

Survey On The Differential Effects Of Time Deadline Pressure Versus Time Budget Pressure On Auditor Behavior

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Abstract

This study examines the differential effects of time deadline pressure versus time budget pressure by surveying both senior and staff auditors in public accounting firms. The responding senior auditors reported experiencing time deadline pressure more frequently than time budget pressure over the preceding year and a majority of them indicated they experienced more stress from time deadline pressure than from time budget pressure. However, the responding staff auditors experienced time deadline and time budget pressures about equally over the preceding year and experienced about equal levels of stress from the two types of time pressure. In contrast to the frequency and stress results noted above, the results also indicated that both senior and staff auditors perceived time budget pressure to be more associated with reduced audit quality, reduced job satisfaction, and increased underreporting of chargeable time than time deadline pressure.

Introduction

Recent audit failures have again focused attention on the quality of financial statement audits. Two types of time pressure--time deadline pressure (resulting from the imposition of a deadline for completion) and time budget pressure (resulting from an effort to reduce audit hours regardless of when the work is done)--have long been suspected of causing reductions in audit quality (Commission on Auditors' Responsibilities, 1978; Report of the Commission on Fraudulent Financial Reporting, 1987; Solomon and Brown, 1992). More recently, Malone and Roberts (1996)

and Otley and Pierce (1996) have provided evidence that at least one form of time pressure -- time budget pressure -- continues to be associated with reductions in audit quality (see DeZoort and Lord (1997) for a literature review on pressure effects in accounting).

Surprisingly, prior survey research on dysfunctional auditor behavior has only focused on the effects of time budget pressure. The effects of time deadline pressure on dysfunctional auditor behavior have not been examined in prior survey research. Since the Commission on Auditors' Responsibilities (1978) and Solomon and Brown (1992) have called for research jointly examining

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time deadline and time budget pressures and expressed strong concerns that these pressures adversely affect audit quality, the current exploratory study was undertaken to gather survey data to assess the differential impact of time deadline pressure versus time budget pressure on auditors. Specifically, survey data from senior and staff auditors working for the then Big-6 and national non Big-6 accounting firms was collected to assess the auditors' perceptions of the amount of time deadline pressure and time budget pressure they experienced over the preceding year and the impact of those pressures on audit effectiveness and efficiency, audit quality reduction acts (e.g., premature sign-offs of audit program steps), underreporting of chargeable time, and reduced job satisfaction.

Therefore, the primary purposes of this study are to: (1) compare the differential impacts of time deadline pressure versus time budget pressure on auditor behavior, and (2) examine the impact of time deadline pressure on intentional reductions in audit quality. In addition, given the exploratory nature of this study additional information was collected to assess: (1) the manners in which auditors actually cope with time deadline and time budget pressures, (2) the extent that the coping behaviors suggested by Solomon and Brown (1992) lessen the adverse impact of time deadline and time budget pressures, and (3) the most frequently encountered internally and externally set time deadlines.

Literature Review

Solomon and Brown (1992) noted that time pressure can be experienced in the form of time deadline pressure or time budget pressure and that prior research had only focused on time budget pressure. Solomon and Brown (1992) saw time deadline pressure as being caused by the need to complete audit tasks by a specific point in time, while time budget pressure is caused by the amount of time that has been allocated by CPA firm management to complete specific audit tasks.

The research on audit time budget pressure has generally focused on the dysfunctional ef-

fects of providing auditors with tight (or unattainable) audit budgets. For example, prior research has provided evidence that over one-half of all auditors, at least occasionally, intentionally reduce the quality of their audit work (e.g., by signing-off on uncompleted audit program steps) or underreport their chargeable time on employee time reports due to time budget pressures (e.g., Rhode, 1978; Lightner, Adams and Lightner, 1982; Lightner, Leisenring, and Winters, 1983; Kelley and Margheim, 1987 and 1990; Raghunathan, 1991; Margheim and Kelley, 1992; Otley and Pierce, 1996; Malone and Roberts, 1996). In addition, prior research suggests that perhaps 5% of all chargeable time is not being reported (Lightner, Leisenring and Winters, 1983) and that 40% of all staff auditors are engaging in some quality reduction acts on any given audit (Kelley and Margheim, 1990).

Some researchers have argued that prior research may actually understate the amount of audit quality reduction acts and underreporting behavior engaged in by auditors. Buchman and Tracy (1982) and Reckers et al. (1997) found evidence that the incidence of dysfunctional auditor behavior (e.g., premature sign-offs) was reported at a significantly higher level when a randomized response data collection method (useful for eliciting sensitive information) was used compared with the direct survey method typically used in other studies. On the other hand, Solomon and Brown (1992) suggest that prior research may actually overstate problems associated with audit time pressures because prior research has not generally considered auditor "coping" behaviors.

Prior research provides evidence that dysfunctional auditor behavior and lower audit quality are generally associated with increases in time budget pressure, although Kelley and Margheim (1990) also presented evidence of an inverted-U shaped relationship between time budget pressure and audit quality reduction acts and underreporting of chargeable time. In addition, prior research provides evidence that time budget pressures are greater on smaller audits and those billed with a fixed fee (Kelley and Margheim, 1987) suggesting

that reductions in audit quality are more likely on these types of audits.

More recent studies have suggested ways that audit firms can, at least partially, mitigate the adverse impact of time budget pressures on audit quality reduction acts. Malone and Roberts (1996) and Otley and Pierce (1996) found that the perceived effectiveness of a firm's quality control and audit review procedures were significantly associated with lower levels of premature sign-offs and other audit quality reduction acts. In addition, the perceived strength of a firm's penalties for committing audit quality reduction acts (Malone and Roberts, 1996), the leadership style of audit managers (Otley and Pierce, 1996), and the organizational commitment of audit staff (Otley and Pierce, 1996) were also associated (in the expected directions) with reductions in audit quality reduction acts.

No survey research has been conducted on the impact of time deadline pressure on intentional reductions in audit quality. However, McDaniel (1990) found evidence in an experimental setting that greater levels of time deadline pressure result in more unintentional reductions in the quality of audit work (i.e., more errors performing audit work in the inventory area in an experimental setting).

Method

The survey instrument was primarily designed to compare the effects of time deadline pressure versus time budget pressure. Specifically, the current study uses a survey of auditors at the senior and staff levels to access: (1) the extent of time deadline and time budget pressures the auditors encountered over the preceding year, (2) the extent to which the two types of time pressure caused the auditors stress, and (3) the effects of the two types of time pressure on perceived audit effectiveness, audit efficiency, audit quality reduction acts, underreporting of chargeable time, and auditor job satisfaction.

Subjects

Four Big-6 CPA firms and two non Big-6 CPA firms agreed to participate in the study. The two non Big-6 firms were national firms of medium to large size. The firms agreed to supply a representative at selected offices who would distribute the surveys to senior and staff auditor mailboxes. Due to the sensitive nature of some of the survey questions, auditors were asked to mail their responses directly back to the researchers in the return envelopes that were provided.

The survey was distributed to a total of 374 senior and staff auditors. Eighty-five auditors (43 from the Big-6 and 42 from the non Big-6) responded to the survey yielding an overall response rate of 23%, which is fairly typical for survey research of this type. Of the respondents, 38 were staff auditors and 47 were seniors.

Analysis and Results

Extent of Time Deadline versus Time Budget Pressure Encountered

One of the major goals of this study was to access the relative extent the responding auditors had encountered time deadline pressure versus time budget pressure over the preceding year. Therefore, auditors were asked to indicate using a Likert-type scale whether they experienced time deadline pressure or time budget pressure more frequently over the preceding year. Since the position of the responding auditor (i.e., senior auditor or staff auditor) might affect the type of time pressure encountered, we analyzed the results by position.

We expected that seniors would experience greater levels of time deadline pressure (in comparison to time budget pressure) and that staff auditors would experience greater levels of time budget pressure (in comparison to time deadline pressure). We expected that seniors would experience greater levels of time deadline pressure because seniors have the overall responsibility for bringing the audit field work to completion by a set

deadline. While seniors also have overall responsibility for the audit time budget, seniors have the ability to shift some of the resulting time budget pressure to their audit staff since seniors make the time allocations to audit areas such as cash, inventory, senior supervision, etc.

With respect to audit staff, it was expected that they would feel the brunt of time budget pressure since they have little control over audit time budgets but are individually responsible for meeting the time budgets for the audit steps they have been assigned. Also, many staff auditors may give the attainment of time budgets more importance for their future careers compared with more experienced seniors who typically are more likely to see time budgets as mostly internal planning and control tools. Audit staff were expected to experience less time deadline pressure, which was believed to be more of a shared group (audit team) pressure for which the senior is primarily responsible. As discussed below, the results confirmed our expectations for audit seniors, but did not for audit staff.

A majority of the responding senior auditors indicated that they experienced time deadline pressures more frequently than time budget pressures. Specifically, 62% of the seniors indicated that they experienced time deadline pressure more frequently than time budget pressure, while 28% of seniors indicated that they experienced time budget pressure more frequently and 10% indicated they experienced an equal amount of the two pressures (see Table 1).

On the other hand, the staff auditors were approximately equally split as to which type of pressure they experienced more frequently. Specifically, 45% of the responding staff auditors reported experiencing more time deadline pressure and 47% reported experiencing more time budget pressure with 8% indicating that they experienced the two types of pressures equally.²

Amount of Stress Related to Time Pressures

Auditors were asked about the relative

Table 1
Percentage of Auditors
Experiencing Time Deadline Pressure
or Time Budget Pressure More Frequently

	Staff Auditors (n=38)	Senior Auditors (n=47)
Percent Who Experienced Time Deadline Pressure by a Slight, Moderate, or Large Extent More Than Time Budget Pressure	45%	62%
Equal Frequency	8	10
Percent Who Experienced Time Budget Pressure by a Slight, Moderate, or Large Extent More Than Time Deadline Pressure	47 100%	28 100%

stress associated with time deadline pressure compared with time budget pressure. Like our previously mentioned expectations with respect to the relative frequency of time deadline pressure versus time budget pressure, we expected seniors to experience more stress as a result of time deadline pressures and staff auditors to experience more stress as a result of time budget pressures. Again, the results confirmed our expectations for seniors, but not for staff auditors.

Overall, a large majority of senior auditor respondents indicated they experienced more stress from time deadline pressures. Specifically, fully 68% of the responding seniors reported experiencing more stress from time deadline pressure, while only 21% experienced more stress from time budget pressure, and 11% experienced approximately the same amount of stress from the two time pressures (see Table 2). On the other hand, half of the staff auditors reported experiencing more stress from time deadline pressures and almost half reported that they experienced more stress from time budget pressures.

Table 2
Summary of Relative Stress From
Time Deadline and Time Budget Pressure

	Staff Auditors (n=38)	Senior Auditors (n=47)
Percent Who Experienced More Stress from Time Deadline Pressure (Compared with Time Budget Pressure) by a Slight, Moderate, or Large Extent	50%	68%
Equal Frequency	3	11
Percent Who Experienced More Stress from Time Budget Pressure (Compared with Time Deadline Pressure) by a Slight, Moderate, or Large Extent	<u>47</u> 100%	<u>21</u> 100%

Extent of Time Pressure and Stress

While Tables 1 and 2 show the relative frequency and relative stress of time deadline versus time budget pressures, the first section of Table 3 shows the magnitude of these time pressures. In order to determine the magnitude of these pressures, auditors were first asked to indicate (on a seven-point Likert-type scale ranging from 1=no extent to 7=extreme extent), the amount of time deadline pressure experienced over the preceding year. Auditors were also asked a similar question regarding the extent of the time budget pressure that they had experienced over the preceding year. The mean score for the senior auditor respondents to the time deadline pressure question was 4.83 and the mean score for time budget pressure was 4.26. The greater level of time deadline pressure (versus time budget pressure) experienced by seniors is consistent with Table 1. These results suggest that moderate to large levels of both types of time pressure are being experienced by seniors.

Paired comparison t-tests were performed between the two types of time pressure for both seniors and staff auditors. This difference for seniors was significant ($p < .05$) using a paired-comparison t-test. The mean staff auditor scores were 4.60 for time deadline pressure and 4.34 for time budget pressure. This difference was not significant.

Consistent with the results in Table 2, the first section in Table 3 shows that senior auditors experience significantly more stress (based on a paired-comparison t-test) from time deadline pressure compared with time budget pressure. Staff auditors experience similar levels of stress from time deadline and time budget pressures.³

Effects of Potential Moderators

Solomon and Brown (1992) suggest that some "coping" variables may potentially moderate the adverse relationships between time pressure and various outcomes such as reduced audit quality. Using the coping variables suggested by Solomon and Brown (1992), in the current study we asked auditors about the extent that: (1) ability to anticipate time related pressure, (2) ability to have some control over time related pressure, and (3) perceived competence to deal with time related pressure reduced the perceived stress associated with these time pressures.

The responses shown in the second section of Table 3 suggest that these coping (or moderating factors) were perceived by the respondents to generally have moderate to large effects in reducing perceived stress. Paired comparison t-tests were employed to determine if these potential moderators have differing ability to reduce the stress felt from time deadline pressure versus time budget pressure. Only for seniors, was "ability to anticipate time related pressure" significantly more helpful in reducing felt stress when the senior was facing time deadline pressures (compared with time budget pressures), while "felt competence" was significantly more helpful in reducing the felt stress associated with time budget pressures (compared with time deadline pressures). The other time

Table 3
Comparison of the Impact of Time Deadline and Time Budget Pressures on Staff and Senior Auditors

	Staff Auditors (n=38)			Senior Auditors (n=47)		
	Time Deadline Pressure	Time Budget Pressure	p	Time Deadline Pressure	Time Budget Pressure	p
Extent of Time Pressure and Stress:						
Amount of pressure	4.60	4.34	p=.21	4.83	4.26	p=.04
Amount of stress	4.63	4.42	p=.43	4.68	4.13	p=.04
Effects of Potential Moderators on Reducing Perceived Stress:						
Ability to anticipate time related pressure	4.16	4.00	p=.52	4.47	3.81	p=.01
Ability to have some control over time related pressure	4.39	4.42	p=.88	4.38	4.45	p=.67
Felt competence to deal with time related pressure	4.66	4.87	p=.38	4.28	4.87	p=.01
Effects on Auditor Behavior:						
Audit effectiveness	3.15	2.97	p=.29	3.06	2.94	p=.54
Audit efficiency	3.61	3.61	p=1.00	3.45	3.55	p=.58
Reduced audit quality	3.08	3.84	p=.00	3.45	4.11	p=.03
Underreporting of chargeable time	2.03	2.63	p=.03	1.89	2.66	p=.00
Reduced job satisfaction	3.94	4.47	p=.03	3.53	4.15	p=.04
Premature sign offs of audit program steps	1.87	2.03	p=.18	2.30	2.15	p=.32
Doing less work than normal	2.66	2.81	p=.25	2.77	2.89	p=.51
Accepting weak client explanations	2.92	3.19	p=.02	2.77	2.81	p=.82
Failure to research accounting principles	2.38	2.73	p=.04	2.55	2.55	p=1.00

Note: Individual responses were on the following Likert-type scale: (1=no extent, 2=very small extent, 3=small extent, 4=moderate extent, 5=large extent, 6=very large extent, 7=extreme extent).

deadline/time budget pressure differences were not significant. Overall, these results with respect to coping behaviors are generally consistent with the theory developed by Solomon and Brown (1992) that these coping behaviors will have a moderate to large impact in reducing the adverse impacts of both time deadline and time budget pressure.

Effects on Auditor Behavior

The third section in Table 3 shows the impact that time deadline and time budget pressures have on audit effectiveness, audit efficiency, audit quality reduction acts, underreporting of

chargeable time, and reduced job satisfaction. In order to determine the effects of time related pressures on auditor behavior, seniors and staff auditors were asked questions, using the same seven point Likert-type scale discussed above, about the extent that time deadline pressure and time budget pressure impacted upon audit effectiveness and efficiency, audit quality reduction acts, underreporting chargeable time, and reduced job satisfaction. The overall results in the third section of Table 3 suggest that both types of time pressure reduce audit effectiveness, audit efficiency, and overall audit quality by a small to moderate extent, reduce auditor job satisfaction by a moderate extent, and

increase underreporting of chargeable time by a small to very small extent.

Paired comparison t-tests were performed on the differences between the time deadline pressure means and the time budget pressure means. For both seniors and staff, no significant differences were found in the assessments of the impact of time deadline pressure versus time budget pressure on measures of audit effectiveness and efficiency.

On the other hand, the most interesting and surprising findings reported in Table 3 show that both staff auditors and seniors reported that time budget pressures rather than time deadline pressures were more associated with "reduced audit quality." This result is surprising; especially for the senior auditors who as a group indicated that time deadline pressure caused them more stress than time budget pressure (see Table 2).

Not surprisingly, the results for both seniors and staff auditors provide evidence that time budget pressure is more often associated with underreporting of chargeable time compared with time deadline pressure. There would seem to be little motivation to underreport chargeable time in the face of time deadline pressure (since underreporting time would not help an auditor to meet a deadline), without time budget pressure being experienced at the same time.

The mean scores in Table 3 for reduced job satisfaction suggest that time pressures reduce job satisfaction to a moderate extent. In addition, the results in Table 3 provide evidence that for both seniors and staff auditors, time budget pressures lead to more reduced job satisfaction when compared to time deadline pressures. This was surprising for seniors who reported experiencing more stress from time deadline pressures. Note that for the outcome variable of reduced job satisfaction, the mean scores for staff auditors were higher than for seniors, perhaps reflecting that many dissatisfied staff auditors leave public accounting before reaching the senior level and that many seniors learn to accept high levels of time

pressure as simply being part of the job of a public accountant.

With respect to specific audit quality reduction acts, only the results with staff auditors show any significant differences. Staff auditors reported significantly more frequent acceptance of weak client explanations when under time budget pressure (3.19) compared with time deadline pressure (2.92). In addition, staff auditors reported significantly more failure to research accounting principles when under time budget pressure (2.73) compared with time deadline pressure (2.38). Staff auditors were not more likely to prematurely sign-off on audit program steps or do less work than normal as a result of time budget pressure as compared with time deadline pressure and paired comparison t-tests showed no significant differences for seniors with respect to any of the specific audit quality reduction acts studied.

Coping with Time Pressures

Two open-ended questions were asked to find out how seniors and staff auditors cope with time deadline and time budget pressures. The results in Table 4 show the most frequent manners in which seniors and staff auditors cope with time deadline pressures. The results in Table 4 show that working longer hours and planning in advance are the most frequent coping responses (19 responses each) to time deadline pressure. Other popular coping strategies for time deadline pressure include (1) talking with CPA firm management, (2) prioritizing work activities, and (3) delegating to staff auditors, client staff, and CPA firm management. While the above are all functional responses to time deadline pressure, it is interesting to note in Table 4 that only three respondents suggested that "finding time to unwind" is one way that they cope with time deadline pressures compared with 19 respondents who "work longer hours." This finding suggests that while public accountants have a laudable work ethic, they would perhaps benefit from engaging more in outside stress reducing activities such as exercise.

Table 4
How Audit Staff and Seniors Cope with Time Deadline Pressures

	<u>Frequency of Responses</u> (n=85)
1. Work longer hours	19
2. Plan in advance	19
- by reviewing previous workpapers	
- by staffing adequately	
- by holding planning meetings	
3. Talk to management	10
- setting internal deadlines, make sure they are realistic	
- about progress	
- about problems	
4. Prioritize	7
- set priorities--in date order	
- work requirements	
5. Delegate	6
- to staff	
- to client	
- upward delegation	
6. Talk to client	5
- keep client informed of progress	
7. Talk to staff	4
keep people organized on what needs to be done	
8. Find time to unwind	3
- enjoy non-work attitude	
- work out/exercise	
9. Not worry about deadline	3
- work whatever it takes	
- some deadlines are ridiculous	
10. Other responses	16
Note: Responses add to more than 85 because some auditors listed more than one response.	

Internal versus External Sources of Time Deadline Pressure

Since no prior survey research had been conducted on time deadline pressure, additional questions were included in the survey to determine the relative frequency of internal time deadline pressures (e.g., partner review date) versus external time deadline pressures (e.g., client or SEC deadlines). Somewhat more than half (53%) of seniors responded that they experienced external time deadline pressures more frequently than internal time deadline pressures compared with 42% of staff auditors experiencing more external time deadline pressures. A follow-up question revealed that the same percentage of seniors (53%) reported more stress from external time deadlines and the same percentage of staff auditors (42%) reported experiencing more stress from external time deadlines. Since seniors have more contact with upper-level client personnel, it is not surprising that seniors would experience more frequent external (rather than internal) time deadline pressures and experience more stress from external time deadline pressures.

The results in Table 5 show the most frequent manners in which seniors and staff auditors cope with time budget pressures. Note that the most frequent responses are functional responses to time budget pressures: (1) planning in advance, (2) discussing issues with upper management, (3) not worrying about small overruns, and (4) focusing on risk areas. On the other hand, misreporting chargeable time was the most frequently mentioned dysfunctional response.

Open-ended questions were asked concerning the most frequently encountered internally and externally set deadlines (see Tables 6 and 7). The need to "roll off" to another audit and a pending senior/manager/partner review of workpapers were the most frequent responses to the open-ended question concerned with internally set deadlines. Client imposed deadlines and government report deadlines (e.g., SEC deadlines) were the most frequently mentioned externally set deadlines.

Table 5
How Audit Staff and Seniors Cope
with Time Budget Pressures

		<u>Frequency of Responses</u> (n = 85)
1.	Plan in advance - by reviewing previous work papers - with managers and partners - senior/staff's share of budget - by organizing tasks	18
2.	Discuss with management - insufficient/unrealistic budget - potential and actual overruns - about problems - about profitability expectation	14
3.	Not worry about small overruns - focus more on quality of work - budget not realistic anyway	12
4.	Misreport chargeable time - eat time--underreporting time - charge time to administration	7
5.	Focus on risk areas - prioritize tasks	7
6.	Work longer hours	6
7.	Talk to staff - explain what is chargeable time - importance of adhering to budget	5
8.	Discuss with clients - potential and actual overruns - about open items/issues	5
9.	Other responses	19

Note: See Note on Table 4.

Discussion and Conclusion

This study examines the differential effects of time deadline pressure versus time budget pressure on auditor behavior. In a survey of 85 senior and staff auditors, the responding senior auditors reported experiencing time deadline pressure more frequently as compared with time budget pressure over the prior year and greater levels of perceived stress resulting from time deadline pressure. Staff auditors experienced time deadline and time budget pressures about equally. In addition, the results indicate that staff auditors experienced about an equal amount of stress from these two

types of time pressure. On the other hand, both senior and staff auditors perceived time budget pressure to be more associated with reductions in audit quality, lowered job satisfaction, and increased underreporting of chargeable time.⁴

The contradictions in these results are surprising and difficult to explain. In particular, the results suggest that, at least for seniors, time deadline pressure may be experienced more frequently and may cause more stress. However, time budget pressure is perceived by both seniors and staff auditors as having more dysfunctional effects (e.g., reduced audit quality).

One potential explanation for these results is that auditors experience time deadline pressure more at an audit team level (rather than at an individual level) and may perceive many deadline pressures to be beyond the control of the accounting firm. Therefore, there is likely to be more social support and supervisory assistance available when an auditor encounters time deadline pressure which may serve to keep job satisfaction from declining and the auditor from reducing the perceived quality of his or her work.

On the other hand, auditors (especially staff auditors) may see time budget pressures as oftentimes being avoidable and within CPA firm control. Some of these auditors may grow to resent this pressure if it is perceived as being avoidable, which may explain why auditors may feel more stress from time deadline pressure but feel greater reductions in job satisfaction from time budget pressure. In addition, auditors (and, again, especially staff auditors) may see time budget attainment as being more important than time deadline attainment in their performance evaluations. If this is the case, auditors may be more likely to reduce the quality of their work, underreport their

Table 6
Most Frequently Encountered Internally Set Time Deadlines

		<u>Frequency of Responses</u> (n=85)
1.	Needing to roll off to another job - scheduling conflict	29
2.	Senior/Manager/Partner Review	21
3.	Financial Reporting - audits - financial statements	5
4.	Not enough staff	5
5.	Scheduling deadlines	4
6.	Budgets	3
7.	Other	19

Note: See Note on Table 4.

Table 7
Most Frequently Encountered Externally Set Time Deadlines

		<u>Frequency of Responses</u> (n=85)
1.	Clients imposed deadlines - audited reports - reports for board meetings	41
2.	Government reports - SEC - IRS - HUD	33
3.	Bank reports	10
4.	Other	9

Note: See Note on Table 4.


chargeable time, and experience lower job satisfaction when faced with time budget pressure and to be more likely to seek out social support or supervisory assistance when faced with time deadline pressure.

Suggestions for Future Research

Since maintaining audit quality is a vital concern to practicing auditors, additional research is clearly needed to clarify the differential effects of time deadline and time budget pressures on the

behaviors and attitudes of auditors. No longer can researchers view time pressure as just being time budget pressure. This study clearly shows that time deadline pressure and time budget pressure are not the same thing. Future researchers, as well as those in practice, must start to consider the potential dysfunctional effects of time deadline pressure separate from time budget pressure.

Specifically, future researchers may wish to extend this line of research by examining: (1) the differential impact of time deadline pressure versus time budget pressure on other types of auditor judgements (e.g., materiality judgements), (2) the extent that auditors seek and obtain supervisory and/or peer social support when they encounter significant time deadline versus time budget pressure and the impact of that support on audit quality, and (3) auditors' perceptions of the impact of failing to meet difficult time deadlines versus difficult time budgets on their performance evaluations and the ramifications of those perceptions on audit quality.

Examination of these issues should help to provide a better understanding of the implications of time deadline pressure and time budget pressure on the overall conduct and quality of audits. 

Endnotes

1. Some experimental research has examined the effects of time pressure on unintentional reductions in audit quality (e.g., McDaniel, 1990) without making a distinction between time deadline and time budget pressure. Although Solomon and Brown (1992) and DeZoort and Lord (1997) classify the McDaniel (1990) research as a time budget pressure study, one could argue that McDaniel's experimental subjects faced time deadline pressure since these subjects could not work past a maximum time allowed in each time condition. Other time deadline pressure experiments have examined the impact of time deadline pressure on auditor judgements and efficiency/productivity (see DeZoort and Lord (1997) for

- a review of this literature).
2. Respondents answered the question on a seven-point scale ranging from respondents experiencing more time deadline or time budget pressure to a slight, moderate, or large extent with the mid-point indicating that the respondent experienced these time pressures with equal frequency. The frequencies in Table 1 (and subsequently in Table 2) were reduced to three categories for clarity since a seven-category breakout added very little. Most respondents who experienced more time deadline or time budget pressure did so to "a moderate extent."
 3. While this paper focuses on the comparison of the levels of time deadline versus time budget pressure within two groups (seniors and staff auditors), it should be noted (see Table 3, first section) that the overall levels of time pressure experienced across these groups were very similar, with seniors seeming to experience somewhat more time deadline pressure than staff auditors and staff auditors experiencing somewhat more time budget pressure than seniors.
 4. One limitation of the current study is that it does not use the randomized response method of data collection (Buchman and Tracy, 1982; Reckers et al. 1997)--which is very time intensive for respondents if the questionnaire is even moderately long--and thus the results may understate the extent that both time deadline and time budget pressure have an adverse impact on auditor behavior. A direct survey method was employed in the current study because the study is exploratory in nature and included a somewhat longer questionnaire that included several open-ended questions. While the direct survey method may result in some respondents being unwilling to admit to dysfunctional auditor behavior, there is little reason to believe that those respondents willing to admit to dysfunctional behavior would be willing to do so with respect to one form of time pressure and not the other. Thus, the current study provides reasonably

strong evidence concerning the differential effects of time deadline versus time budget pressure.

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