

## Accounting Students' Ethical Awareness and Ability to Make Ethical Decisions

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Accountants, like any other occupations, need to comply with several ethics in accounting profession in order to carry out their job properly. This study is obtained by a survey method involving 256 accounting students in Indonesia. Two independent variables in this study include experience and ethical awareness level, and the dependent variable is the ability to make ethical decisions. While experience is measured based on the students' length of study, the ethical awareness level is measured based on the instruments used by Lin and Zhang (2011). The purpose of this study is to see as to whether the accounting students' learning experience and ethical awareness substantiate their ability to make ethical decisions. The results show that (1) learning experience has a positive effect on the level of ethical awareness of the students, (2) learning experience has a positive effect on their ability to make ethical decisions, and (3) there is an influence of the ethical awareness level on the ability to make ethical decisions with a moderate level of significance. Thus, the implication of this study is that intensification of the students' curricular and extracurricular activities during the learning experience is necessary to enhance their ethical awareness with which they will be better equipped to make ethical decisions.

Keywords: learning experience, ethical awareness, ethical decisions, learning, ethic

### INTRODUCTION

Audit scandals have given rise to many doubts about the auditors' ability to review financial statements. The question that may arise is whether the auditors do not know of any fraud; or they deliberately make no attempts to find out the occurrence of the fraud. Indeed, the auditor's inability to act independently is debatable. On the one hand, Chugh & Bazerman (2007) argue that the auditors have limitations in rationality (bounded rationality) so that they are unable to detect any fraud committed by the client, given their heuristic nature to simplify the problem and/or information. Indeed, people have limited awareness in accessing and perceiving information that ultimately results in the inability to make a sound decision (Bazerman & Gino, 2012; Bazerman & Sezer, 2016). On the other hand, the wealth of scholarship like that of Gendron (2002), Gendron, Suddaby, & Lam (2006), and Sharma & Sidhu (2001) argue that auditors cannot act independently due to their position and pressures from their clients so that many audit scandals should occur. The auditors' decreased ability to make ethical decisions is resulted from their decreased awareness and sensitivity to issues related to ethics (Ponemon, 1990, 1993; Shaub, 1994; Shaub, Finn, & Munter, 1993).

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Next, Cohen, Pant, & Sharp (2001) claim that the highest level of ethical awareness is shown by students of Accounting. They find out that fresh graduates of Accounting have lower level of ethical awareness; and that the professionals' level of ethical awareness is the lowest of all. The study of Cohen et al. (2001) is resonant with that of Po (Lin)nemon (1990) about the auditors with higher positions who have lower moral judgment capacity when compared with that of their subordinates. In contrast to Kohlberg's moral developmental theory (Langford & Langford, 2018), the results of these studies show that the higher the level of experience and education of a person, the lower is her/his ethical awareness.

This current study is to attest the seminal theory of moral cognition developed by Kohlberg (1971). Kohlberg quoted by Thorne, Massey, & Magnan (2003) proposed three levels of moral development, namely pre-conventional, conventional, and post-conventional. Built on Kohlberg's three-level of moral development, Jones, Massey, & Thorne (2003) state that the resolution of ethical dilemmas requires cognitive moral capacity and ethical/moral reasoning. While cognitive moral capacity is not influenced by short-term contextual factors, ethical reasoning is inextricably linked to short-term contextual factors. The study of Thorne et al. (2003), for example, shows that ethical reasoning perspective is useful to explain auditors' ethical dilemma resolution.

Further, Hannah, Avolio, & May (2011) put forward four components in ethical decision making, i.e. moral sensitivity, moral judgment, moral motivation, and moral action. Hannah et al. (2011) further state that the diversity of ethical decision making highly depends on the moral capacity possessed by each individual. It is this moral capacity that influences the individual to make judgments and respond to moral challenges. Using Rest's four-model of ethical reasoning, Chan & Leung (2006) assert that an individual with high ethical reasoning as to be able to determine the ethically right from wrong often fail to behave ethically because of her/ his low ethical sensitivity. The person is incapable of identifying ethical issues when encountering a situation.

This study, therefore, seeks to investigate the extent to which the ethical reasoning of the students in the Accounting Department of Sanata Dharma University, Indonesia, depends on their learning experience, i.e. length of study in the department. It is important to find out whether the vision and mission of the institution has been implemented in both teaching and curricular activities so as to increase the students' ethical awareness and to enable them to make ethical decisions. Given that the job of an accountant is very vulnerable to of the professional ethics' violations, it is deemed necessary that the Accounting students acquire the ability to make ethical decisions for their future carrier.

### **Purpose and Research Questions**

The purpose of this empirical study is to examine the effect of the students' learning experiences on their level of ethical awareness and their ability to make ethical decisions. This study hopes to contribute to the debate in the practical and pedagogical field of using a survey method to investigate the weight of Kohlberg's theory of moral development.

### **Hypotheses Formulation**

Research on the effect of experience on the ability to make ethical decisions has thus far shown inconclusive results. Previous studies have shown that more experienced auditors were more likely to want their clients to change their accounting treatment (e.g. Conroy, S. J., Emerson, T. L. N., & Pons, 2010; Emerson & Conroy, 2004; Uyar, Kuzey, Güngörmüş, & Alas, 2015). This means that more senior auditors will tend to be more independent of their clients than the junior auditors. On the contrary, J. Jones et al.(2003) citing the earlier studies done by Ponemon, (1993) and Thorne et al. (2003) conclude that the more experienced the auditors, the lower is her/his ethical attitudes. Meanwhile, the study of Cohen et al. (2001) shows that undergraduate students who are currently

studying have the highest ethical awareness when compared to that of the recently college graduates. The ethical awareness of the professionals is the lowest. A more current study by Cameron & O'Leary (2015) questions the effectiveness of ethical instructions for students after being given theory on moral/ethical and legal/ethical matters. Their study confirms that exposing students with practical situations may improve their ethical attitudes rather than teaching ethical codes. Still in the field of accounting education, it would seem that introducing real-world experiences that involve ethical issues has proven to be more satisfactory as shown by a number of recent studies (Deno & Flynn, 2018; Kerr, Singh, Taplin, & Lee, 2019; Taplin, Singh, Kerr, & Lee, 2018). These studies in general show that it is important to reinforce and instill students with ongoing commitment to ethical behaviour by means of exposure to various real-life situations. The more students obtain ethics training that emphasises ethical action and practice, the more able they make ethical decisions. Thus, building on the above studies, the hypotheses in this current study are as follows.

H1: The more learning experience the Accounting students have, the higher the ethical awareness they have.

H2: The more learning experience the Accounting students have, the greater they have the ability to make ethical decisions

Next, the seminal work of T. M. Jones (1991) identified three things involved in ethical decision making, namely ethical issues, moral agents, and ethical decisions. Ethical issues arise when someone's actions, done freely, can be detrimental or otherwise beneficial. Ethical decision making must be made by an organization/ individual/ moral agent when problems related to certain ethical issues occur. Here, moral agents are people (organizations) who make moral decisions even though they are not aware that in making their decisions, they involve moral issues. While ethical decisions are legally and morally acceptable to the wider community, unethical decisions are the reverse. Further studies that examined the effect of ethical awareness on the ability to make ethical decisions showed that ethical awareness had a positive effect on the ability to make ethical decisions (Cronan, Leonard, & Kreie, 2005; Haines, Street, & Haines, 2008). More recent theory on ethical decision making is proposed by (Schwartz, 2016) to fill the gap in the existing models as varied as reason, intuition, and emotion. The newer theory called "Integrated Ethical Decision Making" that bridge the oscillation between the rationalist -based pole and the non-rationalist-based pole (Schwartz, 2016). It would seem that the important element in ethical decision making is not a moral agent but an individual's recognition of the moral issues involved herein. Therefore, the ethical decisions that a person makes are greatly influenced by how s/he responds to the moral issues s/he is experiencing. Here, the higher one's ability to realize ethical issues in her/ his work, the more able s/he will be to make ethical decisions. Therefore, the third hypothesis can be formulated as follows.

H3: The higher the level of ethical awareness shown by the Accounting students, the higher their ability is in making ethical decisions.

## **METHOD**

### **Data Collection Process**

This quantitative research uses questionnaires to collect the data (Anderson & Widener, 2006; Hair et al., 2019). A survey method is conducted to the student respondents. They are the first, the second, the third, and the fourth-year students of Sanata Dharma University's Accounting Study Program in Yogyakarta, Indonesia. The sampling method is that of convenience sampling by means of distributing questionnaires to the students. A total of 350 questionnaires are distributed to the undergraduate students in the Accounting Study Program; and 293 questionnaires are responded. There are 37 questionnaires incompletely filled out, leaving with only 256 questionnaires to analyze. This research

excludes students who has spent more than 4 years from the sample to avoid bias. Thus, the amount of data obtained is 251. The table below presents the demographic details of the student respondents.

Table 1  
Students' Length of Study Shown by the Cohort Year

	Total no of students	Male	Female
Year IV	82	29	53
Year III	73	26	47
Year II	43	15	28
Year I	53	19	34

### Measuring Instrument

There are three main variables tested namely the ethical awareness variable (EA), ethical decision (ED), and experience (E) as well as four control variables namely gender, Grade Point Average (GPA), the number of Personal Development Training courses completed by the students both on and off campus. The high EA variable indicates the higher recognition of the ethical values. The ED variable is measured based on the level of ethical decision of the given case. The E variable is measured based on the student's length of study. Samples used in this study are the first to the fourth-year students. The fourth-year students' weighting is 4; third year students' weighting is 3, the second-year students' weighting is 2; and the first-year students' weighting is 1.

### Hypotheses Testing

The testing of Hypothesis 1 is done by the regression below.

#### Model 1:

$$EA_i = a + b_1E_i + b_2GEN_i + b_3GPA_i + b_4ONPDT_i + b_5OFFPDT_i + e$$

Notes:

$EA_i$  = Student Ethical Awareness i

$E_i$  = Experience shown by Year of Entry/Batch i

$GEN_i$  = Gender i

$GPA_i$  = Grade Point Average i

$ONPDT_i$  = Number of Personal Development Training on campus

$OFFPDT_i$  = Number of Personal Development Training off campus

Hypothesis 1 is accepted if  $b_1 > 0$  with a significance level of 5%.

Hypothesis 2 testing is done by regression to model 2 below.

#### Model 2:

$$ED_i = a + b_1E_i + b_2GEN_i + b_3GPA_i + b_4ONPDT_i + b_5OFFPDT_i + e$$

Notes:

$ED_i$  = Student Ethical Decision i

$E_i$  = Experience shown by Year of Entry/Batch i

$GEN_i$  = Gender i

$GPA_i$  = Grade Point Average i

$ONPDT_i$  = Number of Personal Development Training on campus

$OFFPDT_i$  = Number of Personal Development Training off campus

Hypothesis 2 is accepted if  $b_1 > 0$  with a significance level of 5%.

Hypothesis 3 testing is done by regression to model 3 below.

**Model 3:**

$$ED_i = a + b_1EA_i + b_2E_i + b_3GEN_i + b_4GPA_i + b_5ONPDT_i + b_6OFFPDT_i + e$$

Notes:

ED<sub>i</sub> = Student Ethical Decision i

EA<sub>i</sub> = Student Ethical Awareness i

E<sub>i</sub> = Experience shown by Year of Entry/Batch i

GEN<sub>i</sub> = Gender i

GPA<sub>i</sub> = Grade Point Average i

ONPDT<sub>i</sub> = Number of Personal Development Training on campus

OFFPDT = Number of Personal Development Training off campus

Hypothesis 3 is accepted if  $b_1 > 0$  with a significance level of 5%.

**FINDINGS AND DISCUSSION**

**Reliability Test and Factor Analysis**

Several attributes here measure the construct of ethical awareness and the construct of the ability to make ethical decisions. The attributes that make up the construct are tested for their reliability and validity. The reliability test results in Table II show that all variables in the study are not reliable because the values are below 7 (Hair, Jr, 2015, p. 118). This means that there are inconsistent answers to the questions that measure the research variables.

Table 2  
Reliability Test Results

No	Construct	Cronbach's alpha
1	Ethical Awareness (EA)	5.93
2	Ethical Decision (ED)	0.75

Based on the reliability test results above, the researchers decide to use factor analysis to form a new construct. Given that each question used to measure ethical awareness and ability to make ethical decisions is independent of one another, this study employs factor analysis to form the construct based on the greatest number of questions being answered. This construct is later used to measure the variables of ethical awareness and ability to make ethical decisions.

**Factor analysis to form the Ethical Awareness Variable (EA)**

The EA variables are made up from item EA1 to EA10. The first iteration results indicate that the KMO MSA has a value of 0.650 (> 0.500), meaning that the analysis process can be continued. Furthermore, based on the Anti-Image Matrices table, it appears that the MSA value for all items has a value of more than 0.500 with which no items are excluded. Based on the extraction results of the 10 items above, four factors are obtained as follows. The following items: EA1, EA5, EA7, EA8, and EA9 form Factor I. The EA3 and EA4 form Factor II. The EA2 and EA10 form Factor III. Lastly, EA6 forms Factor IV.

**Factor analysis to form the Ethical Decision Variable (ED)**

The analysis of the items that make up the ED variable includes EA1 to EA8. The results of the first iteration show that the KMO MSA has a value of 0.837 (> 0.500) with which the analysis process can be continued. Furthermore, based on the Anti-Image Matrices table, it appears that the MSA value for all items has a value of more than 0.500 so that no items are excluded.

Two factors are obtained from the extraction results of the 8 items. Factor I is constructed from ED1, ED2, ED3, ED4, ED5, ED6, and ED8, while Factor II is formed from ED7.

### Descriptive Statistics and Hypothesis Testing

The table below shows that the groups of students with the highest to lowest EA and ED averages were the student respondents of Year IV, III, I, and II.

Table 3  
Descriptive Analysis

Cohort	Total no of students	Average of EA	Average of ED
Year IV	82	17.43	22.68
Year III	73	16.92	21.99
Year II	43	16.02	20.32
Year I	53	16.85	21.81

### Testing the Effect of Experience on Ethical Awareness

To test the effect of experience on ethical awareness, a regression test using model 1 is conducted. The table below shows the results of the autocorrelation and multicollinearity tests.

Table 4  
Results of Autocorrelation and Multicollinearity

No	Test	Result
1	Autocorrelation Test (Durbin-Watson)	1.640
2	Multicollinearity Test (VIF Test)	
	1. $E_i$	1.420
	2. $GEN_i$	1.030
	3. $GPA_i$	1.667
	4. $ONPDT_i$	1.433
	5. $OFFPDT_i$	1.055

The above table shows that the Durbin-Watson test result is less than 2, hence the autocorrelation hardly occurs. Furthermore, the results of multicollinearity test show that all independent variables in Model 1 have a VIF value below 10, hence showing that multicollinearity does not occur.

Next, heteroscedasticity test is done by looking at the plot graph. The results of the test are scatterplot and show the points that are scattered randomly (see Appendix One). The result concludes that there is no heteroscedasticity in Model 1. The histogram figure and normal plot graphs (see Appendix Two) show that the data are normally distributed.

Based on the results of the conventional assumptions above, it can be concluded that the model is acceptable so that further analysis can be done. The next analysis is to do the coefficient of determination test, simultaneous influence test (F-test), and partial test (t-test). Summary of the results of the three tests is as follows.

Table 5  
Results of Determination Coefficient Test, F-test, and t-test

Test Type	Result
Adjusted R2	4.4%
F-test (Sign)	5.325 (0.006)
t-test (Sign)	3.319 (0.001)
	$GEN_i$
	-1.080 (0.281)
	$GPA_i$
	-3.241 (0.001)
	$ONPDT_i$
	-0.181 (0.857)
	$OFFPDT_i$
	-0.032 (0.618)

Table 5 also shows the results of the simultaneous influence (F-test) of 5.325 and is significant at the  $\alpha = 1\%$  level. This means that the  $E_i$ ,  $GEN_i$ ,  $GPA_i$ ,  $ONPDT_i$  and  $OFFPDT_i$  variables simultaneously affect  $E_{Ai}$ . The t test results in Table V show that the  $E_i$  variable has a positive effect. This means that hypothesis 1 is supported, i.e. the longer the students learn, the higher their ethical awareness is. Length of study and hands-on experience are important to raise students' ethical awareness. The result is comparable to the study done by Kerr et al. (2019). Role-play activities are proved useful for Accounting students in learning about ethical awareness, given the diverse students and lacks of real work placements – an opportunity that online students, by comparison, often deprived of (Kerr et al., 2019).

**Testing the Effect of Experience on the Ability to Make Ethical Decisions**

In testing the effect of experience on the ability to make ethical decisions, this study conducts a regression test on Model 2. The results of the autocorrelation and multicollinearity tests are shown in Table 6.

Table 6  
Results of Autocorrelation and Multicollinearity

No	Test	Result
1	Autocorrelation Test (Durbin-Watson)	1.041
2	Multicollinearity Test (VIF Test)	
	1. $E_i$	1.420
	2. $GEN_i$	1.030
	3. $GPA_i$	1.667
	4. $ONPDT_i$	1.433
	5. $OFFPDT_i$	1.055

The table above shows that the DW value is below 2, proving that autocorrelation does not occur. Furthermore, the results of multicollinearity test show that all independent variables in Model 2 have a VIF value below 10 so that it can be said that multicollinearity does not occur.

Next, heteroscedasticity test is done by looking at the plot graph. The results of the test are scatterplot and show points that are scattered randomly. It can be concluded here that there is no heteroscedasticity in Model 2 (see Appendix Three). The histogram and normal plot graphs also show that the data are normally distributed (see Appendix Four).

The results above conclude that the model is appropriate so that further analysis can be done. The next analysis is to find out the coefficient of determination test, simultaneous influence test (F-test), and partial test (t-test). The results of the three tests are summarized in the following table.

Table 7  
Results of Determination Coefficient Test, F-test, and t-test

Test Type	Result
Adjusted R2	5.1%
F-test (Sign)	3.703 (0.003)
t-test (Sign)	t-test (Sign)
	$GEN_i$
	$GPA_i$
	$ONPDT_i$
	$OFFPDT_i$

Shown in the table are the results of the simultaneous influence (F-test) of 3.703 which is significant at the  $\alpha = 1\%$  level. This means that the  $E_i$ ,  $GEN_i$ ,  $GPA_i$ ,  $ONPDT_i$  and  $OFFPDT_i$  variables simultaneously affect  $E_i$ . T-test results show that the  $E_i$  variable has a significant positive effect on

EDi. Thus, it supports Hypothesis 2 that the students' experience positively influences the ability to make ethical decisions. Again, the result is comparable to several existing studies with similar topics (Deno & Flynn, 2018; Fan, Woodbine, Scully, & Taplin, 2012; Kerr et al., 2019; Taplin et al., 2018).

#### **Testing the Effect of Ethical Awareness on the Ability to Make Ethical Decisions**

The testing the influence of ethical awareness on the ability to make ethical decisions is done with a regression test on Model 3. The test is carried out by examining the presence of autocorrelation, multicollinearity, heteroscedasticity, and normality. The table below presents the results of the autocorrelation and multicollinearity tests.

Table 8  
Results of Autocorrelation and Multicollinearity

No	Test	Result
1	Autocorrelation Test (Durbin-Watson)	1.135
2	Multicollinearity Test (VIF Test)	
	1. EDi	1.068
	2. Ei	1.84
	3. GENi	1.035
	4. GPAi	1.738
	5. ONPDTi	1.433
	6. OFFPDTi	1.056

As shown in the table above, the DW value is below 2. It concludes that autocorrelation hardly occurs. Furthermore, the results of multicollinearity test show that all independent variables in Model 3 have a VIF value below 10 for which reason multicollinearity does not occur.

Heteroscedasticity test is done by looking at plot graphs and test results with scatterplot showing the randomly spread points. The conclusion is that there is no heteroscedasticity in Model 3 (see Appendix Five). The histogram and normal plot graphs also show that the data are normally distributed (see Appendix Six).

Based on the results of the classical assumptions above it can be concluded that the model is suitable for further analysis. The next analysis is conducting the determination test, simultaneous influence test (F-test), and partial test (t-test). The results of the three tests are summarized in the table below.

Table 9  
Results of Determination Coefficient Test, F-test, and t-test

Test Type	Result	
Adjusted R2	6.2%	
F-test (Sign)	3.733 (0.001)	
t-test (Sign)		
	Edi	1.920 (0.056)
	Ei	2.960 (0.003)
	GENi	1.051 (0.294)
	GPAi	-2.805 (0.005)
	ONPDTi	0.990 (0.323)
	OFFPDTi	0.910 (0.364)

The table provides the results of the simultaneous influence (F-test) of 3.733 which is significant at the  $\alpha = 1\%$  level. This means that the EDi, Ei, GENi, GPAi, ONPDTi and OFFPDTi variables simultaneously influence EDi. The t test results here show that the EAI variable has a moderate effect on EDi with a significance level of 6%. The results of the Model 3 testing show consistency with that of Model 2.

Here, the students' experience positively influences their ability to make ethical decisions.



In sum, the data analysis above supports the theory of moral development from Kohlberg in that experience will increase ethical awareness and ability to make ethical decisions. Studying in the university's Accounting Department has made the students become more aware of various ethical issues. The results of this study, however, do not prove the positive effect of the students' ethical awareness on their ability to make ethical decisions. It shows that to make ethical decisions, one needs more than ethical awareness. To compare, using a smaller number of undergraduate accounting students, Chan & Leung (2006) shows that no significant relationship occurs between the students' ethical sensitivity and ethical reasoning. There may be contextual factors that might affect the students' ability in making ethical decisions to pursue further in future research. one's ability to determine what is ethically right or wrong (high ethical reasoning) does not necessarily correspond with one's ethical behaviour, given the deficiency in ethical sensitivity (Chan & Leung, 2006). The findings of this current study are consistent with the study of Chan & Leung (2006) in revealing the influence of personal factors in making ethical decisions. In this case, length of differing experiences is one of the personal factors.

### CONCLUSION

This study has shown that the learning process in the Accounting Department of Sanata Dharma University, Indonesia has succeeded in developing the students' personality and to make them increasingly sensitive to ethical issues. Despite the ethical sensitivity, the results of the study hardly show the strong influence of ethical awareness on the ability to make ethical decisions. As such, this study affirms Kohlberg's theory of moral development. It is essential for accounting students to understand ethical values in order to prepare themselves for their future career.

This study has a limitation in that the sample used is not random. Thus, it may not be considered representative of all students. This research cannot specifically identify the factors that encourage or discourage students to make ethical decisions. This gap is left here for the upcoming researchers to pick up.

Finally, based on the results of the study, there is an indication that the students received insufficient amount of opportunity in decision making. Thus, as an implication, the university's Accounting department needs to intensify the curricular and extracurricular activities that may boost students' ethical awareness with which they will be better equipped to make ethical decisions. Ethically prepared students today are but future business leaders.

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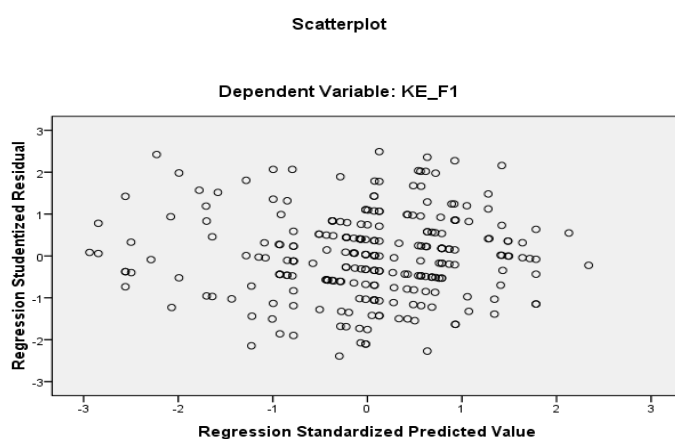
Thorne, L., Massey, D. W., & Magnan, M. (2003). Institutional Context and Auditors' Moral Reasoning: A Canada-U.S. Comparison. *Journal of Business Ethics*. <https://doi.org/10.1023/A:1023005311277>.

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## APPENDIX ONE

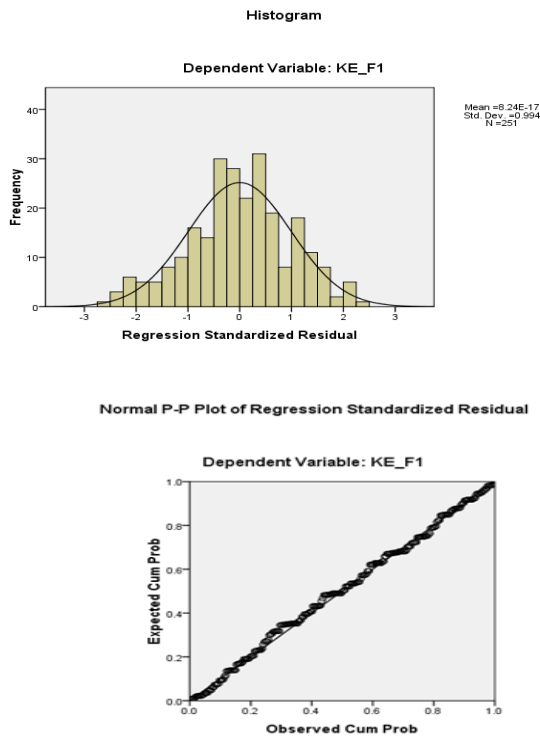
Fig. 1

Plot Graph



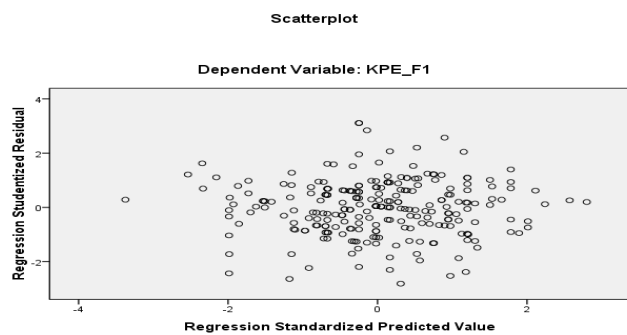
**APPENDIX TWO**

Fig. 2  
Histogram and Normal Plot Graph



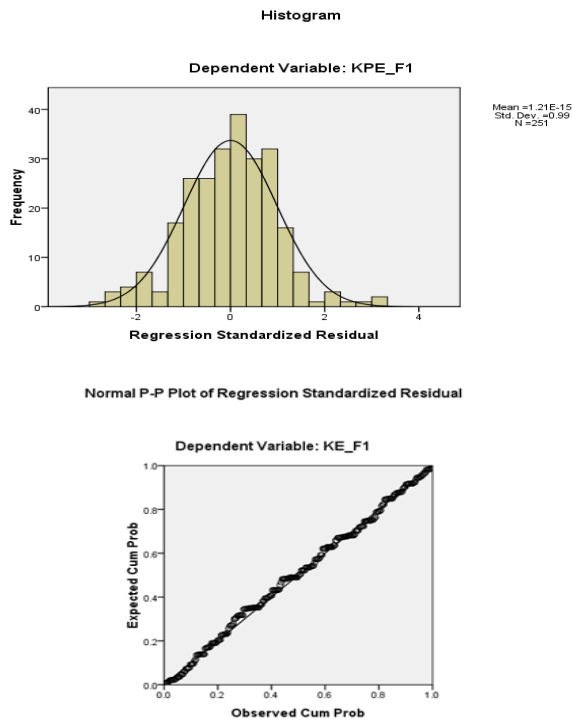
**APPENDIX THREE**

Fig. 3  
Plot Graph



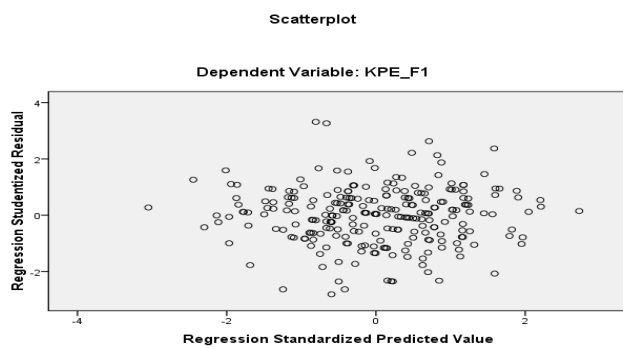
**APPENDIX FOUR**

Fig. 4.  
Histogram and Normal Plot Graph



**APPENDIX FIVE**

Fig. 5  
Plot Graph



APPENDIX SIX

Fig. 6  
Histogram dan Normal Plot Graph

