

**DETERMINANTS OF SCHOOLING RETURNS; A CASE STUDY OF
EMPLOYEES OF ATUTUR HOSPITAL IN KUMI DISTRICT**

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DECLARATION

I Ilakut Geoffrey hereby declare that this work as being original, as a result of tireless efforts and hard work with closed supervision of my supervisor. I am sure this work has not been produced by any one at any academic level to any institution for any award or purpose.

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APPROVAL

This is to certify that this dissertation has been submitted in fulfillment of the requirements for the award of the degree of Bachelor of Economics and Applied Statistics with my approval as the University supervisor.

Signature.....

Date.....01/04/2019

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(Supervisor)

DEDICATION

I am pleased to dedicate this report to the rest of members in my family particularly my parents Ilakut Gilbert and my mother Ocepa Matilida for the great investment they have made. Without forgetting my brothers and Sister Okwalinga Tolbert, Echabu Augustine and Pedun Jesca for being calm and brotherly to me. Much so to my friends in an endless list thanks for our associations in all circumstances. Many thanks to Mwebesa Edison, the supervisor of this project, you were so cooperative. And above all am pleased with Almighty God for enabling me persist in this course.

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ABSTRACT

This study mainly focused on investigating the relationship between schooling and the earnings (wages) of the health workers. A case study was carried on employees of Ataturk referral hospital in Kumi district in Eastern Uganda. The study specific objectives were to find out the level of earnings of health workers, determine the relationship between years of schooling, age, and experience and education level on employee earnings. And finally to investigate the effect of years of schooling, age, experience and education level on earnings of employees. The researcher investigated the relationship between years of schooling, age and experience by carrying out correlations on earnings and testing hypothesis using the t sampling statistics. However since education was a categorical variable the researcher used the one way ANOVA and test hypothesis for statistical difference in means earnings of each education level. To investigate the effect of years of schooling, age, and experience and education level on earnings, the researcher used the Mincerian OLS regression model that regresses the natural logarithm of earnings of employees and this effect tested using the F statistic. The Pearson correlation coefficients sig. (2tailed) yielded correlation coefficients of 0.54 for years of schooling, -0.208 for age and -0.267. One way ANOVA ((2, 79) =54.664, $p=0.003$) showed at least there was significant differences in mean earnings of each education levels, at 0.05 level and a Tukey post hoc test for multiple comparison of mean earnings of each education level showed that this mean differences were statistically significantly higher on tertiary levels (13.19 ± 0.713 , $p=0.000$) compared to primary level (11.12 ± 0.522 , $p=0.508$) and secondary (11.47 ± 0.818 , $p=0.508$). This showed a no statistical significant difference in mean earnings of primary and secondary education level. The results also showed earnings rise with education level. A secondary education added a 0.35 mean earnings on primary level and a tertiary level added a 1.72 mean earnings to secondary schooling. Regression at 95% confidence level yielded regression coefficients of 0.019 for years of schooling, 0.028 for age, -0.015 for experience and -1.6348 for primary education and -0.9432 on secondary education (regression coefficients for education taken for dummies of '0' and '1' tertiary education was used as a reference group. The researcher observed that earnings were significantly dependent on years of schooling, age and experience and education level. It was also observed that earnings were significantly lower for primary

and secondary education in comparison to the other group (tertiary education) and the wage gap was statistically significant. Experience had nonlinear relationships on earnings. The researcher attributes the experience effect on ability and specialization effect. Specialization causes mismatch in job requirements. Some employees can be too specialized which cuts them from some job requirements due to over experience. When the effects were tested the researcher noticed that variation in earnings was explained by the independent variables used. The researcher recommends further research on experience and earnings effect for future academicians they can as well investigate returns to schooling and poverty. Government needs to adopt policies that maintain children at school, and as well adopt proper subsidization policy for higher levels of education to enable scholars enrich their schooling potentials. On wage issue, the research advises government to adopt a salary review team to review salaries and create equal opportunities of wages for employees of similar qualifications. Government should too adopt cost sharing with investors in aspects likes employee training. By reducing labour training costs, employees have a chance of being selected and enjoy balanced earnings.

LIST OF ACRONYMS

OLS	Ordinary Least Squares
LOS	Level of Significance
SE	Standard Error of Estimate
IV	Independent Variable
DV	Dependent Variable
NLS	National Longitudinal Survey
SPSS	Statistical Package for Social Scientists
EOC	Equal Opportunity Commission
UMA	Uganda Medical Association.
ANOVA	Analysis Of Variance

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CHAPTER ONE

INTRODUCTION

1.0 Introduction

This study will investigate the determinant variables that affect earnings (returns to schooling) of employees in Kumi district, with a case study of employees Atatur referral hospital.

1.1 Background of the Study

“A man educated of much labour and time is compared to one expensive machine, the work which he learns to perform over and above the usual wages of common labour will replace the whole expense of his education.”(Adam Smith, 1904, chapter 10) in the book wealth of nations “1776,” thus began the interest of studying schooling as an investment in economics. Articles on schooling as an investment appeared sporadically in the first half of this century, (for example Strumilin, 1929; Welsh, 1935). In the modern era, schooling and human capital entered economics in the late 1950s. The focus of the early writings was on the ‘unexplained’ residual in economic growth, Abramowitz, (1962) and Schultz, (1961). From the voluminous empirical literature, there are two issues of focus, the micro-economic returns to schooling and macroeconomic returns to schooling. In this study, the researcher focused on the micro-economic returns to schooling (workers’ wages). He was interested in investigating changing trends in returns to schooling. Studies in Africa for example document rising returns to schooling. Appleton et al, (1999) shows this for Uganda from 1992-99, Canagarajah and Thomas, (1997). Similar findings were made by Sackey, (2008) for Ghana within 1992-99 and Soderblom et al, (2006) for Tanzania.

The rate of returns to schooling varies from individual to individual due to differences in age, quality to education and social economic status Spence, (1973). On other hand studies by Pedro Carneiro, James Heckman and Edward Vytlacil,(2003) and Christopher Taber(2001) show that the returns to schooling were less for more able bodied

individuals. However Arrow, (1973) puts it in the extreme: a higher education degree might be nothing but a filter: that is, selecting the more able. On other hand Orley Ashenfelter and Cecelia Rose, (1998) find some evidence that the rate may even be higher for children from disadvantaged backgrounds. Whereas Lisa Barrow Cecelia .E. Rose,(2005) found a very less significant evidence of the differences in returns to schooling across racial and ethnic groups, given the attempt to control for ability and measurement error biases, with that said they found no evidence that returns to schooling are lower for African-Americans or Hispanics than for non-minorities. There is also evidence on job sorting ,(Benhassine et al,2006) as well as the role of unions in wage setting and rent sharing,(Teal,1996;Azam and Ris,2001;Soderblom and Teal ,2001;Manda et al ,2001;Alby 2007).

It's also assumed that the returns to schooling is a decreasing function of the quantity of education, in other words the additional earnings generated from an extra year of schooling are likely to be higher for people with low levels of education than those with higher level of education, Stiglitz, (1975).Also better quality education is likely to enhance the productivity of individuals by increasing their cognitive skills there by increasing the rate of returns to schooling Borjas, (2004).

To therefore meet the perfect productive education, the presumptive assumption is that individuals are to seek first to maximize the discounted present value of earnings net schooling costs (see, Williss,1986).This is possible if only people could borrow or lend at fixed interest rate, and indifferent between attending school and working during their late teens and their early 20s. More generally however different individuals have different aptitudes and tastes for schooling relative to work and this variation may lead to differences in the optimal level of schooling and earnings across individuals.

Basic theoretical literature on schooling and earnings relationship can be attributed to Adam Smith conceptualization of the concept of human capital, in his genius book "Wealth of Nations," (1776). The finding of the central nucleus of the theory is not clear enough; however consistency of the productive use of the human resources pervades Smith's entire work, Steffano Spalleti, (pp., 61, 2014). Starting from the classical locus of the tenth chapter of the first book of the wealth of nations precise sequence of the quotation taken from the (1776) work consolidates a production definition of human

capital, it goes "When any expensive machine is erected, the extraordinary work to be performed by it before it is worn out must be expected, will replace the capital laid out upon it, with at least the ordinary profits. A man educated at the expense of much labour and time to any of those employments which require extraordinary dexterity and skill, may be compared to one of those expensive machines. The work which he learns to perform, it must be expected, over and above the usual wages of common labour, will replace to him the whole expense of his education with at least ordinary profits of at least equally valuable capital. It must do this too, in a regards being to the very duration of human life, in the same manner as to the more certain duration of the machine. The difference between the wages of skilled and common labour is founded on this principle."

Adam Smith explains that dexterity and labour skills of man are comparable to a specialized machine which is included in fixed capital evaluation. In the theory of economics, Smith also argues that investment in human capital does not necessarily increase the earnings of workers. He establishes in the 10th chapter that 'the wages of labour vary according to the easiness and cheapness of doing work, or the difficulty and expense of learning the business. He is remarkably quoted "It's reasonable, therefore that, in Europe the wages of mechanics, artificers, and manufacturers, should be somewhat higher than those of common labour. They are so accordingly, and their superior gains make them in most places be considered as the superior rank of people. This superiority, however is relatively very small; the daily or weekly earnings of journey men in the more common sorts of manufacturers, such as those of plane linen or woollen cloth, computed at an average ,are, in most places ,very little than the day wages of common laborers. Their employment is steadier and uniform, and the superiority of their earnings, taking the whole year together, may be somewhat greater. It seems evidently however, to be greater than what is sufficient to compensate the superior expense of their education.

If Ugandans for instance must invest more time schooling and incur allot of expenses that are born earlier on during schooling, then the skills and the experience they get should over time earn them profits that will recover these costs. However there exists variation in investment margins resulting into varying benefits. Even then those with the same qualifications in Uganda can be paid different wage rates. Smith earlier on suggests that the differences in the of earnings results casually due to variation in the easiness,

cheapness, difficulty and expense of doing business. This research focuses therefore to investigate the determinants of schooling returns, by first conceptualizing the major definitions of the terms: We conceptualize the major terms used and explain the variables independent variables used for the study.

Determinant: The American dictionary (2003, pp. 195) defines a determinant of something as an influencing or determining factor of something. In other words it's a pure force of will. In this study the researcher is focused on investigating factors that influence the level of earnings of employees.

Whereas *are turn* is an amount of money made as profit in other words yielding back. The Beginning dictionary, (1977, pp. 530). However returns to schooling are the profits that accrue to the investment in schooling. Becker G (1963) conceptualizes returns to schooling as differentials between the prices of highly and poorly educated labour. The study is focused on the following independent variables on earnings of employees.

Years of schooling. This is the average number of years an individual spends at school to achieve a particular level of education. It's here a measurement variable for schooling as an investment. It's a presumptive that higher earnings are correlated with more years of schooling.

Age: This is defined as the period of time during which someone or something exists. It is also defined as the time in life when a person assumes certain civil and personal rights and responsibilities. In the Beginning dictionary (1997, pg13) it's defined as the amount of time that the person, animal or something has lived. We are interested to investigate what effect that a scholar's life span in years has on the earnings. The question is does age matter.

Experience. This is explained as skills and knowledge a person gains from doing something or something that a person has done or seen or taken part in. Beginning Dictionary (1997, pg.227-228). We investigate this by using the employee years of work experience.

Education level: The word education in the first place is defined as the act or the process of gaining knowledge (knowledge gained), beginning dictionary (pg., 208). The

researcher investigated the effect of an individual's level of education on employee earnings. The employees were asked whether they had never gone to school, attained primary education, secondary education and or tertiary institution.

The study is adapted from the context that there has been controversy of pay rise in Uganda's public service employees. Especially, in health, judicial and the education sector. In an Observer, an independent news paper dated 27th march 2018, reports a series of strikes by teachers, university lecturers, medical workers and judicial officers in protest of poor pay and working conditions. Demands for salary increment stimulate an empirical analysis into factors that determine wage rates in the country.

1.3 Statement of the Problem

Education is one of the greatest investments governments can make for their nationals. And that an individual can personally make in himself. Researchers share that the investment has capacity to boost economic growth, raise societal welfare of the educated, increase marriage prospects and above all being a major determinant of earnings. However in Uganda, there is a mismatch between the investment and the investment outcomes. This is being emanated by controversy over pay rise in most sectors of the economy. Especially by those who think they are less paid in comparison to their counterparts of the same qualifications and or expertise. A report by equal opportunity commission (EOC) in a (2017) independent weekly magazine revealed that the pay rise issue in public service has been sparked off by the fact that some officials earn almost 10 times what the officials in the ministry get. The report notes a huge wage gap between highest executives in government and their deputies, the highest and lowest paid officials in government parastatals, and staff of public universities. A report in an article in daily monitor (20th Nov, 2017, pg 4-5) laments that the situation was alarming in the health sector, where an entry level doctor earns (\$302) about UGX .1mln when a senior physician in the same department earns about UGX. 3.5mln. This phenomenon has sparked a row of strikes in these sectors. Notably, such strikes leave patients ailing and dying in health facilities; distort school programs in case of striking lecturers and postponement of court cases. To solve the issue, government in her mandate resolved with disciplinary action on those who strike, however Charles Obuku the chairperson of

Uganda medical association (UMA) in their part commends that the solution was for government to adhere trade union principal of collective bargaining; otherwise increasing supply of drugs, bandages would not solve the pay rise issue. It's upon this phenomenon that the researcher is convinced to investigate schooling characteristics of employees to ascertain whether, education level, years of completed schooling, age and expertise of the employees has attributed to the wage gap problem.

1.4 Main Purpose of the Study

The survey was conducted to investigate factors that determine the level of earnings of employees, based on their schooling characteristics.

1.5 Objectives of the Study

The Study was guided by the following objectives

- I. To find out the level of earnings (returns to schooling) of health workers.
- II. To investigate the relationship between years of schooling, age, experience and education level on earnings of health workers.
- III. To investigate the effect of age, years of completed schooling, experience and education level on earnings of health workers.

1.6 Research Questions

The researcher had to come up with the following investigative research questions to guide the study.

- i. What is the level of earnings of workers in health institutions?
- ii. What is the relationship between years of schooling, age experience and education level on earnings of health employees?
- iii. What is the effect of years of schooling, age experience and education level on employee earning?

1.7 Research Hypotheses

H01: There is no significant relationship between years of schooling, age, experience and education level on employee earnings.

HA1: There is a significant relationship between years of schooling, age, experience and education level on employee earnings

H02: The mean earnings of primary school level, secondary level and the tertiary institutions are significantly equal.

HA2: The mean earnings of each education level are statistically significantly different from each other.

1.8 Scope of the Study

This discusses the extent of the study scope. It cites the area of study (geographical area), time scope and content coverage.

1.8.1 Geographical Scope

This study involves survey on schooling and earning characteristics of employees from Atatur referral hospital located 5kilometerssouth of Kumi District in the Teso sub-region.

1.8.2 Content Coverage

The Study was centered on investigating major schooling determinants whereas focusing on the schooling characteristics of employees: years of completed schooling, age, and experience and education level on earnings of employees. The study also investigates the relationships between these variables and employee earnings.

1.9 Significance of the Study

This study has been helpful in that it has provided prospective scholars with valuable information, which they can reliably use in furthering research in schooling and earnings relationships.

To the future academicians, especially University students, the study will give them a ray of hope based on which variables scale most in investing in schooling for themselves and so their families.

The accomplishment of the study will enable the researcher have a new way of handling models in empirical research, data analysis and entry techniques. Proficiency in these research techniques will enable him handle any kind of survey projects with precision.

To the government the survey is helpful in policy formulation. It gives government a new of the factor variables to focus on improving the educational gaps in the country.

It also gives the employers an insight in selection of employees, based on their schooling characteristics.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter of the research dissertation discusses summary of the relevant existing literature on the study. It consists of the theoretical literature, conceptual frame work and empirical analysis.

2.2 Theoretical Literature Review

Gary Becker, (1964) analysis of Adam Smith's economics of education theory of human capital is the first contribution to the individual choice to invest in schooling as far as the theory of price is concerned. The notion of human capital concerns both sides of the market, because the specialization that an individual asks in education is that same one that will be offered in a specialized labour force market. Education therefore is the outcome of an investment of time and money, foreseeing future retributions. At the beginning of every period the individual or whoever else is face with the choice between the closing down of his own working capacity on the market and acquisition of abilities and specializations in the professions –investing in human capital. The earnings rise according to the investment. The total costs of education are represented by earnings lost, while the benefits depend on the investment horizons. The individual will maximize his wealth if, in the in the specific unit considered, the marginal cost of education is and its marginal benefit are the same. The causal nexus between the level of education attainment and wage earnings is well established in both theoretical and empirical literature. The general understanding is that subsequent increase in years of schooling would exert a simultaneous rise in the wage rate. Mocan (2014). There is a growing body of literature that investigates the link between schooling and earnings in the country specific settings as well as cross country settings.

The former studies include; (2014);Schultz,(1999);Psacharopolous and Patrinos,(2004);Angrist and Krueger,(1991); Arshenfelter and Krueger,(1994); Oreopoulos,(2006), Kimenyi et al,(2006), Aakvik et al,(2003), Aromolan,(2006,2004);

Okuwa,(2004)and Garcia Mainmar et al,(2005). While the latter studies include Trostel et al,(2001); Salehi et al,(2009); Bennel,(1996);Psacharopolous,(1994);Harmon et al,(2001);De la Fuente,(2003) and others

Although a wealth of information is contained in particularly cross-country studies, these studies suffer well known drawbacks; Firstly, some of the cross country studies tend to present aggregate results without fully allowing for country specific effects that may affect the impact of education. Secondly, while there is a strong possibility that at least some of the explanatory variables could be endogenous, few studies attempt to control for this. Empirical work in this field has focused on establishing relationships between human capital indicators, such as, years of schooling, age, experience, gender and education level on one hand and outcome measure basically earnings.

There is over whelming evidence that education does results in an increase in wages in many countries, using both individual country and cross country analysis. Angrist and Krueger, (1991) used quarter year of birth as an instrument for education. Their findings revealed that on average, one additional year of schooling increased wages of workers by 7.5%.

Using change in the school-leaving age in the UK, Oreopolous, (2006) compared his estimates of the returns to schooling to the local average treatment effect obtained from USA and Canada. The author found larger returns to schooling of 10-14 % per year. He argued, his results were similar to the findings obtained by previous scholars. However Duflo, (2000) investigated a reform that built 61000 primary schools across Indonesia in the 1970s, an increase of between 6.8-10.6% in wage per year of schooling. Likewise compulsory education reform in China was considered by Fang et al,(2012).The authors used reform as a potential research instrument and reported that overall returns to education was 20% of an additional year of schooling in contemporary China. And concluded, their results were consistent with results obtained in industrialized nations.

Bonjour et al,(2003) studied a set of identical twins from UK. And found that returns to schooling for women were 7.7% per year of schooling. However these studies were not

very clear as why one twin achieved more education than the other, while coming from the same genetics upbringing.

Cross country studies confirm the positive relationship between schooling and wages. Salehi Isfahani et al, (2009), examined the private returns to schooling for Egypt, Iran and Turkey and found returns to schooling increased in all the three countries. More specifically, private returns to tertiary education compared to upper secondary and vocational education were found to be high. Their results were in line with other studies that found low returns to vocational training compared to general upper secondary.

Branson et al, (2013) investigated how changes in the distribution of education across birth cohorts in relation to changes in employment probability as well as distribution of earnings and earnings premium to complete secondary education. They observed that young cohorts face worse labour market conditions relative to their predecessors.

A study by Burger and Van der Berg, (2011) investigated the wage differentials between various race groups in South Africa using a simulation model that employed matrices results and education attainment to generate estimates of education quality. Their results wage gap can be attributed to differences in education quality.

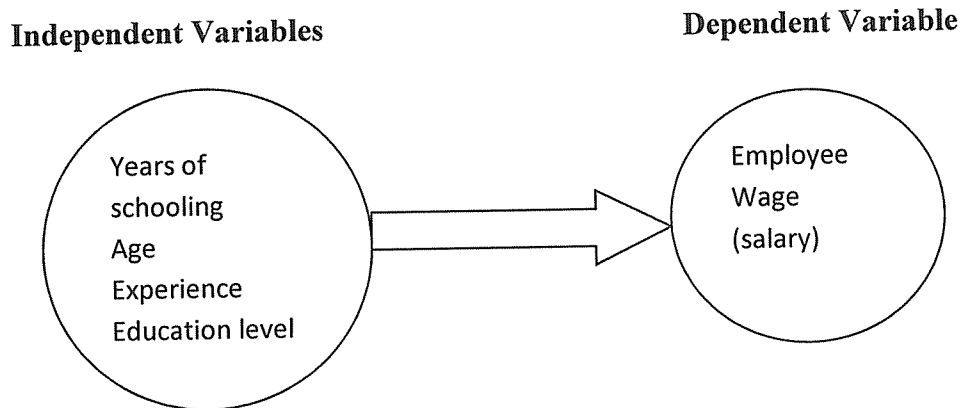
David Card and Alan B Krueger, (1992) Were greatly concerned with school quality on returns to schooling-based on the characteristics of public schools in the US. They estimated the effect of school quality using the pupil teacher ratio, average term length and relative teacher pay-on the return to education for men born between 1992-1949. Using the earnings data set of 1990, they found that men educated in better quality schools in the US had higher returns to additional years of schooling. Also returns to school were higher for men from states with better educated teachers. Holding constant school quality measures, they find no evidence that parental income or education level affected the average state level of rates of returns.

Colm Harmon, Hessel Oosterbeek and Ian Walker, (2000) focus on schooling as a private investment of human capital and concentrate on the individual internal rate of return. They caution, the coefficient of returns to schooling, must be interpreted with caution since there are many variables that have an impact on rates of return. Simple analysis of

the average earnings of individuals would mask a number of issues; they therefore in their study stress a need for multivariate regression analysis. The returns to schooling in the UK using this technique presented a 7% and 9% rate of returns per average year. They suggest returns to schooling being stable with OLS specification. They found that returns to schooling are also high for those on top deciles than lower deciles, and explain this between ability and education. If higher ability persons earn more, it might explain higher returns for top deciles, however they also account for over education effect, returns to schooling may be low if there is over supply of educated workers, the skills they present to the job may exceed skills required for the job leading to lower returns to additional years of schooling in excess of those required by the employer.

2.3 Conceptual Framework

This conceptual frame work is built to represents the interrelationship between the independent variables on one side and the dependent variable on another side. Its upon these variables that the study is focused.



Source: Researcher (2019)

2.4 Empirical Literature Review.

Most of the relevant empirical literature on education and earnings have sidelined their findings on the Mincerian,(1967) human capital wage function, Suzan Namirembe Kavuma, Oliver Morrissey and Richard Upward,(2005) studied private rate of returns to schooling for the employed and the self-employed individuals in Uganda, they used the Mincerian human capital frame work, which employed a two wave housed hold panel data of Uganda household panel survey of 2005-2006 and 2009-2010 to estimate

homogenous and heterogeneous private rates of returns to education for both worker types. They found that estimates for pooled data in the survey found similar marginal returns to schooling for both worker types. In investigating returns to educational qualifications, they found qualification returns to be convex for wage employees and concave for the self-employed. For heterogeneous returns to schooling, they employed quantile regression models and found returns to schooling decreasing for both worker types.

Lisa Barrow and Cecelia Ellena Rose, (2005) used the US decennial census and NLS data of young men and women and NLS for youth in investigating whether returns to schooling differ by race and ethnicity, estimate the relationship by regressing the natural logarithm of the hourly wage of each individual of race or ethnicity on years of completed schooling, they control for the explanatory variables such as potential experience age, sex and geographical region of the country. They found a less significant difference in of returns to schooling for two races blacks and whites. They observed that 11% observable variation in schooling was due to measurement error, some variation by race and ethnicity. Nearly a 20% observed variance in schooling for African Americans due error compares to 14% for Hispanics and whites.

While analyzing why returns to schooling were higher for women than men, Christopher Dougherty, (2005) used the Binder Oaxaca decomposition equation that fits the Mincerian semi logarithmic wage equation. Regressions yielded schooling coefficients of 0.049 for males, and 0.0686 for females respectively, with a differential of 0.0196 being significant at 1% L.O.S. He attributes the wage differentials between women and men on discriminations, tastes and circumstances. e.g. women have tastes of a particular kind of jobs that concentrates them on relatively poorly paid jobs and their willingness to accept some offers that undervalues their characteristics as long as it fits their responsibilities.

A study by Charles Acktah et al investigated the effect of skills and experience on returns to schooling for Ghana. They found that there appears to be an increasing trend on returns to schooling viewing from education level as one climbs up the ladder. Their tests of differences in logs of random wages observed zero significant differences (0.02) in random monthly earnings of persons with no education and those with primary levels.

Yet with movement up the educational ladder significant differences emerge, e.g. persons with no education and those with junior education had log earnings of (0.471) this saw 3 years of post-primary schooling adding a significant increase of (0.45). On regressing only educational variables as explanatory variables, returns to schooling were generally positive and significant. The magnitude of the coefficient to schooling increased progressively with schooling levels compared to persons with no education 16 % for zero schooling, 56% for those who completed primary level, 130% wages for those who completed tertiary institution and primary. Using the Mincerian wage equation, they observed convexity in returns to schooling. Experience added 2% on real earnings but had a nonlinear effect (- SE). Female workers earned 7% less than their counter parts, unskilled 62% less skilled.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

Research methodology is basically a portmanteau. It is the correlation of the two that makes up a significant part of the most important field of scientific research and technology, (Kumar, 2005). Research is the quest for knowledge, to weigh, evaluate and observe facts in order to explain opaque proceedings (Kothari, 2005). It's the systematic investigation delving into an unknown scientific process, whereas methodology is the system of methods followed in a particular discipline. Methodology includes the collection of theories, concepts, ideas and ideologies as they relate to a particular discipline of field of inquiry (Yin, 2003). However this section is meant to show the data sources, methods and data descriptions that will be used to give meaning to the collected information.

3.1 Data type

To come up with a clear conclusion of the aforementioned objectives, the researcher mainly used quantitative data types. The researcher's rationale was basically to achieve the objectives using quantitative data. However the objectives addressed by quantitative techniques were also addressed qualitatively, a condition that accentuates the pertinence of employing both qualitative and quantitative data types. This was then analyzed using a single OLS model that aimed at obtaining comparative relationships of employee schooling and earning characteristics.

3.1.1 Econometric model selection and Specification

The researcher analyzed the determinants of schooling returns (independent variables) on earnings using the Pearson correlation coefficient. The researcher used the Pearson correlation coefficient because the sample size was greater than 30. The influence of schooling on earnings of employees was modeled using the OLS technique. The uses of OLS in modeling dates works of Colm Harmon and Hessel Osterbeek and Ian Walker, (2000). Who suggest that interpreting schooling returns requires a multivariate regression

analysis and suggest returns to schooling being stable with OLS specification. However the researcher combined Mincer (1967), idea of regressing the linear natural logarithm of the earnings. The use of natural logarithm on earnings distributes the earnings of employees normally.

The OLS model specification is in functional form

$$\ln W_i = \beta_0 + \beta_1 S_i + \beta_2 A_i + \beta_3 X_i + \beta_4 E_i + \varepsilon_i$$

Where W_i is the estimated earnings of individual employee i (explained variable), S_i is the years of completed schooling by the individual i , A_i is the employee age, X_i is the experience of the individual employee i in years and E_i is the education level of the individual employee.

β_0 , a constant. It's the estimated earnings of employees when S , A , X and E are equals to zero.

β_1 , β_2 , β_3 , β_4 are the estimated parameters of the regression coefficients for years of schooling, employee experience, age and education level. It measures changes in wages of employees due to variation in earnings (predictor variables)

ε_i = the stochastic term. And it's normally distributed with mean 0 and standard deviation δ^2 that is $\varepsilon_i \sim N(0, \delta^2)$

3.2.2 Data Source

Data for analysis was collected basically from primary source. Few data were from secondary online sources (internet). To address the study specific objectives, primary data was collected by using the questionnaire interview and observation method of respondents who were employees of Atatur referral hospital. Secondary data was collected from published journals, newspapers, unpublished documents, reports and online sources.

3.2.4 Target Population

The sample sizes under study were all employees of Atatur Hospital. Atatur Hospital has a total of 103 approved employees. The researcher used the Lot Quality Assurance sampling design to select the target institution.

3.2.5 Sample size

Different methods portray different means of determining the sample size for analysis. When using specific means of using the error terms and precision levels, Glenn Israel (1992) had used a formulae developed by Yamane, (1967) with precision levels. ± 3 , ± 4 , ± 5 , ± 7 and ± 10 . Due to the commensurately known use of precision levels starting from ± 1 to ± 10 (if the target population is finite, homogenous and small) the researcher would easily use Yamane's (1967) formula with ± 5 precision level. For this study, the researcher uses ± 5 sampling error, table .2. Glenn Israel (1992, pp. 3-4).

Yamane, (1967) sample size formula is expressed as $n = \frac{N}{1+Ne^2}$

Where N is the total population number of employees in the institution denoted as N

n = sample size of respondents.

e is the level of precision in this case the researcher chose a 5% margin error.

$$From n = \frac{N}{1+Ne^2}$$

$$n = \frac{103}{1+103(0.0025)^2}$$

Thus (N = 103 , e = 5%, n = 82)

3.2.6 Sampling Design

Simple random sampling was used to select the respondents from the study area. This gave every individual a chance of being selected, thus representing the entire population.

3.3 Data Collection Instrument and field work

3.3.1 Data Collection Instrument

Questionnaire: This is the most important approach of collecting primary data from the field. It consists of structured and semi structured questions which are either open ended or closed ended and or either. However, in this case both structured and semi structured questions were used to obtain quantitative and qualitative data.

Observation method: This is a method of collecting primary data where by the researcher uses his naked eyes to see and interpret the outcomes of his observations without

inquiring from the respondents. This method was best in obtaining first-hand information from the field from employees who were unable to answer the questionnaire.

3.3.2 Data Collection Procedures.

The questionnaire was self-administered to the respondents of Ataturk hospital. Respondents who were unable to read and write were helped by questionnaire self-administration of the interviewer who was a researcher in this part.

3.4 Data Processing

Responses were coded when entering into the SPSS package for processing. Respondents were for instance asked for their education level, education level of their parent, gender and such qualitative responses were coded as (0="zero level"1="primary level", 2="secondary level" and 3 "tertiary institutions"). Gender was coded (1= "male" 2="female"), Parental education level (0="zero"1="primary"2="secondary"3="tertiary institution").

3.5 Data Analysis

Data analysis was done using IBM SPSS Statistics data editor. The descriptive statistics were analyzed, correlations for individual independent factors on earnings. Regression analysis was carried by regressing the natural logarithm of earnings of the employees with the predictors. This was used for model building and hypothesis testing of schooling and earnings relationships.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF FINDINGS

4.1 Introduction

This chapter of the research dissertation presents the findings and analysis of the data collected from the primary source as shown in the methodology section. This however shows how the researcher is able to analyze and interpret the findings.

4.2 Demographic Characteristics of the Survey Respondents

Table 4.1 illustrates the demographic characteristics of the survey respondents. We observe that there are more males than female a difference of 2.4%. Most respondents had a tertiary education level, most employees were married. As shown in the table below.

Table 4.1: A table showing the demographic characteristics of respondents

Variables	Labels	Frequency	Percentage (%)	Cumulative (%)
Respondents gender	Male	42	51.2	51.2
	Female	40	48.8	100
	Total	82	100.0	
Respondent education level	Zero	0	0	12.2
	Primary	10	12.2	30.5
	Secondary	15	18.3	100
	Tertiary	57	69.5	
	Totals	82	100.0	
Marital status	Married	41	50	50
	Other	10	12.2	62.2
	Single	31	37.8	100
	Totals	82	100.0	

Source: Author 2019

From the table 4.1 above therefore we observe that out of 82 employees surveyed 51.2% were males whereas 48.8% were females. Among these, 50% were married, 31% single, and 12.2% were either divorced or widowed. No employee had a zero education level, 12.2% of the respondents had attained a primary education level, 18.3% secondary level and a big percentage of 69.5% had reached a tertiary institution

4.3 Descriptive Statistics of Employee Level of earnings and Schooling characteristics

To answer the first objective about the level of earnings of the employees, the researcher had to make the statistical description of the employee schooling and earning characteristics. He observes that the youngest employee was 23years old whereas the elder being 65 years. Minimum earnings of the employees were Ugx 30, 0000 whereas maximum earnings were 1,200,000 Table 4.3.1 illustrates the employee descriptive statistics.

Table 4.2: Table describing the level of earnings of the employees

Variable	Min	Max	Mean	Std.Deviation	N
Earnings	30,000	1200,000	499769.365	36370.063	82
Age	23	65	35.109	8.575	82
Experience	1	40	6.439	7.765	82
Years of Schooling	2	31	16.2	4.562	82

Source: Author, 2019

We observe that on average, mean earnings of employees in Atutur hospital was UGx. 499769.365, respondent mean age of 36.10 with the youngest employee being 23yrs and the elder being 65 years old, most respondents had been working for about 6 or more years with the institution. Respondents had 16.2 average years of completed schooling.

4.4 The Relationship between Years of Schooling, Age, Experience and Education level on Employee Earnings.

To investigate the relationship between years of schooling, age, experience and education level on earnings of the employees, the researcher had to obtain the correlation coefficients of the study independent variables and their hypothesis tested using the t sampling statistic on their coefficients. The general assertion was set that there is no statistical significant relationship between years of schooling, age, experience and the employee level of education on their earnings against the alternative that the relationship was statistically significant. The researcher carried the following correlation analysis

4.4.1 Correlation between Years of Schooling and Earnings (wage) of the Employees.

The relationship between years of schooling and employee earnings is seen to be moderately positive given Pearson ($\rho = 0.54$). This value is statistically significant at 0.01 level of significance. As shown in the table 4.3 below

Table 4.3: Pearson correlation of years of schooling on earning of the employees

Number of obs = 82

Pearson (ρ) = 0.54

Sig. (2tailed) = 0.000

Test of H_0 : There is no significant relationship between years of schooling and employee earnings

Prob>|t| 0.000

Source: Author 2019

From the table above we note a moderate positive statistically significant relationship between years of schooling and earnings of the employees. Given a 0.01 significant level with a two tailed test ($\rho = 0.54$, $p > 0.000$). We reject the null hypothesis and accept that

there is a positive relationship between years of schooling on earnings. This showed that an additional year of schooling tends to have proportionate rise in earnings of employees.

4.4.2 Age and the Earnings of the Employees.

The researcher also investigates the relationship between age and the earnings of the employees. Using the Pearson correlation coefficient, statistically significant at a 0.01 level (2 tailed). There was a very weak negative correlation between age and earnings of the employees as shown in the table below.

Table 4.4: Pearson correlation of age and earnings levels of the employees

Number of obs = 80

Pearson (rho) = -0.208

Sig. (2tailed) = 0.061

Test of H0: There is no significant relationship between age and employee earnings

Prob<1t1 0.061

Source: Author 2019

From the table above we note that there is a very weak negative relationship between age and the earnings of the employees. Given a 1% level of significance, ($\rho = -0.208$, $p < 0.061$). We accept the null hypothesis for the age effect on employee earnings. That age of an employee does not influence his earnings.

4.4.3 Experience and Earnings of the Employees

We also investigate whether there is any close association between experience and employee earnings. At a 5% significant level. There is a very weak negative relationship that is ($\rho = -0.267$)

Table 4.5: Pearson correlation of Experience and Earning Levels of the Employees

Number of obs =80

Pearson (rho) = -0.267

Sig (2tailed) = 0.015

Test of H0: There is no significant correlation between years of completed schooling and employee earnings

Prob>1t1 0.015

Source: Author 2019

We note that experience has a weak negative statistically significant relationship on earnings ($\rho = -0.267$, $p < 0.015$). We accept that experience has a very little effect on the employee earnings. The effect is more comparable on the age effect. This shows that the more years of experience of the employee may not necessarily mean higher wages. Some employees spent more than 30 years in the job and were still getting peanuts. The researcher attributes this effect on mismatch in the nature of experience needed in the job with what the employee is already trained in.

4.4.4 Education and Employee Earnings (Wage)

An ANOVA one way was used to analyze differences in mean earnings of education levels. The assertion was set: mean earnings of primary level, secondary and tertiary level are equal against the alternative that mean earnings were significantly different. The mean earnings of primary schooling was 11.12, secondary schooling 11.47 and tertiary level 13.19. The researcher also observed that there were statistically significant differences in the mean earnings to each level of education as reported by the ANOVA in table 4.6 With $F((2, 79) = 54.664$ and $p = 0.003$). A null hypothesis is rejected at 95% confidence level

Table 4.6: A table Showing the Statistical Description of Mean Earnings and ANOVA Results of Employee Mean Earnings Based on their Education Level

Descriptive Statistics								
					95% C.I means			
	N	Mean	S.d	S.E	Lower	Upper	Min	Max
Primary level	9	11.12	0.522	0.174	10.72	11.52	10	12
Secondary level	12	11.47	0.818	0.236	10.95	11.99	10	13
Tertiary level	61	13.19	0.713	0.091	13.01	13.38	11	14
Total	82	12.71	1.086	0.120	12.48	12.95	10	14
ANOVA								
	SS		Df		Mean Square		F	Sig
Between	55.426		2		21.713		54.664	0.003
Within	40.051		79		0.507			
Total	95.477		81					

Source: Researcher 2019

From table 4.6 above we can observe that earnings of employees increase as one progresses the education ladder. We see that attaining a secondary education adds 0.35 earnings on primary level and so 1.72 mean earnings are added onto a secondary education level if an employee reached a tertiary institution.

Since the ANOVA table showed that there were significant differences in mean earnings of employees based on their education level, the ANOVA only shows that there exists significant difference in means but we are uncertain which education levels contributed the statistical difference in mean earnings. The researcher had to carry out a Tukey Post Hoc test which yields a multiple comparison table 4.7 below.

Table 4.7: Table Showing Multiple Comparisons of Group Means for Different Education levels.

(i)Education level	(j)Education level	Mean difference (i-j)	S.Error	Sig	95% Confidence Interval	
					lower	Upper
Primary	secondary	-0.350	0.314	0.508	-1.10	0.40
	Tertiary	-2.073	0.254	0.000	-2.68	-1.47
Secondary	Primary	0.350	0.314	0.508	-0.40	1.10
	Tertiary	-1.723	0.225	0.000	-2.26	-1.19
Tertiary	Primary	2.073	0.254	0.000	1.47	2.68
	Secondary	1.723	0.225	0.000	1.19	2.26

The mean difference is significant at 0.05 levels

From the table above there was statistically significant difference between groups as determined by the one way ANOVA ($F(2, 79) = 54.664, p = 0.003$). A tukey post hoc test revealed that the mean earnings of employees with tertiary education level were statistically significantly higher ($13.19 \pm 0.713, p = 0.000$) than for primary level and secondary level. However there were no statistically significant difference in earnings of employees who had attained a primary education level ($11.12 \pm 0.522, p = 0.508$) and secondary ($11.47 \pm 0.818, p = 0.508$).

4.5 The Effect of Years of Schooling, Age, Experience and Education Level on Earnings of Employees.

To investigate the effect of years of schooling, age, and experience and education level on employee earnings, a multivariate linear regression analysis of the predictors on the log earnings of employees and hypothesis tests on regression coefficients using the F test were carried. The researcher assigned dummies d_1 (primary education) and d_2 on (secondary education). Dummy variables of a '1' and a '0' were used.

Table 4.8: A table showing the General Regression Analysis of Employee Earnings on the Explanatory Variables

on the Dependent Variable

Summary of Regressions						
Model	R	R Square	Adjusted R	Standard Error		
1	0.631	0.3982	0.3586	0.8661		
ANOVA						
	Sum of Squares		Df	Mean Square	F	Sig
	Regression	37.2447	5	7.2447	10.057	2.05E-07
	Residual	56.2886	76	0.7406		
	Total	93.5333	81			
Coefficients						
(Constant)	Unstandardized Coefficients		Std Error	T	p-values	
	11.4739		1.2263	9.3563	2.78E-14	
Years of schooling	0.0198		0.0608	0.3268	0.7446	
Age	0.0281		0.0161	1.7425	0.0855	
Experience	-0.0152		0.0228	-0.6642	0.5086	
Primary education	-1.6348		0.8376	-1.9515	0.0546	
Secondary education	-0.9432		0.3986	-2.36581	0.0205	

Source: Researcher 2019

In order to investigate the effect of, years of completed schooling, age, and experience and education level on earnings of the employees, the researcher also had to investigate the regression coefficients of the model by carrying out a statistical test on overall model statistical significance using the Fishers (F) statistic from table 4.8 above. The general assertion was that: Earnings of employees are independent of years of schooling, age, and experience and education level. At a 95% confidence interval and a 5% level of significance the researcher obtained A NOVA results $F(4, 76)=10.05, p=2.505E-07$. And concluded that at least some of the predictors' variables explained the variation in earnings of employees. The R^2 coefficient of determination therefore is statistically significant and is different from zero. This leads us to the regression model:

$$\ln W = 11.0474 + 0.019S_i + 0.0281A_i - 0.015X_i - 0.015D_i - 1.634Di + \epsilon_i.$$

We can see that the model shows a positive constant of sh.11.0474. The earnings an employee could get if the years of schooling, age, experience and education level were set to be equals to zero. Meaning employees could still get money with other means. It's also noticeable that years of schooling and age have a 0.019 and a 0.028 respectively, multiplier effect on earnings. However the researcher noticed that experience has negative effects on employee earnings given the regression coefficient of -0.015. After the effect of years of schooling, age and experience are taken up, primary education and secondary education had significant noticeable negative (lower returns to schooling). In comparison with the reference group (tertiary education), since the model was statistically significant, the wage discrepancy was also significant among different categories.

4.5.1 Goodness of fit of the model used in regression analysis

This is intended to explain whether the model used in regression analysis is justifiable. From the regressions carried out the researcher obtained the coefficient of determination $R^2 = 0.3982$ this showed that variation in earnings of the employees is roughly half explained. That is $(0.3982 \times 100 = 39.82\%)$ of the variation in earnings of employees in Atatur referral hospital is explained by years of schooling, age, and experience and education level.

CHAPTER FIVE:

DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Summary of Findings

This section of the research dissertation tends to the summarize results of the analysis section. It presents the findings from the survey, draw inferences, discuss, and make conclusions and recommendations for further research.

5.1.1 Demographic Characteristics of Respondents

As seen from table 4.1, the researcher sampled a population of 82 workers in the hospital for a survey. Out of these members who responded to the survey questionnaire, we observe that 51.2% were males whereas 48.8% were females. Among these, 50% were married, 31% single, and 12.2% were either divorced or widowed. All the employees had had some schooling level, 12.2% of the respondents had attained a primary education level, 18.3% secondary level and a big percentage of 69.5% had reached a tertiary institution. Meaning out of the 82 employees contacted a big percentage of them were married adults. It also showed that most of them were men more than women by a very small percentage around 2.4%.

5.1.2 Description of the Schooling and Earning Levels of the Employees.

In order to understand the respondent schooling and earning characteristics, the researcher had also presented the descriptive characteristics of the respondents as of table 4.2 above in chapter four. We observe that on average, mean earnings of employees was UGX. 499769.365, respondent mean age of 36.10. This meant that most of the employees were more than 30 years of age with the youngest employee being 23yrs and the elder being 65 years old; most respondents had an experience of 6 or more years with the institution. Most of the employees had a 2.6 education level that's a big percentage of them had attained more than secondary education. Remember education level was coded 1="primary level", 2="secondary level" and 3="tertiary level". Most employees spent on average 16years at school. We also observed that most respondents start attending school at a minimum age of 3 years while the maximum age being 10 years.

5.1.3 The Relationship between years of Schooling, Age, Experience and Education Level on Earnings of the Employees

The researcher investigated the relationship between schooling and earnings of the employees by carrying out individual Pearson correlation of the predictors. Individual factor relationships were hypothetically tested.

5.1.3.1 Years of Schooling and Employee Earnings.

The researcher observed that more years of schooling were positively correlated with the earnings of the employees. In table 4.3 He observed a moderate positive relationship between schooling and earnings ($\rho = 0.54$). The researcher also tested whether the relationship was zero. He found that there was a positive statistically significant relationship between the two that's ($\rho = 0.54$, $p > 0.000$). By rejecting the null hypothesis, conclusions are made that an additional years of schooling tends to raise employee earnings.

5.1.3.2 Age and Employee Earnings

However age is observed to be having a negative relationship on employee earnings ($\rho = -0.208$). Refer to table 4.4. Hypothesis test showed that age had a zero relationship on employee earnings. The decision was to reject the null hypothesis if $p > 1t1$. The researcher found ($\rho = -0.208$, $p < 0.061$). The null hypothesis accepted at 1% significant level. The researcher attributes the negative relationship between age and earnings on the strict government labour policy in Uganda for instance children under 14 years are not accepted to work in risky jobs. It's no doubt why earnings of young children are lower than adults of age. Also earnings due to schooling can tend to reduce with age. When people are reaching their old age and still investing education for themselves, earnings will have a sharp fall since for few years they will be unable to concentrate and reach retirements that only needs sustainable earnings compared to active and energetic employees.

5.1.3.3 Experience and Earnings of the Employees

Similar results of age on earnings relationship are obtained for experience at 5% (sig.2tailed). Experience had Pearson correlation of ($\rho = -0.267$). Hypothesis tests

showed that experience had a zero relationship on employee earnings. The decision was to reject the null hypothesis if $p > 1t1$. The researcher found ($\rho = -0.267$, $p < 0.061$). The null hypothesis accepted at 5% significant level. The researcher attributes the experience effect on mismatch in nature of experience needed in the job (professionalism effect) with what the employee is already trained in. And the preferred reason for experience in selection may only be attributed that the employee has learnt the system of the profession so he is chosen for being able like Arrow,(1973) puts that's it's just a filter for ability.

5.1.3. Education Level and Earnings of the Employees

The researcher used one way ANOVA for analyzing the mean differences in the mean earnings of education level of individual employees. The researcher observed that earnings of the employees rise with the level of educational attainment. The researcher observed that a secondary education level adds 0.35 mean earnings on primary schooling and attending a tertiary institution had a chance of increasing mean earnings of secondary schooling by an average earning of 1.72. The researcher also carried out multiple comparisons of means earnings for each education level using the Tukey post hoc statistical test. This yielded a multiple comparison table 4.4.2. The researcher observed that mean earnings of tertiary institutions were statistically significantly different and higher (13.19 ± 0.713 , $p = 0.000$) than for primary and secondary school levels. The mean earnings for primary school level and secondary were not statistically significantly different.

5.1.4 The Effect of Years of Schooling, Age, Experience and Education Level on Employee Earnings.

The researcher had to validate the hypothesis on whether years of schooling, age, and experience and education level explained the variation in earnings of the employee. When hypothesis was tested for regression coefficient using F statistics from ANOVA table that is $F((5, 76) = 10.0574)$, $p = 0.2.005E-07$) and therefore at 5% level of significance since the regression was statistically significant, some explanatory variables explained variation in employee earnings.

5.1.4.2 Justification of Goodness of fit of the Regression Model Used.

The regression model used explained 39.8% of the total variation in earnings that is influenced by years of schooling, age, and experience and education level. We also observe a positive standard error of estimate SE (0.866). The model yielded regression coefficients of 0.019 of schooling multiplier effect on earnings; similarly age has 0.028 multiplier effect on earnings the employee earnings. However the researcher noticed experience tend to have negative effects on employee earnings given the regression coefficient of -0.015. There were also significant lower earnings to lower levels of primary education and secondary education in relation to tertiary education level. The researcher attributes the experience effect, ability biased and lack of merit for job qualifications. Some individuals are paid based on ability and capacities, and experience looks to be cross cutting because persons can still get experience in a class room rather in the office. This kind of experience can absorb the job market experience effect on earnings.

5.1.5 Discussions and Conclusions.

From the survey findings we can discuss and conclude with the following.

- The level of earnings rise as one progresses the educational ladder. The researcher observed earnings rising with the education level. For example an additional year of secondary schooling increased the mean earnings of the primary schooling by 0.35 and a tertiary education level raised the mean earnings of secondary schooling by an average of 1.72.
- Cross tabulations of gender and education level on earnings also showed that the lowest paid employee was a female. However the male number of lowest paid employees were many than females. The researcher observed this in kind of jobs like compound cleaning, slashing, mortuary attendants and askaris. We can understand that women were less interested in such jobs or else it's not a preference for them. We still observe significant rise in earnings with education level with labour force with tertiary education enjoying higher nominal returns.
- The researcher also observed that returns to schooling are highly determined by more years of completed schooling and higher education level of the employees.

The survey results observed that individuals who spent more time schooling and had attained a higher education level had moderate positive correlation coefficients; they had better opportunities in the labour market in comparison to their counter parts that spent less than 7 years at school. However the researcher noticed negative correlation and regression coefficient on experience on the earnings of the employees. This gave experience a very small statistical significant effect on earnings of employees ($\rho = -0.267$). The researcher attributes this to specialization effect in the labour market. That's, employees with a positive effect of experience on their earnings must had some kind of specialization that makes them a priority in selection by employers. Some employees had for instance worked with the institution for more than 30 years but still earnings were very small. The researcher as well attributes this to low education level effect.

- Similar observations were made for primary education and secondary education in relation to tertiary education. The wage gap between the two groups and the reference group were statistically significant. This survey observed negative correlation coefficients of age on earnings (-0.001). This showed that additional age of an individual has a possibility of raising his earnings if only these individuals were able to do required tasks based on their age. For instance in Uganda individuals below 14 years of age are not accepted in the labour market. It's by no means that their earnings can be greater than of their counterparts in the labour market.

5.2 Recommendations

- Government should focus on improving ways that keep students at school. This could mean providing necessary support like feeding and sanitary pads for girls. Such policy formulations should be based on educational surveys rather than political mandates. And major focus should be on primary level.
- If earnings of the employees should rise, it should be based on their educational qualification that's education level and that is matched by the years of completed schooling. In other words employees with better qualifications need be paid best.

- There is need for government to adopt a proper subsidization policy so as to make schooling less expensive for nationals. This will likely stabilize earnings of the employees in the long run. We notice that the low level of education correlates low earnings due to other factors like poverty effect.
- Subsequent researchers need to investigate returns to schooling and poverty in the country. It's an assumption that some employees had lower earnings due to poverty effect. When studying schooling returns attention should be taken not to sample respondent's from sectors that is dominated by a single sex.
- There is also need for government to develop a salary review team that focuses on evaluation of earnings of employees based on their schooling characteristics.
- We would agree that employees need not be paid based on experience rather on specialization. It's the reason behind proposed rise in prices of doctors and science teachers in the country, since professionalism brings a significant level of experience. Employers too need not select labour that is not specialized based on experience rather every individual can be given a chance and perform through training unfortunately investors fear the training costs. Then governments should adopt cost sharing with investors.

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APPENDICES

APPENDIX 1: LETTER OF PERMISSION TO CONDUCT RESEARCH

 **KAMPALA INTERNATIONAL UNIVERSITY**
EXPLORING THE HEIGHTS

Ggaba Road, Kansanga
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COLLEGE OF ECONOMICS AND MANAGEMENT
OFFICE OF THE HEAD OF DEPARTMENT
ECONOMICS AND APPLIED STATISTICS

06th DEC, 2018

TO WHOM IT MAY CONCERN

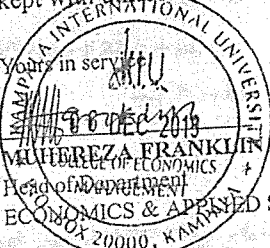
Dear Sir/Madam,

RE: PERMISSION TO CONDUCT A RESEARCH STUDY IN YOUR ORGANISATION/ INSTITUTION

With reference to the above subject, this is to certify that **ILAKUT GEOFFREY** REG.NO. **1153-05144-00452** is a bonafide student of Kampala International University pursuing a Bachelors Degree in Economics and Applied Statistics.

He is currently conducting a field research entitled **"Determinants of schooling Returns"**. This area has been identified as a valuable source of information pertaining to his research study. The purpose of this letter therefore is to request you to avail him with the pertinent information as regards to his study.

Any data shared with him will be used for academic purposes only and shall be kept with utmost confidentiality.

Yours in service

MUHIREZA FRANKLIN
Head of Department
ECONOMICS & APPLIED STATISTICS
P.O. Box 20000, KAMPALA

mission granted week for
MINISTRY OF HEALTH
ATU/STP/ HOSPITAL
KUM/ DISTRICT
11/01/2019 to 24/01/2019
Scanned
SAA
Scanned

Exploring the Heights

APPENDIX 2: QUESTIONNAIRE DESIGN
Kampala International University
College of Economics and Management
Department of Economics and Applied Statistics

Research Questionnaire

I am **Ilakut Geoffrey** a student of the Kampala international University taking a Bachelor's degree in Economics and Applied Statistics. This questionnaire intends to make an inquiry for the stated objectives below from your institution. Your sincere participation in offering responses herein will be of much relevance to aid this course.

Questionnaire Objectives

This questionnaire is intended to achieve the following objectives

- i. Investigate the factors that determine the level of earnings of employees based on their schooling characteristics.
- ii. To investigate the relationship between schooling and earnings of the employees.
- iii. To investigate the effect of years of complete schooling, age, experience and education level on the earnings of the employees.

Instructions to the respondent

- a) Persons below 14 and those above 65 years of age should not answer this questionnaire. Whether on contractual employment or permanently employed.
- b) Please do not answer using acronyms (abbreviations).

SECTION A1: Respondents Bio Data

1. Marital Status
(a) married b) single (c) widowed (d) divorced
2. Your country of origin
A Ugandan (b) Non Ugandan

3. Name of Employer.....

SECTION A11: Determinants of Schooling Returns (Independent Variables)

4. Your age.....(Years)

5. Gender

(a) Male (b) female

6. Your tribe.....

7. At what age did you start school.....?

8. Who sponsored your schooling

(a) public sponsorship (b) Parent (c) Own incomes (d) Loan scheme

9. Where did you participate most of your schooling

(a) Public schools (b) private schools

10. Your level of completed schooling

(a) Zero schooling (b) Primary school (c) Secondary school (d) Tertiary institution

11. At what age did you complete school before getting a job.....?

12. Your current job title (indicate your position).....

13. For how long have you been working with this institution/organization.....?

14. What is the level of education of your parent

(a) Zero level (b) primary level (c) 'O' level (d) Tertiary institution

15. Rank your family background

16. Does your institution have a trade union? If yes continue with question 17. if no jump.

17. Rank the strength of the trade union in your institution

SECTION A111: Earnings of Employees (Wage)

18. Your current gross monthly
salary.....

(a) Married (b) single (c) widowed (c) divorced

THANKS FOR YOUR PARTICIPATION

END

Education

INSTITUTION	PERIOD	ACADEMIC AWARD
Kampala International University	2015-2018	Academic Transcript
Ngora High School	2013-2014	Uganda Advance Certificate of Education
Bukedea Secondary School	2009-2012	Uganda Certificate of Education
Atutur Primary School	2000-2008	Primary Leaving Education-Pass Slip

EXPERIENCE

May-Aug-2017

Internee

Bukedea District Local Government

Duties and Responsibilities

- Printing birth certificates for clients using the VR (Vital Records register) software by (NIRA).
- Collecting organizing and analyzing criminal reports from the sub counties
- Organizing the office, stationary(books into shelves) and tables
- Organizing board room for meetings and writing minutes for meetings.
- Presentation of the computer programs during meetings

June –Aug-2016

Machine Operator

Blue Wave Mineral Water and Bottle Co. Luzira Industrial area

Duties and Responsibilities

- Operating a machine that makes plastic caps, and tubes in injection section.

- Operating tube blowing machines
- Offloading plastic material from the vehicles
- Loading material into the machines
- Packing water bottles into boxes in prep for transportation

June –Aug-2016

Casual Labourer

Mukwano Group of Co. Banda-Kinawataka

Duties and Responsibilities Held

- Clipping plastic dishes, plates, cups and buckets while in plastics section
- Wrapping and packing washing powder containers into boxes.
- Operating machines for bottle caps.
- Loading material into plastic recycling plant

LANGUAGES

Language	Spoken	Written
Ateso	-Fluent	-Excellent
English	-Fluent	-Very good
Luganda	- Basic	-Basic

HOBBIES

- Reading magazines, newspapers on economic on issues that matter, like on political economy, society, growth and development investment and opportunities.
- Watching television news, documentaries
- Travelling and expeditions based on curiosity
- Playing tool table and volley ball with friends during leisure hours.
- Spending valuable time at church fellowshiping.

REFEREES

Mr. Ongaba Stephen

District Planner and Chief Economist

Bukedea District Local Government

Tel: 0772863708

email:steongaba@gmail.com

Mr. Muheresa Franklin

Head of Department Economics and Applied Statistics

College of Economics and Management (K.I.U) Campus

Tel: 077094955

Mr. Mwebesa Edison

Lecturer Statistics and Research Methods

Kampala International University

Tel: 0782275512