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Education and Earnings Inequality in Cameroon

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ABSRACT: Poverty and wage earnings inequality have co-existed for generations both in developed and developing nations, and in spite of the multiple interventions, the progress in eliminating this problem remains elusive. It is from the above count that this study was designed to capture the impact of education on wage earnings and inequality in Cameroon across sectors of employment using OLS and factual/counterfactual test of inequality as the technique to analyse data from CLFS 2010. The results obtained revealed that in Cameroon as a whole, Sector of employment, Work experience, Years of education, Age, and Household size are very instrumental in explaining wage earnings. However, disintegrating the Cameroonian economy into sectors of employment made marital status to be significant in the public sector in addition to Years of education, Age and Household size that were also significant in the overall results while in the private sector only years of education and household size are significant in explaining wage earnings. Thus working experience is significant only in the overall results but failed to be significant when disaggregated into sectors of employment. However, years of education which is our main explanatory variable revealed very significant importance in explaining wage earnings, be it in Cameroon overall or in the public and private sectors of employment individually.Also from the inequality test results, the gini coefficient is higher in the factual results than in the counterfactual results in Cameroon specifically in the public sector while in the private sector the gini coefficient is higher in the counterfactual than in the factual. This shows that in Cameroon as well as in the public sector, the varied level of education in the factual results account for greater wage inequality than equalizing years of education in the factual results while in the private sector the varied level of education in the factual results reduces inequality compared to equalizing years of education in the counterfactual results. It is thus recommended that education for all should be encouraged not only at the primary level as spelt out in the development goals but even at tertiary levels. This can be done by sensitizing the parents on the importance of education for the children as well as offering study leave possibilities to most workers. It can also be done by further subsidizing education at the tertiary level and providing adequate educational infrastructures.

***KEYWORDS**:* Cameroon, Education, Earnings, Inequality, CLFS, OLS, Factual/Counterfactual.

I. INTRODUCTION

The way in which economic rewards are distributed in any economy has been an important and a divisive topic for policy debate. Today, the issue of income inequality range from ideas that focus on a more equitable distribution of rewards and are based on the issue of envy and class welfare (Luhby, 2012). This has caused policy makers to face a big dilemma on the problem of poverty and wage earnings inequality which have co-existed for generations both in developed and developing nations (Wilkinson & Pickett, 2010). However, despite of multiple interventions, the progress in eliminating this problem of inequality remains elusive. Many writers have attributedit to the impact of globalization and its concomitant deleterious effects on nation's labour markets and dismantling of the welfare state (Dominelli, 2004; Mishra, 1999). In many of the developed nations, welfare has become residualised through the restrictions of the benefits which have contributed to the intensification of poverty, wage earnings disparities and the further exclusion and marginalization of groups.

It has been shown that wage earning differential has significant negative impacts on poverty, social performances and regional public finance. For any given level of average income, for instance, a higher degree of wage earning differential generally implies higher levels of poverty. Evidence is the fact that Ravallion (2004) showed that higher wage earning differentials are usually associated with lower rates of decrease in poverty levels. In addition, increasing inequality in many developing countries further reduces the impact of overall economic growth on poverty, thus causing poverty to fall at intolerable rates. Inequality and poverty affect each other either directly or indirectly through their relationship with economic growth (Naschold,2002). Changes in income distribution have a greater effect on the measure of the depth and severity of poverty and work place characteristics play significant role in determining wages (Wooden et. al., 2002). Therefore policies and growth patterns aimed at equal distribution of income are a potentially significant mechanism to fight poverty (Naschold, 2002).

In addition to the above issues, social performances and inequality at the regional level affects health, education and the frequency of crime and violence (Deaton, 1997). The levels and heterogeneity of the regional impact of wage earning differentials may also have some effects on tax collection and may affect the optimal degree of decentralization and the provision of public services (Mookherjee &Bardhan, 2005).

In Cameroon the story is not different as the structure of wages varies considerably in Cameroon especially between the two main sectors of employment (Public and Private sectors). Workers in the private sector are far better off than their counterparts in public institutions. As an illustration, a doctor in the para-public sector earns at least 2.1 times more than a doctor in the public service with the same qualifications, and over 3.5 times more than a contract holder with the same technical profile (INS, 2008). According to the above authors, within the public sector, contract holders are less well paid than civil servants with equal skills and equal performance.Also, analysis using the third Cameroon Household Survey (ECAM III) conducted in 2007 equally revealed great wage differentials between men and women in the labour market irrespective of their educational levels; Women are mostly engage in unprotected jobs and earn on average two times less than men (INS, 2008). These observations corroborate with the results of the Employment and the Informal Sector Survey (EESI) realised in 2005 which has clearly established the existence of gender inequalities in the labour market in Cameroon (INS, 2007).

Considering the above views, the importance of labour market heterogeneity in explaining earnings and income inequality in Cameroon cannot be overemphasized. The structure of the market itself has a significant impact on the employment status and serves as an important determinant of household wage earning and welfare. This is because the labour market consists of several sources of income, including direct remuneration in the form of cash income, and non-cash income (fringe benefits). While these different forms of income sources contribute significantly to dimensions of inequality and income security has relied to a relatively large extent upon the direct remuneration from the labour market (Leibrandt, Bhorat and Woolard, 2001). This suggests that access to employment as well as remuneration attached to such labour market opportunity is important in solving problems relating to inequality and welfare (Ogwumike, 2002). The Cameroonian labour market like in most other developing countries is characterised by large scale heterogeneity as a consequence of differences in factors affecting earnings and entry into the market. The distinction comes in different forms. Labour markets are mostly distinguished by whether they are formal or informal, private sector or public sector, skilled or unskilled which have implications on the labour market earnings.

Based on the above consensus, the issue of wage and earnings inequality in the Cameroon labour market has been a subject of great controversy. Over the last decades a substantial increase in the cross section variance has been observed. There is a common consensus among labour economists that schooling, age, gender, job market experience, professional and vocational background are meaningful factors that can explain part of the existing wage differentials across individuals. However, there is much disagreement on the relative importance of each of these variables for earnings (Rosen, 1972; Mincer, 1974; Spence, 1976& Stiglitz, 1975). With extensive data available over time and individuals on schooling and on earnings, the measurement of the effect of education on earnings is one area where we might expect agreement since education increases the skills and productivity of poor households and enhances their employability and earnings, as well as their welfare.

From the above counts, it is therefore of interest in this study to analyze the effect of educational attainment on wage earnings in Cameroon while testing the impact of education on measured wage inequality in Cameroon overall and across sectors of employment.The remainder of this paper is organised as follows: section II reviews related literature, section III presents the methods and procedures, the findings are reported in section IV while conclusion and policy recommendations in section V.

II. LITERATURE REVIEW

The debate on the impact of education on wage earnings inequality has been a policy debate option in many economies. To this effect, the theoretical basis for this is the Human Capital Theory (HCT) of Becker G. (1967) who emphasizes on the importance of investment in education. The human capital theory led by Chicago economists Schultz and Becker holds that just as physical capital could be accumulated, it was realized that human capital in form of education and skills could also be accumulated and can result in higher earnings. To Becker (1967), the principal characteristic that distinguishes humans from other types of capital is that, by definition, the former is imbedded or embodied in the person investing. This embodiment of human capital is the most important reason why marginal benefits decline as additional capital is accumulated. One obvious implication of embodiment is that since the memory capacity, and the physical size of each investor is limited and it eventually diminishes as he gets older.

According to Psacharopoulos et al. (2004), the HCT has roots in the works of classical authors such as Adams Smith (1776) and Alfred Marshall (1890). The former concluded that a man educated at the expense of much labour and time may be compared to one of those expensive machines and the work he learns to perform should replace to him the whole expense of his education.

The latter referred to industrial training as 'a national investment'. Much later authors such as Mincer (1958), Schultz (1961) and Becker (1975) gave impetus to this theory when they affirmed that time and money spent on education builds human capital hence one should be able to estimate the rate of return on such investment, in a way similar to investment in physical capital.

The basic premise of the human capital approach to income increase is the marginal productivity theory. This theory asserts that, a business man will hire an additional labour input only if the returns from such labour contribute to production more than its cost. In other words, labour should earn only what it contributes to output at the margin if equilibrium is to be established. Labour's productivity on the other hand will depend on the amount of human capital acquired by such labour meaning the level of education attained by an individual will determine the productivity of that individual. More educational investment leads to higher productivity which gives rise to higher earning and vice versa as illustrated in figure below.

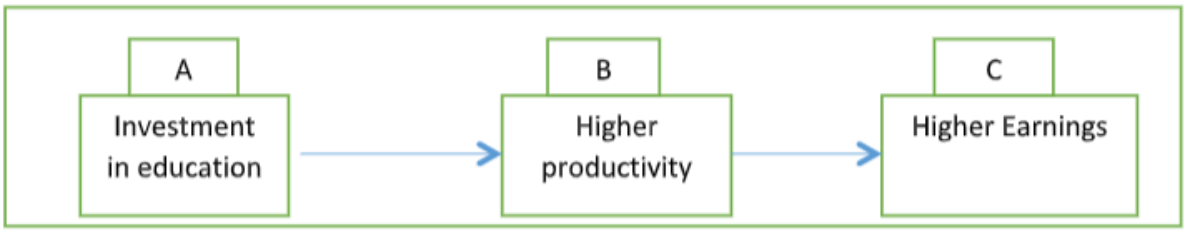

Fig. 1: Human Capital Investment
(Soure Edokat, 1989)

Increase in educational investment (A) gives rise to higher productivity (B) and those with higher productivity, it transcends to earn higher incomes (C). The marginal productivity theory therefore helps to explain why there are earning differentials based mainly on output of labour. Thus an unskilled labour would earn less than a skilled one because skilled labour is more productive than an unskilled one. Thus a primary school leaver with no additional skills is invariably earns lower than a secondary school leaver because it is assumed that the latter will be more productive than the former (Edokat, 1989). In general therefore, those with higher education earn more than those with lower ones. Education thus increases the earning capacity of its possessor. Such level of education includes on-the-job training, even though those who have lower qualification earn higher than others who have just been recruited but with higher qualifications.

The human capital theory has been criticized on several grounds. Firstly, the theory's central proposition that education produces a net positive marginal product of labour can be tested only under improbable conditions it does not suffice to apportion marginal product due to education to labour, as distinct from other factors, while also gratuitously assuming that marginal product can be matched to individuals. Secondly, the notion that higher earnings of more educated workers signify their superior marginal product relatives to less educated workers is wanting. Thus it is only under conditions of perfect labour market competition that the higher earnings of more educated workers can be said to exactly match their higher marginal product relative to less educated workers. Even in the unlikely circumstance of competitive labour markets, Blaug (1987) assert that the competitive labour market model lacks predictive power and fails to indicate a timeframe within which to produce a response in situations of disequilibrium. He notes, in addition, that it is also silent about the nature of this response.

Authors such as Wells (2006) who carried out a research on Education's Effect on Income Inequality concluded that the effects of education on income inequality are affected by the level of economic freedom in a country and specifically that more economic freedom may limit the leveling effects of secondary enrollments. Other past works reviewed included those of Schultz et al (2005) whose objective was to provide comparable measures for 54 countries on how children's educational performance is strongly related to their family background; the works of Baye and Epo (2011) who applied the regression based inequality decomposition approach to explore determinants of income inequality in Cameroon using synthetic variables for education and health constructed by the multiple correspondence analysis method to reflect the multidimensional character of health and education in the 2007 Cameroon household consumption survey; and that of Fambon et. al., (2014) who carry outan empirical analysis of the sources of income inequality in Cameroon. The above reviews among others indicate that most of the research carried out so far have dwelled on the effects of education, educational effect on Income Inequality, impact of education on measured inequality along the wage distribution, the sources of income inequality in Cameroon and relationship between income distribution, democratic institution and growth. None is seen especially in Cameroon that does the two sector (public, private) based analysis. Thus, it is worth investigating on this topic so as to contribute to the existing body of literature and to bring to lamplight the realities of this issue in the context of Cameroon.

III. METHODOLOGY

This study cover the whole of Cameroon and uses the Cameroon labour Force Survey (CLFS, 2010) data collected by the National Institute of Statistics (INS) thus justifying our use of survey research design in the paper. This data is most preferred in this study since it covers a wide range of variables in the labour market of Cameroon and also has very large sample size as well as the credibility of the institution that collected the data. It is quite difficult and the cost burden is too high for an individual to collect data using questionnaires to such variable scope and large sample dimension as well.

The model specified in this study is a functional relationship that models wages as a function of educational attainment and a host of other variables that determine wages. This model helps us to test the impacts of education on wages in Cameroon as well as evaluating the impact of education on measured wage inequality overall and across sectors of employment in Cameroon. The functional relationship is specified as follows:

$$W = f\left(HW, SEC, WEX, EDU, AGE, SEX, MAR, HHS,\right) \quad \text{.....(1)}$$

This model can be specified in econometric form as:

$$W = b_0 + b_1 HW + b_2 SEC + b_3 WEX + b_4 EDU + b_5 AGE + b_6 SEX + b_7 MAR + b_8 HHS + U \quad \text{....(2)}$$

The dependent variable is better expressed in logarithmic form to take care of non-linearity in the variable. Thus the model becomes:

$$LnW = b_0 + b_1 HW + b_2 SEC + b_3 WEX + b_4 EDU + b_5 AGE + b_6 SEX + b_7 MAR + b_8 HHS + U \quad \text{....(3)}$$

Apriori Expectations: $b_0 > 0,\ b_1 > 0,\ b_2 > 0,\ b_3 > 0,\ b_4 > 0,\ b_5 > 0,\ b_6 > 0,\ b_7 > 0,\ and\ b_8 > 0$

Where:

Wages (W)

This is the dependent variable and it measures the average monthly earnings of the individual

Hours-Worked (HW)

This measure the actual number of hours put in for work.

Sector of Employment (SEC)

This variable identifies the sector in which the individual is employed. The employment status of the individual as it is seen that the sector of employment can be a major cause of wage differentials. In this work, four main sectors are identified; the Public sector = 1, the Formal private sector = 2, the Informal non-farming = 3 sector and the informal agricultural sector = 4

Work Experience (WE)

The variable work experience is to determine whether wages differ based on the length of service of the labour. This is based on the belief that workers productivity change as they put in more years of service. The variable will be measured in the number of years of work experience.

Education (EDU)

This variable captures the educational level of the household head. This variable is necessary since education can enhance the productivity of labour and the Marginal Productivity Theory of wage determination depicts that workers are paid the value of their marginal product and so a change in workers productivity can possibly influence the wage. Educational level is measured in terms of the number of years schooling.

Age (AGE)

This captured the age of individual which tries to examine whether age of the individuals can affect their wages. This is also of interest as it will tell us whether young people can easily work even overtime to ensure the secure higher wages or they instead tend to be extravagant, spending and enjoying their youthful ages thus preferring more leisure to work and the old alike

Gender Group (SEX)

This variable captures the gender of the household head. This variable is necessary as it is believed that even under same circumstances, there is gender wage differential. The sex variable is a dummy and the gender group is male (Male = 1 and Women = 0)

Marital Status (MAR)

This variable captures the marital status of the individual. Marital status of the individual can affect the individual's wage since it is possible that the individual will have to work extra sheet to improve on the wage so as to be able to meet the needs of the couple rather than before when he/she was taking care but of only his/her needs. On the other hand married individuals quite often hardly stay at work since they have family calls. Also being married can increase wages through family allowances. However, it is often said that two hands are better than one so it important to test the hypothesis in terms of marital status of the household head and household wellbeing. This variable is also a dummy variable with Married = 1 and Unmarried = 0. However, the unmarried

will include bachelors/spinsters, widows/widowers, divorcees, while the married will be made of those who are officially recognised either by law, church or custom.

Household Size (HHS)

This measures the number of people living in each household. This variable do affect the size of the family allowances and hence the wages.

U = Stochastic Error Term

$b_0, b_1, b_2, b_3, b_4, b_5, b_6, b_7, b_8,$ arethe parameters of the model to be estimated

Two main analytical methods were used in this study. First to examine the role of education on wages in Cameroon overall and across sectors of employment, the Ordinary Least Square (OLS) is used since the wage which is the dependent variable continuous.To achieve the second specific objective that is to evaluate the impact of education on measured wage inequality overall and across sectors of employment in Cameroon, the Factual/Counterfactual test of inequality is employed and this method is consistent with the method used by Baye (2015) in similar study. In order to examine the impact on wage inequality if education had no effect on observed wage inequality overall and across sectors of employment. That is inequality that would materialise if variations in the distribution of wages across sectors of employment were independent of educational attainment. To derive a counterfactual benchmark for this exercise, we first write the estimated counterpart form of the model

$$LnW = b_0 + b_1HW + b_2SEC + b_3WEX + b_4EDU + b_5AGE + b_6SEX + b_7MAR + b_8HHS + U \quad \text{…………………(4)}$$

The factual wage distribution can be gotten from the model above by writing

$$LnW = LnW + v \quad \text{……………………………………(5)}$$

And then the antilog to have

$$W = \hat{e}^{W + v} \quad \text{……………………………………(6)}$$

Which is the factual wage distribution, presented in full in the equation below.

$$W = e^{b_0 + b_1HW + b_2SEC + b_3WEX + b_4EDU + b_5AGE + b_6SEX + b_7MAR + b_8HHS + b_9GOV + U + V} \quad \text{…………..……(7)}$$

The corresponding counterfactual hour-worked equalising benchmark is obtainable if workers within each sector of employment are allocated the mean educational attainment in that sector $\left(E\overline{DU}_s\right)$, while allowing other variables as observed. This gives rise to the counterfactual distribution of wage denoted by $W_{E\overline{DU}_s}$ and defined as:

$$W_{E\overline{DU}_s} = e^{b_0 + b_1HW + b_2SEC + b_3WEX + b_4EDU + b_5AGE + b_6SEX + b_7MAR + b_8HHS + U + V} \quad \text{……………………(8)}$$

In this setup, measured wage inequality is attributed to unobservables (the inverse Mills ratio and the predicted structural error term) and other observed variables (hours worked, work experience, sex, age, marital status and household size) since wage inequality originating from educational attainment has been removed.

If we denote counterfactual distribution by $W_{E\overline{DU}_s}$, that is, the distribution with policy, the without policy distribution by W, and an inequality index represented by I, we can define the impact of policy on wage inequality given by Θ_I:

$$\Theta_I = \frac{I(W) - I\left(W_{E\overline{DU}_s}\right)}{I(W)} \quad \text{……………………………………(9)}$$

If $\Theta_I > 0$, education is inequality augmenting in the factual distribution

If $\Theta_I = 0$, education is inequality neutral in the factual distribution

If $\Theta_I < 0$, education is inequality reducing in the factual distribution

The notation Θ_I indicates that the share of education in the wage inequality is predicted on the chosen inequality index. Here we make use of the Gini coefficient index.

IV. FINDINGS

The Ordinary Least Square results presented below are based on the impact of education on wage earnings by sectors of employment in Cameroon and subsequently the factual/counterfactual inequality test results relating to the impact of education on wage earnings inequality in Cameroon overall and across sectors of employment. The data used are those of the 2010 Cameroon Labour Force Survey (CLFS).

4.1 Descriptive statistics

Table 4.1 Summary statistic of Variables used

Variable	Observation	Mean	Std. Dev.	Min	Max
Wages	8248	88002.9	945508.6	8662.57	2673913
Public Sector	8248	.1351787	.3422059	0	1
Private Sector	8248	.8625176	5.354922	0	1
Work experience	8248	30.45653	13.15555	3	88
Education years	8248	5.391495	4.660894	0	19
Age	8248	41.45653	13.15555	14	96
Sex_male	8248	.8518976	.3555044	0	1
Marital Status_married	8248	.7947324	.4042415	0	1
Household size	8248	7.125711	4.068107	1	23

Source: Compiled by authors using 2010 CLFS

Our descriptive statistic as presented in table 4.1 indicates that the average wage rate in Cameroon is about 88000 FRS with a minimum of about 8662.57 FRS and a maximum of about 2673913 FRS. This wide disparity between the minimum and the maximum wage earnings account for the very large standard deviation of 945508.6 FRS. This means there is a very big gap between the maximum and the minimum wages earned in Cameroon.

Also, in terms of sectors of employment (with the two sectors being public and private) it is observes that about 13.5% of our sample individuals in Cameroon are public sector employees as opposed to about 86.5% whoare private sector actors be it private sector employees, self-employees, both formal and informal and both agricultural and non-agricultural activities.

In relation to work experience, it is realized that the average number of years of work experienced by the respondents was about 30 years with a minimum years of working experience of 3 years and a maximum of about 88 years. Our results show that the years of Education have a mean of 5 years, a minimum of zero years and maximum value of 19 years. This means that on average every individual in Cameroon has 5 years of formal schooling. However, while there are some who didn't school even for a year, there are some who schooled for up to 19 years and this may have some role to play on their abilities to be employed and also their pay packages which is the main interest of this study. The average age of the respondents was about 41.5 with a minimum age of 14 years and the oldest respondent being 96 years. Also, About 85.2% of the respondents were males meaning about 14.8% of them were females and 79.5% are married meaning about 20.5% of them were not married.

As concern the household size, it is made up of an average of 7 persons even though still with some inequalities given the fact that the household size in this study varied from 1 (which maybe the case of an individual living alone) to 23 persons in the largest case scenario. It should however be noted that in Cameroon an average household size is that large (up to 7) with some going up to 23 because of the fact that most households have extended families living with them and people still value large family sizes as work forces in especially in the agricultural households as polygamy is not looked up as a vice in Cameroon like it obtains in other places in the world.

4.2 Investigating the role of years of Education in explaining wage earnings in Cameroon overall and across sectors of employment

Table 4.2: Determinants of wage earnings in Cameroon:

Variables	Overall	Public Sector	Private Sector
Sector of employment Public	-0.09972*** (-5.01)	-	-
Work experience	0.000181** (2.32)	0.0000291 (0.34)	0.0001872 (1.64)
Years of education	0.0302*** (6.28)	0.0313*** (4.71)	0.0235*** (3.64)
Age	-0.0166***	-0.0178**	-0.002

	(-2.89)	(-2.17)	(-0.29)
Sex_Male	0.01266 (0.17)	0.088 (1.01)	0.063 (0.60)
Marital Status_Married	0.047106 (0.68)	0.2114** (2.56)	0.015 (1.51)
Household size	0.0564*** (10.93)	0.087*** (9.12)	0.051*** (781)
Constant	12.19*** (51.32)	11.69*** (10.60)	12.596*** (40.70)
R^2-Adj	42.4%	37.11%	39.91%
F(P- value)	42.39%(0.0000)	15.28%(0.0000)	20.32%(0.0000)

NB: t-values are is parenthesis. *=10% level of significance, **=5% level of significance, ***=1% level of significance.
(Source: Authors, 2018)
Dependent variable is the log of wage earnings.

The coefficient of sector of employment in Cameroon overall with the results predicted for public sector meaning private sector is the reference shows a coefficient of -0.09972. The negative coefficient shows that public sector employees are less likely to earn higher wages than their private sector counterparts. This means that people employed at the private sector are more likely to earn better wages than their public sector counterparts. The results specifically show that public sector workers are earning 9.972% wages less than their public sector counterparts. The effect of sector of employment is significant at 1% level of significance.

In another aspect, our findings shows that the coefficient of years of experience in Cameroon overall is 0.00018, which means that years of working experience correlate positively and significantly (that is at, 5%) with wage earning. Essentially, our results indicates that if years of working experience of an individual increase by one year, we expect wage earnings of that individual to increase by about 0.02% in Cameroon with other variables held constant. Years of working experience also positively affect wage earning both in private and public sectors but the effects are insignificant when disintegrated into sectors. The overall result ties with those of Fondo and Ndamsa (2013).

The coefficient of Years of Education is 0.032 in Cameroon overall, 0.0313 for the public and 0.0235 for the private sector. This shows that in Cameroon irrespective of the sector of employment (public or private) years of education have positive effects on wage earnings. Thus increases in years of schooling increases wage earnings. Specifically, individuals with an additional year of education earn about 3.02% higher wages in Cameroon overall, 2.35% higher wages in the public sector and 3.13% higher wages in the private sector than their counterparts with one year less of education. However, the coefficients indicate that the effects of years of education is more pronounced in private sector than the public sector as the coefficient is higher for private than for public. The effects of education on wage earnings overall and across the two sectors of employment are all significant at 1% level of significance. This implies that we reject the first null hypothesis thereby retaining the alternative. This means that education has a significant impact on wage earnings overall and across different sectors of employment. This result is in conformity with the human capital theory, which states that education enhances productivity and hence income. This result conforms to the works of Mincer (1958), Becker (1964), and Schultz (2004), Baye and Epo (2011).

The coefficient of age in Cameroon overall is -0.0166, -0.0178 for public and -0.002 for private. This indicates that age relates negatively with wage earnings and the effect is significant only for overall results (at1%) and for the public sector (at 5%). This means that older workers are less likely to earn higher wages than the younger workers and age of worker is more relevant for wage earnings in the public sector than the private sector. This is possibly because of the fact that younger people are mostly still strong and can attain high productivity and even work multiple jobs that than the older ones.

The coefficients for sex with results predicted for males meaning female was the reference sex group are all positive showing that males are more likely to earn higher wages than their female counterpart. However, the effects of sex on wage earnings are insignificant both overall and across sectors of employment.

In relation to the marital status with results predicted for married and single being the reference, the coefficients are 0.047106 for overall results, 0.2114 for public sectors and 0.015 for private sectors. The positive coefficients all across indicate that married people irrespective of the sector of employment earn higher wages than unmarried people. The coefficients specifically show that married people earn 4.7% in Cameroon overall, 21.14% in the public and 1.5% in the public sector higher than their unmarried counterparts. This effect is significant only on the public sector at 5% level of significance and so marital status is relevant in the public

sector in explaining wage earnings. This may have to do with family allowances paid to the public sector workers.

The coefficient of Household size is 0.056, 0.087 and 0.051 in Cameroon overall, in public and in private sectors respectively. This shows that an increase in household size by one person increases wage earnings by 5.64% in Cameroon overall, by 8.7% in the public sector and by 5.1% in the private sector. The effect of household size has significant effects on wage earning at 1% level of significance both in Cameroon overall and across the two different sectors of employment. This positive and significant relationship maybe due to family allowances paid on dependent family member.

The coefficients of the constant term reveals that even if all the independent variables specified in the model didn't exists there would have still been some positive values for wage earnings to the magnitudes of 12.19 overall, 11.69 for the public sector employees and 12.596 for the private sector employees and the constant term is significant in all the three results at 1% level of significance.

The coefficients of R-Squared adjusted reveal that the exogenous variables are able to account for about 42.4% of variations in wage earnings overall in Cameroon, 39.91% of variations in wage earnings in the public sector and 37.11% of variations in wage earnings in the private sector. While the F-ratio is significant is significant at 1% in all the three results revealing that our findings are 99% reliable.

4.3 Impact of years of education on well-being inequality

Table 4.3: Wage inequality as measured by the Gini index of impact of equalizing years of education

	GINI INDEX		
Group variables	Factual	Counterfactual	Wage inequality impact
Cameroon Overall	0.349 (0.017)	0.326 (0.013)	6.8%
Public	0.328629 (0.017)	0.325140 (0.013)	1.06%
Private	0.321266 (0.016)	0.329382 (0.01403)	2.53%

(Source: Authors, 2018)

Interpretation: Factual and Counterfactual

The results table 4.3 shows that measured Gini inequality stands at 0.349 for the factual distribution and 0.326 for the counterfactual distribution of wage earnings in Cameroon overall. This shows that wage inequality in Cameroon will decrease significantly by 0.0238 points when inequality caused by years of education is eliminated and the relative impact of years of education on wage inequality in the Cameroon is about 6.8%.

The absolute (relative) impact of years of education in reducing wage inequality in the public sector is -0.0035 point (about 1.06%). This shows that equalizing years of education is inequality widening in the public sector of Cameroon. In the private sector, when wage inequality due to years of education is eliminated, inequality increases by 0.0081 point (about 2.53%). This highlights the inequality mitigating potentials of years of education in the private sector. Our finding highlight that years of education have both inequality widening and mitigation potentials in Cameroon.

V. CONCLUSION AND RECOMMENDATIONS

From the findings of this study, we found enough evidence to conclude that education in terms of years of schooling is very instrumental in explaining wage earnings in Cameroon as a whole and both in the private and in the public sectors of the economy treated individually. This means that attaining higher number of years of education both in the private and the public sector will give an individual opportunity to earn higher wages than before. Also increasing years of working experience increases the possibility of the individual to earn higher wages in Cameroon as a whole while older workers are less likely to earn more than younger workers but increase household size explains wage earnings increases possibly through family allowances and especially in farming households where large household size increases the work force.

From the factual/counterfactual wage inequality test results, it was concluded that the varied level of education in the real sense account for greater wage inequality in Cameroon as a whole and in the public sector of employment compared to equalizing years of education in the counterfactual while in the private sector, the varied years of education in the factual instead reduces wage inequality rather than equalizing years of education.

Based on the findings of this work, we recommend that education for all should be encouraged not only at the primary level as spelt out in the development goals but even at tertiary levels. This can be done by sensitizing the parents on the importance of education for the children as well as offering study leave possibilities to most workers. It can also be done by further subsidizing education at the tertiary level and providing adequate educational establishments.

Also, given the fact that wage inequality can be reduced by ensuring that all individuals attain a given level of education rather than the varied level of education in the economy as a whole especially in the public sector. The government can achieve this by providing continuous education programs for the public sector workers since this has the potential of reducing wage inequality among them. However, for private sector workers this may not be necessary as the current realities of their educational levels instead reduce wage earnings inequality.

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