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Research Article

Dimensions of Ethical Accounting Practices among Certified Public Accountants: An Exploratory Factor Analysis

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ABSTRACT

This research study explored and established the dimensions representing ethical accounting practices among Certified Public Accountants. The respondents were Certified Public Accountants from different sectors of the profession in Davao del Norte, of legal age and with at least two years of experience in accounting who were chosen through stratified random sampling. Responses from the Key Informant Interview were analyzed and the item statements were then used as initial statement pool for the survey. Kaiser-Meyer-Olkin (KMO) index for sampling adequacy, Bartlett's test of sphericity for testing the multidimensionality, principal component analysis for data reduction, and VARIMAX for rotation. Thirty-one (31) original items were surveyed and processed through exploratory factor analysis and only twenty-six (26) items of ethical accounting practices passed the $\geq .40$ threshold after ten iterations which loaded to eight dimensions. The identified eight generated dimensions of ethical accounting practices were moral philosophies, personal values and principles, religiosity, objectivity, reliance to authority, integrity, professional behavior and public welfare.

Keywords: *Accounting, Ethical accounting practices, Exploratory factor analysis*

Introduction

In recent years, widespread moral lapses and corporate financial scandals have brought the issue to the forefront. Compliance and ongoing unethical accounting practices have raised serious concerns across the globe. Users of accounting information no longer have as much confidence in the accounting profession

due to global debacles. Enron, WorldCom in the United States in 2001, Lehman Brothers, Cadbury, Polly Teck, Tyco, Parmalat, One Tel in Australia, MTN in and Barclay Bank in the United Kingdom, to name a few, as well as their respective external auditor, are examples of so-called "too-big-to-fail" companies that have collapsed, casting doubt on the integrity of the

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profession (Monem, 2018). Accounting professionals have been breaking accounting rules and regulations, manipulating financial data, exhibiting unprofessionalism, engaging in inventive tax and accounting fraud, and committing dishonest acts (Jackling et al., 2017).

The phrase "Ethical Accounting Practices" combines two words- Ethics and Accounting practices. The word "Ethics" has been defined by various authors from various disciplines. Ethics is a philosophical concept originating from the Greek Word "ethos," which means character or custom (Oseni 2018, p. 23). This term relates to an organization's code of moral integrity and consistent values in public service, making it pertinent to solid organizational leadership. It refers to a person's standards or values regarding what is good, right, and wrong. Because ethics in accounting is a matter of rules and principles, it is a crucial component of the profession (Devra, 2018).

On the other hand, several studies have defined accounting as a service requiring professional and ethical judgment. As per the definition by the Financial and Sustainability Reporting Standard Council, accounting is a service activity that provides quantitative information, primarily financial in nature, about economic entities that are intended to be useful in making economic decisions. There have been a significant number of corporate accounting scandals worldwide. One of which was found in the study of Diamond et al. (2019, p. 1). The study stated that the PricewaterhouseCoopers LLP (PWC) accounting firm was accused for misbehaving and breaking auditor independence laws. It was the second time the SEC had charged an accounting firm in the year after KPMG was fined for its employees' alleged alteration of prior audit work as a result of receiving stolen information about an impending Public Company Accounting Board (PCAOB) inspection of the considered as a general problem among accounting firms. The theoretical consideration for social and environmental accounting was the subject of a study by Roberts (2018, p. 32), and it was found that because ethics in accounting is such a significant component of the profession, it is a question of both rules and principles. The study of moral principles and judgment as they relate to accounting

is known as accounting ethics. It is essentially a branch of applied ethics and a business and human ethics subfield.

Furthermore, accountants are governed by the accounting profession's policies and ethical standards. They have an ethical responsibility to various stakeholders inside and outside the firm. In the study of Saat et al. (2013, p. 74), ethics is regarded as the primary requirement in accounting because of its significant contribution to societal interest and economic growth. Accounting professionals comply with ethical norms to further their careers, show fairness and honesty, uphold the public trust, to represent themselves to the public as accountants' members of organizations work to uphold or protect the profession's reputation

The literature review indicated that some questions still need to be answered as there seem to be no concrete identified factors of ethical accounting practice in the different contexts presented in this study. Therefore, this study provides further evidence to fill the gaps identified in the literature. With this, the principal investigator highlighted the need to bridge the following gaps: the lack of facture structures of ethical accounting practices and the need to develop a multidimensional framework on ethical accounting practices in Davao del Norte, Philippines.

This academic study is undertaken for its perceived importance and contributions to the literature, society, and study locale. The study envisioned that the findings might help the following beneficiaries become ethically responsible professionals. Generally, the finding of this study could address a pressing social challenge in any community. It brings awareness to a specific ethical problem in a particular location. It gives back to the area or community to help overcome the difficulties they have identified as most challenging.

Additionally, it aids in bringing people of all ideas and cultures together to support and develop a single joint effort for the welfare of all people from all backgrounds. Specifically, the study's results could mainly contribute to accountants in general as the framework would give awareness to the various factors affecting accountants' ethical practice. It will serve as an account to avoid pitfalls in practicing ethical

standards. More so, the study's findings will also bring the global community into meaningful discussion about the importance of ethics in accounting and other fields.

Likewise, the study could offer fresh insights and analysis of ethical accounting practices in business entities in light of emerging business problems and issues, especially in operations and management. The identified determinants may strengthen their policies and

code of conduct as they continue to develop their respective companies. Also, this study's results could be very relevant to the Philippine Institute of Certified Public Accountants (PICPA) as the knowledge and information generated could help them identify the gaps and use it as a basis for their programs and training offered to the members of the said organization.

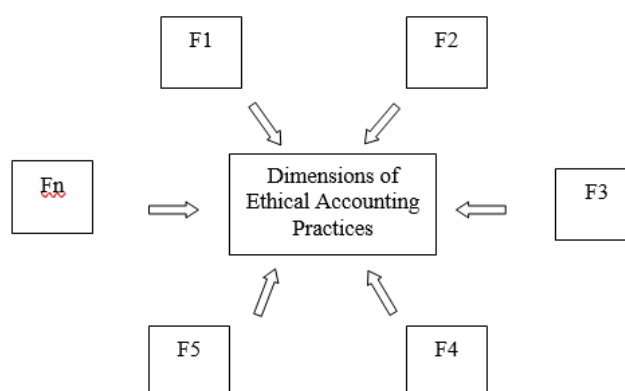


Figure 1. Conceptual Framework

Methods

Sampling and data collection

The key respondents of the study were 217 Certified Public Accountants in the Province of Davao del Norte from a total population of 475. These respondents were aptly chosen for the study since ethical accounting practices are already embedded and expected to manifest among accountants in different fields, contributing to the study's reliability and reasonableness. The respondents came from different sectors, specifically 54 from Commerce and Industry, 92 from the Government, 42 from Public Practice, and 15 from Academe. These samples will be sufficient based on the survey questionnaire's standard "n times the number of questions" (Velicer & Jackson, 1990s). However, with these numbers of samples, it is expected that the study could not generalize the ethical accounting practices of all CPAs as the study is limited only to few samples in a certain research locale. Hence, further study can be conducted expanding the locale of the study and its research sample.

Scale measurement

The study employed a two-phase scale development technique. The researcher chose four (4) people to participate in the discussion during the first phase, which involved the qualitative aspect using Key Informant Interview (KII). It was in adherence to the advice of Creswell (2013) that a qualitative study conducted within a heterogeneous group should consist of a minimum of 3 and a maximum of 15 individuals.

Results from the KII were used in extracting core ideas that were the bases for generating dimensions that could characterize accounting ethical practices. In addition, based on the conduct of the KII, thirty-one (31) items were identified for its administration using Likert Scale to assess and measure its reliability and validity. Five-point Likert scales running from (1) strongly disagree to (5) strongly agree was used on everyone item of the constructs. Scales were fit the setting of the survey.

Exploratory Factor Analysis

This study utilized a quantitative, non-experimental research design using the descriptive exploratory factor analysis technique. The non-experimental exploratory factor analysis technique is the most efficient way to extract information from large data sets (Hair et al. 1998, p. 4). Under this approach, the researcher groups associated variables in an uncontrolled, natural situation to summarize the data. In exploratory factor analysis studies, correlated variables are grouped to arrange a set of data without the use of established underlying structures. EFA is most purposeful at the beginning of a study process when the results can be utilized for hypotheses about underlying processes (Tabachnick and Fidell, 1989).

In context, this approach is most appropriate to determine and ascertain measures or dimensions of a group of variables, which in this study is the ethical accounting practices of accountants in different industries.

Results and Discussion

Measurement model

This study utilized a quantitative, non-experimental research design using the descriptive exploratory factor analysis technique. The non-experimental exploratory factor analysis technique is the most efficient way to extract information from large data sets (Hair et al.,

1998). Presented in Table 1 is the Kaiser Meyer-Olkin Measure of Sampling Adequacy and Barlett's Test of Sphericity. The Kaiser Meyer-Olkin score of .713 implies that the samples were adequate and highly correlated. Thus, factor analysis is appropriate or fit for the set of data. The Barlett's Test of Sphericity of 1265.98, the degree of freedom value of 0.9045, and a p-value of .000, which was lesser than .05 level of significance, suggest that the set of data can proceed with the factoring (Kaiser and Rice 1974) in order to identify the dimensions of ethical accounting practices among Certified Public Accountants. Furthermore, Barlett's Test of Sphericity signifies that no evidence has been found to warrant rejection of the assumption. Simply put, the presence of identified factors that influence ethical accounting practices merits the acceptance of the assumption.

Table 2 shows the dimensions of ethical accounting practices among certified public accountants after applying the rotated component matrix. Using the thematic analysis, eight dimensions were generated. From 31 original items surveyed and processed through the data reduction analysis, only 26 items of ethical accounting practices passed the ≥ 0.40 threshold after ten rotations using the principal components analysis as the extraction method and VARIMAX with Kaiser-Meyer-Olken normalization as rotation method.

Table 1. Measures of sampling Adequacy and Multidimensionality

Measurement	Value
Kaiser-Meyer-Olkin Measure of Adequacy Sampling Adequacy	0.713
Barlett's Test of Sphericity χ^2	1265.98
Degrees of freedom	465
Sig. (p-value)	.000

Table 2 shows the dimensions of ethical accounting practices among certified public accountants after applying the rotated component matrix. Using the thematic analysis, eight dimensions or observed variables were generated. From the thirty-one (31) original items surveyed and processed through the data

reduction analysis, only 26 items of ethical accounting practices passed the ≥ 0.40 threshold after ten rotations using the principal components analysis as the extraction method and VARIMAX with Kaiser-Meyer-Olken normalization as rotation method.

Table 2. Rotated Component Matrix showing the preliminary extracted dimensions

Item	Component										
	1	2	3	4	5	6	7	8	9	10	11
17	.787										
18	.666										
22	.615										
11		.737									
9		.671									
1		.502									-.476
31			.773								
19			.729								
27			.498								
20	.415		.472								
23				.728							
10				.691							
24				.550	.523						
6				.427				.424			
25					.641						
3					.632						
30						.779					
26						.723					
29						.497					
15							.811				
16					.411		.660				
21								.684			
14								.658			
4									.780		
5									.737		
8									.438		
7										.760	
13										.499	
28										.449	
12											.635
2											.583

Rotation converged in 10 iterations.

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Shown in Table 3 are the observed variables, with a threshold of ≥ 0.40 according to the views, perceptions, and understanding of Certified Public Accountants (CPA) resulting from

the extraction and retention methods that were administered during the interpretation of data gathered.

Table 3. Extracted dimensions representing the ethical accounting practices among Certified Public Accountants

Item	Extracted Dimensions	Loading
	Factor 1 – Moral Philosophies (7.32% variance)	
17	I stand firm on what I believe regardless of my age	.787
18	I adhere to the accepted accounting principles	.666

Item	Extracted Dimensions	Loading
Factor 1 – Moral Philosophies (7.32% variance)		
22	I assure to be free from any form of work conflicts in the performance of professional duties	.615
Factor 2 – Personal Values and Principles (6.583% variance)		
11	I am conscious with the familiarity threat in order to draw a line with the client	.737
1	I uphold my personal values and principles despite the pressure of the management	.671
9	I am completely aware that confidentiality should always be a top priority with or without a non-disclosure agreement	.502
Factor 3 – Religiosity (6.124% variance)		
31	I consider my loved ones as I practice ethical accounting works	.773
19	I engage in accounting in accordance with my religious beliefs	.729
27	I take into consideration the public interest in practicing my profession	.498
20	Having a strong sense of the presence of God helps me behave ethically	.472
Factor 4 – Objectivity (5.838% variance)		
23	I am being pressured by my seniors or manager to force balance an account	.728
10	Being under pressure to decide whether or not to adjust accounts may jeopardize my excellent relationships with clients	.691
24	Having less experience gives me doubt about making the right decision	.550
6	Having a personal relationship with clients affects my objectivity and decision as an accountant	.427
Factor 5 – Reliance to Authority (5.802% variance)		
25	Having knowledgeable others on the side keeps my duties on the track	.641
3	I am influenced by my manager in my ethical decision(s) since I believe he/she knows better	.632
16	I seek advice from older colleagues when an ethical dilemma arises	.411
Factor 6 – Integrity (5.506% variance)		
30	Accepting money does not affect my ethical values	.779
26	Even when receiving gifts does not affect my work ethics	.723
29	I am not being affected by the undue information received from the people with authority	.497
Factor 7 – Professional Behavior (5.438%)		
4	I maintain professionalism even though interpersonal relationships with clients are affected	.780
5	I choose professionalism over interpersonal client connections	.737
8	I maintain my professional behavior despite being irritated by clients	.438
Factor 8 – Public Welfare (5.438%)		
7	I know that accepting money from clients to alter financial figures will result in my incarceration	.760
13	Being aware that sharing a client's information with anybody, known or unknown, friends or loved ones, violates confidentiality	.499
28	I make sure that my actions never compromise the welfare of my clients	.449

Moral philosophies, the first factor, had an eigenvalue of 2.269 and explained 7.32% of the variation in ethical accounting procedures. Personal values and principles were the name of

the second component, which had 2.041 eigenvalues and a 6.583% variance share. Religiosity was the third component. With an eigenvalue of 1.899, this predicted 6.124% of the variance in

ethical accounting procedures. The fourth factor was labeled as Objectivity, which accounts for 5.838% of the variation, has an eigenvalue of 1.810. With an eigenvalue of 1.799, the fifth factor was able to explain 5.802% of the variance. Integrity, the sixth factor, was given an eigenvalue of 1.707 and a variance of 5.506%. The seventh factor was labeled professional behavior with an eigenvalue of 1.686, explaining 5.438% of the variance. Lastly, the eighth factor was labeled as public welfare, with 1.556 eigenvalues, explaining 5.438% of the variance of ethical accounting practices.

On the other hand, it is important to note that the factors identified from this analysis were from the responses and personal insights and perspectives of the different CPAs making it subjective by nature. However, this was made objective since the core ideas from the thematic

analysis was run through a software for analyzing the different factors. Other than that, these factors were supported by different body of literature from related studies.

Structural Model

Presented in Figure 2 is the multidimensional framework that encapsulates the eight dimensions of ethical accounting practices of certified public accountants in Davao del Norte. These factors are moral philosophies, personal values and principles, religiosity, objectivity, reliance on authority, integrity, professional behavior, and public welfare. These eight factors or determinants significantly influence ethical accounting practices. The framework provides a schematic illustration of the measurement tool being developed.

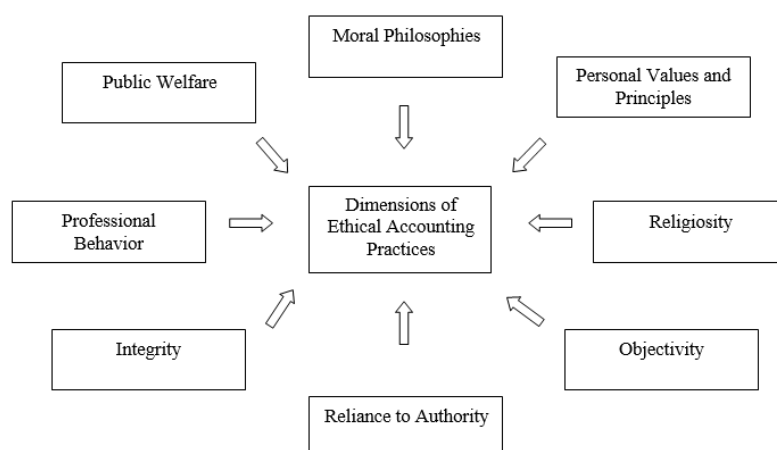


Figure 2: Structural Model

The study was able to develop eight dimensions of ethical accounting practices that aligned with the Theory of Reasoned Action by Fishbein which states that humans behave consciously and consider all available information. It implies that the primary determinant of whether someone engages in behavior is their intention to do so.

The first dimension is *Moral Philosophies*, accountants indicated that when faced with ethically contentious situations, accountants will react according to their moral philosophies, adhere to the principles of accounting, and act based on what they believe in. The results find parallelism to the assertion of Craft

(2013, pg. 16), who stressed the importance of moral philosophies in ethical decision-making. Accountants regarded this factor noteworthy as they observe ethical accounting practices. The second dimension is *Personal Values and Principles*, they substantiated this by upholding their guiding principles in dealing with ethical dilemmas that may arise in their work. This finding conforms with the study of Schmidt (2015, p.163) that concludes the influence of values on ethical behavior. Third factor, *Religiosity*, demonstrates that accountants valued the existence of Almighty God, who influences their ability to make moral judgments. The findings conform with the pronouncements of

Stichter (2020, pg. 33) that there is a constructive relationship between religion and ethical decision-making. Fourth factor was labeled as *Objectivity* which was substantiated by a mindset that enables internal auditors to complete engagements in a way that they are confident in their job and that no quality compromises are being made. These results support the claim made by Masoud and Mahbude (2013, pg. 9) that objectivity significantly affects the quality of an accountant's job. The fifth factor was labeled as *Reliance to Authority*, the result showed that accountants had emphasized the impact of relying on authority when an ethical dilemma arises. They believed that having someone in the organization to talk to greatly aids in making moral decisions and that the shared values that contain ethics impact their behavior. This idea is aligned with Friedrich et al.'s (2011, pg. 26) viewpoint that reliance on authority influences individual ethical decision-making. The sixth factor was labeled as *Integrity*, which accountants emphasized as an important aspect of the performance of any professional judgment. This speaks to the character trait of being honest and having high moral standards (William 2018, p 22). It involves not just being honest but also being fair in telling the truth. The seventh factor was labeled as *Professional Behavior*, accountants substantiated that it is important to act professionally even when misunderstandings arise with their clients. These findings agree with the pronouncements of Slavka (2017, p. 22) that professional behavior in producing quality reports is statistically and favorably significant and that ethical perceptions among internal accountants and those working for firms that offer external accounting services are proxied by this behavior and are also more forgiving of ethically delicate situations. Lastly, the eighth factor was labeled as *Public Welfare*. Accountants believed that accepting one's responsibilities to the public is a profession's defining characteristic. This dimension is in congruence with Saidu (2017, p. 125), who asserted that behavioral literature had given public welfare a lot of attention, particularly in the domain of ethical accounting procedures.

Conclusion

Compliance and ongoing unethical accounting practices have raised serious concerns due to financial scandals over the past years. These have brought questions that impeded the confidence of the financial statement users of any organization. These problems have undermined accountants' credibility and moral character, alarmed the professions, and prompted them to investigate the various causes of such. With this, this study was conducted to establish dimensions affecting the ethical accounting practices of Certified Public Accountants. The eight dimensions of ethical accounting practices developed using the exploratory factor analysis are *moral philosophies, personal values and principles, religiosity, objectivity, reliance on authority, integrity, professional behavior, and public welfare*.

In light of the above findings, researcher would like to suggest to the accounting firms/business organizations to consider the factors identified and the developed scale of the study to toughen any existing policies or strategies to ensure that their accounting practices are properly and ethically executed. The association of accountants may use the instrument or the developed framework to assess ethical accounting practices by different chapters in the country so there could be a proper intervention to be done such as action plan, specifically designed to resolve emerging unethical issues in their specific firms. This action plan highlights trainings and seminars to address contextualized needs. It is further recommended that the Institute of Certified Public Accountants consider the study's findings in designing programs, training, and activities that may raise accountants' awareness, interest, enthusiasm, and commitment to practice ethical behavior.

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