Ethical decision-making: an interactive model of organizations' ethics systems and decision-makers' financial situation

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Abstract

Purpose – This study aims to investigate the influence of two perceived organizational ethics systems (perceived ethics training quality and integrity-based climate) on the ethical decision-making (EDM) of tax accountants in Ghana. The study also examines the moderating role of the decision-makers' financial situation on the quality ethics training–EDM relationship.

Design/methodology/approach – Survey data from 356 tax accountants were analyzed using the partial least squares structural equation modeling technique.

Findings – The results show that the two ethics systems influence EDM, but their extent of influence varies across the stages of EDM. Specifically, quality ethics training is a better predictor of EDM at the ethical issue recognition stage, whereas integrity-based climate is a better predictor of EDM at the ethical intention stage. The study also found that decision-makers' financial situation predicts the ethical recognition stage of EDM but does not moderate the quality ethics training–EDM relationship.

Practical implications – This study recommends the concurrent deployment of quality ethics training and an integrity-based work climate to improve ethical behavior. Policymakers should also emphasize a work climate that promotes honesty, conscientiousness and ethical principles (integrity-based climate) to improve ethical intentions.

Ethical compliance: All procedures performed in this study involving human participants were in accordance with the ethical standards of the Ghana Institute of Management and Public Administration and the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

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Plain language summary: This study establishes that ethics can be improved through quality ethics training and by instituting a work climate that emphasizes honesty, conscientiousness and ethical principles. The study also recommends that employers pay attention to key tax decision-makers' financial situations.

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Originality/value – This study applied the interactionist theory by capturing the relative effects of two organizational ethics systems and an individual-level situational factor in a single model. To the best of the authors' knowledge, this is the first study that tests the moderation effect of decision-makers' financial situation on the ethics training–EDM relationship in a developing country context.

Keywords Ethical decision-making, Integrity-based climate systems, Quality ethical training, Decision-makers' financial situation, Organizational ethics systems, Tax accountants

Paper type Research paper

1. Introduction

Ethical decision-making (EDM) remains topical in the accounting literature, but the focus has been on auditors (Oboh *et al.*, 2020) to neglect tax accountants, an often-forgotten accountant group. Tax accountants' EDM perspectives are pertinent because their daily work schedules make them ethically vulnerable (Kportorgbi *et al.*, 2023). The need to focus on the EDM of tax accountants is relevant globally but more pertinent for jurisdictions where unethical tax practices deny the state enormous tax revenue (Kportorgbi *et al.*, 2023; Addo, 2021). Ghana is a good context in which to examine the EDM perspectives of tax accountants. The tax workspace in Ghana holds ethics as a key pro-organizational behavior and touts its investments in organizational ethics systems. However, public discourse on unethical practices often cites professionals in this workspace for ethical infractions (Addo, 2021; Kuditchar, 2021). Thus, this study uses the Ghanaian context to establish the role of the organizational ethics system in engendering EDM among accounting professionals in the tax workspace of developing countries. In addition to the contextual contribution, this study advances the EDM literature on three fronts.

First, it captures the influence of the ethics capacity-building system (quality ethics training) and the ethics attitude-shaping system (work climate) on the EDM. Previous studies examined the influence of these two ethics systems on EDM in isolation (Al Halbusi *et al.*, 2021; Weber and Opoku-Dakwa, 2022; Teresi *et al.*, 2019; Warren *et al.*, 2014). The extant literature serves foundational purposes but falls short of discussing the EDM effect when the two perspectives of the organizational ethics system are concurrently deployed. This study fills this gap by studying how the ethics capacity-building and attitude-shaping systems concurrently influence EDM. Using this approach, this study provides guidance on the deployment of ethical systems.

Second, this study examined the influence of the two ethics systems on EDM at multiple stages. Using this approach, the complementary efficacy of each ethical system is tested. For instance, this study provides evidence that ethics training (which is traditionally linked to ethics capacity building) also predicts ethical intention (i.e. shapes ethical attitude). This study establishes that an integrity-based climate (traditionally gleaned as an ethics attitude-shaping intervention) also predicts the EDM's ethical issue recognition (ethics capacity-building) stage. This contribution is expected to energize policymakers toward the deployment of multiple organizational ethics interventions.

Another contribution lies in the application of Trevino's (1986) interactionist theory of EDM to explain the effect of the decision-makers' financial situation on the ethics training–EDM relationship. The need to examine the role of decision-makers' financial situations in the EDM relationship is justified both theoretically and in the context of this study. Theoretically, the financial situation of the decision-maker, defined as the individual's self-evaluation of their financial satisfaction and financial strain (Fehr *et al.*, 2022), could constrain or engender EDM. De Bruijn and Antonides (2022) argue that poverty (an unsound financial situation) can cause individuals to exhibit suboptimal behavior. However, this claim has not yet been tested empirically. Contextually, ethical infractions in developing

countries are often blamable on the financial situations of actors (Kportorgbi *et al.*, 2023; Fehr *et al.*, 2022), but empirical perspectives on the specific role of this variable (financial situation) seem not to be well explained. This study draws on Trevino's interactionist theory of EDM to propose that decision-makers' financial situation could both impair ethical sensitivity of the decision-maker, and moderate the relationship between ethics training and ethical intention. A successful test of this relationship would explain the variation in the EDM among individuals exposed to ethics training of the same quality.

The study is therefore guided by two research objectives:

(1) examine the influence of two perceived organizations' ethics systems (i.e. perceived ethics training quality and integrity-based climate) on EDM; and

(2) to investigate the role of the decision-maker's financial situation in EDM relationship.

The remaining sections present a review of relevant literature, methodology, results and discussion. The final section provides the conclusions and policy implications.

2. Literature review

2.1 Theoretical literature

2.1.1 Ethical decision-making. The dominant EDM studies were drawn from Rest's (1986) EDM framework. Casali and Perano (2021) conceptualized EDM as the cognitive ability and willingness of an individual to incorporate ethical perspectives into decisions. Rest (1986) conceptualized EDM as a four-stage hierarchical process comprising ethical issue recognition, ethical judgment, ethical intention and actual ethical behavior. Rest (1986) defines ethical issue recognition as an individual's cognitive ability to identify ethical issues when presented with one. Ferrell *et al.* (2019) described ethical issue recognition as the ethical sensitivity of individuals, workgroups and/or organizations. The factors that sharpen or improve individuals/work groups' ethical sensitivity include ethics capacity-building systems (e.g. ethical training and ethical leadership) and ethics attitude-shaping systems (e.g. organizational ethics climate and code of conduct) (Ferrell *et al.*, 2019).

The second EDM stage, ethical judgment, reflects the decision-maker's cognitive evaluation of rules, norms and ethical codes to evaluate whether an intended decision is correct. At this point, the decision-maker uses cognitive reasoning to distinguish between ethically wrong and correct decisions (Ferrell *et al.*, 2019). The third stage, ethical intention, involves the decision-maker's willingness and mental fortitude to adopt a supposedly "good" course of action in the face of opposing pressures, other convenient choices and external stress. The fourth stage involves clear and unambiguous enforcement of real decisions. Owing to practical difficulties and a high level of sensitivity, EDM studies rarely capture actual ethical behavior (Craft, 2013; Sweeney and Costello, 2009). Hunt and Vitell (1986) and Zhang *et al.* (2009) argued that ethical judgment and ethical intentions yield statistically similar results; thus, their simultaneous inclusion in EDM studies adds no real value. In choosing between ethical judgment and ethical intention, the latter is preferred, as it is deemed a proximate measure of ethical behavior (Kportorgbi *et al.*, 2023). Karande *et al.* (2000) argue that ethical intention must be studied because one can have a high ethical perception and make a sound moral judgment but not intend to act in accordance with it. In this study, EDM is conceptualized to capture the first and third stages of ethical issue sensitivity/recognition and ethical intention.

2.1.2 Interactionist theory of ethical decision-making. Trevino's interactionist EDM theory was applied in several studies. Trevino's (1986) EDM theory holds that the EDM of

individuals and groups is explained by the interaction between individual and organizational situational factors. This theory has mainly been explained by modeling organizational situational factors as predictors of EDM, and individual-level factors as interaction variables. Organizational situational factors in Trevino's (1986) theory include an organization's normative structure, ethical systems, organizational ethical reinforcement and other forms of ethical pressure (Li, 2023; Trevino, 1986). Individual factors include ego strength, field dependence, *locus* of control (Trevino, 1986) and ethical voice (Chen and Treviño, 2023).

Following the arguments of Ferrell *et al.* (2019), this study argues that EDM is explained by two organizational ethical systems (quality ethics training and integrity-based climate systems). This study's proposition of a direct relationship between ethical systems (i.e. quality ethics training and integrity-based climate perceptions) and EDM is supported by Trevino's (1986) interactionist theory of EDM, Rest's (1986) theory of EDM and the multistage contingency model of EDM (Ferrell *et al.*, 2019). These theories hold that the EDM is driven by a variety of factors, including ethics capacity-building programs (i.e. ethics training and exposure) and ethics attitude-shaping systems (i.e. work ethics climate, reward and punishment systems, ethical voice and code of conduct). This theory does not sufficiently explain the relative effects of the two dimensions of ethics systems on the multiple EDM proxies. By resolving this deficiency, this study argues that ethics training, traditionally used as an ethics sensitivity tool, is also a potent ethics–attitude–building intervention. Relatedly, this study ignites a discourse that argues that work climates (i.e. integrity-based climates) can be an effective tool for improving ethical sensitivity and ethical intention.

This study further argues that financial situation could impair the ethical sensitivity stage of the EDM, but has a less direct effect at the higher stages of EDM. In advancing arguments for the integrated approach, Schwartz (2016) highlighted that ethical blindness (low ethical sensitivity) could occur as a result of personal situations, but the individual becomes more alert at higher stages of EDM to minimize the bounded ethicality and guilt associated with taking decisions that run contrary to one's ethical values. Based on this theoretical stance, this study proposes that a decision-maker's financial situation can positively predict EDM at the ethical issue recognition stage.

The literature has not sufficiently addressed the variations in the EDM of individuals exposed to the same quality of ethics training. De Bruijn and Antonides (2022) argue that poverty can lead to suboptimal behavior. Al Halbusi (2021) argued that personal fit (personal situational factors) can moderate the relationship between organizational ethics systems and ethical behavior. In line with these arguments, this study proposes that decision-makers' valuation of their personal financial benefits from side-stepping ethical boundaries could affect their propensity to incorporate ethical knowledge and experience into their decision-making. Specifically, this study proposes that, all things being equal, persons with a sound financial situation would have higher confidence and resilience in applying lessons acquired during ethics training than persons with poor financial situations.

This study contributes to the interactionist theory on these three fronts. First, the study modifies the existing EDM models by examining the relative influence of the two organizational ethics systems on EDM in two stages. It also argues that decision-makers' financial situation moderates the relationship between ethics training and EDM. Thus, this study provides a better understanding of the role of organizations' ethics capacity-building systems (ethics training) and ethics attitude-shaping systems (integrity-based climate) and explains the role of individual-level situational variables (decision-makers' financial situation) in EDM.

The conceptual framework for this study is in Figure 1.

The conceptual framework in Figure 1 predicts a relationship between the two dimensions of an organization's ethics systems and EDM. Specifically, the study predicts that integrity-based climate (IntClim) and quality ethics training (EtrainQ) will have a direct relationship with and ethical issue recognition (EDM.EIR) and ethical intention (EDM.EInt). The study also predicts that decision-makers' financial situation (F.Situat) could have a direct relationship with EDM.EIR and could moderate the relationship between ETrainQ and EDM.EIR.

2.2 Empirical review

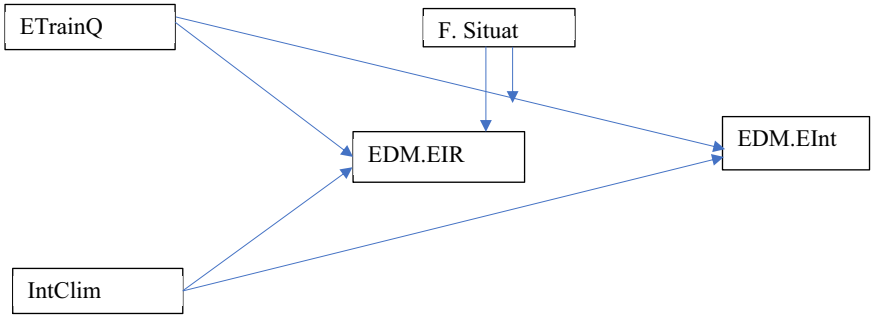
In practice, organizations concurrently deploy ethics training to build ethical capacity and emphasize integrity systems to shape the ethical attitudes of organizational members (Casali and Perano, 2021). Empirical attempts to examine the impact of these organizational ethics systems on the EDM were conducted separately for each ethics system.

2.2.1 Ethics training quality, integrity-based climate perception and ethical decision-making. The literature attempts to understand the link between ethics capacity-building systems (i.e. training and ethics education) and ethical behavior, but the results are inconsistent. Parks-Leduc *et al.* (2021), Kim and Loewenstein (2021) and Rottig and Heischmidt (2007) found that ethics training/education has a positive relationship with EDM. On the other hand, Li (2023) found that ethics cannot be taught, and that ethics training does not predict ethical behavior. One suggestion to resolve this inconsistency is to examine the relationship between the organizational ethics systems and the multiple stages of ethical behavior (Steele *et al.*, 2016; Simha *et al.*, 2012). These studies contend that the effect of ethics training could vary across Rest's (1986) EDM stages, and that it is important to test this relationship, at multiple stages of EDM. This attempt is uncommon in the literature, yet important for understanding the full impact of ethics capacity-building programs. To contribute to the literature, this study examined the influence of ethics training at two levels of the EDM using the following hypotheses:

H1a. High-quality ethics training is associated with sharper ethics issue recognition.

H1b. High-quality ethics training is associated with positive ethical intention.

A few studies (Al Halbusi *et al.*, 2021; Teresi *et al.*, 2019; Weber and Opoku-Dakwa, 2022) have examined the impact of the work ethics climate on ethical behavior proxies. Using a



Source: Authors own work

Figure 1.
Conceptual framework

sample of 295 workers in Iraq, Al Halbusi *et al.* (2021) found that ethical climate predicts ethical behavior. The authors held that organizational leadership is critical in setting the tone for employees' ethical behaviors. Haldorai *et al.* (2020) also established a link between ethical climate and ethical behavior, holding that employees' ethical behavior is driven by their perceptions of the fairness of the system. Nauman *et al.* (2023) also established a positive link between Islamic ethics climate and an ethical behavior proxy. Teresi *et al.* (2019) and Haldorai *et al.* (2020) studied the effects of different types of organizational ethics climates. Teresi *et al.* (2019) studied the effects of two ethical climate types (friendship and self-interest climates) on organizational morality and other behavioral intentions. The study found that a friendship climate is a better predictor of desirable employee attitudes and behavioral intentions. Although an integrity-based climate is a common ethics climate type among professionalized organizations, the literature has not sufficiently examined how this ethics climate type influences EDM. Menzel (2014) was among few studies that examined the ethics effect of integrity work climate. This study contributes to the literature by examining the influence of integrity-based climate perception on EDM at two levels. Studying the relationship at multiple stages of EDM is pertinent to establish whether integrity-based system (presumed as an ethics attitude-building system) is also an ethics-sensitizing intervention. The following two hypotheses apply:

H1c. Integrity-based climate systems are associated with sharper ethical issue recognition.

H1d. Integrity-based climate systems are associated with positive ethical intention

2.2.2 The role of financial situation on ethical decision-making. First, it examines the direct relationship between financial situations and EDM. Empirical perspectives on this relationship are sparse, but posited theoretical perspectives (Schwartz, 2016; Trevino, 1986) suggest that personal situations can influence the initial stages of EDM. Teresi *et al.* (2019) argue that the poverty (financial situation) of decision-makers could induce suboptimal behavior but fall short of proving the claim with empirical data. Onumah *et al.* (2022) found that personal attributes, such as family influence, pressure and ego strength, influence ethical attitudes. To advance the literature, this study tested the following hypotheses:

H2a. The decision-maker's financial situation predicts the ethical recognition stage of the EDM.

In the previous section, the review revealed that the extant literature posted inconsistent results on the ethics training–EDM relationship. Babalola *et al.* (2019) suggest that inconsistent results on relationships could be attributed to the presence of an unexamined moderating variable. As financial situations are often cited as key contributors to unethical practices in this study, the influence of this variable on the ethics training–EDM relationship should be tested. This assertion is theoretically grounded (Trevino, 1986) but is underexplored in the empirical literature. Al Halbusi (2021) also suggests that personal fit (situations) are anchors for ethical behavior relationships but falls short of examining whether the financial situation of the decision-maker is a potent anchor. The moderation effect of the decision-makers' financial situation on the ethics training–EDM relationship is pertinent in explaining variations in the EDM of persons who are exposed to the same quality of ethics training. To fetch this important dimension in the empirical literature, we tested the following hypothesis:

H2b. The decision-makers' financial situation moderates the relationship between quality ethics training and ethical intention.

3. Methodology

3.1 Research design, approach, sample and data

This study adopted an explanatory/causal design to explain the causal relationship between variables of interest (Creswell and Zhang, 2009), using tax accountants in Ghana [1]. For the purposes of this study, The Institute of Chartered Accountants, Ghana (the regulator of the accountancy profession), estimated the population of tax accountants to be 1,125. Adam (2020) recommended a minimum sample size of 219 participants for the population range of this study. Convenience sampling was used to obtain 450 members of the population. In total, 356 tax accountants participated in this study. The sample size met the requirements of both the proportionate population-based recommendations (Adam, 2020) and sample size specification in Hair *et al.* (2021).

The data were collected using questionnaires. The questionnaire comprises four sections. The first section solicited background information about the respondents. The second section collected data on the EDM-dependent variables. This section contained a vignette on a tax related dilemma. Respondents were requested to read the vignette, assume the role of tax accountants and respond to specific statements. The third and fourth sections solicited information to measure perceptions of the quality of ethics training and integrity-based climate. The main data collection phase was preceded by a technical review of the questionnaire by three tax practitioners and a pilot study involving 63 professional accounting students. The respondents were reached at conference/workshop/society meetings with tax accountants. In all cases, the researcher observed protocols to adhere to confidentiality promises and protect the anonymity of respondents.

3.2 Measurement and validity of variables

This study measured both the dependent variable (EDM) and the independent variables (integrity-based systems, quality of ethics training and financial situation of individuals) in a single survey. Harman's one-factor test was conducted to check for the risk of common method bias (Appendix 1). The test yielded 36.98% (> 50%). It is safe to conclude that the instrument and data did not suffer from significant common method bias. The measurements for each of these three variables are discussed below.

3.2.1 Ethical decision-making. EDM is conceptualized in the ethical issue recognition and ethical intention stages. The EDM at the issue recognition stage is deemed a proximate measure of a person's ethical capacity. The extant literature suggests that either ethical judgment or ethical intention can be used to measure ethics attitude or behavior, thus simultaneous inclusion of both constructs in EDM studies adds no real value (Hunt and Vitell, 1986; Zhang *et al.*, 2009). In choosing between ethical judgment and ethical intention, the latter is more preferred as it is deemed as a proximate measure of ethical behavior (Zhang *et al.*, 2009). The questionnaire comprised four ethical vignettes, each capturing the ethical dilemmas of fictional tax accountants (Appendix 2). The vignettes were self-constructed; however, the items for measuring EDM proxies were adopted from Musbah *et al.* (2016). For each of the four vignettes, respondents were expected to react to statements on a seven-point Likert scale. To measure ethical issue recognition, respondents reacted to the statement "I consider the ethical issue(s) in this scenario as important." To measure ethical intention, the respondent was requested to respond to a statement about whether he/she would make the same decision if he/she were a fictional tax officer in each given vignette.

The construct met all validity and reliability criteria, namely, indicator reliability, internal consistency and convergent validity (Table 3).

3.2.2 Perceived ethics training quality. Six items were used to gauge respondents' perceptions of the quality of the ethical systems in their organizations. The items covered three quality dimensions: perception of the relevance of ethical training, perception of ethical exposure offered by ethical training programs and feelings of empowerment after training programs. The dimensions of quality of ethics training were adapted from Weber (2015). The factor loadings of the six items ranged from 0.904 to 0.929, which is higher than the minimum threshold of 0.70. A composite reliability (CR) of 0.970 (Cronbach's alpha = 0.963) recorded for the variable was indicative of good scale reliability.

3.2.3 Integrity-based climate valuation. The items for measuring organizational integrity climate valuation were adopted from Zahari *et al.*'s (2019) organizational integrity questionnaire. The questionnaire encapsulated three components of integrity climate: honesty, conscientiousness and principles. Thirteen items, comprising three for the climate of honesty and five each for conscientiousness and principles, were used to measure the construct – organizational integrity climate.

The loading for one of the honesty factors did not meet the 0.70 threshold; thus, it was removed. The CR of the construct was 0.979 (Cronbach's alpha = 0.976), indicating a good scale reliability. These figures meet the reliability requirements (Hair *et al.*, 2021).

3.2.4 Decision-maker's financial situation. This construct was measured with four items. The items comprise sufficiency of the decision-makers' ability to meet regular needs, emergency needs and savings/investment. A fourth item directly gauged how the decision-maker perceives himself/herself as not financially pressured.

The four indicators have a loading above the 0.70 threshold. The CR for the variable is 0.947 (greater than the threshold of 0.70). The measurement scale is consistent, and the indicators are appropriate for the measurement of the variable.

3.3 Empirical estimation strategy

This study adopts the partial least squares structural equation modeling (PLS-SEM) technique to estimate these relationships. SEM is an effective technique for estimating relationship for unobservable constructs that manifest through observable indicators (Ringle *et al.*, 2022; Nitzl, 2016). SEM is also useful in mediation moderation studies (Hair *et al.*, 2021). This study adopts PLS-SEM rather than covariance-based SEM for at least three reasons. First, PLS-SEM is preferred over covariance-based SEM in studies seeking to predict relationships or expand the frontiers of a theory (Dash and Paul, 2021). Second, PLS-SEM does not require normally distributed data (Hair *et al.*, 2021). Third, PLS-SEM is better at optimizing the explained variance of endogenous latent variables (Rasoolimanesh *et al.*, 2021; Gadzo *et al.*, 2019; Hair *et al.*, 2021).

4. Empirical analysis

4.1 Sample characteristics

The sample comprises qualified accountants. Aside from having a professional qualification in accounting, 71 majority of the sample (71%) has a professional qualification in taxation. Therefore, the sample was comprised of professionals. The sample also consisted of individuals with considerably higher educational levels. In total, 92% of the population had at least one degree. With respect to experience, a sizeable proportion of the sample (62%) has at least five years' work experience as tax accountants. Based on the sample profile, we can conclude that the perspectives captured in this study represent the opinions of a highly informed tax accountant group.

Most of the sample (62%) works as tax accountants in the public sector, whereas a considerable minority works for private tax and accounting firms. This distribution captures the prevailing situation in Ghana, where most professionals work in the public sector (Aduhene and Osei-Assibey, 2021).

Table 1 presents the detailed sample characteristics of the study.

4.2 Descriptive characteristics of variables of interest

The key variables of interest are EDM, proxied by ethical issue recognition (EDM.EIR), ethical intention (EDM.Int), integrity-based climate valuation (IntClim), ethical training quality perception (EtrainQ) and decision-makers' financial situation (F.Situat). Table 2 provides detailed descriptive characteristics of the variables of interest. The coefficient of variation for all indicators and variables falls below the maximum threshold of three, indicating normally distributed data.

The respective scores for EDM.EIR and EDM.EInt are 5.18 and 4.61, respectively, which are higher than the median score of 4. On average, the sample recorded higher-than-average ethical sensitivity and ethical intention.

On the seven-point Likert scale, the average score for the financial situation is 3.91, which falls short of the median score of 4. This indicates that, on average, the sample comprises financially pressured respondents.

On the seven-point scale, the mean score for ethical climate and ethical training is 4.81 and 4.68, respectively. The standard deviations for each indicator and construct indicate less variability within the data set relative to the mean scores.

4.3 Diagnostics of indicators

This study used indicator loading to check the indicator reliability, CR statistics to confirm internal consistency and average variance extracted (AVE) to test convergent validity. Discriminant validity was also tested using the Fornell–Larcker criterion and variance

Profile	No.	%
Gender		
Female	125	35
Male	231	65
Professional qualification		
Qualified tax practitioner	251	71
Not qualified tax practitioner	105	29
Education		
Tertiary diploma	22	6
Degree	167	47
Masters	161	45
PhD	6	2
Place of work		
Public sector	219	62
Private sector	137	38
Total	*356*	*100*

Source: Authors' own work

Table 1. Sample characteristics

Indicators	Indicator code	Mean	SD	Coeff of variation
Ethical issue recognition	EDM.EIR			
	EIR.S1	5.10	1.70	0.33
	EIR.S2	5.25	1.71	0.33
	EIR.S3	5.31	1.67	0.31
	EIR.S4	5.06	1.76	0.35
Overall	*EIR*	*5.18*	1.71	0.33
Ethical intention				
	EInt.S1	4.39	1.91	0.44
	EInt.S2	4.57	1.91	0.42
	EInt.S3	4.77	1.94	0.41
	EInt.S4	4.71	1.93	0.41
Overall	*EInt*	*4.61*	1.92	0.42
Financial situation				
	F.Situat1	4.19	1.71	0.41
	F.Situat2	3.76	1.76	0.47
	F.Situat 3	3.74	1.79	0.48
	F.Situat4	3.93	1.83	0.47
Overall	*F.Situat*	*3.91*	*1.77*	*0.45*
Integrity climate				
	IntClim1	4.75	1.48	0.31
	IntClim2	5.02	1.61	0.32
	IntClim3	4.83	1.80	0.37
	IntClim4	4.76	1.76	0.37
	IntClim5	4.81	1.77	0.37
	IntClim6	4.76	1.78	0.37
	IntClim7	4.84	1.78	0.37
	IntClim8	4.77	1.81	0.38
	IntClim9	4.91	1.79	0.37
	IntClim10	4.66	1.76	0.38
	IntClim11	4.85	1.84	0.38
	IntClim12	4.72	1.88	0.40
	IntClim13	4.88	1.86	0.38
Overall	*IntClim*	*4.81*	*1.76*	0.37
Ethical training quality				
	EtrainQ1	4.46	1.71	0.38
	EtrainQ2	4.67	1.74	0.37
	EtrainQ3	4.72	1.70	0.36
	EtrainQ4	4.82	1.69	0.35
	EtrainQ5	4.69	1.72	0.37
	EtrainQ6	4.73	1.78	0.38
Overall	*EtrainQ*	*4.68*	*1.72*	*0.37*

Source: Authors' own work

Table 2.
Descriptive of latent variables of interest

inflation factor (VIF) to confirm the non-existence of collinearity. The diagnostics are subsequently presented.

4.3.1 Indicator reliability, internal consistency and convergent validity. Table 3 presents the results of the diagnostic tests (i.e. indicator reliability, internal consistency and convergent validity). The indicator loadings of the latent variables were compared with a threshold value of 0.50 to confirm indicator reliability. Indicators were deemed reliable when they had a loading greater than the minimum threshold (Hair *et al.*, 2014). Regarding internal consistency, the constructs should have a CR of at least 0.7 (Hair *et al.*, 2014).

Indicator	Loadings	CA	CR	AVE
EIR		0.880	0.917	0.735
EIR.S1	0.845			
EIR.S2	0.871			
EIR.S3	0.880			
EIR.S4	0.834			
Eint		0.885	0.921	0.744
EInt S1	0.854			
EInt S2	0.897			
EInt S3	0.817			
EInt S4	0.878			
Etrain		0.963	0.970	0.842
Etrain1	0.904			
Etrain2	0.908			
Etrain3	0.925			
Etrain4	0.923			
Etrain5	0.929			
Etrain6	0.918			
FinS		0.926	0.947	0.816
FinS 1	0.859			
FinS 2	0.928			
FinS 3	0.914			
FinS 4	0.914			
IntClim		0.975	0.978	0.771
IntClim2	0.857			
IntClim3	0.901			
IntClim4	0.894			
IntClim5	0.886			
IntClim6	0.894			
IntClim7	0.919			
IntClim8	0.876			
IntClim9	0.906			
IntClim10	0.870			
IntClim11	0.896			
IntClim12	0.877			
IntClim13	0.904			

Source: Authors' own work

Table 3.
Indicator reliability, internal consistency and convergent validity

To show convergent validity for a construct, Hair *et al.* (2014) suggest an "extracted minimum average variance (AVE) of 0.5." An AVE value less than 0.50 means that more volatility exists, on average, in the products than the variance defined by the construct.

Table 3 shows that the indicators for each of the constructs are reliable. Relatedly, the CA and CR are above the threshold of 0.70, indicative of internal consistency. The AVE of all the four constructs is above the threshold value of 0.5, a validation of convergent validity.

4.3.2 Discriminant validity – Fornell–Larcker criterion. The Fornell–Larcker criterion was used to assess the discriminant validity (Hair *et al.*, 2021). The results in Table 4 show that the values in bold are larger than the other correlation values among the latent variables when glanced from both vertical and horizontal perspectives. This suggests that the condition for discriminant validity is adhered to for all the constructs.

4.3.3 Collinearity. The VIF was used to test collinearity. Table 5 presents the test results for the models used in this study.

The results in Table 5 indicate that the models do not suffer from collinearity deficiencies.

4.4 Partial least squares structural equation modeling results

The first objective was to investigate the influence of ethical training and integrity-based climate system valuation on EDM. This is addressed by testing *H1a–H1d*. The second objective examined the moderating effect of decision-makers' financial situation on the relationship between ethics training quality and EDM. This objective is achieved by testing *H2a* and *H2b*. The results for the hypothesis are presented in Table 6 and Figure 2.

4.5 Discussion of results

4.5.1 Ethics training quality, integrity-based climate perception and ethical decision-making. The results show that both quality ethics training and integrity climate valuation predict EDM at both the ethical issue recognition and ethical intention stages. Comparatively,

Relationship	EDM.EIR	EDM.EInt	EtrainQ	F.Situat	IntClim
EDM.EIR	*0.858*				
EDM.EInt	0.455	*0.862*			
EtrainQ	0.352	0.389	*0.918*		
F.Situat	0.245	0.177	0.055	*0.904*	
IntClim	0.280	0.456	0.300	0.337	*0.892*

Table 4.
Discriminant validity

Source: Authors' own work

Relationship	VIF
EtrainQ → EDM.EIR	1.102
EtrainQ → EDM.EInt	1.133
F.Situat → EDM.EIR	1.131
F.Situat → EDM.EInt	1.136
IntClim → EDM.EIR	1.239
IntClim → EDM.EInt	1.277
F.Situat × EtrainQ → EDM.EInt	1.061

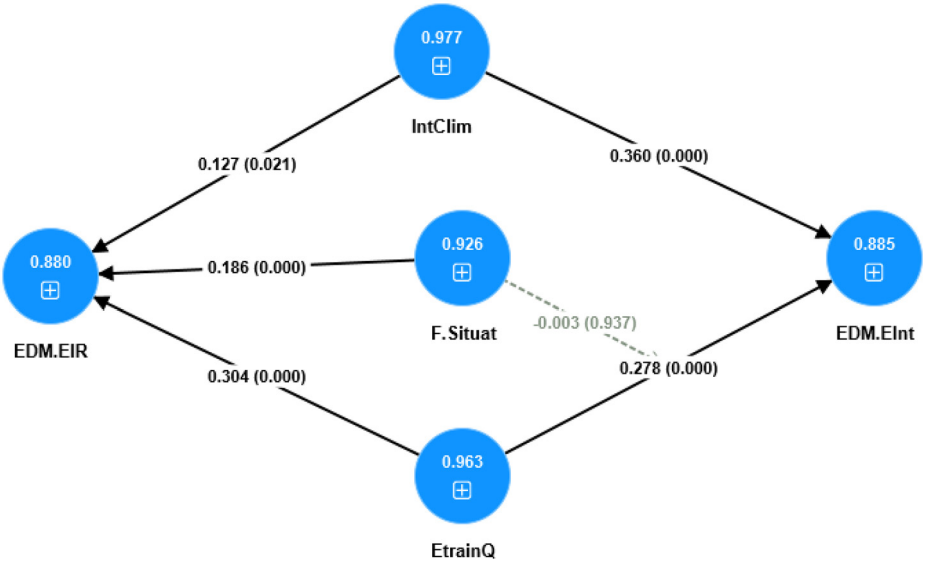
Table 5.
Collinearity

Source: Authors' own work

Relationship	Coefficient	*p*-value	*t*-statistics (|O/STDEV|)	Decision
EtrainQ -> EDM.EIR	0.304	0.000	6.233	Accept
EtrainQ -> EDM.EInt	0.278	0.000	5.137	Accept
IntClim -> EDM.EIR	0.127	0.021	2.306	Accept
IntClim -> EDM.EInt	0.360	0.000	7.094	Accept
F.Situat -> EDM.EIR	0.186	0.000	3.683	Accept
F.Situat × EtrainQ -> EDM.EInt	−0.003	0.937	0.079	Reject

Table 6.
Relationships among ethics systems, decision-makers financial situation and EDM

Source: Authors' own work



Source: Authors own work

Figure 2.
Path diagram: relationships among ethics systems, F.Situat and EDM

quality ethics training is a better predictor of EDM at the ethical issue recognition stage. At the ethical intention stage, integrity-based climate valuation is a better predictor of the EDM. Theoretically, the finding that quality ethics training has a stronger influence on EDM in the first stage, and that an integrity-based climate has a stronger influence on EDM in the third stage, is not surprising. Quality ethics training, ethics capacity building (ethics sensitivity-sharpening) interventions and an integrity-based climate are ethics attitude-shaping interventions. The theoretical contribution of this study lies in the finding that ethical systems complement each other. Thus, ethical interventions deployed to build an individual's ethical capacity are also potent in shaping ethical attitudes. Conversely, integrity-based climates deployed to shape individuals' ethical attitudes are also effective in building individuals' ethical capacity.

In the context of the empirical literature, the findings on the relationship between ethics training and EDM are compared with those of Parks-Leduc *et al.* (2021) and Kim and Loewenstein (2021). This finding suggests that quality training is a potent ethical intervention to build ethical capacities and shape positive ethical attitudes. Kim (2023) provided a general empirical framework for understanding the role of ethics training in improving ethical behavior. Kim suggested that quality ethics training (a core component of ethics leadership) sharpens ethical sensitivity and empowers individuals to incorporate ethical perspectives into their actions. However, the findings of this study contradict those of Li (2023) who found that ethics education does not influence ethical behavior. Li (2023) argued that ethics education/training is a mere moral rule, and that training participants may not be bound to live ethically. The discrepancy between this study's findings and Li's (2023) findings can be accounted for by the level of conceptualization of the ethics training/education construct. Li (2023) conceptualized ethics education at only exposure level, but this study conceptualized the ethics education at multiple dimensions (relevance, quality exposure and empowerment) of the construct.

The findings of this study on integrity-based climate and EDM relationships compare favorably with those of Lythreatis *et al.* (2022), Al Halbusi *et al.* (2021), Aryati *et al.* (2018) and Domino *et al.* (2015), who linked work climate and ethical leadership to several pro-organizational outcomes. This study also confirmed the findings of Nguyen *et al.* (2022) that organizational culture is associated with ethical intentions. This study argues that organizations can improve their ethical behaviors by creating a work climate that emphasizes honesty, conscientiousness and ethical principles.

Juxtaposing the findings of this study with the study context shows that ethical problems in the tax workspace can be addressed by emphasizing quality ethics training and enacting a work climate that places a premium on the virtues of honesty, conscientiousness and observance of ethical principles. Ethical behavior can be improved in the tax workspace when gatekeepers institute ethics programs that imbibe ethics in the heart and minds of tax accountants.

4.5.2 The role of the decision-makers financial situation on ethical decision-making. The result predicts that decision-makers who evaluate their financial situation as sound are more ethically sensitive than those who evaluate their financial situation as poor. Similar findings were posited by Onumah *et al.* (2022) and De Bruijn and Antonides (2022), who posited that family pressure and financial situation could potentially impair individuals' ethicality. Clayton and van Staden (2015) also argued that societal pressures on individuals could drive them toward unethical behavior. However, the findings of this study should be interpreted with caution, because F.Situat predicts EDM only in the first stage.

The results show that F.Situat does not moderate the relationship between quality ethics training and the EDM. This finding supports the argument that financial pressure on individuals potentially limits the effect of the EDM on ethics training. In this study, financial pressure was cited as a major reason for unethical practices among tax officers. However, the findings of this study discount the influence of money on ethical behavior and hold that the influence of quality ethics training on EDM remains unshaken, even in the presence of financial inducements/pressures.

5. Conclusion and study limitations

This study investigated the relative influence of two organizational ethics systems (i.e. quality ethics training and perceived organization integrity-based system) on EDM, and the moderating effect of financial situation on the quality ethics training–EDM relationship of tax accountants in Ghana. In terms of the relative influence on EDM, this study found that ethics training has more influence at the issue recognition stage, but that an integrity-based climate is more influential at the ethical intention stage. The study also found that both ethics systems complement each other in improving the EDM. The study also found that decision-makers' financial situation predicts only the ethical issue recognition stage, and that the variable does not moderate the relationship between ethics training and ethical intention.

This study contributes to the theoretical literature by establishing that these two ethical systems complement each other in their traditional role. Ethics training, which is traditionally associated with improvement in ethical capacity (ethics sensitivity), is also an effective intervention for improving ethical attitudes (ethics intention). Similarly, an integrity-based climate, traditionally seen as an ethics attitude shaping intervention, is equally effective in improving ethical sensitivity.

The practical implications of this study's findings are twofold. First, the study encourages organizations to concurrently deploy the two examined ethics systems, as they two ethics systems complement each other in building ethics capacity and conscientizing the heart toward EDM. Second, policymakers at the firm level should pay attention to the financial situation of decision-makers, as poor financial situations predict low ethical

sensitivity, and sound financial situations predict high ethical sensitivity. However, this study deflates the publicly held notion that the heightening records of unethical behavior in Ghana's tax workspace are blamable by the poor financial situation of tax practitioners.

The study adopted a cross-sectional design, in which respondents' perceptions were collected at a point in time. Proponents of a longitudinal study design often berate the ability of a cross-sectional design to incorporate changes in perspectives over time. However, Spector (2019) argued that cross-sectional designs remain effective in predicting relationships, especially when experimental methods are incorporated into their application. This study incorporated experimental methods to reduce the inherent limitations of the cross-sectional design.

Note

1. Tax accountant in this study refer to accountants who are practicing in tax related fields (i.e. tax divisions at private firms or at Ghana Revenue Authority).

References

Adam, M.A. (2020), "A study on sample size determination in survey research", Vol. 26 No. 5, p. 90, doi: 10.9734/jsrr/2020/v26i530263.

Addo, A. (2021), "Controlling petty corruption in public administrations of developing countries through digitalization: an opportunity theory informed study of Ghana customs", *The Information Society*, Vol. 37 No. 2, pp. 99-114.

Aduhene, D.T. and Osei-Assibey, E. (2021), "Socio-economic impact of COVID-19 on Ghana's economy: challenges and prospects", *International Journal of Social Economics*, Vol. 48 No. 4, pp. 543-556.

Al Halbusi, H., Williams, K.A., Ramayah, T., Aldieri, L. and Vinci, C.P. (2021), "Linking ethical leadership and ethical climate to employees' ethical behavior: the moderating role of person–organization fit", *Personnel Review*, Vol. 50 No. 1, pp. 159-185.

Aryati, A.S., Sudiro, A., Hadiwidjaja, D. and Noermijati, N. (2018), "The influence of ethical leadership to deviant workplace behavior mediated by ethical climate and organizational commitment", *International Journal of Law and Management*, Vol. 60 No. 2, pp. 233-249.

Babalola, M.T., Stouten, J., Camps, J. and Euwema, M. (2019), "When do ethical leaders become less effective? The moderating role of perceived leader ethical conviction on employee discretionary reactions to ethical leadership", *Journal of Business Ethics*, Vol. 154 No. 1, pp. 85-102.

Casali, G.L. and Perano, M. (2021), "Forty years of research on factors influencing ethical decision making: establishing a future research agenda", *Journal of Business Research*, Vol. 132, pp. 614-630.

Chen, A. and Treviño, L.K. (2023), "The consequences of ethical voice inside the organization: an integrative review", *Journal of Applied Psychology*, Vol. 108 No. 8, pp. 1316-1335.

Clayton, B.M. and van Staden, C.J. (2015), "The impact of social influence pressure on the ethical decision making of professional accountants: Australian and New Zealand evidence", *Australian Accounting Review*, Vol. 25 No. 4, pp. 372-388.

Craft, J.L. (2013), "A review of the empirical ethical decision-making literature: 2004–2011", *Journal of Business Ethics*, Vol. 117 No. 2, pp. 221-259.

Creswell, J.W. and Zhang, W. (2009), "The application of mixed methods designs to trauma research", *Journal of Traumatic Stress: Official Publication of the International Society for Traumatic Stress Studies*, Vol. 22 No. 6, pp. 612-621.

Dash, G. and Paul, J. (2021), "CB-SEM vs PLS-SEM methods for research in social sciences and technology forecasting", *Technological Forecasting and Social Change*, Vol. 173, p. 121092.

De Bruijn, E.-J. and Antonides, G. (2022), "Poverty and economic decision making: A review of scarcity theory", *Theory and Decision*, Vol. 92 No. 1, pp. 5-37, doi: 10.1007/s11238-021-09802-7.

Domino, M.A., Wingreen, S.C. and Blanton, J.E. (2015), "Social cognitive theory: the antecedents and effects of ethical climate fit on organizational attitudes of corporate accounting professionals—a reflection of client narcissism and fraud attitude risk", *Journal of Business Ethics*, Vol. 131 No. 2, pp. 453-467.

Fehr, D., Fink, G. and Jack, B.K. (2022), "Poor and rational: decision-making under scarcity", *Journal of Political Economy*, Vol. 130 No. 11, pp. 2862-2897.

Ferrell, O.C., Harrison, D.E., Ferrell, L. and Hair, J.F. (2019), "Business ethics, corporate social responsibility, and brand attitudes: an exploratory study", *Journal of Business Research*, Vol. 95, pp. 491-501.

Gadzo, S.G., Kportorgbi, H.K. and Gatsi, J.G. (2019), "Credit risk and operational risk on financial performance of universal banks in Ghana: a partial least squared structural equation model (PLS SEM) approach", *Cogent Economics and Finance*, Vol. 7 No. 1, p. 1589406.

Hair, J.F., Jr, Sarstedt, M., Hopkins, L. and Kuppelwieser, V.G. (2014), "Partial least squares structural equation modeling (PLS-SEM): an emerging tool in business research", *European Business Review*, Vol. 26 No. 2, pp. 106-121.

Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M. and Thiele, K.O. (2017), "Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods", *Journal of the Academy of Marketing Science*, Vol. 45 No. 5, pp. 616-632.

Haldorai, K., Kim, W.G., Chang, H.S. and Li, J.J.(. (2020), "Workplace spirituality as a mediator between ethical climate and workplace deviant behavior", *International Journal of Hospitality Management*, Vol. 86, p. 102372.

Hunt, S.D. and Vitell, S. (1986), "A general theory of marketing ethics", *Journal of Macromarketing*, Vol. 6 No. 1, pp. 5-16.

Karande, K., Shankarmahesh, M.N., Rao, C.P. and Rashid, Z.M. (2000), "Perceived moral intensity, ethical perception, and ethical intention of american and malaysian managers: a comparative study", *International Business Review*, Vol. 9 No. 1, pp. 37-59, doi: 10.1016/S0969-5931(99)00028-1.

Kim, J. (2023), "Ethical leadership and program to reduce unethical behaviour among public employees", *Public Management Review*, Vol. 25 No. 7, pp. 1333-1347.

Kim, J. and Loewenstein, J. (2021), "Analogical encoding fosters ethical decision making because improved knowledge of ethical principles increases moral awareness", *Journal of Business Ethics*, Vol. 172 No. 2, pp. 307-324.

Kportorgbi, H.K., Aboagye-Otchere, F. and Kwakye, T.O. (2023), "Ethical tax decision-making: evaluating the effects of organizational prestige valuations and tax accountants' financial situation", *Cogent Business and Management*, Vol. 10 No. 1, p. 2196037.

Kuditchar, N.L. (2021), "Curbing illicit financial out-flow from Africa: the phenomenology of institutions in Ghana", *Journal of Contemporary African Studies*, Vol. 39 No. 1, pp. 56-69.

Li, C. (2023), "Organizational identification and unethical pro-organizational behavior: a culture-moderated meta-analysis", *Ethics and Behavior*, pp. 1-21.

Li, C. (2023), "The effect of ethics education on students' ethical decisions: a preliminary laboratory experiment", *Journal of Finance and Accounting*, Vol. 11 No. 1, pp. 14-18.

Lythreatis, S., El-Kassar, A.N., Smart, P. and Ferraris, A. (2022), "Participative leadership, ethical climate and responsible innovation perceptions: evidence from South Korea", *Asia Pacific Journal of Management*, pp. 1-28.

Menzel, D.C. (2014), *Ethics Management for Public Administrators: Building Organizations of Integrity*, Routledge, doi: 10.4324/9781315704500.

Musbah, A., Cowton, C.J. and Tyfa, D. (2016), "The role of individual variables, organizational variables and moral intensity dimensions in Libyan management accountants' ethical decision making", *Journal of Business Ethics*, Vol. 134 No. 3, pp. 335-358.

Nauman, S., Basit, A.A. and Imam, H. (2023), "Examining the influence of Islamic work ethics, organizational politics, and supervisor-initiated workplace incivility on employee deviant behaviors", *Ethics and Behavior*, pp. 1-18.

Nguyen, L.A., Dellaportas, S., Vesty, G.M., Pham, V.A.T., Jandug, L. and Tsahuridu, E. (2022), "The influence of organisational culture on corporate accountants' ethical judgement and ethical intention in Vietnam", *Accounting, Auditing and Accountability Journal*, Vol. 35 No. 2, pp. 325-354.

Nitzl, C. (2016), "The use of partial least squares structural equation modelling (PLS-SEM) in management accounting research: directions for future theory development", *Journal of Accounting Literature*, Vol. 37 No. 1, pp. 19-35.

Oboh, C.S., Ajibolade, S.O. and Otusanya, O.J. (2020), "Ethical decision-making among professional accountants in Nigeria: the influence of ethical ideology, work sector, and types of professional membership", *Journal of Financial Reporting and Accounting*, Vol. 18 No. 2, pp. 389-422.

Onumah, R.M., Simpson, S.N.Y. and Kwarteng, A. (2022), "The effects of personal and organisational attributes on ethical attitudes of professional accountants: evidence from Ghana", *Journal of Global Responsibility*, Vol. 13 No. 3, pp. 245-267.

Parks-Leduc, L., Mulligan, L. and Rutherford, M.A. (2021), "Can ethics be taught? Examining the impact of distributed ethical training and individual characteristics on ethical decision-making", *Academy of Management Learning and Education*, Vol. 20 No. 1, pp. 30-49.

Rasoolimanesh, S.M., Khoo-Lattimore, C., Md Noor, S., Jaafar, M. and Konar, R. (2021), "Tourist engagement and loyalty: gender matters?", *Current Issues in Tourism*, Vol. 24 No. 6, pp. 871-885.

Rest, J.R. (1986), *Moral Development: Advances in Research and Theory*, Praeger, New York, NY.

Ringle, C.M., Wende, S. and Becker, J.M. (2022), "SmartPLS 4", *J. Appl. Struct. Equ. Model*, SmartPLS GmbH, Oststeinbek.

Rottig, D. and Heischmidt, K.A. (2007), "The importance of ethical training for the improvement of ethical decision-making: evidence from Germany and the United States", *Journal of Teaching in International Business*, Vol. 18 No. 4, pp. 5-35.

Schwartz, M.S. (2016), "Ethical decision-making theory: an integrated approach", *Journal of Business Ethics*, Vol. 139 No. 4, pp. 755-776.

Simha, A., Armstrong, J.P. and Albert, J.F. (2012), "Attitudes and behaviours of academic dishonesty and cheating—do ethics education and ethics training affect either attitudes or behaviours?", *Journal of Business Ethics Education*, Vol. 9, pp. 129-144.

Spector, P.E. (2019), "Do not cross me: optimizing the use of cross-sectional designs", *Journal of Business and Psychology*, Vol. 34 No. 2, pp. 125-137.

Steele, L.M., Mulhearn, T.J., Medeiros, K.E., Watts, L.L., Connelly, S. and Mumford, M.D. (2016), "How do we know what works? A review and critique of current practices in ethics training evaluation", *Accountability in Research*, Vol. 23 No. 6, pp. 319-350.

Sweeney, B. and Costello, F. (2009), "Moral intensity and ethical decision-making: an empirical examination of undergraduate accounting and business students", *Accounting Education*, Vol. 18 No. 1, pp. 75-97, doi: 10.1080/09639280802009454.

Teresi, M., Pietroni, D.D., Barattucci, M., Giannella, V.A. and Pagliaro, S. (2019), "Ethical climate(s), organizational identification, and employees' behavior", *Frontiers in Psychology*, Vol. 10, p. 1356.

Trevino, L.K. (1986), "Ethical decision making in organizations: a person-situation interactionist model", *The Academy of Management Review*, Vol. 11 No. 3, pp. 601-617.

Warren, D.E., Gaspar, J.P. and Laufer, W.S. (2014), "Is formal ethics training merely cosmetic? A study of ethics training and ethical organizational culture", *Business Ethics Quarterly*, Vol. 24 No. 1, pp. 85-117.

Weber, J. (2015), "Investigating and assessing the quality of employee ethics training programs among US-based global organizations", *Journal of Business Ethics*, Vol. 129 No. 1, pp. 27-42, doi: 10.1007/s10551-014-2128-5.

Weber, J. and Opoku-Dakwa, A. (2022), "Ethical work climate 2.0: a normative reformulation of victor and Cullen's 1988 framework", *Journal of Business Ethics*, Vol. 178 No. 3, pp. 629-646.

Zahari, A.I., Said, J. and Arshad, R. (2019), "Integrity climate questionnaire", *Cogent Psychology*, Vol. 6 No. 1, p. 1626541.

Zhang, J., Chiu, R. and Wei, L. (2009), "On whistleblowing judgment and intention", *Journal of Managerial Psychology*, Vol. 24 No. 7, pp. 627-649, doi: 10.1108/02683940910989020.

Further reading

de Bruijn, E.J., Antonides, G. and Madern, T. (2022), "A behaviorally informed financial education program for the financially vulnerable: design and effectiveness", *Frontiers in Psychology*, Vol. 13, p. 1090024.

Hair, J.F. Jr., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2021), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage publications, available at: www.hhz.de/fileadmin/user_upload/Hermann_Hollerith_Zentrum/Forschung/PLS-SEM_Course.pdf

Appendix 1

Component	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of variance	Cumulative (%)	Total	% of variance	Cumulative (%)
1	17.013	36.984	36.984	17.013	36.984	36.984
2	5.851	12.720	49.704			
3	3.794	8.247	57.951			
4	3.083	6.703	64.654			
5	2.486	5.405	70.058			
6	1.686	3.664	73.723			
7	1.398	3.040	76.763			
8	0.928	2.017	78.780			
9	0.775	1.684	80.464			
10	0.710	1.543	82.007			
11	0.635	1.380	83.387			
12	0.501	1.089	84.476			
13	0.482	1.049	85.525			
14	0.423	0.920	86.445			
15	0.407	0.885	87.330			
16	0.363	0.790	88.120			
17	0.339	0.738	88.858			
18	0.326	0.709	89.567			
19	0.302	0.657	90.224			
20	0.289	0.628	90.852			
21	0.274	0.596	91.448			
22	0.266	0.579	92.026			
23	0.264	0.573	92.599			
24	0.260	0.566	93.165			
25	0.236	0.512	93.677			
26	0.229	0.498	94.175			
27	0.216	0.469	94.644			
28	0.206	0.447	95.091			
29	0.197	0.428	95.519			
30	0.185	0.401	95.920			
31	0.166	0.361	96.281			
32	0.162	0.353	96.634			
33	0.156	0.340	96.974			
34	0.147	0.320	97.293			
35	0.143	0.312	97.605			
36	0.133	0.289	97.895			
37	0.126	0.274	98.169			
38	0.115	0.250	98.419			
39	0.112	0.243	98.663			
40	0.104	0.226	98.889			
41	0.099	0.216	99.104			
42	0.093	0.201	99.306			
43	0.088	0.191	99.497			
44	0.085	0.184	99.681			
45	0.075	0.162	99.844			
46	0.072	0.156	100.000			

Note: Extraction method: Principal component analysis
Source: Authors' own work

Table A1.
Harman's one factor test – common method bias

Appendix 2. The tax ethics vignette

The scenarios that you are about to read are hypothetical and are meant for this research only

Nimo and Kaiza have been friends. Their friendship dates to their university days when they were roommates. Nimo works with Ghana Revenue Authority (GRA), and on one occasion, led a team for tax audit at a company (Freeze Ltd). Kaiza is a senior consultant at a private tax practice firm and in charge of managing tax affairs of Freeze Ltd. Nimo and Kaiza did not disclose to their long-standing friendship to their respective superiors.

Nimo suspected that Freeze Ltd operates an undisclosed bank account. Kaiza is aware that Freeze Ltd operates a secret bank account but remained quiet when Freeze's officials denied the allegation. Nimo's team did not probe the issue further.

Nimo-led team assessed Freeze Ltd.'s tax liability as Ghc450,000. After the field audit, Nimo held a review meeting with his supervisor. At the review meeting, Nimo's supervisor said, "let the working papers reflect a tax position of GHS80,000; when Freeze Ltd is happy, we are happy as a team." Nimo complied and reviewed the working papers to reflect a tax position of GHS80,000.

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