory Standard | -102.6% | 462.8% | -49.9% | -13.7% | 8.2% | 58.1% |
| Required Annual Maintenance | -151.6% | 950% | -51.3% | -13.3% | 6.8% | 58.1% |

**Table 4. Associations For Unexpected Financial Statement Items 2013/14 Financial Year, New South Wales[3]**

| | Unexpected Depreciation | Unexpected Cost to Bring to Satisfactory Standard | Unexpected Required Maintenance Cost |
|---|---|---|---|
| **Unexpected Depreciation** | | 0.791* | -0.627 |
| | | (0.372) | (0.616) |
| **Unexpected Cost to Bring to Satisfactory Standard** | 0.045* | | 0.461** |
| | (0.021) | | (0.142) |
| **Unexpected Required Maintenance** | -0.013 | 0.173** | |
| | (0.013) | (0.053) | |
| **Households (ln)** | -0.501 | -40.637* | 17.589 |
| | (4.332) | (17.748) | (29.548) |
| **ATSI (ln)** | 4.250+ | -3.975 | 25.867 |
| | (2.379) | (10.074) | (16.289) |
| **Depreciation rate** | 7.554** | 10.244 | -2.616 |
| | (1.987) | (8.740) | (14.347) |
| **metro** | 13.828* | 19.691 | 77.523 |
| | (7.469) | (31.632) | (51.245) |
| **Exogenous Controls?** | Yes | Yes | Yes |

| | | | |
|---|---|---|---|
| **Coefficient of Determination** | 0.3129 | 0.2578 | 0.2577 |
| **n** | 151 | 151 | 151 |

+ p<0.10, * p<0.05, ** p<0.01

Standard errors in parentheses