

The Influence of Knowledge, Effort and Ethical Orientation on Audit Judgment Performance

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ABSTRACT

The current study examines the relationship between ethical orientation, knowledge and effort on audit judgment performance amongst final year accounting students who are the potential future auditors of Malaysia. The research instrument was developed and self-administered to 220 Accounting students enrolled in Diploma in Accountancy and Bachelor of Accountancy in Universiti Teknologi MARA (UiTM). The study measures the ethical orientation in two dimensions - idealism and relativism. The multiple regression results show that there is a significant relationship between the respondent's knowledge and effort on audit judgment performance. However, contrary to the expectation, effort indicates significantly a negative relationship to audit judgment performance. In overall, the study reveals that the differences in one's ethical orientation are insignificant to predict their judgment in auditing context. It also suggests that different group of students show different effect of knowledge and effort on the audit judgment performance.

Keywords: Audit Judgment Performance, Ethical Orientation, Knowledge, Effort.

INTRODUCTION

A series of global corporate failures such as Satyam, 2009 in India, Lehman Brothers, 2008, Enron, 2001 in the US; Northern Rock, 2008, Barring Bank, 1995 in the UK and a series of corporate scandals in Malaysia, starting with Perwaja Steel, 1997 and up to Inix Technologies Holdings Berhad, 2010 had severely damaged public perceptions on auditors' judgment performance. The quality and reliability of audited information (Cadbury, 1992) and quality of auditors' judgments are being argued and have resulted in an erosion of the public's confidence towards the auditing profession. Audit judgments involve independent auditors' professional judgments in their audit work (Gibbins, 1984). Professional judgments reflect collective judgments in all stages of audit work which include audit planning, collection and evaluation of audit evidence and formation of audit opinion.

In order to restore public confidence in the profession and to increase the quality of audit judgment, regulators have embarked on a number of measures such as Sarbanes-Oxley Act 2002 and new auditing standards (e.g. Statement of Auditing Standard 99, 2002 and International Standard on Quality Control 1, 2006). However, despite the availability of listed laws and standards, one cannot stop to wonder if the basic requirement of those performing auditors is also associated with skills, competencies and responsibilities of each individual auditor. Indeed, the public's perception on the credibility of audited financial reporting is influenced significantly by the perceived effectiveness of external auditors in examining and reporting on financial statements. According to Watkins et al. (2004), as the quality of an audit is the product of individual auditor's judgment therefore it is affected by auditor competency. Bonner (1999) argues that audit competence is determined by certain characteristics such as ability, knowledge and experience of an individual auditor. In the past, many studies abroad provide empirical supports on the positive influence of audit competence on audit judgment performance (e.g. Tan & Libby, 1997; Taylor, 2000; Lenard, 2003; Achilles, 2006; Anandarajan et al., 2008).

Apart from the technical consideration, an ethical consideration of each auditor also plays a role in increasing the quality of audit judgment. Gaa (1994) highlighted that the auditor needs to be a technical and ethical expert while auditing financial reports. This argument is supported by the

introduction of International Education Standard (IES) 8, Competence Requirements for Audit Professionals in October 2008, by International Accounting Education Standards Board (IAESB) of IFAC. Current theoretical views maintain that an individual's moral philosophy or ethical orientation influences ethical judgments of the professionals and they include accountants (e.g. Douglas et al., 2001; Henle et al, 2005; Achilles. 2006). The views also act as a basis in understanding the ethical behaviour of an individual (Forsyth, 1992; Hunt & Vitell, 1986). However, in examining the audit judgments performance, only a few studies (Martinov & Pflugrath, 2009; Pflugrath et al., 2007) have included the variable of ethical consideration into their framework on auditors' overall audit judgment. The current study is meant to integrate both technical and ethical aspects of an auditor in performing his duties. In spite of furthering empirical research on audit competence based on Malaysian respondents, the study also provides an extensive analysis which examines the effect of ethical perspective on audit judgment performance study. The study will particularly determine how the differences in ethical orientation, knowledge level and effort of an individual could influence his or her audit judgment performance.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Knowledge and Performance

As early as 1983, accounting researchers were encouraged to focus on knowledge, environment and motivation as determinants for judging performance in accounting settings. Heeding on such advice, the researchers studied the impact of experience, knowledge and ability on accountant's judgment and decision making performance. In 1991, Ashton examined both experience and knowledge as determinants of expertise. The experiment tested auditor's knowledge of error frequencies in financial statements and the causes of these errors. The results suggest that audit experience should be task specific for expertise to influence performance. Tan and Libby (1997) tested knowledge and experience as determinants of performance using actual performance evaluations to classify experts. Their findings suggest that the difference in tacit managerial knowledge at all levels is due to knowledge gained through experience. As the auditing profession

requires more specialized industrial knowledge, Taylor (2000) examined an auditor's industrial specialization to determine the effects on assertion-level inherent risk assessments. The study shows that industrial experience aids expert development and that general experience is not indicative of successful audit judgments. Anandarajan et al., (2008) has studied the novice versus expert auditors in the going concern judgment. Their findings have identified a number of heuristics that may bias the going concern decision. They conclude that knowledge through experience mitigates the unintentional consequences played by heuristics biases. Based on the preceding discussion, the following hypothesis will be tested:

HI: Knowledge has positive relationship to audit judgment performance.

Ethical Orientation and Performance

Forsyth (1980) developed the Ethics Position Questionnaire (EPQ) to identify an individual's ethical orientation which can be described as a continuum with idealism at one end and relativism at the other. Idealism focuses on human welfare or in other words is described as a belief that desirable consequences can be achieved without violating moral guidelines. Relativism describes an individual's concern for a universal set of rules or standards. Individuals who tend to be more idealistic should not make any decision that could harm others, an outcome they tend to avoid (Forsyth, 1982). On the other hand, those who tend to be more relativistic consider the circumstances first rather than the potential harm a decision might cause. These individuals also tend to judge decisions more leniently (Elias, 2002). The EPQ instrument has been used in prior studies of practicing auditors (e.g. Chan et al., 2006; Douglas. 2001; Shaub et al, 1993) and both undergraduate and graduate students (e.g. Greenfield et al., 2008; Henle et al., 2005; Forsyth, 1980). All attest to the EPQ's validity and psychometric. From the previous results, it is shown that studies using EPQ have helped to explain a variety of decisions that individuals make in organizations. For example, Greenfield et al. (2008) found out a significant relationship between an individual's ethical orientation and decision making. Their results pointed out that an individual with a more idealistic ethical orientation will be less likely to engage in earnings management behavior but not for the individual with a relativistic ethical orientation. Achilles (2006) also used Ethics Position Questionnaire (EPQ) which takes advantage of

different criteria to describe variations in moral thought of managers and accountants in recognizing the misappropriation of assets. Her result showed that individuals who tend to have more of a relativist ethical orientation exhibit no systematic variation in their assessment of the possibility of fraud. Based on this discussion, the following hypotheses will be tested:

H2a: Idealistic ethical orientation has positive relationship to audit judgment performance.

H2b: Relativistic ethical orientation has negative relationship to audit judgment performance.

Effort and Performance

The quality of audit judgments in all stages of audit work also depends on the auditor's effort in performing their duties. Effort refers to the overall amount of effort expended in the process of studying or performing any related task (Zimmerman & Risemberg, 1997). It can be classified into two, one is a type of effort which leads to the increase of auditor's performance and the second is a type of effort which leads to the increase of auditor's learning. There are three components of effort which lead to an increase of auditor work's performance. They are effort duration, effort intensity and effort direction. A strategy development on the other hand, is the type of effort which lead to the increase of auditor's learning. The amount of cognitive effort spent on a task can be increased either through effort duration (e.g. working longer time) or effort intensity (e.g. working harder), or through both effort duration and effort intensity (Cloyd, 1997). Research evidence shows that effort makes a positive contribution to the prediction of academic performance outcome (Bouffard et al., 1995; Wentzel, 1996; Dupeyrat & Marine, 2005 as quoted in Phan, 2009). However, Phan (2009) provides no statistical significance relationship of effort on academic performance. Accordingly, the following hypothesis is proposed:

H3: Effort has positive relationship to audit judgment performance.

METHODOLOGY

Sample

The population of this study is the Accountancy students of Universiti Teknologi MARA (UiTM). The sample is comprised of three student groups who are currently pursuing their studies in (i) Diploma in Accountancy (DIA) - a 3-year program, (ii) Bachelor of Accountancy (BACC) - a 2 1/2-year program (following on from a three year DIA program) and (iii) Bachelor of Accountancy (BACC MATRIX) - a 4-year program (following on from a ministry matriculation program) in Shah Alam Main Campus. The purpose of having three different groups of students in this study is to differentiate the knowledge level among the respondents. Group 1(DIA) comprises of the students which have passed their auditing course at diploma level. Whereas for both Group 2 (BACC, 2 Vi-year program) and Group 3 (BACC, 4-year program), students selected are those who have passed their auditing course at degree level. In addition, all participants in Group 2 have undergone a six- month period of industrial training at various audit firms in Malaysia.

Data Collection

Data for the study were collected by using a convenient sampling method. The questionnaires are distributed to the three groups of students in respective classrooms. The sessions were being observed by the researcher who assisted them in answering the questionnaires. This approach was taken to increase the response rate and minimize incorrect responses due to respondents misunderstanding of some questions (Keller & Warrack, 2003). Out of 250 copies questionnaires distributed, 24 questionnaires were rejected due to incomplete responses. Another 6 respondents were dropped as they are univariate outliers. As a result, the final number of questionnaires analyzed was 220 questionnaires.

Variable and Measurement

The study uses audit judgment performance as dependent variable whereas ethical orientation, effort and knowledge act as independent variables.

Audit judgment performance (AJP)

AJP is measured through an audit case pertaining to an internal control cash receipt system developed by Sanusi (2008). The respondents need to identify substantive tests of transaction that are likely to uncover the misstatements created in the audit case. Performance is determined by the number of correct responses scored by the respondents after comparing the answers given with standard criteria. In this case, quality of work was appraised by looking at correct responses given for each audit task in the questionnaires. The more scores obtained shows the better performance of the respondents. The maximal score for the audit case was 10.

Knowledge

Knowledge is measured based on the intensity of knowledge attained by each respondent through their average score in academic performance (CGPA). The score is measured as a continuous variable from 0.00 to 4.00.

Ethical Orientation

Ethical orientation is measured by using an instrument developed by Forsyth (1980). A 20-question consisted of 10 questions each on idealism (IEO) and relativism (REO) were used to identify the respondent's ethical orientation. Responses to Forsyth's instrument was made on a seven-point scale (1=strongly disagree; 7=strongly agree).

Effort

Effort is measured by the amount of time devoted by each respondent in completing the audit task in the questionnaire. Respondents were asked to write the time they started and ended the task. The use of time duration as a proxy of effort had been used in some prior research (Sanusi & Iskandar, 2007; Libby & Lipe, 1992).

Instrumentation (The Questionnaire)

The survey instrument consisted of three primary sections. The first section contained a set of audit case with eight misstatement of internal control cash receipt system. The task requires participants to recognize the problems and apply different cues and patterns of information to the problems. Thus, this task can be considered as having a high level of task complexity (Sanusi, 2008). In the second section, a set of 20 questions of Forsyth instrument is used to identify the ethical orientation of the

respondents. Lastly, a set of questions is designed to obtain respondent's profile such as gender, age, current academic course, average score in the academic performance (CGPA) and the audit firm size category (big, medium and small audit firm) during practical training.

Data Analysis

The study examines the effects of ethical orientation, effort and knowledge on AJP by utilizing several statistics analyses. The analyses are meant to check on the validity and reliability of the measures and to test the proposed hypotheses. Analysis of data is examined using a multiple regression analysis. This type of analysis provides information about the model as a whole and also the relative contribution each variable has that makes up the model.

RESULTS

Demography of Participants

The final sample comprised of 220 respondents. The demographic data are intended to give a clear understanding of the respondents' background. Table 1 presents the summary of respondents' demographic information.

Table 1: Demography of Participants

Item	Group 1 (N=63)	Group 2 (N=84)	Group 3 (N=73)	Overall (N=220)	
	Frequency	Frequency	Frequency	Frequency	Percent
Gender:					
Male	13	6	14	33	15
Female	50	78	59	187	85
Age:					
Mean	19.4	23.1	20.6	21.2	-
Sid Deviation	0.72	1.10	0.96	3.20	-
Practical' raining (Audit Finn Placement):					
Big 4					
Medium	-	11	-	11	13
Small	-	43	-	43	51
Others	-	29	-	29	35
		1		1	1

Participants include 63 students from Group 1 (28 percent), 84 students (38 percent) from Group 2 and 73 students (33 percent) from Group 3. Out of the total respondents, there are only 33 males (15 percent) and 187 females (85 percent). This split is in line with the general trend in Malaysian universities where in the recent past, the intake of female students tends to be higher than male students. As for the age, participants for Group 1, Group 2 and Group 3 are between 19 to 21 year-old (mean value of 19.4 year-old), 21 to 26 year-old (mean value of 23.1 year-old) and 20 to 24 year-old (mean value of 20.6 year-old), respectively. Finally, as only Group 2 has undergone a period of six months practical training, majority of them (51 percent) have done it at a medium-sized audit firm, followed by 35 percent at a small-sized audit firm and only 13 percent at four, big audit firms.

Descriptive statistics

The descriptive statistics of means for measured variables is shown in Table 2. The mean value for AJP of Group 2 is the highest value which is 54 percent (std. dev. = 15.3), followed by Group 1, 52 percent (std. dev. = 14.5) and Group 3, 49 percent (std. dev. = 15.8). Results show that the AJP of Group 2 is significantly higher than Group 1 and Group 3 ($p < 0.01$).

Table 2: Means for Measured Variables

	Group 1		Group 2		Group 3		t	Overall	
	Mean	SD	Mean	SD	Mean	SD		Mean	SD
AJP	51.8	14.5	53.9	15.3	48.8	15.8	49.9	52.0	16.9
Knowledge	3.51	0.29	3.26	0.24	2.85	0.15	135.1	12.4	28.0
Effort	8.1	5.5	7.2	3.5	6.5	2.1	27.5	7.2	3.9
Idealism (IEO)	5.4	0.9	5.7	0.8	5.1	0.6	102.2	5.5	0.8
Relativism (REO)	4.8	0.9	4.9	0.9	4.7	0.6	87.8	4.7	0.8

*SD = Standard Deviation

In Table 2, Group 1 outperformed the other two groups with respect to the mean values for knowledge and effort. Scores for knowledge range from 1.00 to 4.00. The mean value for Group 1 is 3.51 (std.dev. = 0.3) while the mean value for Group 2 and Group 3 are 3.26 (std.dev. = 0.2) and 2.85 (std.dev. = 0.2), respectively. Similarly, Group 1 also has the highest mean value for effort on the audit task, which is 8.1 (std.dev. = 5.5) minutes compared to 7.2 minutes (std.dev. = 3.5) spent by Group 2 and 6.5 minutes (std.dev. = 2.1) spent by Group 3. The finding indicates that, on average, the

respondents with higher knowledge tend to spend more time in performing the audit task given in the questionnaires.

The mean values of the two dimensions of ethical orientation are obtained by averaging the respective scores of question items. Scores for these variables range from "1" (strongly disagree) to '7'* (strongly agree). The mean value for IEO of Group 2 (mean = 5.7, std.dev. = 0.8) is the highest among the three groups. As for Group 1, the IEO mean value is 5.4 (std.dev. = 0.9) which is 0.3 higher than Group 3 (mean = 5.1, std.dev. = 0.6). The mean values of REO for all the groups are almost similar, in which Group 2 is 4.9 (std.dev. = 0.9), Group I is 4.8 (std.dev. = 0.9) while Group 3 is 4.7 (std.dev. = 0.6). Overall, the mean value of IEO (mean value =5.5, std. dev. = 0.8) is 0.8 higher than the mean value of REO (mean value = 4.7, std. dev. = 0.8). Therefore, on average, all the respondents of the three groups have higher levels of IEO compared to REO, where Group 2 which represents the most matured student (mean value for age is 23.1, std. dev. 1.1) scored the highest IEO mean value which is 5.7 (std. dev. = 0.8) compared to the other two groups. This shows that more matured respondents are more concerned about human welfare.

Goodness of Data

An exploratory factor analysis is applied to understand the structure of correlations among measured variables. Table 3 shows the factor loadings for each IEO and REO with eigenvalues more than 1.0, which accounts for 62.26 percent and 64.65 percent, respectively of the total variance in the data. The Kaiser-Meyer-Olkin coefficient for these dataset is 0.80 for IEO and 0.75 for REO. The Bartlett test of Sphericity for both IEO and REO is statistically significant ($p < 0.01$). All the items in Table 3 have the factor loadings above 0.40 which are significant for a sample size between 200 and 249 (Hair et al., 2010). Thus, this indicates that the data is suitable for factor analysis.

Table 3: Factor Analysis

Item	Factor Loadings	Item	Factor Loadings
IEO 1	.716	REO 2	.642
IEO 2	.413	REO 3	.528
LEO 3	.516	REO 4	.593
IEO 4	.750	REO 5	.703
IEO 5	.819	REO 6	.691
IEO 6	.679	REO 7	.646
IEO 8	.807	REO 8	.678
IEO 10	.592	REO 9	.513
		REO 10	.451

The items were then extended for a reliability analysis. The reliability coefficient assesses the consistency of the entire scale, with Cronbach's alpha should exceed the minimum requirement of .60 (Hair et al., 2010).

Table 4: Reliability Test

Reliability coefficients	IEO	
Cronbach's Alpha	<i>M</i>	<i>Jl</i>
Standardized Item Alpha	.82	.78
N of items	8	9

Table 4 shows the statistical tests of the reliability of ethical orientation constructs. Under this study, the **IEO** scale has a Cronbach's alpha reliability coefficient of 0.80 with a standardized item alpha of 0.82. On the other hand, the REO scale has a Cronbach's alpha reliability coefficient of 0.77 with a standardized item alpha of 0.78. The values indicate that each dimension of ethical orientation scale has sufficient internal consistency.

Correlation Analysis

Table 5 describes the analysis of Pearson correlation between variables. The three variables i.e. IEO, REO and knowledge provide support for their expected direction to AJP. However, only knowledge is significantly related to AJP ($r = 0.145$, $p < 0.05$). The results show that idealism orientation will positively ($r = 0.04$) correlated with AJP. On the

other hand, relativism orientation will negatively ($r = -0.03$) associated with AJP. The results also show that knowledge is positively associated ($r = 0.15$) to AJP. On the contrary, effort shows a reverse direction from what have been expected. The analysis shows that effort is negatively significant ($r = -0.13$, $p < 0.05$) to AJP.

Table 5: Correlation Analysis

	AJP	EOI	EOR	Knowledge
DEO	.040			
REO	-.034	.354(**)		
Knowledge	.145(*)	.169(*)	-.025	
Effort	-.126(*)	.160(*)	.091	.179(**)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed)

Regression Analysis

Table 6 presents the result of regression analysis of the knowledge, IEO, REO and effort (independent variables) on AJP (dependent variable). Multicollinearity among the independent variables does not appear to be a problem as the range of tolerance value and VIF (variance inflation factor) of the variables have not violated the multicollinearity assumption suggested by Pallant (1997). The tolerance value for all the independent variables is between 0.793 and 0.981, which is not less than .10. This value is also supported by the VIF value which lies between 1.020 and 1.261, which is well below the cut-off of 10.

Based on Table 6, knowledge was found significant to AJP particularly for Group 3. Thus, the result supported H1 ($b \sim 8.69$, $p < 0.05$). Whereas, as hypothesized in H2 (a), IEO was found positively related to AJP and as hypothesized in H2(b), REO was also found negatively related to AJP. However, both variables are insignificant in predicting the AJP. Therefore, based on the results, H2(a) and H2(b) were not supported. Finally, a significant relationship was found exist between effort and AJP, particularly for Group 2. However, the relationship is negatively related to AJP, which is not as being hypothesized in H3. Therefore, H3 was not supported.

Table 6: Regression Analysis

Independent Variable	Dependent Variable: AJP					
	Group 1		Group 2		Group 3	
	Unstd. Coeff.	Std. error	Unstd. Coef.	Std. error	Unstd. Coeff.	Std. error
Constant	30.10	27.72	47.94	27.79	-27.92	38.77
Knowledge	8.69	6.63	3.14	7.26	25.09*	12.55
IEO	0.12	2.33	0.39	2.29	3.54	3.14
REO	-1.07	2.37	0.43	1.98	-4.32	3.05
Effort	-0.54	0.34	-1.20*	0.50	1.11	0.86
R²	8.7<		6.99f		10.8%	

Note: */xO.Q5(2-tailed)

DISCUSSION OF FINDINGS

Discussion of Findings

The results of this current study provide a mixed result of the variables under study. In line with past findings on knowledge-performance relationships (Libby & Luft, 1993), knowledge was found positively related to AJP. This indicates that higher knowledge contributes to higher judgment performance of an individual. Respondents in Group 2 of the study comprise of those with variety academic performance with average score of academic performances (CGPA) ranges from 2.2 to 3.2. Whereas in the other two groups (the high achievers group, i.e. those with higher academic performance), their CGPA ranges from 2.8 to 4.0. This explains the reason for having a significant relationship only in Group 3. There is also a reverse relationship between effort and judgment performance among the respondents. The finding could be explained by the fact that the audit task used to measure the AJP is already classified as a complex task. Although there is an increase in effort, it will not improve the AJP when the task is complex (Chang et al., 1997). Therefore, it is supported that although the respondents tend to spend more time on the task but still they could not perform. In other words, they failed to get the correct answers. From the analysis, the only significant relationship between effort and AJP is found in Group 2. Respondents in this group are those who have undergone the industrial training in various audit firms in Malaysia. They have been exposed to the reality of auditing duties and responsibilities. Therefore, such

experience assists them in tackling the task given in this study. It reasons out why the findings have a significant relationship only in Group 2.

From the literature, idealism and relativism have proven to be important explanatory variables for ethical decision making in many business contexts (e.g. Douglas & Wier. 2000; Forsyth, 1982). However, in this study, it is identified that the respondents were more of the idealism orientation, but it did not provide a significant effect on AJP. So, it can be concluded that while idealism may be successful in predicting ethical decision making of an individual, it appears to be not an explanatory construct in audit judgments study. Martinov and Pflugrath (2009) also found insignificant differences between the audit judgments made by participants in the ethical environment factor. However, the results of the ethical orientation level revealed that on average, our future auditors were having higher levels of idealism ethical orientation compared to relativism ethical orientation.

Study Limitations and Future Research

There are several limitations to this research. First, the external validity of this study is limited since the case contains less information than the real audit environment. In the real audit environment, much richer information influences the AJP. Second, this study includes primarily audit trainees from accounting degree students with a modest sample size. The use of auditing students must be interpreted with caution and reservation (Abdolmohammadi & Wright, 1987). Variables such as the level of expertise among the auditors may influence the performance. Future studies should attempt to replicate and elaborate using larger and more varied samples tailoring a variety of different audit task conditions. This would enhance the external validity of the findings.

Conclusion

The results of this study conclude that higher knowledge contributes to higher judgment performance. However both idealism ethical orientation and relativism ethical orientation were found insignificant to the AJP. This indicates that our future auditors are among those who are more concerned about the human welfare and benefits for others. By having more acute and precise auditors, perhaps they could reinstate public confidence in the profession and increase the quality of AJP.

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