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Professional Accounting Firm**

V Ururuka, David Otley and Wendy Beekes

The Department of Accounting and Finance
Lancaster University Management School
Lancaster LA1 4YX
UK

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Explaining Adverse Behavioural Impact of Performance Management Systems in a Professional Accounting Firm

Valentine Ururuka, David Otley, Wendy Beekes

Department of accounting & Finance
Lancaster University Management School

Abstract

This study investigates how hierarchical level and line of service affect the behavioural effects of performance management systems (PMS) features such as performance evaluative style and goal difficulty, as well as the effects of organisational commitment. Our study provides empirical evidence of the incidence of dysfunctional behaviour in a UK accounting firm, and also show that hierarchical levels impact on the behavioural effects of PMS. We find a high incidence of dysfunctional behaviour among accounting firm staff relative to prior studies, but no evidence to suggest a difference in the incidence of dysfunctional behaviour across hierarchical levels or lines of service. We find that high organisational commitment generally tends to result in lower dysfunctional behaviour, while both target-focused evaluative style and goal difficulty generally induces more of such behaviour. However, the strength of these effects differs significantly across hierarchical levels. On one hand, where a target-focused evaluative style is used, dysfunctional behaviour only increases significantly at low hierarchical levels, while difficult performance targets only results in significant increases in dysfunctional behaviour at mid hierarchical levels. On the other hand, strong organisational commitment leads to significantly lower dysfunctional behaviour only at low and high hierarchical levels. Thus hierarchical level is an important context affecting the use of PMS. Organisations need to fit the use of PMS to the organisation's hierarchical levels.

Keywords: Performance evaluative style, Goal difficulty, Organisational commitment, Dysfunctional behaviour, Quality threatening behaviour, Performance measurement systems, Management control systems, Hierarchical levels, lines of service

1. Introduction

Previous literature emphasizes the need to match performance management systems (PMS) to the different task environments and technologies of organisations. By so doing this enhances performance and reduces the dysfunctional behavioural effects of such systems (Brownell & Dunk, 1991; Brownell & Hirst, 1986; Govindarajan, 1984; Hopwood, 1972; Otley, 1978). The purpose of this study is to investigate the relationship between dysfunctional

behaviour and PMS features such as target-focused evaluative style and goal difficulty, as well as organisational commitment, and these effects are affected by hierarchical levels and lines of service. The investigation is carried out within the context of professional accounting firms where the importance of ethics in business has come into the spotlight with such corporate scandals in the recent past like Enron and Worldcom. These scandals raised concerns regarding the role auditors played in these cases and the possible compromise of their independence by the provisioning of non-audit services to their audit clients. As in these cases, consequences of dysfunctional behaviour or lack of exercise of professional care can be costly for both individuals and their organisations. For example, it could lead to termination of employment for the individual, damage to firm reputation, and increases litigation risks for the firm (Pierce & Sweeney, 2004, 2005).

Prior literature focused on audit functions in professional accounting firms show evidence of a high incidence of a variety of dysfunctional behaviours among auditors, particularly junior staff (Kelley & Margheim, 1990; Malone & Roberts, 1996; Otley & Pierce, 1996a; Pierce & Sweeney, 2004, 2005). These studies generally find a strong link between the dysfunctional behaviours exhibited by auditors and the use of 'tight' time budgets. The explanation for this association is that tight budgets foster conflict between achieving high quality work output and improving profitability; a phenomenon referred to in the literature as the 'cost-quality dilemma' (Power, 2003; Pierce and Sweeney, 2004). A limitation of these prior studies is that they focus their investigations at the same hierarchical level within or across organisations. There is little or no evidence that shows the contingent factors examined in the literature have the same impact at different hierarchical levels. Each hierarchical level requires different roles and behaviours with implications for PMS. For instance, it is probably more feasible and less costly to monitor effectiveness of task related effort lower down than higher up the hierarchy given the complexity and non-programmability of tasks at higher

organisational levels {Galbraith, 1977}. Thus in designing and implementing effective PMS, it is important to understand whether PMS features have the same or differential effects across hierarchical levels.

Another, perhaps minor, limitation of prior literature focused on accounting firms is the almost exclusive focus on the audit line of service. Thus there is little evidence as to the incidence of dysfunctional behaviour in the non-audit lines of service, and whether the effects of PMS are similar or different between the audit and non-audit lines of service. Non-audit services are a significant part of professional accounting firms as they represent major revenue streams which enable many an accounting firm to remain competitive in the audit market. For example, a survey report issued the UK Professional Oversight Board (POB) in 2006 show that non-audit fee income for the Big 4 accounting firms represented no less than 70% of their total fee income in each of the years 2002 to 2004 (see below).¹ However, in 1990 income from audit services represented 71% of revenue for the Big 5 accounting firms from SEC audit clients, shifting to 48% in 1999 (Iyer, Iyer, & Mishra, 2003). Low audit fees, presumably compensated by more lucrative non-audit fees, have been a source of concern regarding the independence of auditors and the consequent impact on the quality of audits and of financial statements. Thus the cost-quality pressure may well be more on the non-audit than the audit line of service.

The need to understand how PMS features and other significant factors highlighted by previous studies impact on behaviour is further heightened by the significant changes in the general business environment. Such changes as increased globalisation, advances in information technology, and changing control practices such as higher prominence accorded

¹Update of this report issued in June 2009 show income from non-audit services provided to audit clients decreased from 35% of total fee income in 2003 to 17% in 2008; whilst income from non-audit services to non-audit clients increased from 49% in 2003 to 59% in 2008.

non-financial performance measures in such approaches as the Balanced Scorecard affect the way PMS are used and the consequent effects on behaviour (Baines & Langfield-Smith, 2003; Burns, Ezzamel, & Scapens, 1999; Otley, 1994). Accounting firms have experienced significant changes in recent years in both their internal and external environments such as the move towards paperless audits and reduced audit file documentations; increased use of strategic or risk-based audit methodology; and changes in the audit review process towards interview based audit reviews and less detailed review of audit papers. These changes have been noted, from a contingency theory perspective, as impacting on accounting firms' organisational structure and control systems, and thus its effects on behaviour (Pierce & Sweeney, 2004, 2005; Power, 2003).

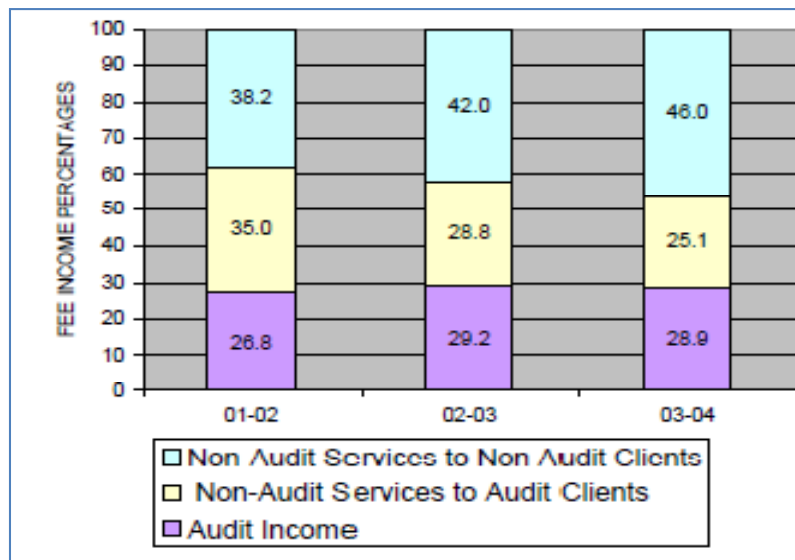


Figure 1 Big 4 Fee Income Percentages

Source: *Key Facts and Trends in Accountancy Profession (The Professional Oversight Board, 2006)*

In line with prior studies, we find high incidence of dysfunctional behaviour among professional accounting firm staff, but the level of dysfunctional behaviour does not differ between hierarchical levels or lines of service. Thus incidence of dysfunctional behaviour is not markedly higher at junior levels in the organisation, nor markedly higher in the audit lines of service. We also find that target-focused evaluative style, goal difficulty, and

organisational commitment are all significant factors affecting dysfunctional behaviour. Generally, a high focus on targets in appraising performance is positively related to dysfunctional behaviour as is high levels of goal difficulty, while high organisational commitment is negatively related to dysfunctional behaviour. We hypothesize and find that these effects differ between hierarchical levels. Target-focused evaluative style association with dysfunctional behaviour is only significant at low hierarchical levels, while goal difficulty association with dysfunctional behaviour is only significant at mid hierarchical levels. On the other hand, organisational commitment association with dysfunctional behaviour is only significant at the low and high but not the mid hierarchical level. These findings contribute to the literature on PMS in showing that the effects of PMS features differ between hierarchical levels therefore design and implementation of PMS should also be tailored to different hierarchical levels. We also contribute to the literature in providing evidence of the incidence of dysfunctional behaviour in a UK accounting firm whereas prior PMS studies of accounting firms have been conducted in the US and Ireland. Finally, results of our study show that the level of dysfunctional behaviour among audit staff is similar to those of non-audit staff. Thus the 'cost-quality' dilemma pressures apply equally across functions within an accounting firm.

The rest of the paper is organised as follows; the second section reviews the literature related particularly to accounting firms, and third section introduces the hypotheses. The fourth section describes the research method; while the fifth section analyzes the data and presents the study's results. The final section discusses these results and sets out the study's conclusions, limitations, and recommendations for future research.

2. Review of Related Literature and Research Hypothesis

Management Control Systems (MCS)

MCS have been defined and described by various authors equating it to the more formal forms of organisational control (Anthony, 1965; Anthony & Govindarajan, 1998, 2004; Hopwood, 1974; Ouchi, 1977; Ouchi, 1979; Simons, 1995, 2000). MCS has also been depicted as a subset of organisational control systems or package (Emmanuel, Otley, & Merchant, 1990; Otley, 1980). A strong feature of MCS inherent in the various definitions and descriptions found in the literature is its role in influencing organisational members' behaviour towards the achievement of organisational objectives via monitoring, evaluating and rewarding achievement of such objectives. Thus in this study, performance management systems (PMS) is used to refer to those formal organisational control features mainly used in monitoring, evaluating and rewarding performance.

The foremost theoretical canopy of most empirical PMS studies is contingency theory, while other socio-psychological theories like goal and role theory are used in developing hypotheses or explaining results.² In summary, contingency theory holds that there is no one universal best system, but the most appropriate system depends on contexts of each organisation such as its structure, strategic focus, nature of work technology, and degree of uncertainty in the external environment. Thus the general aim of contingency theory motivated PMS studies is to explicate the conditions or contexts under which particular features of PMS (e.g. budgets and the style of use of budgetary controls) more positively impact on organisational performance and on the work motivation and attitudes of managers. A general consensus of these studies seems to be that rigid use of PMS in evaluating and rewarding performance elicits dysfunctional behaviours, and does not

²Another prevalent theoretic framework is institutional theory focusing mostly on how PMS is implicated in the legitimisation and advancement of the interests and power of different groups in an organisation {see Covaleski et al. 1993; 1996; 2003; Abernethy & Chua, 1996; Brignall & Modell, 2000; Scott, 1987, Abernethy & Vagnoni, 2004}

enhance performance under complex work structures and uncertain environments. This is mainly due to the conflict such use of PMS engenders between achievement of short versus longer term objectives (Chenhall, 2003). This conflict puts pressure on managers who resort to coping behaviours that are not entirely functional to the organisation.

PMS in Accounting Firms

Accounting firms provide an interesting context for PMS studies because of a prevalent feature of these organisations described in the literature as the 'cost-quality' dilemma, akin to the short vs. long term conflicts highlighted in the general MCS literature (McNair, 1991; Power, 2003). Professional accounting firms, like any other profit oriented organisation, need to maintain commercial viability in order to continue functioning. However, a peculiar feature of their operating environment is that quality of work done is seen as of overriding importance; overriding even commercial considerations.³ Audit quality is enhanced with more time allowed on a job on the one hand. On the other hand, costs are positively related to the amount of time spent on engagements. Thus in trying to improve profit and maintain commercial viability, a conflict ensues between maintaining quality of work done and keeping costs down via a tight lid on chargeable time.

Empirical evidence indicates a high incidence of dysfunctional behaviours among auditors over time (Kelley and Margheim, 1990; Malone and Roberts, 1996; Otley and Pierce, 1996a; Pierce and Sweeney, 2004; 2005). The consequences of dysfunctional or unethical behaviour can be costly both for the individual and the firm. For example, it could lead to termination of employment for the individual, and damage to reputation and increased potential for

³ For instance, paragraph 11 of the International Standard on Quality Control (ISQC) 1 issued by the Auditing Practices Board (APB) stresses the importance of accounting firms recognition that their business strategy is subject to the overriding requirement to achieve quality in all their engagements, and thus that commercial considerations do not override the quality of work performed, and that performance evaluation, compensation, and promotion systems are designed to demonstrate this overriding commitment to quality.

litigation for the firm (Pierce & Sweeney, 2004, 2005). The seriousness of the consequences of unethical behaviour in the wider business community is aptly highlighted by corporate failures as in the case of Enron and Arthur Andersen in 2002. Systematic fraud in Enron, via aggressively creative accounting practices, led to imprisonment of its chief executive, while Arthur Andersen was convicted of criminal charges in relation to its handling of Enron's audit.⁴ The accounting firm suffered immense reputational damage leading to its eventual demises.

A number of explanatory variables of dysfunctional behaviours among auditors have been examined in prior literature including the style of performance evaluation, time budget pressure, participation in budget setting, personality traits, locus of control, leadership style, audit fee, organisational commitment, and environmental uncertainty (Herrbach, 2001; Kelley & Margheim, 1990; Malone & Roberts, 1996; Otley & Pierce, 1996a; Pierce & Sweeney, 2004, 2005). However, prior studies report conflicting findings on the importance of these variables except for time budget pressure, although evaluative style and organisational commitment has received the least attention. On the other hand, the potential impact of hierarchical levels on the association between these variables and dysfunctional behaviour has not been investigated by any prior study. Therefore this study will further investigate evaluative style and organisational commitment alongside goal difficulty aka time budget pressure, and the impact of hierarchical levels on these variables relationships with dysfunctional behaviour.⁵

⁴ The conviction was later reversed by the US Supreme court in 2005, but only on the grounds of improper jury instructions. Nonetheless, Arthur Andersen is still out of business and looks to remain so in the foreseeable future.

⁵ Some of the dysfunctional behaviours among auditors include under-reporting of time on audits, prematurely signing off an audit step, accepting weak client explanations, not investigating an accounting principle, and reducing the amount of work performed on an audit steps (Otley and Pierce, 1996a)

Organisational Hierarchical Levels (OHL)

OHL reflects different capabilities to process information about unforeseen events, with tasks progressively complex and non-programmable higher up the hierarchy {Galbraith, 1977}. Thus each hierarchical level necessitates different roles and behaviours, and therefore requires different controls for the tasks performed at each level {Jacques, 1990}. However, the impact of OHL on the use of PMS has not received any attention within studies of PMS in accounting firms, and very little attention in the wider PMS literature. Almost all the studies of PMS in accounting firms focus exclusively on relatively low level staff; i.e. audit juniors and seniors with typically between 1 – 4 years experience in the firm (Pierce & Sweeney, 2005).⁶ A justification for the focus on relatively junior staff, particularly audit seniors, is that they are “... around the mid-point in the firms’ hierarchy, and occupy the most pressurized position in the firm (Kelley and Seiler, 1982) [*note reference included in original text*]” (Otley and Pierce, 1996a, p. 70). Another reason is that audit seniors exhibit high levels of under-reporting of time on audits (Sweeney & Pierce, 2006)

However, the pressures faced by the audit juniors and seniors are initially faced by the more senior staff perhaps in a slightly different form, and then gets transmitted further down the hierarchy. For instance, Carcello et al. (1996) found that the common factor associated with audit partners and senior managers’ inappropriate behaviour is fixed-fee audit contracts. This makes audit partners more concerned with audit hours resulting in gathering of insufficient evidence, inadequate review of engagement papers, and other inappropriate behaviour. In such situations, it is plausible that the pressure on audit partners and senior managers gets transmitted down to junior staff in the form of tight audit times. This view point is supported by Pierce and Sweeney’s (2006) findings which show that audit seniors under report time spent on audit due to both explicit and implicit requests from managers

⁶ Exceptions include Carcello et al.’s (1996) survey of audit partners and senior managers; Pierce and Sweeney’s (2005) interviews with audit partners; and Sweeney and Pierce’s (2006) interviews with audit seniors and partners.

to do so, who in turn are pressurized from partners to meet the budget. This study therefore examines whether explanatory factors of dysfunctional behaviour investigated by previous studies at lower hierarchical levels have the same or differential effects at senior levels; in other words does hierarchical level moderate the effect of PMS and other factors on behaviour?

Focus on Audit Lines of Service

Despite the acknowledged diversification of services by accounting firms, almost all the empirical studies of PMS in accounting firms are conducted exclusively within audit lines of service. Barrett et al. (2005, p.3) offer a justification for the focus on the audit line of service arguing that “while these firms have expanded into a wide range of business services, audit work remains a significant element of these firms, provides an important basis for their claims (across all lines of service) to be professional and objective, and is said to fundamentally influence the ‘culture’ of these organizations.” However, the audit/non-audit distinctions in the services provided by accounting firms has become operationally unclear in recent times, and there is a major shift in emphasis from keeping costs down to generating more revenues {Power, 2003}. In addition, non-audit services represent the major revenue stream for accounting firms in recent times, as noted earlier from the POB surveys. These changes, coupled with the strong firm wide influence of the culture within audit lines of service, underscore the need for evidence on how findings of prior studies of PMS apply to non-audit lines of service. We don’t know whether the high incidence of dysfunctional behaviour observed within audit lines of service is similar or significantly different within non-audit lines of service, and if the same PMS features have differential effects on dysfunctional behaviours.

Goal Difficulty & Dysfunctional Behaviour

Otley and Pierce (1996a) note that whilst engagement time and costs are measurable and easier to control in accounting firms, work output particularly audit quality is not easily observable and thus difficult to measure and control. Thus it is difficult and problematic to apply traditional output or behaviour controls in such context, whereas input controls are easier to implement. Hence PMS in accounting firms tend to be heavily focused on input controls via control of audit time budgets, although these are not best suited for this context in view of the overriding importance of maintaining output quality. Tight time budgets whilst emphasising the importance of maintaining audit quality exerts pressure on auditors which can sometimes result in a variety of dysfunctional behaviour as a way auditors cope with the time budget pressures. Time budget pressure is generally measured as “the difficulty of attaining the time budget on the specified audit” (Kelley and Margheim, 1990; p. 29). Thus, it is a specific measure of budget attainability (i.e. goal difficulty) for the audit line of service of professional accounting firms. Achieving high quality audit work requires more time, whilst keeping costs low requires taking less time on jobs. Thus higher goal difficulty engenders the ‘cost-quality’ dilemma. Essentially, with increasingly ‘tight time’ targets auditors engage in dysfunctional behaviour as a coping mechanism.

Kelley and Margheim (1990) found that time budget pressure was positively related to dysfunctional behaviour among audit staff and seniors up to the point where time targets were considered unattainable, at which point auditors did not feel as pressured to engage in dysfunctional behaviour. Equally, Otley and Pierce (1996a) found significant positive associations between budget attainability, i.e. time budget pressure, and dysfunctional behaviour among audit seniors. Similarly, Pierce and Sweeney (2004) also found a significant positive association between budget difficulty and dysfunctional behaviour among audit juniors and seniors. Thus prior studies consistently show time budget pressure, i.e. goal difficulty, significantly increases dysfunctional behaviour among auditors.

Evidence of goal difficulty effects on dysfunctional behaviour relates mainly to audit juniors and seniors. Thus, there is no evidence to show whether these effects are different at higher levels in the organisation. However, as earlier noted, Pierce and Sweeney (2006) found that managers make explicit and implicit requests for subordinates to engage in a form of dysfunctional behaviour indicating that managers attempt to pass on down the hierarchy their own 'cost-quality' conflicts. This indicates those at higher hierarchical levels attempt to cope with the 'cost-quality' dilemma by passing the pressure down the hierarchy. However, there is a limit to the amount of pressure mid-level managers can pass down given their peculiar position in the hierarchy. Whilst they absorb pressures from their superiors, they may not be able to substantially pass down the pressure to their subordinates. Lower level employees in accounting firms are typically 1 – 4 years old at the firm and so are relatively inexperienced at the job. Given the 'up or out' culture in these firms, lower level employees are usually primarily concerned with passing their qualification exams which take typically 1 – 4 years to achieve. The mid level managers would appreciate these factors more than the higher level managers, and these factors limit the amount of pressure they can pass down. As they usually lead the field teams on engagements it would be relatively more difficult for them to substantially pass down the cost-quality pressures they face. Thus they are likely to feel this pressure much more than at other levels of the hierarchy. Therefore we expect that goal difficulty effects on dysfunctional behaviour will be stronger at mid hierarchical levels than at lower and higher levels.

Equally, evidence of goal difficulty effects on dysfunctional behaviour to date have been within audit lines of service. There is no evidence to indicate if this relationship differs within non-audit lines of service. Although the nature of work carried out in the audit and non-audit lines of service may differ, it is not clear if given the shift in emphasis from costs to

revenues that their operating environments differ significantly for instance in the level of uncertainty faced. Thus it is not clear if goal difficulty has differential impact on behaviour between audit and non-audit lines of service. Given discussions in the above paragraphs, we hypothesize as follows:

- H_{1a} there is a positive association between goal difficulty and dysfunctional behaviour.*
- H_{1b} the form (i.e. sign of coefficient) of the association between goal difficulty and dysfunctional behaviour is not different across hierarchical levels, and across lines of service*
- H_{1c} the strength (i.e. size of coefficient) of the association between goal difficulty and dysfunctional behaviour is stronger at mid hierarchical levels than at low and high hierarchical levels*

With regards to the hypothesis above, it is pertinent to note that a moderating variable can affect either the direction, i.e. form, or the strength of the association between a predictor variable and a dependent variable, or both form and strength (Venkatraman, 1989; Hartmann & Moers, 1999; Gerdin and Greve, 2004). Gerdin and Greve (2004, p.311) argue that the two types of moderation effect could “yield consistent results, but *there is no reason to expect that they should* [emphasis is theirs].” In other words, it is not necessarily evident that a moderation of the form of the association of a predictor variable with a dependent variable also implies a moderation of the strength of such an association and vice versa. Figure 1 illustrates the types of moderation effects on the relationship between two variables X and Y. The oval circles depict the correlation, i.e. strength of the relationship, and a narrow (wide) ‘circle’ signifies a high (low) correlation. The lines represent the regression lines, and in each panel the regression slopes are the same for each subgroup and so only one line is drawn. Whilst form moderation is usually analysed using moderated regression, strength moderation is analysed using sub-group correlation analysis.

Although, the signs of the correlation coefficients in a strength analysis contain some information about the form of association, both form and strength moderation addresses different issues (Gerdin & Greve, 2004; Hartmann & Moers, 1999). For instance the regression slopes in Panel B indicate that goal difficulty has a positive effect on quality threatening behaviour at both low and mid hierarchical levels (i.e. no moderation of form) but the narrow circle indicate greater predictive power at mid levels. The slopes could also have been flatter (i.e. a negligible or no effect) whilst the correlation difference exists still. Panel C shows the reverse situation, i.e. differences in the form of the associations for each subgroup but no difference in the strength of association. Thus a difference in signs of correlation coefficients for each subgroup does not provide information about predictive power.

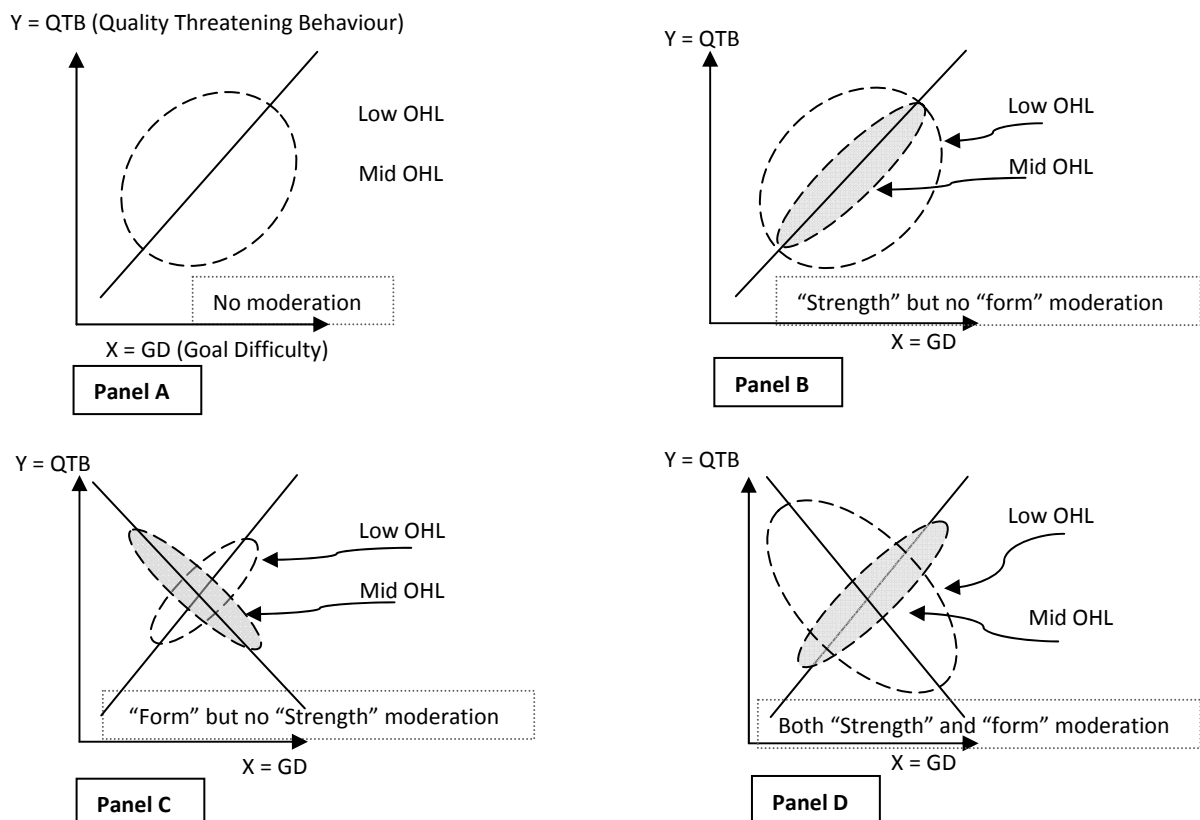


Figure 2: Types of moderation (i.e. interaction) effects

Target-Focused Evaluative Style (TFES) & Dysfunctional Behaviour

Of the explanatory variables of dysfunctional behaviour among auditors, performance evaluative style and organisational commitment has received the least attention. Nevertheless, there is strong theoretical basis to expect an association between these variables and dysfunctional behaviour. Formal performance evaluations are important and part of the process for career progression in accounting firms (Kelley and Seiler, 1982; Pierce and Sweeney, 2005). In monitoring and evaluating performance, accounting firms employ a variety of performance criteria that are both quantitative and non-quantitative in nature. The quantitative measures usually include a variety of financial measures, but also some non-financial measures such as time spent on an audit, exams passed, number of and profile of successful assignment and recruitment drives undertaken. Some of the non-quantitative performance measures usually include quality of work done, quality of relations with clients and with colleagues.

Otley and Pierce (1996a) first formally linked evaluative style to dysfunctional behaviour among auditors. They argue that the excessive use of quantitative forms of control associated with the more formal control systems lead to dysfunctional behaviour because of the conflict between emphasis on meeting time budgets (i.e. tight input controls) and the importance of sustaining audit quality. However, they did not find any statistically significant association between performance evaluative style and dysfunctional behaviour among audit seniors.⁷ Pierce and Sweeney (2004) also examined the impact of performance evaluative style on dysfunctional behaviour among auditors but find mixed results using different concepts of performance evaluative style and measures of dysfunctional behaviour. Thus within this strand of the literature, empirical evidence of the impact of performance

⁷ Performance evaluative style was measured as budget emphasis, while dysfunctional behaviour was separately measured as under-reporting of time, premature sign-offs, and as audit quality reduction acts (a sum of behaviours including acceptance of weak client explanations, not investigating an accounting principle, and reducing the amount of work performed on an audit step).

evaluative style on behaviour does not support the theoretical propositions, or at best is inconclusive. However, the wider management accounting literature indicate that extensive use and emphasis on quantitative targets for performance measurement, evaluation and reward, referred to here as Target Focused evaluative style (TFES) is generally positively associated with behaviours that are not in the best interests of organisations and thus considered dysfunctional even at mid to high hierarchical levels. For instance, TFES is seen to encourage short-term oriented behaviours, and avoidance of long-term actions in order to meet short-term goals (Anthony, Dearden, & Govindarajan, 1992; Anthony & Govindarajan, 2004; Simons, 1995). In addition, TFES is also seen to encourage manipulation of data resulting in distortion of communication between superiors and subordinates (Hopwood, 1972; 1973). Thus we expect that TFES would be positively associated with dysfunctional behaviour, and that this holds across lines of service and the hierarchy.

Jaques (Jaques, 1964a, 1979, 1990) posits that in general tasks are progressively more complex and non-programmable higher up the hierarchy, and that the time frame between actions and the significant realisation of its consequences are progressively longer higher up the hierarchy. Consequently, the shorter time frame and tighter link between action and results suggests that TFES is best suited at lower than at higher hierarchical levels.⁸ The general management control literature suggests that TFES is inappropriate in more complex and uncertain environments and elicits more dysfunctional behaviour in these conditions. Therefore, we expect that the relationship between TFES and dysfunctional behaviour would be stronger at higher compared to lower hierarchical levels. Given the discussions above, we hypothesize as follows:

H_{2a} there is a positive association between TFES and dysfunctional behaviour.

⁸ Some lower level jobs in the context of an accounting firm may appear to be quite complex but in large part they are still programmable, i.e. they consists of clear and detailed steps to take in defined circumstances.

H_{2b} the form (i.e. sign of coefficient) of the association between TFES and dysfunctional behaviour is not different across hierarchical levels, and across lines of service

H_{2c} the strength (i.e. size of coefficient) of the association between TFES and dysfunctional behaviour is stronger at higher compared to lower hierarchical levels.

Organisational Commitment (OC) & Dysfunctional Behaviour

As mentioned earlier, OC has received very little attention in the stream of PMS studies focused on accounting firms, but has received greater attention in the psychology and general accounting literatures. In these literatures, organisational commitment, particularly affective commitment, has been identified as having positive associations with job satisfaction and performance (Ketchand & Strawser, 1998, 2001; Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989). Affective organisational commitment is characterized by a belief in and acceptance of organizational goals and values, a willingness to exert effort to accomplish those goals, and a strong desire to maintain organizational membership (Porter, Steers, Mowday, & Boulian, 1974).

The quality of auditors work output are not easily observed and this increases the importance of personnel and other forms of social controls in these contexts (Otley & Pierce, 1996a). However, empirical evidence of the OC importance in relation to dysfunctional behaviour among auditors is mixed. Otley and Pierce (1996a) hypothesized and found support for a negative association between OC and dysfunctional behaviour among audit seniors, but Malone & Roberts (1996) did not find such association to be significant. Herrbach (2001) did not also find the association of OC with dysfunctional behaviour among audit seniors to be significant, but did find a significant negative association with 'non-professional' behaviours. This behaviour included things like gossip about the firm and its hierarchy, expression of doubts about the effectiveness of an audit and about firm's method in the presence of the audit team, and talks about looking for another job in the presence of

the audit team. Herrbach (2001) therefore conclude that the result confirm auditors' reputation for conscientiousness; that is, although auditors that were less committed to the organisation were vocally more critical of the organisation, they still performed their duties conscientiously.

The limited empirical evidence above is inconclusive on the relationship between OC and dysfunctional behaviour among auditors. Nevertheless, we generally expect that acceptance of organisational values and willingness to exert more effort coupled with a strong desire to maintain membership in the organisation would incline individuals towards exhibiting lower dysfunctional behaviour. We also expect that this negative association will hold across lines of service and hierarchical levels. However, it is anticipated that this relationship will be stronger at lower organisational levels. Those at lower levels would have spent less time in the organisation compared to those at higher levels and hence less likely to have deeply imbibed organisational values compared to those at higher levels. Therefore high organisational commitment at lower levels will have a greater impact on dysfunctional behaviour than it would at higher levels. At higher levels, continuance commitment most likely dominates affective commitment which at this point would only increase very marginally with little or no significant effect on behaviour.⁹ Therefore we hypothesize as follows:

H_{3a} there is a negative association between organisational commitment and dysfunctional behaviour.

H_{3b} the form of association between organisational commitment and dysfunctional behaviour is not different across hierarchical levels and lines of service

H_{3c} the strength of the association between organisational commitment and dysfunctional behaviour is stronger at low than at high hierarchical levels.

⁹ Continuance commitment is also most likely greater at higher compared to lower hierarchical levels, and empirical evidence show affective and continuance commitment to be orthogonal and differentially related to work behaviours. For instance, Meyer et al. (1989) found affective and continuance commitment to be uncorrelated, and also that affective commitment is positively correlated with job satisfaction and performance while continuance commitment is negatively related to these variables.

3. Research Method and Variable Descriptions

The study is based on a secure and anonymous web survey conducted in one of the big four UK accounting firms whose operations are organised into 3 main lines of service viz.; assurance (i.e. audit); tax; and business advisory (i.e. consultancy). The firm has several offices in the UK which are grouped by regions, and the web survey covered one of these regions. An email from the Region's Chairman was sent to all 1,261 professional staff in the region inviting them to participate in the anonymous survey with hyperlinks to the survey website. However, Partners were excluded from the survey as they represented only a very small subset of the sample. The survey was completely anonymous and was open for two and half weeks between August and September 2005. Access to the web survey was restricted by requiring a username and password to sign in, which was provided in the email invitation. Thus anyone stumbling upon the survey on the web could not access it. Although the survey was web based, it adhered closely to recommendations in the literature on questionnaire design and presentation. Pilot tests were conducted using a small group of accounting academics and later a small group of the accounting firms' staff comprising of auditors, tax, and business consultants.

A total of 320 responses were received, but only 236 of these were complete and usable, i.e. a 19% usable response rate. This compares favourably with the 20 – 30% response rate the firm indicated is usually achieved in their internal surveys. Of the 236 usable responses, 21 responses from staff in support functions within the 3 lines of services are excluded from analysis because support staff time is not billable to the firm's clients. Equally, 14 responses from Directors are also excluded from analysis being only a small subset of the sample. Thus the total sample responses used in this study is 201.

Variable Measurement & Descriptions

Dependent variable:

Quality threatening behaviour (QTB) was measured as the average score on 5 items scored on a 5 point scale with high scores indicating greater QTB. These items summarise the general unethical or problematic behaviours identified in the accounting and finance literature (Hopwood, 1972, Merchant, 1990, Grinyer et al., 1998, Otley and Pierce, 1996a, Otley and Pierce, 1996b, Murphy, 2004, Sweeney and Pierce, 2004, Demirag, 1995). The mean scores on the individual items are provided in Table 1. Cronbach alpha of 0.69 indicate the scale has acceptable internal consistency, and responses to some of the items compare with previous studies that used similar items as shown in Table 2. For instance, in this study, only 13% of respondents indicted not having to avoid or skip a required procedure, a measure similar to the 'premature signoff' item used in the literature. Kelley and Margheim (1987), and Malone and Roberts (1996) reported that 70% and 75% respectively of the U.S respondents to their surveys indicated never prematurely signing off on a procedure or audit step; whereas Otley and Pierce (1996a) reported 40% of their Irish respondents never signed off on a procedure prematurely. These figures suggest there may be a rising trend of accounting firms' staff dealing with pressure by skipping required procedures although Herrbach (2001) reported that 92% of their French respondents never engaged in premature signoffs. However, Herrbach also reported higher percentages of engagement in other forms of dysfunctional behaviour compared to these other studies. Furthermore, 72.1% of respondents in our study indicate having done things they felt were against their better judgement at least sometimes. In comparison, Kelley and Margheim (1987), Malone and Roberts (1996), and Otley and Pierce (1996a) reported 26%, 29%, and 64% of their respondents, respectively, as having engaged in one or more of several quality reduction acts at least sometimes.

[Insert Table 1 & Table 2 about here]

Explanatory Variables:

Target-Focused Evaluative Style was measured using the average score of 6 items used by (Ururuka, 2007) to measure performance evaluative style. These items are shown in the appendix and were based on 3 dimensions of evaluative style identified in the literature. The dimensions include the relative weight of quantitative vs. non-quantitative performance criteria in performance measurement, supervisors' attitude towards negative deviations from meeting quantitative performance targets, and the relative importance of performance against quantitative targets vs. non-quantitative performance criteria in the determination of extrinsic rewards. The six items were scored on a 7 point scale with higher scores indicating evaluative styles that focus more rigidly on achievement of performance targets as a means of assessing performance. Validation of the TFES items using structural equation model show a high consistency between data (for all 236 respondents) and the TFES measurement model ($\chi^2 = 1.939$ $p = .585$; RMSEA = .000, $p_{close} = .770$; CFI = 1.000).

Goal Difficulty (GD) was measured by an item adapted from Kenis (1979) measure of budget goal difficulty. Respondents were asked to rate their agreement with the statement 'I should not have too much difficulty in reaching my goals' also scored on a 7 point scale from strongly agree to strongly disagree. This item was reverse coded to represent GD, and is similar to measures used by Kelley and Margheim (1990). Organisational Commitment was measured using a 4 item instrument adapted from the 9 item OC instrument used in the literature (Mowday, et al., 1979; 1982; Parker and Kohlmeyer; 2005). Respondents were asked to indicate their agreement with 4 statements on a 7 point scale from strongly agree to strongly disagree. The items are reported in the appendix. The need for parsimony prompted that items considered as having a close substitute were deleted first, followed by those reported by Parker and Kohlmeyer (2005, p.366) as not loading "...appropriately in

factor analysis”.¹⁰ Nonetheless, the Cronbach alpha of 0.78 for this 4 item instrument (for the 236 complete responses) compares well with the 0.85 alpha level reported for the full scale by Parker and Kohlmeyer (2005).

Five organisational hierarchical levels (OHL) were covered in the survey from the graduate entry position to Directors. The level designations used in the organisation are; Associate, Executive, Manager, Senior Manager, and Director. Directors are then promoted next to Partners. There is no great differentiation made between the first two levels within the organisation, and so in the survey the two levels were grouped into one as Associate/Executive level. As already noted responses from 14 Directors have been excluded from analysis given they represent only a small subset of the sample. In effect three hierarchical levels are covered in this study, i.e. Associates/Executives representing low OHL, Managers representing mid OHL, and Senior Managers representing high OHL. OHL is coded -1, 0, and +1 representing low, mid, and high OHL respectively. Lines of service is represented by a dummy variable *AUD* which is coded 1 if audit line of service and 0 otherwise.

Table 3 below provides the descriptive statistics for the variables and the correlations between them. Overall, respondents have a mean age of 33 years; have been with the firm and at their current grade levels for 6 and 3 years respectively. Respondents at junior hierarchical level have a mean age of 29 and have been with the firm for 4 years and have spent just over 2 years at their current grade. This is in line with expectations as the starting grade for new graduate recruits is the Associate level, and it takes about 3 years for them to gain their professional qualification before being promoted to the Executive grade. After

¹⁰ Although one item, ‘*I am willing to put in a great deal of effort beyond that normally expected in order to help this organisation be successful*’ did not load appropriately in Parker and Kohlmeyer’s (2005) study, it was included among the 4 items used in this study as it was considered quite relevant in this study’s context.

being professionally qualified, it can take up to 2 years to be promoted to the Manager level. Managers are averagely 35 years of age, spend 3 years at their grade and have been with the firm for 6 years. Table 3 shows overall mean score of 2.62 for QTB which is closer to the score of 3, implying respondents engage in QTB sometimes as opposed to rarely or never with 56.2% of respondents scoring 2.6 and above. There is a high mean score of 4.01 on GD, which indicates that respondents on average find their performance target levels to be challenging rather than easy. 64.7% of respondents considered their performance targets challenging to unattainable with scores of 4 and above. The mean score on OC is also high at 4.7 with 55.2% of respondents scoring 4.7 and above. Thus, employees' commitment to this organisation is quite high and this supports other media surveys that found this organisation to be one of the best places to work. The mean score on TFES is 3.35 with 57.2% of respondents scoring 3.33 and above. This suggests that targets are used in a more balanced way in evaluating performance. Only 13.9% of respondents had scores above 4, while 29.4% had scores below 3. All the variable mean scores are similar across the hierarchical levels and not statistically different.

[insert Table 3 about here]

4. Results of Hypothesis Testing

The first and second parts of the hypotheses are tested using a moderated regression model in the form:

$$\begin{aligned}
 QTB = \gamma_0 + \gamma_1 GD + \gamma_2 TFES + \gamma_3 OC + \gamma_4 Aud + \gamma_5 OHL + \gamma_6 GD * AUD + \gamma_7 TFES * \\
 Aud + \gamma_8 OC * Aud + \gamma_9 GD * OHL + \gamma_{10} TFES * OHL + \gamma_{11} OC * OHL
 \end{aligned}$$

Equation 1

Where,

- QTB = quality threatening behaviour
- GD = goal difficulty
- TFES = target focused performance evaluative style
- OC = organisational commitment

AUD = 1 for audit line of service and 0 for non-audit lines of service

OHL = organisational hierarchical level

If the estimated coefficients on GD and TFES are positive and significant, then Hypothesis 1a and 2a will be confirmed; while hypothesis 3a will be confirmed if the coefficient on OC is negative and significant. On the other hand, hypothesis 1b, 2b, and 3b will be confirmed if the estimated coefficients on the interaction terms are not significant; i.e. there is no difference in the form of the association between the dependent variable QTB and the independent variables GD, TFES, and OC across lines of service and hierarchical levels. To enable a meaningful interpretation of the lower order (direct) effects in the moderated regression model, the scores on GD, TFES, and OC were centred to zero by deducting the mean scores of each variable respectively. The third part of the hypotheses is tested using sub-group correlation analysis. The sub-group correlation coefficient between the independent variables and QTB is first transformed into standard Z-scores using the Fisher's r to z transformation formula. Then a Z-test of differences between the sub-group standardised coefficients is carried out.

Table 4 presents results of the regression analysis used to test the first and second parts of the hypotheses. The results show the independent variables have significant influences on dysfunctional behaviour as expected, although the effect of GD is only marginally significant in the full regression model ($b = .062, p = .068$). Thus high TFES encourages engagement in more QTB ($b = .178, p = .014$), while OC has reduces such behaviours ($b = -.204, p = .000$). These results support hypotheses 1a, 2a, and 3a. The interaction terms between the 3 independent variables (GD, TFES, and OC) and the context variables (Audit and OHL) are not significant as expected. The result also provides support for hypotheses 1b, 2b, and 3b. Therefore we conclude that PMS features examined in this study do not have different

effects on dysfunctional behaviour between the audit and non-audit lines of service, and across hierarchical levels.

Table 5 below shows the results of the sub-group correlation analysis used to test the third parts of the hypotheses. A comparison of subgroup means for the dependent variable was first conducted, and the t-tests revealed no significant differences in quality threatening behaviour (QTB) means between the subgroups.¹¹ The first part of the table shows the results of the exploratory analysis of differences in the strength of the independent variables association with QTB between the Non-audit and Audit lines of service. The results show goal difficulty (GD) has a positive correlation with QTB in both sub-groups, but the correlation is only significant in the Non-audit line of service. However, tests for differences in correlation coefficients show no significant differences in coefficients between the sub-groups. Similarly, the correlation of TFES with QTB is positive in both sub-groups, but only significant in the Audit line of service. Again, tests reveal no significant difference in the strength of this association between the sub-groups. On the other hand, OC has a significant negative correlation with QTB in both sub-groups, but again the coefficients were not significantly different. Thus goal difficulty (GD), target-focused evaluative style (TFES), and organisational commitment (OC) associations with QTB are not significantly different in the Audit and Non-audit lines of service. Furthermore, results of sub-group regression analysis of Equation 1, shown in Table 6, confirm these results. It shows GD is not significantly associated with QTB in both audit and non-audit groups, and that TFES (OC) association with QTB is positive (negative) and significant in both lines of service.

[insert Table 4 about here]

¹¹ No significant difference in means was observed between the Non-audit and Audit lines of service ($t = .194, p = .846$); between Associate/Executives and Managers ($t = -1.56, p = .121$), Associate/Executives and Senior Managers ($t = -.927, p = .333$), and between Managers and Senior Managers ($t = .58, p = .563$). Note p value is 2-tailed.

The OHL sub-groups correlation analysis results in Table 4 show that GD has a positive correlation with QTB in all the subgroups but this is only significant among managers (i.e. in the mid OHL subgroup). Tests for coefficient differences between the subgroups show significant differences in the coefficients between Associates/Executives and Managers ($z = -2.207, p = .014$), between Managers and Senior Managers ($z = 2.341, p = .01$); but there is no significant difference in the coefficients between Associates/Executives and Senior Managers. The results reveal that the association of GD with QTB is stronger at the mid levels of organisational hierarchies than at the low and top levels. These results provide support for hypothesis 1c. It is also consistent with results of the sub-group regression analysis presented in panel B of Table 6 which shows the positive association of GD with QTB is only significant for Managers.

Results in Table 5 also show that TFES has a positive correlation with QTB in all subgroups but this is only significant among Associates/Executives (i.e. in the low OHL sub-group). Again, tests for coefficient differences between the subgroups only show a significant difference in the coefficients between Associates/Executives and Managers ($z = 2.339, p = .005$), and a marginally significant difference in coefficients between Associates/Executives and Senior Managers ($z = 1.274, p = .095$). These results do not support hypothesis 2c, on the contrary, it shows that TFES has a stronger association with QTB at low organisational hierarchical levels than at the mid or high levels although the association seems stronger at high levels compared to mid levels. The result is consistent with the sub-group regression analysis results in Table 6 which show that TFES association with QTB is only significant for Associates/Executives, marginally significant for Senior Managers but not significant for Managers.

Finally, results in Table 5 show that OC has a negative correlation with QTB at all hierarchical level, but is only significant at Associates/Executive and Senior Manager levels (i.e. low and

high OHL subgroups). However, there is no significant difference in the correlation coefficients among the 3 subgroups. Thus the strength of the association between OC and QTB does not differ significantly across OHLs, and therefore hypothesis 3c is not supported. The results are also consistent with the sub-group regression results in Table 6 which show that OC association with QTB is significant for Associates/Executives and for Senior Managers, but not for Managers. Thus organisational commitment reduces dysfunctional behaviour at low and high organisational levels but not at mid levels. In summary, these results show that while the form of the effects of these PMS features on dysfunctional behaviour is similar across hierarchical levels, the predictive power of these PMS features are significantly different across hierarchical levels.

[insert table 5 & 6 about here]

5. Discussions and Limitations

The purpose of this study was to investigate the moderating effects of hierarchical levels and to explore the impact of line of service on the relations between significant features of Performance Management Systems (PMS) and other explanatory variables identified in the literature and dysfunctional behaviour among professional staff of accounting firms. Extant literature focuses on the Audit lines of service and lower staff grades in accounting firms. Buoyancy in the general economic climate of accounting firms has resulted in diversification of services by these firms leading to high staff turnover and shortage of staff (Lin et al., 2003; Barrett et al., 2005). This development has led to faster promotions and flatter reporting and performance evaluation structures (Pierce and Sweeney, 2004). However, do the incidence of dysfunctional behaviour and the impact of PMS on such behaviours differ across hierarchical levels? Furthermore, the Non-audit lines of service represent significant revenue streams for accounting firms in recent times, and the distinctions between non-audit and audit services have become blurred (Power, 2003). One explanation offered for

the focus of prior research on the audit lines of service is that audit work deeply influences the culture within these firms and provides an important basis for their claims to professionalism and objectivity (Barrett et al., 2005). But does this mean that the behaviours that threaten the reputation of professionalism and objectivity of these firms are more prevalent among their audit staff compared to non-audit staff, and are the impact of PMS and other factors on dysfunctional behaviour significantly different between these lines of service? This study provides some preliminary results addressing these issues.

We find that the incidence of dysfunctional behaviour is not significantly different between the audit and non-audit lines of service, or across hierarchical levels. If prior studies focus on audit lines of service was on the assumption of greater incidence of dysfunctional behaviour, then our results reflect the recent changes in the environment of accounting firms. Recent corporate failures linked to accounting scandals and the direct involvement of professional accounting firms in such scandals have resulted in increased public scrutiny, more regulatory oversight, and increased risk of litigation (Barrett, Cooper, & Jamal, 2005; Lin, Fraser, & Hatherly, 2003). The increased attention on auditor independence limits lucrative revenue streams from non-audit services to audit client increasing the competitiveness of non-audit services. On one hand, auditors may exhibit less dysfunctional behaviour due to increased regulatory oversight and litigation risks. On the other hand, increased competitiveness of non-audit services increases the pressures on staff in these lines of service to maintain the high revenues. Such pressures lead to greater incidence of dysfunctional behaviour among non-audit staff. As Barrett et al. (2005, pp 21 -22) argue, in the commercialisation of audit “the claim to professional status and integrity can be seen as a successful strategy in a different era” commercialisation was “more about the provision of a wide range of services whose common feature was not appeals to integrity or public service, but responding to clients’ needs.”

The results indicate that goal difficulty, target-focused evaluative style, and organisational commitment do not differ in the form or strength of their association with dysfunctional behaviour across lines of service. These findings extend previous studies that found goal difficulty to be the most consistent predictor of dysfunctional behaviour among auditors (Kelley and Margheim, 1990; Otley and Pierce, 1996a; Pierce and Sweeney, 2004) by providing evidence of this relationship among non-auditors. It is also consistent with prior studies in the general management accounting literature that show that rigid use of budgetary targets in complex work situation elicits dysfunctional behaviour (Hopwood, 1972; Kenis, 1979; Hirst, 1983; Anthony et al., 1992; Simons, 1995; Anthony and Govindarajan, 2004). The findings also contribute to the empirical evidence of the dampening effect of higher organisational commitment on dysfunctional behaviour (Otley and Pierce, 1996a). Other findings of this study show that hierarchical level moderates the strength but not the form of the association between dysfunctional behaviour and the explanatory variables - goal difficulty and target focused evaluative style. Thus although these variables generally engender more dysfunctional behaviour the significance of their impact depends on the hierarchical level being analysed. Goal difficulty increases dysfunctional behaviour significantly more at mid hierarchical levels than at other levels, whilst target-focused evaluative style increases dysfunctional behaviour significantly more at low hierarchical levels than at other levels. Likewise organisational commitment leads to significantly lower dysfunctional behaviour at low and higher hierarchical levels compared to at mid levels. Thus these explanatory variables of dysfunctional behaviour have significantly different predictive powers depending on the hierarchical level.

One implication of these findings is that future research on PMS in accounting firms should include non-audit lines of services in their sample, except there is compelling practical or

theoretical reason not to do so. Including non-audit lines of service will enhance their sample sizes, and potentially the power of their statistical tests. In addition, accounting firms need not operate disparate PMS for the different lines of service as may be implied by researchers' dichotomisation of their operations along audit and non-audit work. Indeed, anecdotal evidence in the course of this research suggests that they tend to operate the same systems across all lines of service. However, use of PMS in accounting firms, as well as in other contexts, should be matched to hierarchical levels. What works at one level may not be effective at another level. Attention need be paid to the use of target-focused evaluative styles at lower hierarchical levels, and the use of difficulty goals at mid levels than at other levels. Furthermore, the results underline the importance of selecting organisational members, irrespective of the area of work, based on not just technical ability but also on personal characteristics and attributes that match the envisioned culture of professionalism and objectivity. An environment that enhances this culture, leading to greater commitment to the organisation, is particularly important for those at the low and high organisational hierarchy. Altogether, these results make the case for hierarchical levels to be accorded attention among the more traditional context variables identified in contingency research. Therefore future studies of PMS in accounting firms, as well as other settings, need to take hierarchical levels into consideration in the study designs.

Results of this study, however, should be interpreted in the light of some limitations. Although survey data provides rich information not publicly available to the researcher, responses could be biased by inclinations to provide socially acceptable responses. However, given the nature of the questions investigated such bias is likely to work against finding significant results. Non-responses may equally bias the results of the study. However, there is no reason to believe that respondents were in any way systematically different from non-respondents. Analysis of early and late responses to the survey did not show any significant

differences in the variables examined in the study. Finally, the generalizability of the findings may be limited to accounting firm settings within the UK. Therefore, future studies might extend our study by looking at the impact of hierarchical levels on the behavioural effects of PMS in other types of firms and in accounting firms outside the UK.

References:

- Anthony, R. N. 1965. *Planning and Control Systems: Framework for Analysis*. Boston: Division of Research, Graduate School of Business Administration, Harvard University.
- Anthony, R. N., Dearden, J., & Govindarajan, V. 1992. *Management Control Systems*. Homewood, IL: Irwin.
- Anthony, R. N., & Govindarajan, V. 1998. *Management Control Systems* (9th Ed ed.). Burr Ridge, ILL: Irwin McGraw-Hill.
- Anthony, R. N., & Govindarajan, V. 2004. *Management Control Systems* (11th Ed ed.). Boston, Mass.: Irwin McGraw-Hill.
- Baines, A., & Langfield-Smith, K. 2003. Antecedents to management accounting change: a structural equation approach. *Accounting, Organizations and Society*, 28(7-8): 675-698.
- Barrett, M., Cooper, D. J., & Jamal, K. 2005. Globalization and the coordinating of work in multinational audits. *Accounting, Organizations and Society*, 30(1): 1-24.
- Brownell, P., & Dunk, A. S. 1991. Task Uncertainty and Its Interaction with Budgetary Participation and Budget Emphasis: Some Methodological Issues and Empirical Investigation. *Accounting, Organizations and Society*, 16(8): 693.
- Brownell, P., & Hirst, M. 1986. Reliance on Accounting Information, Budgetary Participation, and Task Uncertainty: Tests of a Three-Way Interaction. *Journal of Accounting Research*, 24(2): 241 - 249.
- Burns, J., Ezzamel, M., & Scapens, R. 1999. Management accounting change in the UK. *Management Accounting*, 77(3): 28.
- Chenhall, R. H. 2003. Management control systems design within its organizational context: findings from contingency-based research and directions for the future. *Accounting, Organizations and Society*, 28: 127-168.
- Emmanuel, C. R., Otley, D. T., & Merchant, K. A. 1990. *Accounting for management control* (2nd ed.). London Chapman and Hall, University and Professional Division.
- Govindarajan, V. 1984. Appropriateness of accounting data in performance evaluation: An empirical examination of environmental uncertainty as an intervening variable. *Accounting, Organizations and Society*, 9(2): 125-135.
- Herrbach, O. 2001. Audit quality, auditor behaviour and the psychological contract. *European Accounting Review*, 10(4): 787.
- Hopwood, A. G. 1972. An Empirical Study of the Role of Accounting Data in Performance Evaluation. *Journal of Accounting Research*, 10(3): 156.
- Hopwood, A. G. 1974. *Accounting and Human Behaviour*.
- Iyer, G. S., Iyer, V. M., & Mishra, B. K. 2003. THE IMPACT OF NON-AUDIT SERVICE FEE DISCLOSURE REQUIREMENTS ON AUDIT FEE AND NON-AUDIT SERVICE FEE IN THE UNITED KINGDOM: AN EMPIRICAL ANALYSIS. *Advances in Accounting*, 20: 127-140.
- Jaques, E. 1964a. *Time-Span Handbook*. London: Heinemann Educational Books Ltd.
- Jaques, E. 1979. Taking Time Seriously in Evaluating Jobs. *Harvard Business Review*, 57(5): 124.
- Jaques, E. 1990. In Praise of Hierarchy. *Harvard Business Review*, 68(1): 127.

- Kelley, T., & Margheim, L. 1990. The Impact of Time Budget Pressure, Personality, and Leadership Variables on Dysfunctional Auditor Behavior. *Auditing*, 9(2): 21.
- Ketchand, A. A., & Strawser, J. R. 1998. The existence of multiple measures of organizational commitment and experience-related differences in a public accounting setting. *Behavioral Research in Accounting*, 10: 109-137.
- Ketchand, A. A., & Strawser, J. R. 2001. Multiple Dimensions of Organizational Commitment: Implications for Future Accounting Research. *Behavioral Research in Accounting*: 221.
- Lin, K. Z., Fraser, I. A. M., & Hatherly, D. J. 2003. Auditor analytical review judgement: a performance evaluation. *British Accounting Review*, 35(1): 19.
- Malone, C. F., & Roberts, R. W. 1996. Factors associated with the incidence of reduced audit quality behaviors. *Auditing*, 15(2): 49.
- McNair, C. J. 1991. Proper compromises: The management control dilemma in public accounting and its impact on auditor behavior. *Accounting, Organizations and Society*, 16(7): 635.
- Meyer, J. P., Paunonen, S. V., Gellatly, I. R., Goffin, R. D., & Jackson, D. N. 1989. Organizational Commitment and Job Performance: It's the Nature of the Commitment That Counts. *Journal of Applied Psychology*, 74(1): 152.
- Otley, D. 1994. Management control in contemporary organizations: Towards a wider framework. *Management Accounting Research*, 5(3,4): 289.
- Otley, D. T. 1978. Budget Use and Managerial Performance. *Journal of Accounting Research*, 16(1): 122.
- Otley, D. T. 1980. The contingency theory of management accounting: Achievement and prognosis. *Accounting, Organizations and Society*, 5(4): 413-428.
- Otley, D. T., & Pierce, B. J. 1996a. The operation of control systems in large audit firms. *Auditing-a Journal of Practice & Theory*, 15(2): 65-84.
- Ouchi, W. G. 1977. The Relationship between Organizational Structure and Organizational Control. *Administrative Science Quarterly*, 22(1): 95.
- Ouchi, W. G. 1979. A conceptual framework for the design of organizational control mechanisms. *Management Science (pre-1986)*, 25(9): 833.
- Pierce, B., & Sweeney, B. 2004. Cost-quality conflict in audit firms: An empirical investigation. *European Accounting Review*, 13(3): 415.
- Pierce, B., & Sweeney, B. 2005. Management control in audit firms--Partners' perspectives. *Management Accounting Research*, 16(3): 340-370.
- Porter, L. W., Steers, R. M., Mowday, R. T., & Boulian, P. V. 1974. Organizational Commitment, Job Satisfaction, and Turnover among Psychiatric Technicians. *Journal of Applied Psychology*, 59(5): 603.
- Power, M. K. 2003. Auditing and the production of legitimacy. *Accounting, Organizations and Society*, 28(4): 379-394.
- Simons, R. 1995. *Levers of Control: How Managers Use Innovative Control Systems to Drive Strategic Renewal*. Boston, Massachusetts: Harvard Business School Press.
- Simons, R. 2000. *Performance Measurement & Control Systems for Implementing Strategy*. New Jersey: Prentice Hall.
- Sweeney, B., & Pierce, B. 2006. Good hours, bad hours and auditors' defence mechanisms in audit firms. *Accounting, Auditing & Accountability Journal*, 19(6): 858.
- The Professional Oversight Board. 2006. Key facts and trends in the accountancy profession.

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Table 1
Descriptive Statistics of Quality Threatening Behaviour Measurement Items

Listed below are pressures some people in other organisations claim to have experienced in their jobs. To what extent have you experienced these in your current job?

	<u>Mean</u>	<u>SD</u>	% of Scores		
			=1	=2	> 2
1. Taking actions that enhance short-term performance of the firm even though it negatively impacts long-term performance	2.54	.97	13.9%	35.3%	50.8%
2. Having to do things you feel are against your better judgement in the course of your work	3.15	1.11	8.5%	19.4%	72.1%
3. Having to stay longer hours in the office to indicate you are working hard	2.43	.86	10.9%	47.3%	41.8%
4. Feeling it necessary to avoid or skip a required procedure	2.80	1.11	12.9%	27.9%	59.2%
5. Feeling I cannot record all the time I spend on a specific work, project, or job assignment	2.20	.92	23.4%	42.3%	34.3%

Scale: 1 = Never, 2 = rarely, 3= Sometimes, 4 = often, 5 = Almost Always)

Table 2
Comparison of Quality Threatening Behaviour Incidence Across Studies

	This Study	% of Respondents		
		Otley & Pierce (1996)	Malone & Roberts (1996)	Kelley & Margheim (1987)
Having to do things you feel are against your better judgement in the course of your work (at least sometimes) ^a	72.1%	64%	29%	26%
Feeling it necessary to avoid or skip a required procedure (never done so) ^b	13%	40%	75%	70%

^a Percentage of respondents with score of 3 and above. ^b Percentage of respondents with score of 1

Table 3
Descriptive Statistics & Pearson Correlations Coefficients (N = 201)

<i>Descriptive Statistics</i>					<i>Organisational Hierarchical Levels</i>					
					<i>Ass/Execs</i> <i>N=89</i>		<i>Managers</i> <i>N=60</i>		<i>Snr Managers</i> <i>N=52</i>	
	<u>Mean</u>	<u>Stdev</u>	<u>Theoretic range</u>	<u>Actual Range</u>	<u>Mean</u>	<u>Stdev</u>	<u>Mean</u>	<u>Stdev</u>	<u>Mean</u>	<u>Stdev</u>
Age	33.6	7.02			28.8	5.06	35.4	5.48	39.6	5.95
ETen	5.76	3.84			3.57	2.06	5.9	3.17	9.3	4.19
GTen	3.0	1.97			2.27	1.35	3.08	1.73	4.13	2.51
QTB	2.62	.659	1 – 5	1 – 4.6	2.54	.72	2.72	.60	2.65	.60
GD	4.01	1.308	1 – 7	1 – 7	3.71	1.19	4.32	1.48	4.17	1.18
TFES	3.35	.737	1 - 7	1.17 – 5.67	3.37	.68	3.9	.82	3.26	.74
OC	4.70	1.198	1 – 7	1.25 - 7	4.68	1.34	4.64	1.09	4.80	1.05
Aud	Audit(1) = 84, Non-audit (0) = 117				49		18		17	

<i>Pearson Correlations Coefficients</i>									
	<u>ETen</u>	<u>Gten</u>	<u>QTB</u>	<u>GD</u>	<u>TFES</u>	<u>OC</u>	<u>AUD</u>	<u>OHL</u>	
ETen	1								
GTen	.598**	1							
QTB	-.003	.076	1						
GD	.039	-.068	.162*	1					
TFES	-.148*	.057	.198**	.047	1				
OC	.020	-.003	-.332**	-.170*	.056	1			
Aud	-.049	-.188**	-.014	-.045	-.095	.036	1		
OHL	.603**	.384**	.081	.165*	-.055	.036	-.204**	1	

* Correlation is significant at the 0.05 level (2-tailed); ** Significant at the 0.01 level (2-tailed)
GD (goal difficulty); TFES (target-focused evaluative style); OC (organisational commitment); OHL (organisational hierarchical level)

Table 4
Regression Results of Quality Threatening Behaviour on Goal Difficulty (GD),
Target-Focused Performance Evaluative Style (TFES), Organisational Commitment (OC),
Organisational Hierarchical Level (OHL), and Audit (AUD = dummy variable)

<i>Variables</i>	<i>Expected Sign</i>	<i>Coefficient (Sig Level)*</i>	<i>Std Error</i>	<i>Coefficient (Sig Level)*</i>	<i>Std Error</i>	<i>Coefficient (Sig Level)*</i>	<i>Std Error</i>
Constant		2.625 (.000)	.043	2.615 (.000)	.056	2.61 (.000)	.057
GD	+	.049 (.07)	.033	.04 (.117)	.034	.062 (.068)	.041
TFES	+	.19 (.000)	.058	.20 (.000)	.059	.178 (.014)	.080
OC	-	-.18 (.000)	.036	-.185 (.000)	.037	-.204 (.000)	.048
Audit	?			.059 (.512)	.089	.054 (.547)	.090
OHL	?			.081 (.138)	.054	.173 (.462)	.235
GD* AUD	?					-.052 (.480)	.073
TFES* AUD	?					.025 (.843)	.124
OC* AUD	?					.042 (.595)	.079
GD* OHL	?					.016 (.732)	.046
TFES* OHL	?					-.108 (.170)	.078
OC* OHL	?					-.020 (.683)	.048
<i>F-Statistics</i>		13.10 (.000)		8.34 (.000)		4.09 (.000)	
<i>R²</i>		.166		.176		.192	
<i>Adjusted R²</i>		.154		.155		.146	

* One-tailed significance level for GD, TFES, and OC coefficients

Note: GD = goal difficulty; TFES = target-focused evaluative style; OC = organisational commitment; OHL = organisational hierarchical level.

Table 5
Test of Differences in Correlation Coefficients of Independent Variables with QTB across Lines of Service, and Hierarchical Levels

By LOS	Non-Audit Line of Service		Audit Line of Service		Test Statistics	
	(N = 117, QTB Mean =2.63)		(N = 84, QTB Mean =2.61)		z =	
	QTB (rho)	Fisher's z [Z' _A]	QTB (rho)	Fisher's z [Z' _B]	$[Z'_A - Z'_B]/SE^a$	2-tail p
GD	.210*	0.213	.074	0.074	0.957	0.338
TFES	.144	0.145	.274*	0.281	-0.937	0.348
OC	-.366**	-0.384	-.276*	-0.283	-0.691	0.49
By OHL	Associates/Executives		Managers		Senior Managers	
	(N = 89, QTB Mean =2.54)		(N = 60, QTB Mean =2.72)		(N = 52, QTB Mean =2.54)	
	QTB (rho)	Fisher's z [Z'(1)]	QTB (rho)	Fisher's z [Z'(2)]	QTB (rho)	Fisher's z [Z'(3)]
GD	.049	0.049	.402**	0.426	-.030	-0.030
TFES	.370**	0.388	-.011	-0.011	.159	0.160
OC	-.359**	-0.376	-.210	-0.213	-.417**	-0.444
Test Statistics						
	z =		z =		z =	
	$[Z'_1 - Z'_2]/SE$	1-tail p	$[Z'_2 - Z'_3]/SE$	1-tail p	$[Z'_1 - Z'_3]/SE$	1-tail p
GD	-2.207	0.014	2.341	0.01	0.442	0.329
TFES	2.339	0.01	-0.880	0.19	1.274	0.101
OC	-0.952	0.171	1.185	0.118	0.382	0.351

* Significant at the 0.05 level; ** Significant at the 0.01 level (2-tailed).

$^a SE = \sqrt{\frac{1}{n_1-3} + \frac{1}{n_2-3}}$ Where n_1 is sample size for group 1 and n_2 is sample size for second group.

GD (goal difficulty); TFES (target-focused evaluative style); OC (organisational commitment); OHL (organisational hierarchical level).

Table 6
Regression of QTB on Goal difficulty (GD), Target-focused evaluative style (TFES), and Organisational Commitment (OC) for Sub-samples of Organisational Hierarchical Levels (OHL) & Lines of Service

Lines of Service	Audit		Non-Audit	
	Beta	Std. Error	Beta	Std. Error
Constant	2.54**	0.485	2.73**	0.384
GD	0.02	0.059	0.14 [^]	0.041
TFES	0.26**	0.087	0.17*	0.081
OC	-0.27*	0.059	-0.36**	0.047
R ²	.153		.185	
Adj R ²	.121		.164	
F	4.81**		8.76**	

^a OHL	<u>Associates/Executives</u>		<u>Managers</u>		<u>Senior Managers</u>	
	Beta	Std. Error	Beta	Std. Error	Beta	Std. Error
Constant	2.31**	0.506	2.39**	0.477	3.43**	0.517
GD	-0.06	0.059	0.38**	0.05	-0.07	0.065
TFES	0.35**	0.1	0.03	0.091	0.24 [^]	0.105
OC	-0.35**	0.052	-0.16	0.069	-0.46**	0.073
R ²	.251		.185		.23	
Adj R ²	.224		.141		.182	
F	9.49**		4.23**		4.77**	

^a Significant at the 0.10 level; * Significant at the 0.05 level; ** Significant at the 0.01 level (2-tailed).

Coefficients are standardized betas

GD (goal difficulty); TFES (target-focused evaluative style); OC (organisational commitment); OHL (organisational hierarchical level)

Table 7
Percentage of Respondents Scoring 3 and above on the Quality Threatening Behaviour
Measurement Items: By Line of Service and Hierarchical Level

	<u>Audit</u>	<u>Non- Audit</u>	<u>Juniors (N=89)</u>	<u>Managers (N=60)</u>	<u>Snr_Mgrs (N=52)</u>
1. Taking actions that enhance short-term performance of the firm even though it negatively impacts long-term performance	48.8%	52.1%	35.9%	56.6%	69.3%
2. Having to do things you feel are against your better judgement in the course of your work	70.3%	73.5%	68.6%	83.4%	65.4%
3. Having to stay longer hours in the office to indicate you are working hard	44.1%	40.1%	34.9%	48.3%	46.2%
4. Feeling it necessary to avoid or skip a required procedure	58.3%	59.8%	63%	55%	57.6%
5. Feeling I cannot record all the time I spend on a specific work, project, or job assignment	41.6%	29%	31.5%	33.3%	40.4%

Scale: 1 = Never, 2 = rarely, 3= Sometimes, 4 = often, 5 = Almost Always)

Appendix:

Target-Focused Performance Evaluative Style (TFES) Measurement Items

Preamble:

Thinking about your last annual performance review p, please indicate the extent to which you agree with the statements below

1. My appraiser mainly uses quantitative information (e.g. financial, time and deadline targets) in evaluating my performance
 2. My appraiser mainly uses qualitative information (e.g. quality of work done) in evaluating my performance
 3. My appraiser is more concerned with my overall performance than with not meeting specific goals in the short-term
 4. My appraiser expects me to meet my goals and is unwilling to accept explanations for any shortfalls in meeting them
 5. My rewards depend mainly on information other than how well I meet my specific goals
 6. My rewards depend equally on how well I meet my goals and on non-goal related information
-

Scale: 1 = Strongly Disagree, 7 = Strongly Agree

Scores on items 2, 3, and 5 are reverse coded, and TFES is the average of all item scores.

Organisational Commitment Measurement Items

Preamble: Please indicate the extent to which you agree with the following statements

1. Within my role, I would accept almost any type of work, project, or job assignment in order to keep working for this organisation
 2. I am extremely glad that I chose this organisation to work for over others that I was considering at the time I joined.
 3. I really care about the future of this organisation
 4. I am willing to put in a great deal of effort beyond that normally expected in order to help this organisation be successful
-

Scale: 1 = Strongly Disagree, 7 = Strongly Agree