Kenny and Baron 4 Step Analysis (1986): A Case of Employee Job Satisfaction as a Mediator Between Ethical Climate and Performance among Sugarcane Transport Smes in Western Kenya

Author; Rev (Dr) Willis Otuya
Senior Lecturer of Entrepreneurship, School Of Business and Economics
University chaplain for Protestants
Masinde Muliro University of Science and technology

Abstract

Models are frequently estimated by communication researchers. Although there are many methods available for testing hypotheses about intervening variable effects, the most widely-used method is the causal steps approach popularized by Baron and Kenny (1986). This approach requires the researcher to estimate each of the paths in the model and then ascertain whether a variable functions as a mediator by seeing if certain statistical criteria are met. For example, if both a and b paths in a model are statistically significant and c' is closer to zero than c, then M is deemed a mediator of the relationship between X and Y. Some assess whether one's data meet these criteria only if there is evidence of a total effect of X (i.e., if c is statistically significant), one of the requirements of mediation outlined by Baron and Kenny. To demonstrate this analysis, three variables were used in a study conducted in Mumias Sugar Belt among Sugarcane transport SMEs. Ethical climate (X), SME performance (Y) and Employee job satisfaction (M) were fitted in Kenny and Baron (1986) step analysis model. Specifically, the study sought to; establish the mediating effect of employee job satisfaction on the relationship between ethical treatment towards employees and enterprise performance. The study was guided by the stakeholder theory and a conceptual model of the same theory aimed at assessing business/stakeholder relationships. Correlational survey design was adopted for the study. The study population was made up of, 1,000 Cane Haulage MSE employees, yielding a sample size of 100n. The employees were selected using simple random techniques. Questionnaires were used to obtain data from employees. Frequencies were used to show distribution of responses. Correlations and regression analysis were used to assess associations between: ethical treatment towards employees and enterprise performance. They were also used to assess the mediating effect of employee satisfaction on the relationship between ethical business practices and enterprise performance. Pearson correlations revealed that good work safety facilities positively correlated with employee loyalty. Similarly, the correlations showed that job security negatively correlated with employee loyalty. On the other hand, logistic regression results showed that job security negatively affected employee loyalty. Pearson correlations further revealed that job security positively correlated with handling of employees. On the other hand, logistic regression indicated that there was no relationship between job security and handling of employees. Logistic regression analysis revealed that the way employees are handled inconsistently mediated the relationship between job security and loyalty to company. The study recommended that cane transport companies should increase job security for employees.

Introduction

Understanding communication processes is the goal of most communication researchers. An example includes the rise of structural equation modeling (SEM), which allows investigators to examine how well a process model that links some focal variable X to some outcome Y through one or more intervening pathways fits the observed data, Andrew F. Hayes (2012).
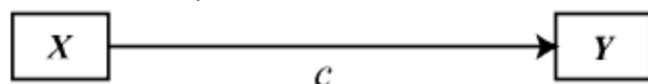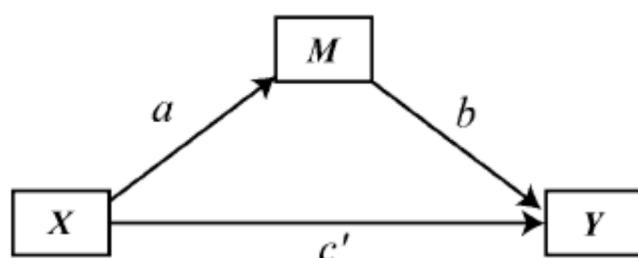

Figure A

Figure B: Four path model

In an intervening variable model, variable X is postulated to exert an effect on an outcome variable Y through one or more intervening variables, sometimes called mediators as shown in the figure above. Given a sample of data, X's total effect on Y, denoted in Figure A as *c*, can be represented in a number of ways, such as an OLS regression coefficient in standardized or unstandardized form, or as *a* path coefficient from a maximum likelihood-based method such as structural equation modeling. This total effect, interpreted as the expected amount by which two cases that differ by one unit on X are expected to differ on Y, may come to be through a variety of forces both direct and indirect. Figure B represents a number of possibilities, although of course there are many others one could imagine. Figure B is the simplest form of all intervening variable models. In this model, *a* is the coefficient for X in a model predicting M from X, and *b* and *c'* are the coefficients in a model predicting Y from both M and X, respectively. In the language of path analysis, *c'* quantifies the direct effect of X, whereas the product of *a* and *b* quantifies the indirect effect of X on Y through M. If all three variables are observed, then $c = c' + ab$ (in latent variable models or models of dichotomous outcomes, this will not always be true). Simple algebra shows that the indirect effect, *ab*, is just the difference between the total and direct effect of X: $ab = c - c'$. The indirect effect is interpreted as the amount by which two cases who differ by one unit on X are expected to differ on Y through X's effect on M, which in turn affects Y. The direct effect is interpreted as the part of the effect of X on Y that is independent of the pathway through M.

Tetralink tailor and associates (2009) in a rare study on customer and employee satisfaction in the sugar industry in Kenya used Kenya Sugar Board employees as respondents and obtained a high satisfaction index of 72%. These studies however failed to link cane haulage MSE employees to the satisfaction assessed and how their levels of satisfaction can affect organizational performance. More so, not much is provided to depict the mediating role of employee satisfaction on the relationship between stakeholder ethical uptakes and enterprise performance. Tetralink tailor and associates (2009) fails to apply Kenny and Baron (1986) path analysis in his study. This sets the stage for a study to assess the possibility that employee satisfaction (M) can mediate the relationship of ethical treatment (X) to stakeholders on cane haulage MSE enterprise performance (Y) in the trouble-ridden Mumias Sugar Belt.

METHODOLOGY
The study population
Kombo & Delmo (2006), referred to a study population as a group of individuals from which samples were taken for measurement. Uma (2003) refers to population as the entire group of people of interest that the researcher wishes to investigate.

In this regard, the study population for this study comprised of the key stakeholders in the sugar industry who were likely to be affected by cane haulage services. These included 1000 employees of cane haulage MSEs in Mumias Sugar Belt.

Determination and allocation of sample sizes
A sample size decision model developed by Krejcie and Morgan (1970) was used to determine the sample size of 100 key respondents from a population of 1000 employees.

90 employees filled and returned the questionnaires. This translates to 90% response rate way above the 72% response recommended by John and Niel (1998).

Model specification
The study was multivariate with a mediating variable calling for a mediation model. The single mediator model utilized in the study is shown in figure 3.1. Where the variables X (ethical treatments to customers and employees), M (customer and employee satisfaction) and Y (enterprise performance) are in triangles and the arrows represent relations among the variables.
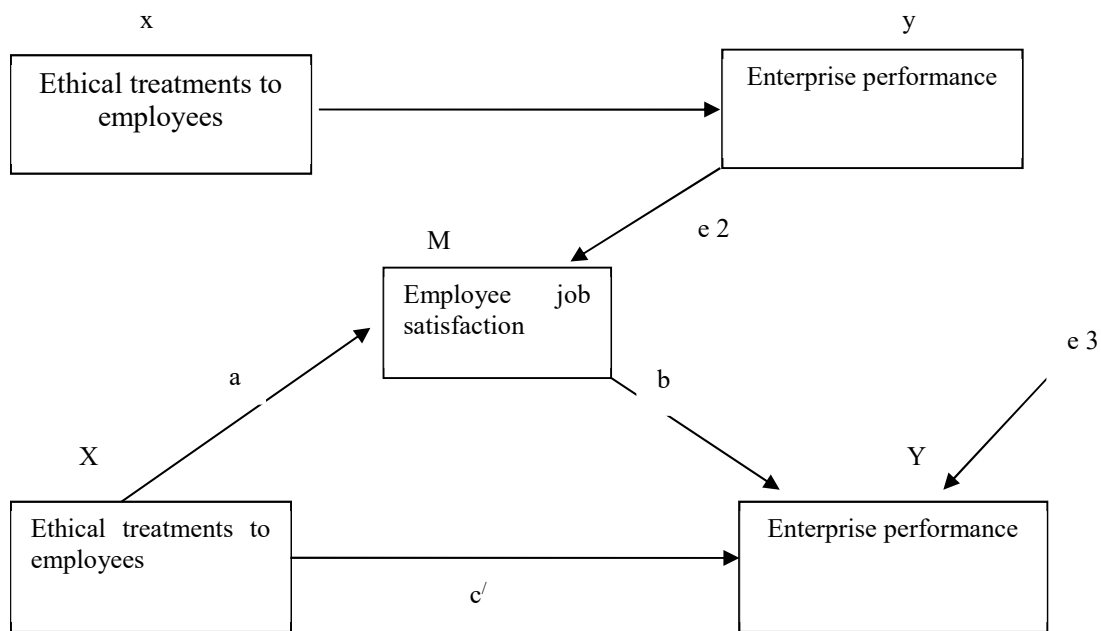
Figure C: Kenny and Barron (1986)

c = the relation of X to Y

a = the relation of X to M,

b = the relation of M to Y adjusted for X

$c^{/}$ = the relation of X to Y adjusted for M.

The symbols e 2 and e 3 represent residuals respectively. The model effect seeks to show that there is a direct effect relating X to Y and a mediated effect by which X indirectly affects Y through M.

The model equations recommended for the study are as follows:

$$Y= i_1 + cX + e_1 \dots\dots\dots\dots\dots ..... \quad (1.0)$$

$$Y=i_2 + c´X + bm + e_2 \dots\dots\dots \quad (1.1)$$

$$M= i_3 + ax + e_3 \dots\dots\dots\dots\dots \quad (1.2)$$

Where i_1, i_2 and i_3 are intercepts, X (ethical treatments to customers and employees is the independent variable), Y(enterprise performance is the dependent variable), M (customer and employee satisfaction) is the mediator, c is the coefficient relating the independent variable and the dependent variable, c´ is the coefficient relating the independent variable to the dependent variable adjusted for the mediator, b is the coefficient relating the mediator to the dependent variable adjusted for the independent variable, a is the coefficient relating the independent variable to the mediator and e_1, e_2 and e_3 are residuals. The widely used method to assess mediation is the causal steps approach outlined in the classic work of Barron and Kenny (1986) which this study adopted.

Four steps involved in the Kenny and Barron (1986) approach to establishing mediation are as follows:

Step 1

Shows that the initial value is correlated with the outcome. Y is used as the criterion variable in a regression equation and X a predictor (it estimates and tests path C). This step establishes that there is an effect that may be mediated.

Step 2

Shows that the initial variable is correlated with the mediator. M is used as the criterion variable in a regression equation and X a predictor (it estimates and tests path a). This step essentially involves treating the mediator as if it were outcome variable.

Step 3

Shows that the mediator affects the outcome variable in a regression equation and X and M as predictors (it estimates and tests path b) it is not sufficient just to correlate the mediator with the outcome, the mediator and the outcome may be correlated because they are both caused by the initial variable X. Thus the initial variable must be controlled in establishing the effect of the mediator on the outcome.

Step 4

To establish that M completely mediates the X-Y relationship, the effects of X on Y controlling for M (path c) should be Zero. This means that after the mediator is entered in the regression model, the relationship between the independent and dependent variables should either disappear (full mediation) or significantly diminish (partial mediation) Barron and Kenny (1986). The effects in both steps 3 and 4 are estimated in the same equation.

However, Kenny and Bolger (2003) argue that not all the steps have to be fulfilled for there to be mediation. Mackinnon, Fairchild and Fritz (2007) refer to this scenario as inconsistent mediation. Inconsistent mediation takes place if coefficients of c′ (direct effect) were opposite in sign to *ab* (indirect effect). In this case, the mediator acted like a suppressor variable. This explains why some steps in the model are not met yet mediation is still reported. Kenny et al (1986) also explains that with inconsistent mediation, sometime the direct effect is even larger than the total effect.

The amount of reduction in the effect of X on Y due to M was not equivalent to either the change in variance explained or the change in an inferential statistic such as F or P value. Mackinon et al (2007) argued that it is possible for the F from the initial variable to the outcome variable to decrease dramatically even when the mediator has no correlations hence the way to measure mediation was the indirect effect. If step two (the test of A) and step three (the test of B) were met, it followed that there was a reduction in the effect of X on Y. One way to test the null hypothesis that ab = 0 was to test that both paths a and b were zero; (steps two and three). In concurrence with recommendations by Fritz, Taylor and Mackinon (2012) this test was incorporated in other tests.

Indirect effect is the amount of mediation. Indirect effect equals the reduction of the effect of the initial variable on the outcome or:

$$ab = c - c' \quad .... (1.3)$$

ab is the measure of the amount of mediation. Total effect equals direct effect plus indirect effect or:

$$c = c' + ab \quad ....(1.4)$$

Full mediation would be obtained if the percentage of the total effect mediated is above 80%. Partial mediation would be obtained if the percentage of the total effects mediated is less than 80%. Inconsistent mediation would be obtained if direct effects is opposite in sign to indirect effect.

FINDINGS AND DISCUSSIONS
Frequency distributions
Ethical treatment towards employees (X)

Ethical treatment towards employees was assessed based on employee perspective in order to address the third study objective. This assisted in answering whether the content of ethical treatment towards employees had a relationship with enterprise performance. Information in this section was based on the following ethical treatment indicators; employees on good pension scheme, employees with full support to join trade union, employees promoted since they joined current employer, employees with good work safety facilities, employees with competitive salary package, employees with good job security, employers give local community preference during employment, employees' gender balance during recruitment, employers solve financial problems beyond employees salary, and employers' sponsor employees for further training

Table 1: Frequencies of Responses on Ethical Treatment Towards Employees

Statement		SD	D	N	A	SA	TOTAL
Employees on good pension scheme	F	61	26	0	12	1	100
	%	61.0	26.0	0.0	12.0	1.0	100
Employees with full support to join Trade Union	F	30	48	5	13	4	100
	%	30.0	48.0	5.0	13.0	4.0	100
Employees promoted since they joined current Employer	F	43	36	0	11	10	100
	%	43.0	36.0	0.0	11.0	10.0	100
Employees with good work Safety Facilities	F	13	66	0	8	13	100
	%	13.0	66.0	0.0	8.0	13.0	100
Employees with competitive Salary Package	F	66	27	0	6	1	100
	%	66.0	27.0	0.0	6.0	1.0	100
Employees with good job Security	F	42	25	2	25	6	100
	%	42.0	25.0	2.0	25.0	6.0	100
Employers give local Community Preference during employment	F	48	39	0	12	1	100
	%	48.0	39.0	0.0	12.0	1.0	100
Employees Gender balance during recruitment	F	56	39	1	4	0	100
	%	56.0	39.0	1.0	4.0	0.0	100
Employers solve financial problems beyond Employees salary	F	56	29	0	10	5	100
	%	56.0	29.0	0.0	10.0	5.0	100
Employers sponsor employees for further training	F	68	32	0	0	0	100
	%	68.0	32.0	0.0	0.0	0.0	100

Source: Survey Data

The responses were analyzed on a five-point Likert scale, that is, "Strongly Disagree" (SD), "Disagree" (D), "Neutral" (N), "Agree" (A), and "Strongly Agree" (SA) with values 1, 2, 3, 4, and 5, respectively as reported in

Table 1

When asked about their level of agreement on pension scheme enrolment, 61% (61) respondents strongly disagreed, 26% (26) disagreed, none was neutral, 12% (12) agreed while only 1% (1) strongly agreed to be a contributor in a pension scheme. On the question of being supported to join trade unions by the employer, 30% (30) strongly disagreed, 48% (48) disagreed, 5% (5) were neutral, 13% (13) were in agreement while only 4% (4) strongly agreed. When asked if they had been promoted, 43% (43) strongly disagreed, 36% (36) disagreed, none was neutral, 8% (8) agreed and 13% (13) strongly agreed to having been promoted. when asked about their work safety, 13% (13) strongly disagreed, 66% (66) disagreed, none was neutral, 8% (8) agreed and 13% (13) strongly agreed to having work safety facilities. On the question of having a competitive salary package, 66% (66) strongly disagreed, 27% (27) agreed, none was neutral, 6% (6) agreed, while only 1% (1) strongly agreed to having good salary package. When asked about job related security, 42% (42) strongly disagreed, 25% (25) disagreed, 2% (2) were neutral, 25% (25) agreed while only 6% (6) strongly agreed to having job security. When asked if employers give local community preference during employment, 48% (48) strongly disagreed, 39% (39) disagreed, 1% (1) was neutral, 4% (4) agreed while none strongly agreed. On the question of gender balance during employment, 56% (56) strongly disagreed that there was gender balance, 39% (39) disagreed, 1% (1) was neutral, 4% (4) agreed and none strongly agreed. When respondents were asked if their employers solve their financial problems, 56% (56) strongly disagreed, 29% (29) disagreed, none was neutral, 10% (10) agreed that their employers solve their financial problems while only 5% (5) strongly agreed. When they were asked if their employers sponsor them for further studies, 68% (68) strongly disagreed, 32% (32) disagreed, none was neutral, none agreed and none strongly agreed.

It can be observed from table 1 that majority of the employees of the cane transport companies seemed to disagree with all the statements regarding ethical treatment towards employees by the employer. This can be interpreted to mean that in the opinion of employees, cane transport employers did not treat them well.

Employees perspective of enterprise performance (Y)

The perception of employees on enterprise performance was based on objective three, to assess whether the content of ethical treatment towards employees had a relationship with employees' perceived enterprise performance. The indicator information consisted of; employees' perception on their companies' reputation on farmers and other stakeholders, employees do not leave the company to seek employment elsewhere, employees committed to their work, employees' perception on their company's public image, employees' perception on their company's customers' happiness as well as employees perception on loyalty to their cane transport companies. A five-point Likert scale was utilized in capturing the response which included "Strongly Disagree" (SD), "Disagree" (D), "Neutral" (N), "Agree" (A), and "Strongly Agree" (SA) with corresponding values of 1, 2, 3, 4, and 5, respectively. The results were displayed in table 2

Table 2: Response Frequencies of Employee Perception on Enterprise Performance

Statement		SD	D	N	A	SA	TOTAL
Employees' perception on their companies reputation on farmers and other stakeholders	F	40	39	9	11	1	100
	%	40.0	39.0	9.0	11.0	1.0	100
Employees do not leave the company to seek employment elsewhere	F	2	14	3	56	25	100
	%	2.0	14.0	3.0	56.0	25.0	100
Employees committed to their work	F	50	39	4	7	0	100
	%	50.0	39.0	4.0	7.0	0.0	100
Employees' perception on their company's public image	F	20	59	18	2	1	100
	%	20.0	59.0	18.0	2.0	1.0	100
Employees' perception on their company's Customers happiness	F	31	36	26	4	3	100
	%	31.0	36.0	26.0	4.0	3.0	100
Employees' perception on loyalty to their companies	F	36	31	17	15	1	100
	%	35.0	31.0	17.0	15.0	1.0	100

Source: Survey Data

When employees were asked about their level of agreement with their company's reputation, 40% (40) strongly disagreed that their company had a good reputation. 39% (39) disagreed, 9% (9) were neutral, 11% (11) agreed while only 1% (1) strongly agreed. When they were asked if employees do not leave the company to seek employment elsewhere, 2% (2) strongly disagreed, 14% (14) disagreed, 3% (3) were neutral, 56% (56) agreed while 25% (25) strongly agreed. When respondents were asked if employees were committed to their work, 50% (50) strongly disagreed, 39% (39) disagreed, 4% (4) were neutral, 7% (7) agreed and none strongly agreed. On the question of public image, 20% (20) strongly disagreed that the company had good public image, 59% (59) disagreed that the company had good public image, 18% (18) remained neutral, 2% (2) agreed while only 1% (1) strongly agreed. On the question of customer happiness with the company, 31% (31) strongly disagreed, 36% (36)

disagreed, 26% (26) were neutral, 4% (4) agreed while only 3% (3) strongly agreed that customers were happy with the company. When asked about their loyalty to the company, 36% (36) strongly disagreed with the statement that they were loyal to the company, 31% (31) disagreed, 17% (17) remained neutral, 15% (15) agreed that they were loyal to the company while only 1% (1) agreed to be loyal to their company.

In Table 2, it was observed that majority of the respondents were in disagreement in their opinion on enterprise performance apart from the opinion on the indicator that employees do not leave the company to seek employment elsewhere. It could explain why farmers were dissatisfied with employee conduct lending credence to the possibility that employees benefit from illegal cane trade. Perhaps an observation on this indicator could be that although they were not treated well by the employer, there was still a window for them to benefit from illegal cane trade hence their decision to remain with the employer.

Employees job satisfaction indicators (M)

Several indicators on employee's job satisfaction were used to assess whether the content of job satisfaction had a mediating role between ethical treatment towards employees and employees' perceived enterprise performance. These indicators consisted of perceived; friendliness of co-workers, way in which the company takes care of employees complains, salary and amount of work done, praise for job well done, working conditions, the way in which employer handles employees, recognition for work done, and chances of advancement. All responses were derived from a five-point Likert scale which entailed "Strongly Disagree" (SD), "Disagree" (D), "Neutral" (N), "Agree" (A), and "Strongly Agree" (SA) having corresponding values of 1, 2, 3, 4, and 5, respectively. The results were recorded in table 3.

Table 3: Response frequencies of employees job satisfaction

Statement		SD	D	N	A	SA	TOTAL
Friendliness of co-workers	F	3	1	3	46	47	100
	%	3.0	1.0	3.0	46.0	47.0	100
Way in which the company takes care of employees complains	F	15	44	23	17	1	100
	%	15.0	44.0	23.0	17.0	1.0	100
Salary and amount of work done	F	34	59	5	2	0	100
	%	34.0	59.0	5.0	2.0	0.0	100
Praise for job well done	F	5	24	24	46	1	100
	%	5.0	24.0	24.0	46.0	1.0	100
Working conditions	F	24	48	15	13	0	100
	%	24.0	48.0	15.0	13.0	0.0	100
Way in which employer handles employees	F	7	36	36	21	0	100
	%	7.0	36.0	36.0	21.0	0.0	100
Recognition for the work done	F	11	49	14	26	0	100
	%	11.0	49.0	14.0	26.0	0.0	100
Chances of advancement	F	36	36	21	7	0	100
	%	36.0	36.0	21.0	7.0	0.0	100

Source: Survey Data

When respondents were asked to rate their satisfaction with friendliness of co-workers, 3% (3) were strongly dissatisfied, 1% (1) was dissatisfied, 3% (3) were neutral, 46% (46) agreed and 47% (47) strongly agreed to satisfaction with fellow workers friendliness. On the question of satisfaction with the way the company takes care of its employees, 15% (15) strongly disagreed, 44% (44) disagreed, 23% (23) were neutral, 17% (17) agreed and only 1% (1) strongly agreed. When asked if they were satisfied with salary and amount of work done, 34% (34) strongly disagreed, 59% (59) disagreed, 5% (5) were neutral, 2% (2) agreed and none strongly agreed. When they were asked if they receive praise for work done, 5% (5) strongly disagreed, 24% (24) disagreed, 24% (24) were neutral, 46% (46) agreed and only 1% (1) strongly agreed. When they were asked if they were satisfied with working conditions, 24% (24) strongly disagreed, 48% (48) disagreed, 15% (15) were neutral, 13% (13) agreed and none strongly agreed. When respondents were asked if they were satisfied with the way employer handles employees, 7% (7) expressed strong dissatisfaction, 36% (36) disagreed, 36% (36) were neutral, 21% (21) agreed and none strongly agreed. On the question of recognition for good work done, 11% (11) expressed strong disagreement, 49% (49) disagreed, 14% (14) were neutral, 26% (26) agreed and none strongly agreed. When asked about their satisfaction with chances of advancement, 36% (36) strongly disagreed, 36% (36) disagreed, 21% (21) were neutral, 7% (7) agreed that they had chances of advancement and none strongly agreed.

It was observed among indicators of employees' job satisfaction in Table 3 that most employees had positive opinion about friendliness of co-workers and receiving praise for a job well done. On the other hand, majority

were negative about the way the company takes care of employees complains, salary and amount of work done, working conditions, way in which employer handles employees, recognition for the work done, and chances of advancement. This could explain the fact that employees hardly have issues with each other. The bone of contention is usually with their employer. It explains why employees were satisfied with fellow employees and dissatisfied with their employer. The satisfaction level of employees sharply varies with findings of Tetralink (2009) who obtained a high satisfaction index for employees of Kenya Sugar Board. The variance could be explained by the fact that Tetralink (2009) investigated job satisfaction levels of employees of a different stakeholder in the sugar industry.

Hypotheses testing

H$_{01}$: Ethical Treatment towards Employees has no Effect on Enterprise Performance (Path C)

To test this hypothesis, frequencies, Pearson correlations and the binary logistic regression models were used to establish whether there was a relationship between the ethical treatment towards employees (independent variables) and enterprise performance factors (dependent variables). Results were reported in the foregoing tables. The Tables display frequencies, Pearson correlations between ethical treatment towards employees' factors and enterprise performance factors, and logistic regression for step 1 of Kenny and Barron (1986).

Pearson correlations of ethical treatment towards employees and enterprise performance.

Correlations between ethical treatment to employee factors and enterprise performance factors were obtained to ascertain the degree to which the variables were related and results displayed in Table 4.

Table 4: Pearson Correlation of Ethical Treatment Factors and Enterprise Performance Factors (p-value)

Employee Ethical Factor	Enterprise Performance Indicators					
	EPEP1	EPEP2	EPEP3	EPEP4	EPEP5	EPEP6
ETE2	-0.167	0.151	-0.124	-0.08	-0.124	-0.125
	(0.097)	(0.133)	(0.218)	(0.431)	(0.218)	(0.216)
ETE4	-0.190	0.062	0.045	-0.091	-0.141	0.225
	(0.058)	(0.540)	(0.655)	(0.370)	(0.160)	(0.024)**
ETE6	0.019	0.159	-0.099	0.009	-0.099	0.293
	(0.854)	(0.113)	(0.326)	(0.93)	(0.326)	(0.003)**
ETE7	-0.051	-0.040	0.01	-0.068	-0.106	-0.006
	(0.613)	(0.691)	(0.918)	(0.502)	(0.294)	(0.949)

** P-value < 0.05

Key

EPEP6 employees' loyalty to transport company

ETE4 very good work safety facilities

ETE6 employer cannot sack easily

Source: Survey Data

In Table 4 there were two indicators of ethical treatment towards employees, that is, employees with good work safety facilities (ETE4) and employees with good job security (ETE6) that had a significant relationship with the enterprise performance indicator; employee's perception on loyalty to their companies (EPEP6). ETE4 was positively correlated with EPEP6; r= 0.225, (p< 0.05). This means that when work safety improved at the work place, employee loyalty to their companies also increased. This is a linear relationship. ETE6 similarly had a positive correlation with EPEP6; r= 0.293, (p<0.05). This means that when the possibility of being sacked by the employer went down, the employees loyalty to their company increased. This relationship is also linear. Though the correlations are weak both ETE4 and ETE6 were positively associated with EPEP6. This offers preliminary rejection to hypothesis H2$_{01.}$ The true nature of the relationship was explored in the foregoing logistic regression analysis. Consequently, logistic regression models through Barron's steps were fitted to ascertain whether indeed there was a significant relation between the dependent variable (enterprise performance indicator i.e. EPEP6) and each of the independent variables (indicators of ethical treatment towards employees i.e. ETE4 and ETE6). The results of step 1 of the four steps of Kenny and Baron (1986) were displayed in Table 5 and figure D

Table 5 displays step 1 of the four mediation steps of Kenny and Barron (1986)

Table 5: Step 1 of Baron & Kenny Steps of Mediation.

Step	Regression and path(s) tested	Predictor	Outcome	Unstandardized coefficient B	Standardized coefficient Beta	95% CI LL	LU	P value	Effect size	Power analysis
1	c	ETE6	EPEP6	0.232	-0.293	-0.384	-0.080	0.003**	d=-0.655	0.14

Pvalue <0.05**

Key
EPEP6 employee loyalty to transport company
ETE6 employer cannot sack easily
Source: Survey study

According to Table 5, Step 1 of Barron & Kenny (1986) passed B = 0.232, (P< 0.05). This suggests that there was evidence that employees with good job security (ETE6) were statistically related to employees loyalty to enterprise (EPEP6). This confirms that when job security was improved at the work place, employee loyalty to their company also increased. This is a linear relationship. Consequently, the null hypothesis; H2$_{01}$ was rejected, and the alternative accepted. This means that employee's job security positively influenced employee's loyalty to enterprise.

This output is consistent with a study conducted by Gillman (2003); which indicated that ethically responsible enterprises particularly with respect to employees have enjoyed business success, customer loyalty and able to attract good loyal employees, and better financial performance. In relation to this finding, Gillman (2003); also opines that when it comes to ethical disclosures, enterprises interested in obtaining good results must provide employees with a safe working environment. Findings of this study also concur with a study by Narvan and Joseph (2003); which opines that whenever ethics is well established in the enterprise with respect to employees, this would contribute positively to management's health and stability.

H$_{02}$: Ethical treatment towards employees has no effect on job satisfaction (Path a)
This subsection ascertains the validity of the second step involved in the Kenny and Baron (1986) on whether there was any significant relation between the independent variable(s) and the hypothesized mediating variable(s). Frequencies for employee job satisfaction are displayed in table 6 before being used for Pearson correlations and logistic regression with ethical treatment factors.
Pearson correlations between employee ethical factor and job satisfaction factor.
Table 6 presents the results from cross tabulation to assess the correlation between employee ethical factors and job satisfaction factors assessed by employees. Those variables that were significantly related in Table 3 were used with job satisfaction indicators identified in Table 6 below. The Table displays Pearson correlations between employee ethical factors and job satisfaction factors.

Table 6: Pearson Correlation of ethical treatment to employees factors and job satisfaction factors (p-value)

Employee Ethical Factor	Job Satisfaction Factor						
	EJS2	EJS3	EJS4	EJS5	EJS6	EJS7	EJS8
ETE4	7.109 (0.927)	7.302 (0.544)	12.922 (0.353)	13.732 (0.079)	5.866 (0.746)	6.520 (0.678)	9.428 (0.335)
ETE6	18.040 (0.340)	9.780 (0.747)	15.746 (0.597)	10.014 (0.574)	18.571 (0.046)**	12.262 (0.348)	7.343 (0.870)

** P-value < 0.05

Key
ETE6   employer cannot sack easily
EJS6   the way boss handles employees
Source: Survey Data

Table 6 suggested that there was a significant positive association between Employees with good job security; ETE6 and way employer handles employees, EJS6; r = 18.571(p<0.05). This implies that when employee's job security increased, employees became more satisfied with the way they were handled. This is a linear relationship. The true nature of the relationship was explored in the foregoing logistic regression models which were fitted to ascertain whether indeed there was a significant relationship between the dependent variable; ETE 6, employees with good job security and mediating variable EJS 6, satisfaction with the way the employer handles employees. The results were displayed in Table 7 to show the logistic regression output for step 2 of Kenny and Baron (1986)

Table 7 displays path a of the four mediation steps of Kenny and Barron (1986)

Table 7: Path a of Baron & Kenny steps

Step	Regression and path(s) tested	Predictor	Outcome	Unstandardized coefficient B	Standardized coefficient Beta	95% CI LL	LU	P value	Effect size	Power analysis
2	a	ETE6	EJS6	-0.117	-0.133	-0.292	0.058	0.186**	d=-0.288	0.86

Source; Researcher   P-value <0.05**

Key
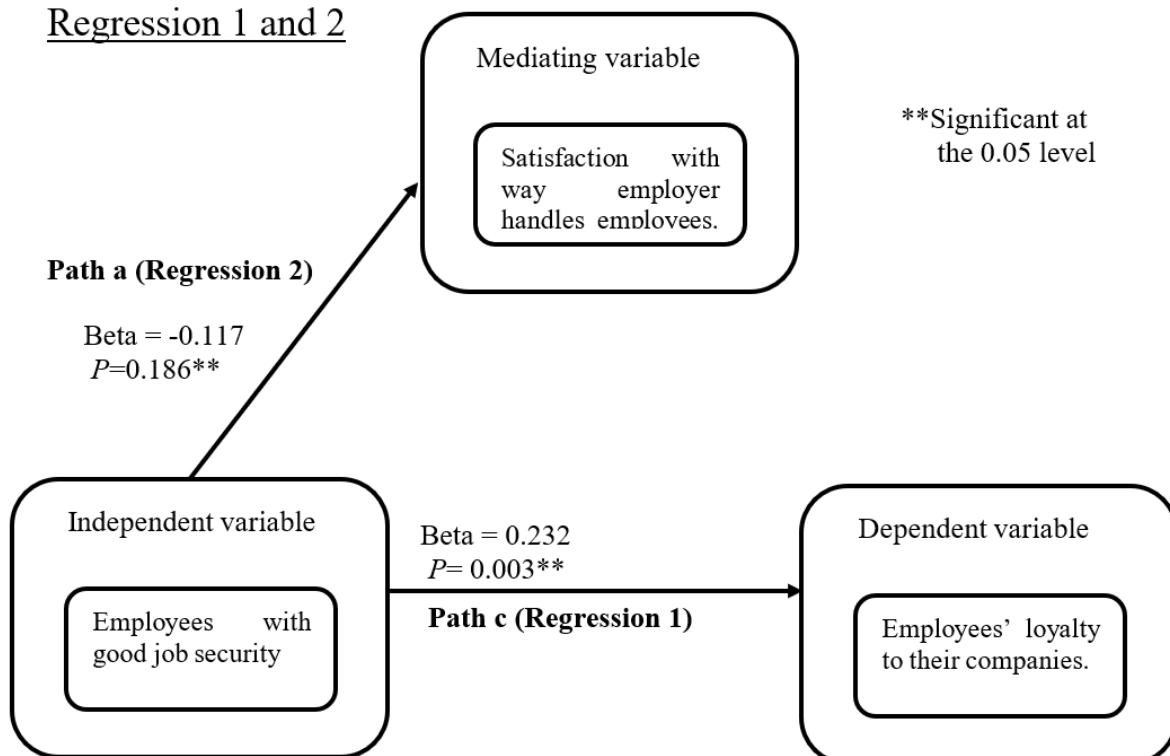ETE6   employer cannot sack easily
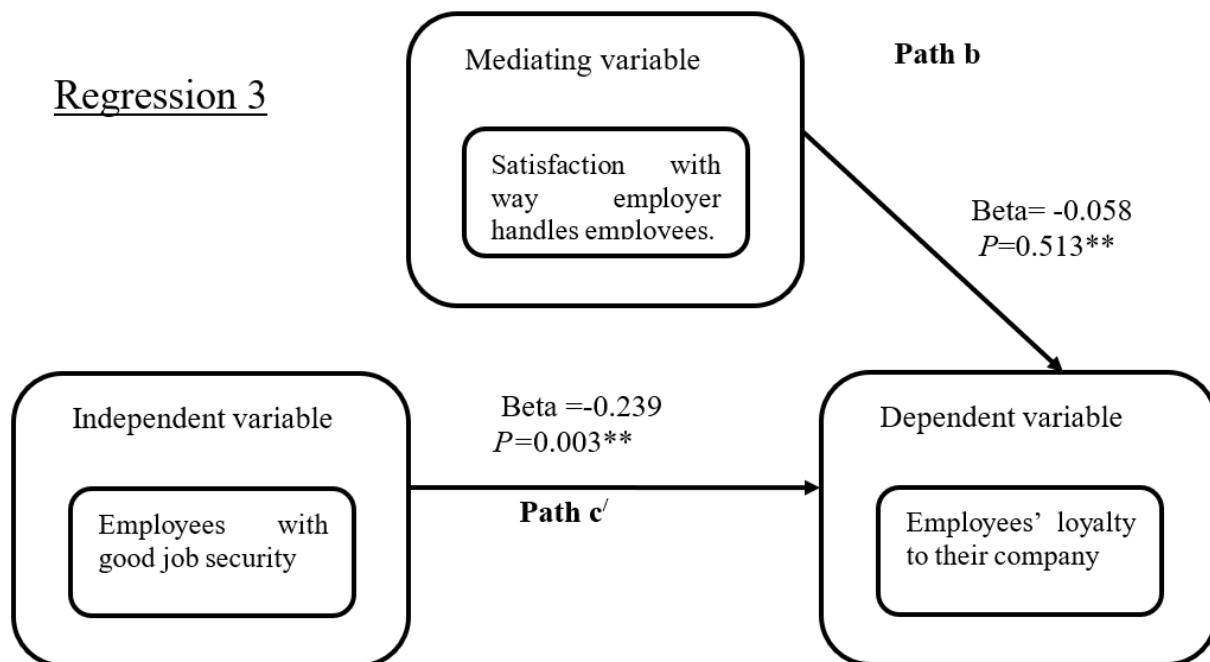EJS6   the way boss handles employees
Source: Survey Data

According to table 7 and figure D step 2 of Baron and Kenny (1986) did not pass B = -0.117, (p>0.05). Consequently, $H2_{02}$ was accepted and the alternative rejected. This suggests that there was no evidence that employees with good job security influenced satisfaction with the way employers handle their employees.

This finding is inconsistent with a number of studies on organizational situations cited by Kol and Boo (2001); ethical practices were reported to lead to positive job attributes and outcomes. In other words, employees who perceive their organizations to be ethical are also likely to perceive their organizations as being fair to them, this intern is likely to enhance job satisfaction, hence organizational ethics and job satisfaction expected to be positively linked.

H_{03}: Employee job satisfaction has no mediating effect on the relationship between ethical treatment towards employees and enterprise performance. (Path b and c')

To test whether the mediating variable significantly mediated the relationship between the independent variable and the dependent variable, variables ETE6, EJS6 and EPEP6 were used in the regression model where ETE6, EJS6, and EPEP6 were indicators representing employees with good job security, way employer handles employees, and employees' perception on loyalty to their companies, respectively. These relationships are displayed in figure D, Table 8 and table 9. While step 3 of Barron and Kenny (1986) in Table 2 did not pass, step 4 of Barron and Kenny (1986) passed B = -0.232, (P>0.05) and B = -0.392, (P< 0.05) respectively.

Regression 1 and 2

Mediating variable
Satisfaction with way employer handles employees.

**Significant at the 0.05 level

Path a (Regression 2)
Beta = -0.117
$P=0.186$**

Independent variable
Employees with good job security

Beta = 0.232
$P= 0.003$**
Path c (Regression 1)

Dependent variable
Employees' loyalty to their companies.

Source: Research analysis

Figure D: Diagrammatic representation of the four-step regression for employees with good job security, way employer handles employees and employees' loyalty to their companies

Table 8 displays the four mediation steps of Kenny and Barron (1986)

Table 8: Four steps of Baron & Kenny (1986)										
Step	**Regression and path(s) tested**	**Predictor**	**Outcome**	**Unstandardized coefficient B**	**Standardized coefficient Beta**	**95% CI**		**P value**	**Effect size**	**Power analysis**
						LL	**LU**			
1	c	ETE6	EPEP6	-0.232	-0.293	-0.384	-0.080	0.003	d=-0.655	0.14
2	a	ETE6	EJS6	-0.117	-0.133	-0.292	0.058	0.186	d=-0.288	0.86
3	b	EJS6	EPEP6	0.232	-0.064	-0.232	0.117	0.513	r=0.067	0.85
4	c/	ETE6 ↑ EJS6	EPEP6	-0.392	-0.301	-0.392	-0.085	0.003	d=-0.672	0.85

P-value<0.05**

Key

ETE6   employer cannot sack easily

EJS6   the way boss handles employees

EPEP6   employee loyalty to transport company

Source: Survey Data

Table 9 displays the bootstrap outputs of the mediation model

Table 9: Bootstrap Results for Mediation Model for Employee Ethical Factor, Satisfaction and Performance.					
Bootstrap results for indirect Effect	Standard error	CI 95%		Effect size	Total % mediated
		LL	UL		
0.007	0.014	-0.010	0.052	(d*r)0.019	0.000

N = 100 employees, Bootstrap sample size = 3,000 trials,   LL = Lower Limit, UL = Upper Limit

Source: Survey Data

The direct effect of ethical treatment to employees; employees with good job security to employees loyalty to company was B = -0.232, (P<0.05). But since step 3 and 4 measured indirect effects, the bootstrap results reported in Table 4.20 estimated path **ab** to be B=0.007, (P>0.05) with a small effect size (d*r = 0.019) and a standard error of 0.014. Since the coefficients of path c/ is negative in sign (-0.232) to the indirect effect (path **ab**) 0.007 as presented in figure D it was concluded that satisfaction with the way employer handled employees had an inconsistent mediating effect on the relationship between employees with good job security and employees

loyalty to their companies. This means that although mediation is detected, it cannot easily be quantifiable due to its inconsistent appearance. Consequently, $H2_{03}$ was rejected and the alternative accepted.

This finding is partially consistent with a similar study by Ramswami and Singh (2003) which reported that treating employees with dignity and compensating them fairly determines their level of job satisfaction which in turn determines organizational performance. Similarly findings of this study are partially in agreement with a study conducted by Jones and Wicks (1999); on the normative approach to stakeholder theory. Their study revealed that paying attention to demands of stakeholders enhances their level of satisfaction which leads to enhanced output showing that stakeholder satisfaction plays a mediating role. On the contrary their study agreed that an organization that exploits its employees or pollutes the environment adversely reduces employee satisfaction which brings down their loyalty, thus balancing stakeholder interests by delivery value to multiple stakeholders may have a stronger, positive impact on marketing outcomes.

On the basis of these findings, it is concluded that employee satisfaction provided an inconsistent mediation between ethical treatment towards employees and enterprise performance.

References

Andrew F. Hayes (2012): Beyong Baron and Kenny : statistical mediation analysis in the new millenium

Fritz MS, Mackinnon DP, (2007), Required sample size to detect the mediated effect, PubMed USA.

Gillman, M. (2012). *AS-AD in the Standard Dynamic Neoclassical Model: Business Cycles and Growth Trends*. Cardiff Economics working papers E2012/12, Cardiff University, Cardiff Business school, Economics section. Unpublished works.

John Niel (1998) , The Paradox of Success, TarcherPerigee

Kenny , D.A. ,Bolger and Korchmaros, J.D. (2003) Lower Level Mediation in multilevel models.   Psychological methods, 8, 115-128.

Kenny, D.A. & Baron, R.M. (1986). The moderator-mediator variable distinction in   social   psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology, 51*(1), 1173-1182.

Koh, H.C., & Boo, E.H.Y. (2001). The Link Between Organizational Ethics and Job Satisfaction; A Study of Managers in Singapore. *Journal of Business Ethics*, 29(4), 309-324.

Kombo, K.D., & Delmo, L.A.T. (2006). *Proposal and Thesis Writing*: Africa, Pauline Publications, ISBN 0831493719.

Krejcie and morgan (2003), Determining sample size for research activities.

MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology, 58, 593-614*

Navran, J., & Joseph, J. (2003). Eye on ethics: reprinted from training magazine http://www.ethics.org/resources/article_detail.cfm?ID=837

Tetralink, T., & Associates East Africa. (2009). *External customer satisfaction survey.* Kenya Sugar Board. (unpublished).

Uma, S. (2003). *Fourth Edition Research Methods for Business: A Skill Building Approach*. (Asia) John Wiley & sons Pte Ltd.