

Research article

Effect of university course on career path and subsequent job satisfaction: A survey of graduates in Nairobi County, Kenya.

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Abstract

This paper investigates the relationship between university course and an individual's career path. It seeks to find out job satisfaction as a result of these two variables. That is whether one is satisfied in their present area of employment, or simply the career path they are on and also if this particular area of employment is related to the university course pursued.

The data used in this study was collected in the context of a case study of the Graduates in regular employment and graduate trainees randomly selected in Nairobi County. A multiple regression model was fitted to the data to investigate the effects of the independent variables on job satisfaction. A single measure/index of job satisfaction was calculated and used as the dependent variable.

It was found that the graduate trainees and graduates in regular employment expressed satisfaction in their current areas of work or career paths. It was also found that the university course and one's career path had a strong correlation but these two factors were not adequate predictors of job satisfaction for the graduate trainees and the graduates in regular employment. **Copyright © www.acascipub.com, all rights reserved.**

Keywords: Career Path, Graduate, Regression Model, Trainee, Correlation

1.0 Introduction

1.1 Definitions

This research is geared towards investigating graduate trainees and graduates in regular employment on the courses they undertook in university and the career paths they are pursuing and if the career path they are on gives them a sense of job satisfaction. This study is important because most university graduates have already a

predetermined job market that they want to get absorbed into. By seeking graduates information on the courses they pursued in the various universities we can determine whether the courses they undertook majorly played a role in their initial or current field of work. More so, are they content in their current placement and would they be willing to continue with the job or do they have prospects of looking for other jobs elsewhere and in different fields. Our interest in this particular study is to study the market flexibility in absorbing different individuals with different degrees in different disciplines, and to measure how satisfied they are in the training programs and current jobs.

A trainees is commonly known as an individual taking part in a trainee program or a graduate program within a company after having graduated from university or college. Trainee programs and graduate programs are arranged by private companies and public sector employers where the trainee is offered the possibility to take part in training programs for a particular period of time. During the duration of these programs the trainee works under normal conditions as any other employee, including benefits. In some companies, some trainees are there after taken into full-time employment after the training period.

A graduate trainee can therefore be referred to as a graduate degree holder in any particular discipline(s) undergoing through a structured training program with the aim of acquiring employment skills or exposure in an organization.

Regular employment has been used in this study to refer to normal salaried employment either in private or in public institutions. Graduates apply for the various positions which could have been advertised in the dailies, websites or any other media to bring to their attention the availability of a vacant position. Some other graduates drop their curriculum vitae at the various organizations and are contacted in case of any vacancies relevant to them. The term graduate in this study will be used in general to refer to both the graduate trainees and the graduates in regular employment.

According to (Thompson & F.T.T, 2012) Job satisfaction on the other hand is how content an individual is with his or her job. Job satisfaction can either be affective job satisfaction or cognitive job satisfaction. Affective job satisfaction is the extent of pleasurable emotional feelings individuals have about their jobs overall. Whereas cognitive job satisfaction is the extent of individual satisfaction with particular facets of their jobs, such as pay, working hours and many other numerous aspects of their jobs.

(Statistics, 2009) Nairobi is the capital city of Kenya and the capital of Nairobi province and of the Nairobi district. It is the most populous city in East Africa with about 3 million people in the 696km² area according to 2009 census. It is the 12th largest city in Africa and the one of the most prominent cities in Africa financially. It is home to thousands of Kenyan businesses and over 100 major international companies and organizations. The city is centred on the city square, which is located in the central business district (CBD). This is why it is a suitable location for the study to be undertaken.

This research mainly focuses on affective job satisfaction among the graduate trainees and graduates in regular employment in Nairobi County in their respective areas of work as pertains to the university degrees they pursued.

1.2 Background of the Study

Out of all children in Kenya, about 85 percent attend primary school. 75 percent of these children who complete primary education proceed to secondary schools and 60 percent of those who complete secondary school proceed to higher institutions of education which include business and vocational institutions, national polytechnics, public and private universities within the country. There are a number of universities in Kenya, 14 and counting which are public and 24 which are private. The public universities have constituent colleges but these universities combined are not sufficient to absorb all the students who have completed high school and attained at least a mean grade of C+ , this is one of the reasons why we have over 950,000 Kenyans who have furthered their education abroad.

In 2011, over 118,000 students who sat for KCSE qualified to gain admission after scoring a C+ which is the minimum entry point in Kenya. The number of students who join universities annually is estimated to have increased from around 91,541 to 140,000 according to (Kenya economic survey, 2011). Research also shows that over 10,000 graduates are released into the market annually and of these students, only a couple could be absorbed via regular employment intake into the various organizations.

For those who get absorbed into the universities either public or private, they pursue different courses usually offered by the institution and graduate after a specified period on successful completion. After the graduation, the graduates then set out to seek employment using the various papers acquired in their education. The lucky ones get absorbed into the job market very fast while for others it takes a bit longer. Others opt to go into self-employment as the exercise of searching for a job can be a little frustrating. There are a group of others who take the option of being taken into the organizations as graduate trainees and may be work their way up the corporate ladder. They are trained in the various trades of the business while enjoying some benefits.

1.3 Statement of the problem

There is an increasing rate of unemployment among graduates which leads to more graduates settling for the option of being accepted into the organizations as graduate trainees. These graduate trainees are either absorbed into departments which relate to the university courses or into completely unrelated departments. Also the graduates absorbed in regular employment also seem to settle for any department they are assigned, be it related to the university course or not, provided a job opportunity presents itself. Getting absorbed into departments different from the course they pursued in university would inhibit them from exhibiting the skills they gained and their full ability in their area of expertise. The graduates in regular employment and graduate trainees may have a hard time coping with having to learn the trades of a different area of specialization than the area they are specialized in. Adapting to this career path would take a lot more effort from them as opposed to if they were taken into the department related to their area of study.

In many websites, social or otherwise, it is observed that there is an increased demand for graduate trainees as regards to demand for normal employment into the organizations. This is because the amount of regular employment opportunities in the job market are very limited which sees graduates applying even for jobs out of their area of expertise. The graduates may be open to being absorbed into any department that the organization deems fit but it is important for employers to seek to synchronize the selection of the department they post their graduate trainees and regular employment graduates to, with the courses that they pursued in university.

This will be more prone to produce more motivated workers as they will be able to apply themselves and their abilities and skills more naturally and easily leading to a better performing workforce.

This research will hence try to find out if the universities course the graduate trainees and graduates in regular employment in Nairobi County affected the career path they are currently on and how satisfied are they in their current field and department of employment.

1.4 Research Objectives

1. To find out if the course one studies in university affects their career path and do they find job satisfaction in the career they pursue.
2. To find out the market flexibility in absorbing the university graduates who pursued the different courses into the diverse fields available.
3. To find out the reason as to why some the graduates opted to be absorbed into the various organizations as trainees.

1.5 Hypothesis

The research identifies the following hypotheses;

Ho: The course one studies in university affects their career path and subsequent job satisfaction in the career path they undertake.

Ho: The market is flexible in absorbing the university graduates who pursue the different courses into the diverse fields.

1.6 Significance of the Study

This study is important because it is common belief among many employers that once a person has successfully completed university education they are regarded as easily trainable and hence can be absorbed into any department of an organization. This study will hence mostly benefit employers to make more calculated decisions in selecting the best suited individuals for different job positions.

The results of this research bring to light whether the university course the graduates undertook played a role in the career paths they are on and are these individuals satisfied in their current placements. Better job placement, which will be a benefit of this research, will in turn produce a more productive employee body which will be effective in working toward the organizations goals and objectives.

This also leads towards general national growth because better performing organizations lead to a better performing economy which will be a step in the right direction with regards to achieving Kenya's vision 2030.

1.7 Limitations of the Study

1. There is no defined way of identifying the graduate trainees and the graduates in regular employment. This hence brings about a lot of asking around, since they are selected randomly, before finally finding one. This makes getting responses to the questionnaires a challenge.
2. The graduate trainees and the graduates in regular employment almost always tend to be busy hence they have little time to spare to respond to the questionnaires.
3. The budget that we were supposed to work with was not adequate for the research and also there was limited time for carrying out the research.
4. Job satisfaction cannot be substantively measured because it is a relative measure.

1.8 Assumptions of the Study

- This study assumes that the graduates had a passion for the university course they pursued and that they acquired all the relevant required skills in that course.

- The career path they were aspiring to be on while in university is directly related to their university courses.

2.0 Literature Review

2.1 Prior Research on Job Satisfaction

Job satisfaction is simply how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs (Spector, 1997). According to Webster's Dictionary (1986), job satisfaction refers to how well a job provides fulfillment of a need or want, or how well it serves as a source or means of enjoyment. Job satisfaction is considered a strong predictor of overall individual well-being (Diaz-Serrano, 2005) as well as a good predictor of intentions or decisions of employees to leave a job (Gazioglu, 2002)

(SP, 1998), stated that job satisfaction is an important aspect for every employee in any organization. Also, the level of job satisfaction among all personnel is crucial. This is because it may affect performance and employee retention. He went on to say that the primary determinants of job satisfaction are the intrinsic aspects of the job; that is the work the employees or trainees do or the way they as the personnel are used. Other factors such as workload, physical conditions, and career aspirations of individuals also have a significant effect on job satisfaction which tends to vary from country to country depending on job-culture fit.

According to (Chimanikire, 2007) high job satisfaction of 80% has been recorded among Americans while low job satisfaction 14% has been recorded among the Japanese because the Japanese assign workers to jobs despite their interests whereas Americans look at the worker personality and preferences.

(Baron, 2003) Identified one of the factors that led to workers holding positive and negative perceptions of their jobs as 'The work itself' and (Robbins, 2003) went ahead to define "the work itself" as the extent to which the job provides the individual with stimulating tasks, opportunities for learning and personal growth, and the chance to be responsible and accountable for results. He continued to show that employees prefer jobs that present them with opportunities to execute their competencies on a variety of tasks and that are mentally stimulating. They employees would thus prefer a job that is interesting, challenging and one that would create opportunities for self-actualization and recognition.

Additionally (Arnold, 1996) stated that the work itself plays a critical role in determining how satisfied a worker is with his or her job. Research conducted by (Vitell, 1990) which involved employees in a management information system environment, found a statistically significant relationship between job satisfaction and the dimension of work itself. Results from other studies conducted indicate that a dimension such as the work itself can result in either job satisfaction or dissatisfaction (Oshagbemi, 1997)

(Maslow, 1954) In his hierarchy of needs theory introduces the concept of self-actualization. Self-actualization is the last level the hierarchy of needs thus it is found at the top of the pyramid and can be typically defined as the full realization of one's full potential. The satisfaction of self-actualization in the workplace is enhanced by creating opportunities for promotion, allowing autonomy, providing challenging assignments and even more importantly, optimal utilization of individual's ability.

(Chimanikire, 2007), used the F-Statistic to find the relationship between job satisfaction and job security and also job satisfaction and the level of utilization of skills of the different individuals. He used Cross-tabulations to relate job satisfaction and the levels of skills utilization. In his research of factors affecting job satisfaction among academic professionals in tertiary institutions in Zimbabwe, they found that only 29% of respondents who indicated that their skills were highly utilized were satisfied with their jobs whilst 71% were not. However the level of utilization of skills and job security variables were not significant at the 5% level, indicating no significant association with job satisfaction.

(Iaffaldano, 1985), extensively analyzed the relationship between job performance and job satisfaction. Across their many studies, they found a mean correlation of 0.17 between the two variables which thus means that they are weakly correlated. However, in another model the relationship was stated to be a reciprocal one; this was supported by the research of (Wanous, 1974). The underlying theory of this reciprocal model is that if the satisfaction is extrinsic, that is where workers consider the conditions of work such as pay, then satisfaction leads to performance, but if the satisfaction is intrinsic, a case where workers consider only the kind of work they do, then the performance leads to satisfaction. Further research by industrial psychologists moved to show that the relationship between job satisfaction and job performance is not justifiable, although it was found that a positive mood is related to higher levels of job performance and job satisfaction.

It also seems to be a common assumption that employees, who are happy with their job, should also be more productive at work (Spector, 1997). It has been hypothesized that if above average Performance is rewarded on the job, then the correlation between job satisfaction and job performance would be higher (Jacobs, 1977).

Looking at job satisfaction with regards to personality, research reflects that many different personality factors have been correlated to job satisfaction. On a report linking traits from the 5-factor model to job satisfaction, neuroticism, extraversion, openness, experience, agreeableness and conscientiousness were identified as the 5 personality traits. On a selected sample, the estimated multiple correlation of job satisfaction with these traits of 0.41 was found. This indicates support of the relationship between personality and job satisfaction.

Although job satisfaction emerged as an indicator of job quality, proposed by the European Council in 2001, (Fernández Macías, 2003) made a conclusion that there is little or no correlation between job satisfaction and job quality. Job satisfaction has no apparent relevant relation to other objective indicators of job quality, which makes this indicator of little adequacy for evaluating job quality'

In any organization, the personnel need to feel certain about their future in their current areas of employment. Determining job satisfaction is relative but it is for sure that job satisfaction breeds organizational commitment which is a feeling of dedication to one's employing organization, willingness to work hard for that employer, and the intent to remain with that organization (Allen, 1990). Employees are regarded as committed to an organization if they willingly continue their association with the organization and devote considerable effort to achieving organizational goals (Raju, 1994). These authors argue that the high levels of effort exerted by employees with high levels of organizational commitment would lead to higher levels of performance and effectiveness at both the individual and the organizational level. More specifically organizational commitment can be understood as a predictor of job satisfaction. (LaLopa, 1997), added to the previous statement by stating that job satisfaction is a significant predictor of organizational commitment.

(Ting, 1997) Found that clarity of tasks led to greater job satisfaction. It is hence expected that greater role clarity will create employees who are more satisfied with and involved in their work. (Weisman, 1981) Found that age was also a strong predictor of job satisfaction in that, satisfaction and commitment increases with age and decreases with education. The importance of training in developing committed employees cannot be ignored. Training generates a feeling of belonging among employees.

Job satisfaction is found to be either directly ((Netemeyer, 1990)or indirectly (Brown, 1993)related to turnover intentions. Turnover intentions in this context can be taken as a measurement of whether a business' employees plan to leave their positions. Job satisfaction can influence a variety of important attitudes, intentions and behaviours of an employee

The previous studies mostly focus on the satisfaction of employees employed on permanent basis whether full time or part time in their different jobs. This research indulged both them and the graduate trainees on the basis of how they are satisfied by the type of department or line of employment they are engaged in in their various areas of work as opposed to what they studied in their respective universities. From the prior studies by (Raju, 1994) the employees express a feeling of willingness to continue being associated with the organization; and this is considered to be a sign of job satisfaction.

3.0 Materials and Method

3.1 Multiple regressions

3.1.1 Introduction

The research model found befitting for this study is multiple regressions. Multiple regressions is a statistical technique that allows us to predict someone's score on one variable on the basis of their scores on several other variables. The general purpose of multiple is to learn more about the relationship between several independent or predictor variables and a dependent or criterion variable. It assumes linearity that is that the relationship between variables is linear. In practice this assumption can virtually never be confirmed; fortunately, multiple regression procedures are not greatly affected by minor deviations from this assumption.

Under the normality assumption, it is assumed that in multiple regression that the residuals (predicted minus observed values) are distributed normally (i.e., follow the normal distribution). The major conceptual limitation of all regression techniques is that you can only ascertain relationships, but never be sure about underlying causal mechanism. For example, you would find a strong positive relationship (correlation) between the university course done and the career path taken but we do not conclude that the career path is as a result of the university course pursued. In real correlation research, alternative causal explanations are often not considered.

Suppose we have a variable of interest, y , which is 'driven by' some other variable x . We then call y the dependent variable and x the independent variable. In addition, suppose that the relationship between y and x is basically linear, but is inexact: besides its determination by x , y it has a random component, e_0 , which we call the 'disturbance' or 'error'.

Multiple regression analysis takes into account the inter-correlations among all variables involved. This method also takes into account the correlations among the predictor scores (Cohen, 2002). (Sekaran, 2000) States that multiple regression analysis for more than one predictor is jointly regressed against the criterion variable. This method is used to determine if the independent variables will explain the variance in job satisfaction.

Using multiple regressions and assuming linearity, the equation is

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e$$

Where:-

The Y variable can be expressed in terms of a constant β_0 and a slope β_1 times the X variable. In this case the X_1 variable will be university course pursued, and the X_2 variable will be career path. Y will be job satisfaction. The constant β_0 is also referred to as the intercept, and the slope as the regression coefficient or B coefficient.

We will however assume three things:

$E(U_i) = 0$ u has a mean of zero for all i

$E(U_i^2) = \sigma^2$ it has the same variance for all i

$E(U_i U_j) = 0$ $i \neq j$ which means there is no correlation among the observations.

3.2 Research instrument

The research tool that was used to gather information for this research is the questionnaire. A questionnaire can be referred to simply as a tool for collecting and recording information about a particular issue of interest; in this case it will be, whether university course affects the career path, and also information on job satisfaction. The questionnaire will basically consist of a list of questions directed to the graduate trainees and the graduates in regular employment.

Control Variable: There are many other variables which may influence the satisfaction level of the graduates in general. For this study, we choose to assume that all those variables which are not mentioned in questionnaire are not influencing the satisfaction of the graduate trainees and the graduates in regular employment or we can say they are controlled by the researcher's instructions at the beginning of each part of questionnaire.

A Biographical Questionnaire was also used to obtain demographic information relevant to the sample, that is, the graduates. Participants were asked to furnish information with regard to their year of graduation, and even where applicable, why they chose to be graduate trainees.

3.3 Location of the study

Nairobi being the capital city of Kenya, the capital of Nairobi province, the central business district, one of the most prominent cities in Africa Politically and financially, and very populous, it is a suitable location for the study to be undertaken. It is located between the cities of Kampala and Mombasa and adjacent to the Eastern edge of the rift valley. Nairobi city is located in the city square.

3.4 Target population

This research was done on the graduate trainees and graduates in regular employment in Nairobi County. They were randomly selected from consenting organizations and some individuals randomly approached. The sample size that the questionnaires were distributed to was estimated at around 60 graduate trainees and graduates in regular employment in total.

3.5 Data analysis

The data that was collected was quantitatively analyzed using Statistical Package for Social Sciences (SPSS). Descriptive analysis was majorly employed alongside multiple linear regressions.

3.6 Multiple Regression Model

A multiple regression model with a dependent variable Y and P independent variables i.e. X_1, X_2, \dots, X_p is given by the equation

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \dots + \beta_p X_{ip} + e_i$$

Where

$$e \sim N(0, \delta^2)$$

The subscript i denote the observational unit from which the observations from Y and P independent variables were taken. The second subscript designates the independent variables. The sample size is denoted with n i.e. $i = 1, 2, \dots, n$ and P denotes the number of independent variables. $\beta_0, \beta_1, \dots, \beta_j$ are the parameters. There are $P+1$ parameters where β_0 is the intercept. $P+1$ will be represented by p' .

The linear model given by matrix notation is:-

$$\begin{pmatrix} y_1 \\ y_2 \\ y_3 \\ \vdots \\ y_n \end{pmatrix} = \begin{pmatrix} 1 & X_{11} & X_{12} & \dots & X_{1p} \\ 1 & X_{21} & X_{22} & \dots & X_{2p} \\ 1 & X_{31} & X_{32} & \dots & X_{3p} \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ 1 & X_{n1} & X_{n2} & \dots & X_{np} \end{pmatrix} \begin{pmatrix} \beta_0 \\ \beta_1 \\ \beta_2 \\ \vdots \\ \beta_p \end{pmatrix} + \begin{pmatrix} e_1 \\ e_2 \\ e_3 \\ \vdots \\ e_n \end{pmatrix}$$

$$Y = X\beta + \varepsilon$$

Where;

Y : the $n \times 1$ column matrix of the observations on the dependent variable Y_i

X : the $n \times p'$ matrix consisting of a column of 1's which is labeled 1 and followed by the P column vectors of the observations on the independent variables.

β : the $n \times p'$ vector parameters to be estimated.

ε : The $n \times 1$ vector of random errors.

3.6.1 Least square estimation of the parameters

This method is used to estimate the parameters

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \dots + \beta_p X_{ip} + e_i$$

$$Y_i = \beta_0 + \sum_{j=1}^p \beta_j X_{ij} + e_i$$

$i = 1, 2, \dots, n$

The least square function is

$$L = \sum_{i=1}^n (Y_i - \beta_0 - \sum_{j=1}^p \beta_j X_{ij})^2$$

Differentiating with respect to $\beta_0, \beta_1, \dots, \beta_p$, the least squares estimators of $\beta_0, \beta_1, \dots, \beta_p$ must satisfy the equations;

$$\frac{dL}{d\beta_0} \Big|_{\hat{\beta}_1, \hat{\beta}_2, \dots, \hat{\beta}_p} = -2 \sum_{i=1}^n (Y_i - \beta_0 - \sum_{j=1}^p \beta_j X_{ij}) = 0$$

$$\frac{dL}{d\beta_j} \Big|_{\hat{\beta}_1, \hat{\beta}_2, \dots, \hat{\beta}_p} = -2X_{ij} \sum_{i=1}^n (Y_i - \beta_0 - \sum_{j=1}^p \beta_j X_{ij}) = 0$$

Simplifying the above equations we obtain the least squares normal i.e.

$$\sum_{i=1}^n Y_i = n\hat{\beta}_0 + \hat{\beta}_1 \sum_{i=1}^n X_{i1} + \hat{\beta}_2 \sum_{i=1}^n X_{i2} + \dots + \hat{\beta}_p \sum_{i=1}^n X_{ip}$$

$$\sum_{i=1}^n X_{i1} Y_i = \hat{\beta}_0 \sum_{i=1}^n X_{i1} + \hat{\beta}_1 \sum_{i=1}^n X_{i1}^2 + \hat{\beta}_2 \sum_{i=1}^n X_{i1} X_{i2} + \dots + \hat{\beta}_p \sum_{i=1}^n X_{i1} X_{ip}$$

⋮

$$\sum_{i=1}^n X_{ip} Y_i = \hat{\beta}_0 \sum_{i=1}^n X_{ip} + \hat{\beta}_1 \sum_{i=1}^n X_{i1} X_{ip} + \hat{\beta}_2 \sum_{i=1}^n X_{i2} X_{ip} + \dots + \hat{\beta}_p \sum_{i=1}^n X_{ip}^2$$

The solutions to these normal equations will be the least squares estimators of the regression coefficients $\beta_0, \beta_1, \dots, \beta_p$. These equations can be solved by any method appropriate for solving systems of linear equations.

In matrix notation, the normal equations are written as

$$X'X \hat{\beta} = X'Y$$

Since the normal equations are always consistent and hence will always have a solution of $\hat{\beta}$ as

$$\hat{\beta} = (X'X)^{-1} X'Y$$

The multiplication $X'X$ generates a $p \times p$ matrix i.e.

$$\begin{pmatrix} n & \sum X_{i1} & \sum X_{i2} & \dots & \sum X_{ip} \\ \sum X_{i1} & \sum X_{i1}^2 & \sum X_{i1}X_{i2} & \dots & \sum X_{i1}X_{ip} \\ \sum X_{i2} & \sum X_{i1}X_{i2} & \sum X_{i2}^2 & \dots & \sum X_{i2}X_{ip} \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ \sum X_{ip} & \sum X_{i1}X_{ip} & \sum X_{i2}X_{ip} & \dots & \sum X_{ip}^2 \end{pmatrix} \begin{pmatrix} \beta_0 \\ \beta_1 \\ \beta_2 \\ \vdots \\ \beta_p \end{pmatrix} = \begin{pmatrix} \sum Y_i \\ \sum X_{i1}Y_i \\ \sum X_{i2}Y_i \\ \vdots \\ \sum X_{ip}Y_i \end{pmatrix}$$

Thus $X'X\hat{\beta} = X'Y$

3.6.2 Test of the significance for the overall model

To test for the significance of the overall model we use the analysis of variance (ANOVA). For regression, the hypotheses are

$$H_0: \beta_0 = \beta_1 = \dots = \beta_p = 0$$

Vs

H_1 : at least one of the β 's is not zero.

ANOVA

Due to	degrees of freedom	sum of squares	mea sum of squares	F value
Regression	k	SSR	MSR=SSR/k	T-value = $\frac{MSR}{MSE}$
Error	n-k-1	SSE	MSE = SSE/n-k-1	
Total	n-1	SST=SSR+SSE		

H0 can be tested using the ANOVA table. In the ANOVA table we have to calculate the SSR, SSE and SST which are calculated using the following formulas;

$$SSE = \sum_{i=1}^n (y_i - \hat{y}_j)^2$$

$$SST = \sum_{i=1}^n (y_i - \bar{y})^2$$

$$SSR = \sum_{i=1}^n (\hat{y}_i - \bar{y}_j)^2$$

$$R^2 = SSR/SST$$

We reject H_0 if and only if the P value is less than α . If H_0 is rejected, it leads to the conclusion that at least one of the partial regression coefficients is not zero and therefore the whole model is significant. This is the decision rule that is applied during data analysis.

4.0 Results and Discussion

4.1 Introduction

The data that was collected by virtue of questionnaires was analyzed by use of SPSS and the results and interpretations are reflected in this chapter. A selected sample of 60 (n=60) graduates was identified and questionnaires administered to them. Of these 60 questionnaires, 50 were returned.

4.2. Analysis on graduate trainees

4.2.1 The reason for becoming a graduate trainee

From the sample, 22 candidates were found to have started out as graduate trainees in their organizations. Descriptive analysis was used to come up with the following table;

	Frequency	Percent
I always wanted to start out as a graduate trainee in my current organization	2	9.1
It was the only way I could get into my current organization	8	36.4
It is the best way to start out in any organization	9	40.9
I could not find a regular job	3	13.6

Table 1: Sample Descriptive Statistics

9.1% of the selected candidates started out as graduate trainees because they always wanted to start out in their organizations as graduate trainees. This could have been because they wanted to learn the trades of their organizations from the grassroots and then proceed upwards hence increasing their competencies in the organization. There was also an indication of fear when they start out in the organizations as they did not know if they would be able to adequately apply their skills to fulfill the job responsibilities allocated to them hence leading them to want to be graduate trainees first.

36.4% opted to start out as graduate trainees as it was the only way they thought they could get into their current organizations

40.9% of the sample thought it was the best way to start out in any organization.

The remaining 13.6% could not find regular employment and hence chose to become graduate trainees.

4.2.2 Duration of being a graduate trainee

	Percent	Cumulative Percent
Less than 3 months	4.5	9.1
3-6 months	59.1	63.6
6-12 months	22.7	86.4
Over an year 3	13.6	100
Total	100	

Table 2: Descriptive statistics of duration of being a graduate trainee

Majority of the graduate trainees, that is 59.1%, served as graduate trainees for an average period of 3-6 months. 22.7% served for 6-12 months while 13.6% served for over one year as graduate trainees. 4.5% of the graduate trainees served for a period of less than 3 months. The optimal period for serving as a graduate trainee from this study was concluded to be 3-6 months as it was seen to be the most popular. Most graduate trainee programs which were programs arranged by private companies and public sector employers were therefore concluded to have an average training period that ran for a span of 3-6 months before terminating.

4.3 Market flexibility in absorbing graduates from various fields

4.3.1 Analysis on whether this was the career path they were aspiring to be on while in university

From the assumption stated in the first chapter of this study it was assumed that the career path the graduates in regular employment and the graduate trainees were aspiring to be on while in university was directly related to their university courses. Due to this assumption, an analysis on whether this was the career path that the respondents were aspiring to be on while in university was undertaken and the results were as indicated in table 3.

	Frequency	Percent
Yes, it is	23	46
It is somehow related	13	26
No, it is not	12	24
I did not have a specific career path in mind	2	4

Table 3: Career path aspiration

46% of the sample candidates were absorbed in careers paths that they aspired to be on with regard to the relation with the various university courses. This being the majority reflects that the market is a little bit stringent in absorbing university graduates from the diverse fields

26% of the sample indicated that their career paths were somehow related to their university courses and 24% were in career paths unrelated to their university courses. The remaining 4% of our sample did not have a specific career path in mind while in university may be due to the diverseness of their courses with regard to the market that they could be absorbed in.

The following bar graph gives the visual representation of the data in table 3

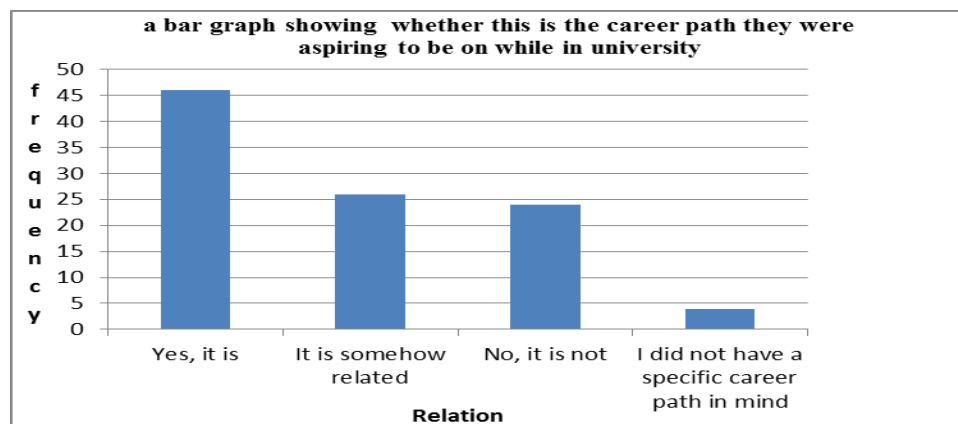


Figure 1: Career Path Aspiration

4.4.1 Analysis on how the current job relates to the course pursued in university

From the statistics taken from the sample, it was found that for 38% of the respondents their current occupation was strongly related to the university course they pursued. For 28% of the same sample their current occupations were very strongly related to their university course. A total of 66% of the sample size reflected the existence of a relationship between the two variables. 24% did not have an opinion with regard to the existence of a relationship between the two variables whereas 8% and 2% showed weak and very weak relationship between university course pursued and their current job.

	Frequency	Percent
Very weakly	1	2
Weakly	4	8
Neutral	12	24
Strongly	19	38
Very strongly	14	28

Table 4: Current job and course pursued analysis

4.4.2 Analysis on how the skills learnt in the university course were being directly utilized in their current occupations

For majority of the sample, the skills they learnt in their university courses were directly utilized in their current occupation strongly by 38%. Then moderate utilization of skills learnt in university course in current occupation followed by 32%. 14% of the sample reflected that their skills were very strongly utilized, 10% indicated a weak utilization while 6% reflected a very weak utilization of their acquired skill through their university course in their current job positions. The pie chart below provides the visual representation of this data

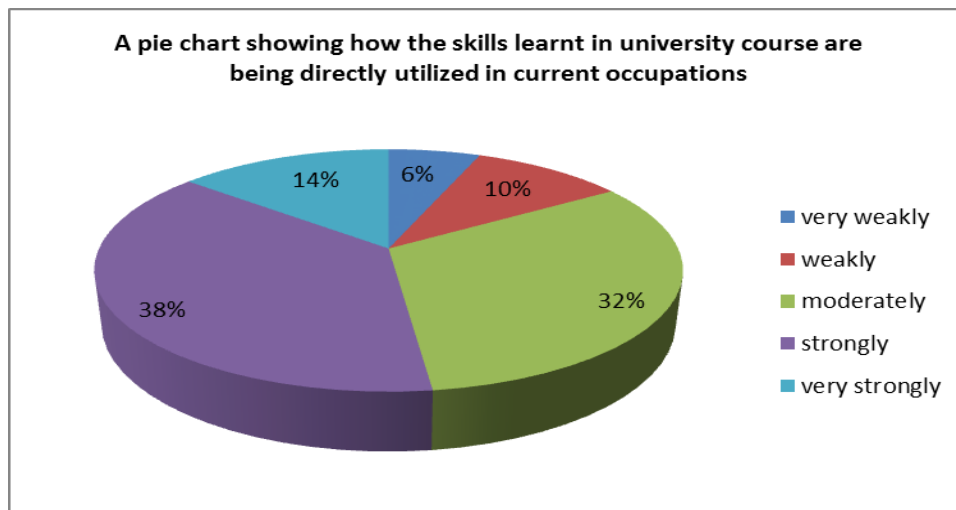


Figure 2: Skills learned

This could have been due to the fact that majority of the respondents from our sample were in the career paths they were aspiring to be on while in university hence this meant that the departments they were currently absorbed in had a direct demand for those specific skills. E.g. for a student who undertook Bachelor of commerce-Accounting option and was absorbed in the accounting department, the accounting skills acquired in the course of their degree would be directly utilized, like in preparing books of accounts.

A further survey was carried out on the respondents who were absorbed in departments which were unrelated to the courses they pursued in their university courses. This research question sought to find the ease of applying some of the skills they learnt in their various university courses to the diverse departments. The respondents by a majority of 40% reflected a moderately easy application of their university course acquired skills. 35% reflected very easy application of their skills, 15% indicated that it was very easy to apply the skills they learnt in their university course in their current department and 10% responded to it being very difficult to apply the skills they learnt in their university course in their current department. All this is reflected in the bar graph below;

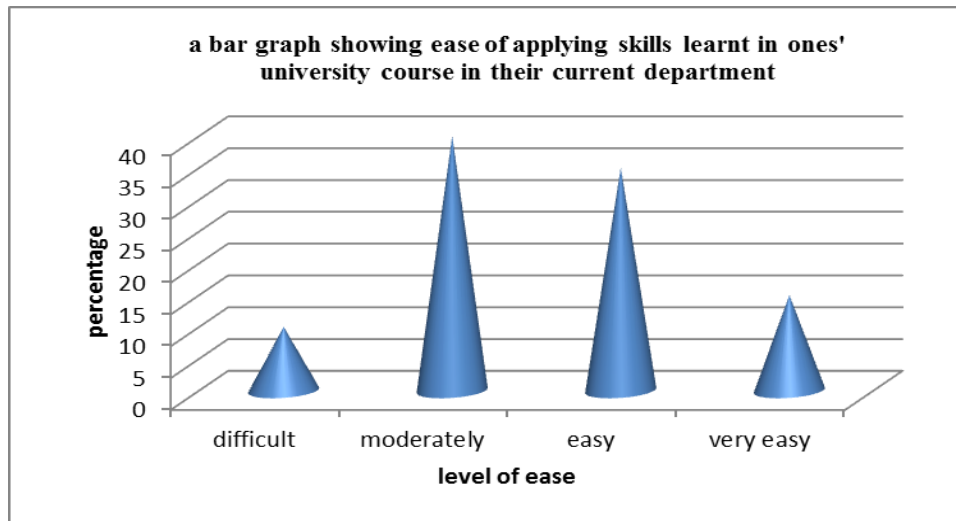


Figure 3: Ease of applying skills

This indicated that the various skills that were acquired by the various respondents who ventured into departments that were unrelated to their university courses, some could very easily be applied in the various diverse departments. These could be some of those skills learnt through common units undertaken across all the courses like general economics, operations research and even simple computer packages like Ms Word.

Job satisfaction was sought from the selected sample with regard to the ease of adapting and carrying out the duties of their current departments. The response received was indicated in the table 1.5.

Only 4% of the respondents were dissatisfied indicating they might have had a little difficulty in adapting and carrying out the duties designated for that department. 20% percent were neutral in their opinion with regard to satisfaction due to this factor. 62% were very satisfied with how easy it was to adapt and carry out duties of their current department. A further 14% were very satisfied and this could have also been interpreted as, it was very easy for these respondents to adapt and carry out duties in their departments.

	Frequency	Percent
Dissatisfied	2	4
Neutral	10	20
Satisfied	31	62
Very satisfied	7	14
Total	50	100

Table 5: Ease of adapting and carrying out the duties of your current department

4.5 Correlation

To address the first part of the research topic, that is, the effect of university course on career path, the responses from the graduates in regular employment and graduate trainees were analyzed to find the correlation between the two variables. The results found are as indicated in the table below;

		Name of the department you are currently working in	What course did you pursue while you were in university
Name of the department you are currently working in	Pearson Correlation	1	0.560561517
	Sig. (2-tailed)		2.29847E-05

Table 6: Correlation between variables

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

From the above data a 56.1% relationship was found between the two variables, that is the university course and the department one is currently working in. This indicates a moderate correlation between them or a marked relationship.

4.6 Multiple regressions

In this study, the model was seen to have two independent variables which are; the university course and the career path. The dependent variable was identified as job satisfaction.

The equation for this model is;

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2}$$

Where;

Y_i Is the dependent variable, satisfaction.

β_0 Is the y intercept

β_1 Is the coefficient of independent variable university course.

X_{i1} Is the ith observation of independent variable university course.

β_2 Is the coefficient of independent variable career path

X_{i2} The ith observation of independent variable career path

From the data collected from the sample, the following model was deduced by first getting the average score for job satisfaction. This score was then equated to the aforesaid independent variables, that is, the university course pursued and the career path. The current department one was working in was taken to be the indicator of the career path one was on.

	Unstandardized Coefficients		Standardized Coefficients	t	sig.
	B	Std. Error	Beta	B	Std. Error
(Constant)	3.513	.141		24.946	0.000
What course did you pursue while you were in university	.003	.052	.009	.055	.956
Name of the department you are currently working in	.117	.069	.286	1.699	.096

Table 7: University course pursued and the career path

Dependent Variable: satisfaction

$$Y = .003X_1 + .117X_2 + 3.513$$

This is the resulting model produced by the data analyzed. The value 3.513 shows the Y intercept will be at this value. The model is insignificant hence there can be no interpretation of the beta values as they do not have any effect on the dependent variable. If the model would have been significant, the independent variables would have had a positive effect on the job satisfaction because their beta values are positive. The two variables are also insignificant since the values 0.956 and 0.096 for the university course and the department being currently worked in respectively are greater than $\alpha = 0.05$.

The model summary below was obtained

Model	R	R Square	Adjusted R Square	Std Error of the estimate
1	0.292	0.085	0.046	0.65257

Table 8: Model Summary

Form the above model summary it was found out that 8.5% change in the satisfaction is explained by the variables career path and the university course. This showed that there were other factors that influenced the satisfaction of the graduate trainees and graduates in regular employment and the effect of university course on career path had very little effect on their job satisfaction.

4.6.1 Test of the significance for the overall model

The overall test of significance was achieved by virtue of the ANOVA table below;

ANOVA

Model		Sum of squares	Df	Mean Square	F	Sig.
Regression		1.858972512	2	0.929486256	2.182675	0.124036
Residual		20.01482749	47	0.425847393		
Total		21.8738	49			

Table 9: ANOVA

Predictors: (Constant), Name of the department one is currently working in, the course one pursued while in university

Dependent Variable: satisfaction

The model was found to be insignificant because the p-value 0.124 was greater than $\alpha = 0.05$ which was derived from the decision rule indicated in the materials and methods section.

4.7 Conclusions

From the research done and the model developed due to the data collected and analyzed the following conclusions were drawn;

Most graduates start out as graduate trainees in the various organizations because they believe that it is the best way to start out in any organization.

The optimal period for serving as a graduate trainee in any organization was also estimated to be 3-6 months.

From the sample that was selected to participate in the study, it was noticed that most of them were in the career paths that they aspired to be on while in university and also that their current jobs were directly related to the university courses they pursued. Also the skills they acquired in the pursuit of their university courses were directly utilized in current departments. Further it was found that from the various skills that were acquired by the various respondents who ventured into departments that were unrelated to their university courses, some of those skills could very easily be applied in the various diverse departments.

With reference to job satisfaction and with regards to the ease of adapting and carrying out duties in their departments, the respondents were majorly satisfied and very satisfied.

It was also deduced that the university course that a graduate undertakes is directly related to the career path that they will be on but these two factors are not adequate predictors of job satisfaction experienced by the graduates in regular employment and those that serve as graduate trainees. It was thus concluded that there are many other external factors that influence the job satisfaction of the graduate trainees and the effect of university course on career path had an insignificant impact on the job satisfaction of the graduate trainees. The two variables were therefore not adequate predictors of job satisfaction among the graduates in regular employment and the graduate trainees.

4.8 Interpretations

Most graduates believe being a graduate trainee is the best way to start out in any organization. The reason could be that, the best way to learn a certain trade is from the bottom up starting from the grass roots. This way, as one progresses up the corporate ladder nothing can be overlooked as they know all the processes that are being undertaken in the positions beneath them and how exactly they are undertaken because they were a part of that process at some point in time in that organization. This eventually provides for good leadership because are thorough in overlooking or supervising these activities.

The optimal period for serving as a graduate trainee in any organization was also estimated to be 3-6 months. This is the time thought to be adequate to train the graduates on both theory and practice and also to evaluate a person in a bid to make a decision whether to hire them on a permanent basis.

Since most of the respondents were in the career paths that they aspired to be on while in university and also their current jobs were directly related to the university courses they pursued. It could be concluded that the market is a bit stringent in absorbing graduates from the diverse fields. For example, a doctor cannot serve in the capacity of an engineer and vice-versa. But there are a few situations where the market was deemed to be flexible in absorbing the graduates. This is the percentage represented by the minority. For example, the case of procurement graduate acting in the capacity of a banker.

From the model developed to represent the relationship between university course and career path and subsequently how they affect job satisfaction, it was evident that other external factors played a major role in determining the

graduates in regular employment and the graduate trainees' job satisfaction and hence the variables selected in our model were not adequate predictors. These other factors could be the working environment and working conditions, remuneration and many other aspects of the job.

4.9 Recommendation

From the conclusions drawn above, the recommendation is that employers and human resource managers should assign people jobs taking into consideration to a large extent the university courses they pursued and which course best relates to that particular vacancy. This facilitates easier employment of the skills they acquired into the courses to their work hence more efficient performance of duties.

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