

Investigating the Moderating Role of Time Budget Pressure in the Relationship Between Professional Commitment and Underreporting of Audit Time

Ramin Zeraatgari

Associate Professor of Accounting, Department of Accounting, University of Sistan and Baluchestan- Iran.
(Corresponding Author)
E-mail: ramin@acc.usb.ac.ir

Meysam Lakzaee

Ph.D. student in Human Resources Management, Department of Management, University of Sistan and Baluchestan- Iran.

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Abstract

Objectives: This study aims to examine the moderating role of time budget pressure in the relationship between professional commitment and underreporting of audit time.

Methodology/Design/Approach: The research employs a descriptive-correlational design and is classified as a cross-sectional survey. Data were collected via a questionnaire. The statistical population comprises all employed auditors, with a sample size of 243 individuals. Hypotheses were tested using regression analysis with SPSS software version 22.

Findings: The results reveal a significant negative relationship between professional commitment and underreporting of audit time. Additionally, time budget pressure moderates this relationship, influencing the extent to which professional commitment affects underreporting of misconduct.

Innovation: This study contributes to the auditing literature by highlighting the interactive effect of time budget pressure on the link between auditors' professional commitment and their reporting behavior. The findings provide practical insights for audit firms seeking to manage audit quality and ethical practices under budget constraints.

Keywords: Time Budget Pressure, Professional Commitment, Underreporting of Audit Time

1. Introduction

Underreporting of audit time has emerged as a common ethical dilemma among auditors, carrying significant consequences for audit firms (Pickerd et al., 2015). This behavior can influence audit fee negotiations with clients, distort future audit time budgets, and compromise transparent evaluations of audit effectiveness (Akers et al., 1998). Although most audit firms have formal policies prohibiting the misreporting of hours (Sweeney & Pierce, 2006), auditors may still be motivated to underreport time in pursuit of more favorable performance evaluations (Anderson-Gough et al., 2001). Consequently, time underreporting has become a visible and widespread phenomenon within auditing firms (Church, 2014; Pickerd et al., 2015). Given its detrimental effects on both audit firms and the profession as a whole, identifying the factors that influence auditors' acceptance of this behavior is of critical importance.

Prior research has yielded mixed findings on the presumed influence of auditors' professional commitment and experience on ethical judgments and decision-making, including underreporting. For instance, Otley and Pierce (1996) found no significant relationship between professional commitment and time underreporting among practicing auditors, whereas Elias (2006) reported that auditing students with higher professional commitment were more likely to view underreporting as unethical.

The literature suggests that environmental factors—such as time budget pressure—may offer meaningful insights into unethical auditor behavior (Andreas, 2016). In other words, auditors may resort to underreporting time when facing significant time pressure. However, auditors with higher levels of professional commitment and a stronger sense of responsibility toward their professional duties may be better equipped to manage audit procedures, thereby reducing their exposure to time pressure and their likelihood of engaging in unethical conduct like time underreporting.

Herda and Martin (2016) argue that examining individual factors influencing underreporting in

isolation may lead to incomplete or inaccurate conclusions. From their perspective, professional commitment is an important factor that may affect underreporting behavior. Similarly, Andreas (2016) contends that time budget pressure may moderate the relationship between auditors' professional commitment and their tendency to underreport audit time, and therefore should be incorporated into analytical models.

In recent years, the auditing profession in Iran has experienced a decline in public credibility and trust. Several high-profile cases of embezzlement and financial fraud have resulted in widespread criticism and accusations against auditors, raising concerns about the increasing acceptance of unethical behavior among Iranian auditors. However, empirical evidence on this issue within Iran remains scarce, and the international literature presents inconsistent findings, as exemplified by the aforementioned studies. These circumstances give rise to a key research question: What factors influence auditors' acceptance of unethical behavior, such as underreporting of audit time, in Iran? More specifically, do auditors' professional commitment and perceived time budget pressure affect their acceptance of underreporting? Furthermore, does perceived time budget pressure moderate the relationship between professional commitment and the acceptance of time underreporting?

Literature Review

Underreporting of Time

Honest reporting of actual hours worked by auditors on audit engagements has become a growing concern for auditing firms (Rudd, 1978; Leichtner et al., 1983; Ackers et al., 1998; Pickard et al., 2015; Herda & Martin, 2016), as underreporting of audit time poses a serious threat to audit quality (Donnelly et al., 2003; Stefaniak & Robertson, 2010). Time underreporting is an inefficient and unethical practice that undermines the reliability of audit procedures. It involves recording fewer hours than were actually worked, often arising when auditors complete their tasks more

quickly than expected and seek to avoid or manipulate time budgets. Researchers have noted that underreporting audit time has become a relatively simple and frequently used strategy (e.g., Rudd, 1987; Otley & Pierce, 1996).

Ackers et al. (1998) argue that underreporting audit time results in various losses for both audit firms and auditors. These losses include:

- Audit firms use reported hours to prepare the time budgets for subsequent years; therefore, underreporting can lead to unrealistic benchmarks against which future auditor performance is evaluated or force further underreporting.
- Audit firms rely on reported times when negotiating fees with clients.
- Reported times are used to assess the effectiveness of auditing methods on current engagements.
- Time records inform resource allocation decisions within the firm.
- In certain cases, firms use reported times to justify additional billing to clients.

These consequences can harm not only audit firms but also the credibility of the auditing profession as a whole (Herda & Martin, 2016). In response, most auditing firms explicitly prohibit inaccurate time reporting through internal policies (Bouchet et al., 2003; Sweeney & Pierce, 2006; Smith & Houghton, 2011).

Sweeney and Pierce (2006), in their study of time underreporting, found that audit firm partners identified three primary causes of this behavior: lack of competence, pressure from performance evaluation and budgeting systems, and requests from management. Numerous studies have confirmed that auditors admit to engaging in time underreporting (e.g., Kelly & Margheim, 1987; McNeil, 1991; Otley & Pierce, 1996). Punman (1992) found that auditors with lower levels of ethical reasoning are more likely to take underreporting lightly. The reasoning underpinning Punman's study, along with similar

research, is that underreporting is an unethical response to time budget pressure.

Furthermore, according to Herda and Martin (2016), professional commitment is another factor that may influence auditors' acceptance of unethical underreporting behavior. They emphasize the importance of including such factors in a comprehensive analytical model that accounts for the various roles they may play. Accordingly, the following sections present the theoretical foundations related to auditors' professional commitment and perceived time budget pressure as factors contributing to underreporting audit time.

Professional Commitment

One key factor that may influence auditors' acceptance of underreporting audit time is their level of professional commitment (Herda & Martin, 2016). Professional commitment refers to an individual's dedication to professional responsibilities, identification with the profession, and adherence to its goals and ethical standards (Sorensen & Sorensen, 1974). In the accounting literature, professional commitment is typically defined as belief in and acceptance of the profession's goals and values, willingness to make substantial efforts on behalf of the profession, and a desire to maintain membership in it (Aranya et al., 1981; Aranya & Ferris, 1984).

Professional commitment is believed to develop through the process of professional socialization that occurs as individuals enter and progress within the field (Aranya et al., 1982). Prior research has found evidence of a positive association between audit experience and professional commitment (Aranya & Ferris, 1984; Jeffrey & Weatherholt, 1996; Smith & Hall, 2008; Sodabi et al., 2009). As auditors gain experience and become more embedded in the culture of the profession, their level of professional commitment is likely to increase (Hall et al., 2005). Accordingly, auditors' experience is expected to be positively related to their level of professional commitment (Herda & Martin, 2016).

Aranya et al. (1981) suggest that individuals with stronger professional commitment exhibit greater sensitivity to ethical issues. Similarly, Lord and DeZoort (2001) argue that professional commitment encourages auditors to act in the public interest and avoid behaviors that could damage the profession. Conversely, auditors with lower levels of commitment may be more susceptible to unethical behavior. However, empirical research on the relationship between professional commitment and ethical evaluations has produced mixed findings (Elias, 2006). For example, Shaub et al. (1993) found no significant association between professional commitment and auditors' ability to identify ethical issues. In contrast, studies by Jeffrey and Weatherholt (1996), Jeffrey et al. (1996), and Taylor and Curtis (2010) reported a positive relationship between professional commitment and ethical behavior, including auditors' intention to report suspicious activities.

Research findings regarding the relationship between professional commitment and the acceptance of underreporting audit time are similarly inconsistent. Otley and Pierce (1996) found no significant association between professional commitment and underreporting behavior. However, Elias (2006), in a study of auditing students, found that those with higher professional commitment were less likely to accept underreporting audit time. Supporting this view, Herda and Martin (2016) found that stronger professional commitment was associated with a lower likelihood of accepting underreporting. These results are consistent with the theoretical perspectives of Aranya et al. (1981) and Lord and DeZoort (2001), who suggest that greater professional commitment enhances ethical awareness, thereby reducing the acceptance of unethical behaviors such as time underreporting.

Therefore, a negative relationship between professional commitment and the acceptance of underreporting audit time is anticipated. Based on this reasoning, the first hypothesis is proposed as follows:

Hypothesis 1: There is a significant relationship between auditors' professional commitment and their underreporting of audit time.

Time Budget Pressure

Recent auditing research has explored the impact of time budget pressure on auditors. Findings suggest that auditors respond to this pressure in various ways, including manipulating recorded hours, superficially reviewing client documentation, prematurely or inappropriately completing audit sections, and underreporting audit time. According to Ponemon (1992), underreporting audit time often creates ethical tension, as the behavior typically violates firm policies or established standards. Moreover, Ponemon observed that auditors expressed concern about violating professional norms upheld by their peers. Otley and Pierce (1996) similarly found that although audit firm policies formally disapprove of time underreporting, the practice is frequently tolerated—either implicitly or explicitly—by firm leadership.

Rudd (1978) reported that 55% of certified public accountants had engaged in underreporting audit time. Leightner et al. (1982) found an even higher rate of 67%. Additionally, Otley and Pierce (1996) revealed that 55% of respondents admitted to occasionally underreporting time. Ponemon (1992), in a training program setting, observed actual instances of underreporting and concluded that auditors are vulnerable to time budget pressure, often reporting fewer hours than were actually worked. Almer et al. (2005) argue that a distinctive feature of audit work is the inherent incentive to underreport time in order to meet strict time constraints.

Based on these findings, it is reasonable to expect a positive relationship between auditors' perceived time budget pressure and the tendency to underreport audit time. Auditors working under such pressure are more likely to engage in unethical behaviors, including time underreporting.

Furthermore, time budget pressure may influence the strength of professional commitment. Under high pressure, the effectiveness of professional commitment in deterring unethical behavior may be diminished. That is, when auditors experience intense time pressure, their level of professional commitment may have a weaker impact on reducing underreporting.

Accordingly, it is anticipated that time budget pressure moderates the relationship between professional commitment and underreporting audit time. Based on this reasoning, the second hypothesis is proposed:

Hypothesis 2: Time budget pressure, as perceived by the auditor, moderates the relationship between professional commitment and underreporting of audit time.

Research Methodology

This study adopts a quantitative research design, employing the scientific method for model development and empirical validation. It is structured around predetermined hypotheses and a formal research framework. This approach is appropriate when data are measured quantitatively and statistical techniques are applied to derive conclusions. Additionally, because data were collected via questionnaires, the study also qualifies as a survey-based investigation. In terms of purpose, it falls under the category of applied research.

The study variables and their respective measurement methods are described as follows:

- **Professional Commitment:** Measured using the validated questionnaire developed by Herda and Martin (2016).
- **Time Budget Pressure (from the Auditor's Perspective):** Measured using a researcher-developed questionnaire tailored to the context of this study.
- **Underreporting of Audit Time:** Also measured using the questionnaire developed by Herda and Martin (2016).

To assess the reliability of the questionnaires, Cronbach's alpha was calculated. The results indicated that the alpha values for all instruments exceeded the threshold of 0.70, demonstrating acceptable internal consistency.

The statistical population of this study comprises all auditors employed by auditing firms in Iran, including those working within the Iranian Audit Organization. Since there were no specific criteria guiding the selection of sample members, a simple

random sampling method was employed. Given the lack of precise data on the total population size, Cochran's formula for an unknown population was used to determine the appropriate sample size, which was calculated to be 384 respondents.

To enhance the statistical power of the study and minimize both Type I (false positives) and Type II (false negatives) errors, a total of 400 questionnaires were distributed across the target population. Through repeated follow-ups, 243 completed questionnaires were returned, representing a response rate of 61%.

For data analysis, inferential statistical methods were applied, including the Pearson correlation coefficient and both simple and multiple linear regression analyses, using SPSS software (version 22). To test the study's two hypotheses, Regression Models 1 and 2—as described in the following section—were employed.

$$UTB = \beta_0 + \beta_1(PC) + \varepsilon \quad (1)$$

$$UTB = \beta_0 + \beta_1(PC) + \beta_2(TBP) + \beta_3(PC*TBP) + \varepsilon \quad (2)$$

In the above models, UTB represents underreporting of audit time, PC represents professional commitment, and TBP represents time budget pressure.

Findings

The results from the descriptive analysis of the demographic questions in the questionnaire reveal that among the 243 respondents, 174 individuals (71.6%) were male, while the remaining were female. The age distribution of the respondents indicates that 46.9% were between 30 and 40 years old, 94.7% were under the age of 50, and only 5.3% were older than 50.

Regarding educational attainment, 78.6% of the respondents held either a bachelor's or a master's degree. In terms of work experience, 22.6% had less than 5 years, 44.9% had between 5 and 10 years, 28% had between 11 and 20 years, and only 4.5% had more than 20 years of experience in their respective roles.

Table 1 presents the descriptive statistics for the main research variables. Based on the data in the table, respondents predominantly selected response options indicating moderate agreement with the items

measuring professional commitment, underreporting of audit time, and perceived time budget pressure. These findings suggest that the overall level of professional commitment among respondents is above average, and that a notable perception of time budget pressure exists within the sample.

Table 1. Descriptive statistics of the research variables

	Min	Max	Mean	S.D.
Professional Commitment	2.818	6.545	5.116	0.843
Underreporting Audit Time	2.500	7	4.545	0.924
Time Budget Pressure	2	6.800	5.037	1.078

Table 2 presents the correlation matrix among the research variables, obtained through Pearson's correlation coefficient. The results indicate a significant negative correlation between underreporting audit time and both professional commitment and time budget pressure at the 95% confidence level. Additionally, a significant positive correlation is observed between professional commitment and time budget pressure at the same confidence level.

Table 2. Summary of correlation coefficients

	Professional Commitment	Underreporting Audit Time	Time Budget Pressure
Professional Commitment	1		
Underreporting Audit Time	-0.313 (0.000)	1	
Time Budget Pressure	0.468 (0.000)	-0.478 (0.000)	1

Table 3 presents the results of testing the first hypothesis. The F-statistic for the regression model is 183.26, indicating that the model is statistically significant at the 95% confidence level. The Durbin-Watson statistic of 2.030 suggests there is no evidence of serial autocorrelation in the residuals. The adjusted R² value of 0.094 implies that approximately 9.4% of the variance in the dependent variable is explained by

the independent variable. Additionally, the Kolmogorov-Smirnov test confirms that the residuals of the regression model are normally distributed, supporting the validity of the model assumptions.

Table 3. Regression results for testing the first hypothesis

Var.	β	Standard error	t-stat	P value
Constant	2.758	0.348	7.926	0.000
professional commitment	-0.343	0.067	-5.117	0.000
R²	R²_{adj}	D-W stat	F stat	Sig.
0.098	0.094	2.030	26.183	0.000
	Z stat	0.854	Sig.	0.302

Table 3 presents the regression coefficients for the model testing the first hypothesis, along with their corresponding significance levels. The results indicate a significant negative relationship between professional commitment and underreporting audit time at the 95% confidence level.

Table 4 summarizes the results for the second hypothesis. The overall model significance is supported by the F-statistic of 26.493 ($p < 0.05$), indicating that the regression model is statistically significant at the 95% confidence level. The Durbin-Watson statistic of 1.915 suggests the absence of serial autocorrelation in the regression residuals. Furthermore, the adjusted R² value of 0.240 indicates that approximately 24% of the variance in underreporting audit time is explained by the independent variables included in the model. The Kolmogorov-Smirnov test confirms that the residuals of the regression model are normally distributed, supporting the validity of the regression assumptions.

Table 4 presents the regression coefficients for the model testing the second hypothesis, along with their corresponding significance levels. According to the data, the coefficient for professional commitment is not statistically significant at the 95% confidence level, indicating no direct significant relationship between professional commitment and underreporting audit time. Similarly, the relationship between time

budget pressure and underreporting audit time is also not significant at the 95% confidence level. However, the interaction term between professional commitment and time budget pressure shows a negative coefficient that is statistically significant at the 90% confidence level. This finding suggests that time budget pressure moderates the relationship between professional commitment and underreporting audit time, weakening the effect of professional commitment under increased time pressure.

Table 4. Regression Results for Testing the Second Hypothesis

Var.	β	Standard error	t-stat	P value
Constant	4.762	1.517	3.139	0.002
professional commitment (1)	0.441	0.315	1.398	0.163
Time Budget Pressure (2)	0.187	0.304	0.614	0.540
(1) * (2)	-0.113	0.061	-1.840	0.067
R²	R²_{adj}	D-W stat	F stat	Sig.
0.250	0.240	1.915	26.493	0.000
Z stat		1.307	Sig.	0.066

Discussion and Conclusion

The analysis of the demographic data obtained from the general section of the questionnaire indicates that 85.2% of the respondents hold at least a bachelor's degree, and 71.6% are male. Moreover, 77.4% have more than five years of work experience in their current roles. These findings provide a robust empirical foundation for examining the relationship between professional commitment and underreporting of audit time, particularly with respect to the moderating role of perceived time budget pressure.

The results of testing the first hypothesis revealed a significant negative relationship between professional commitment and underreporting of audit time. Specifically, as auditors' professional commitment increases, their tendency to underreport audit hours decreases. Therefore, the first hypothesis is supported with a statistically acceptable level of confidence. This finding is consistent with the results

of Andreas (2016). The theoretical justification aligns with prior literature: auditors with higher levels of professional commitment feel a greater sense of responsibility toward accurate reporting of audit hours and are thus less likely to engage in time underreporting.

Analysis related to the second hypothesis demonstrated that time budget pressure, as perceived by auditors, moderates the relationship between professional commitment and underreporting of audit time. Thus, the second hypothesis is also supported. More specifically, time budget pressure significantly weakens the negative relationship between professional commitment and underreporting. In other words, even auditors with strong professional commitment are more likely to underreport audit time when they experience high levels of time pressure. This result is also in line with the findings of Andreas (2016). The underlying reason is that, under time pressure, auditors may feel compelled to appear compliant with time budgets, and therefore resort to underreporting, despite their commitment to professional standards.

Based on the findings of the first hypothesis, it is recommended that audit firm managers and regulatory bodies—such as the Iranian Association of Certified Public Accountants—take steps to strengthen professional commitment among auditors. One effective strategy could involve offering training programs focused on professional identity and ethical responsibilities. These initiatives may help mitigate tendencies toward underreporting. Furthermore, curriculum designers in accounting education are encouraged to place greater emphasis on professional ethics and commitment in academic syllabi, enabling future auditors to develop a strong sense of professional responsibility during their studies.

In light of the second hypothesis, it is recommended that audit firm managers avoid assigning unrealistic time budgets that impose excessive pressure on auditors. Doing so may reduce the likelihood of underreporting and promote more ethical behavior among auditing professionals.

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