International Journal of Economics, Commerce and Management
United Kingdom Vol. IV, Issue 6, June 2016
http://ijecm.co.uk/ ISSN 2348 0386

GENDER DIFFERENCES IN LABOUR SUPPLY AND OCCUPATIONAL CHOICE IN THE BAMENDA MUNICIPALITY, CAMEROON

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Abstract

This study carried out in the Bamenda Municipality, Cameroon examines gender differences in labour supply and occupational choice. The objective of this work is to investigate the existence of gender differences in labour supply and occupational choice in the Bamenda municipality. Our data is from a cross-sectional survey conducted in 2014/15 in the Bamenda Municipality with a representative sample of 350 people from Bamenda I, Bamenda II and Bamenda III. We used the OLS model to examine gender differences in labour supply, the multinomial logit to analyse gender differences in occupational choice and the Blinder-Oaxaca decomposition model to measure the actual mean gap between male and female labour supply. The main

findings of this study show that Sex, Wage, education, job satisfaction and risk have significant and positive effects on labour supply, while fertility on the other hand shows a negative effect on labour supply in the Bamenda Municipality and also influence occupational choice. Men unlike women supply more hours of labour while women unlike men have preference for part-time and full-time jobs than being self-employed and vice versa. We conclude that there exist a significant gender difference in labour supply and occupational choice in the Bamenda municipality. We thus recommend women marry later, companies follow the careers of workers for promotion rather than sex and women should venture into risky and less satisfactory jobs.

Keywords: Gender Differences, Labour Supply, Occupational Choice, Blinder-Oaxaca Decomposition model, Cameroon

INTRODUCTION

It can be seen that throughout the world and for the most of history, women have had dual roles as income earners (workers) and mothers/caregivers, while men have largely been income workers only**.** Although women's representation in the workforce has increased dramatically, they continue to bear most of the family and household responsibilities. This implies that the real differences in men and women's experiences of work over a lifetime comes not from decisions about how much to work in total, but from decisions about how to divide total labour supply between the market and domestic sectors (Washbrook, 2007). The implication of this gender difference in labour supply in UK can be seen in the domain of market production where women aged 16-64 are nearly twice as likely to be classed as economically inactive as men in the same age group. Even where women do work in the market, they contribute far fewer hours to paid work. In the domain of non-market production women without children contribute 70 percent more hours per week to domestic production than men, while the figure for women with children under 16 is more than double that of men and of children living with single parents, (over 90 percent live with the mother).

In the case of OECD countries though this gender differentials in the labour market witness a steady reduction in the 1970s and 1980s, it increases again in the 1990s which makes it still significant. At the same time, differences in pre-labour market characteristics, in particular education, have decreased and in most OECD countries women now acquire more education than men. However, if the differences in the amount of education acquired by men and women are small, the differences in the type of education (such as the field of study, major or other characteristics of the study programme) are still large (Flabbi, 2011).

The supply of female labour in the developed world increased very slowly prior to the 1940's but significantly after 1940. World War II (WWII) had an important impact on women's labour force participation rate as millions of women entered the labour market to fill in for their male counterparts who left those civilian jobs to join World War II and consequently, in 1940, the female participation rate was 27.9% and increased to 35.8% in 1945 (Blau et al, 2010). Another significant increase occurred between 1960 and 1970, when female participation rate rose from 37.7% to 43.3%. Overall, the women's labour force participation rate increased from 34% in 1950 to 60% in 2008. While the male participation rates declined from about 86% in 1950 to 73% in 2008. The rapid upward drift in women's labour force participation over time compensated for the decline in the male participation rate contributing to the rise of the overall total or aggregate participation rate over time (McConnell and Brue, 2010).

In developing countries, Lewis (1954) argued that labour market is characterise by dualism rather than perfect competition. The existence of activities with diminishing returns to labour in the traditional sector and entry costs in the modern sector are a specific feature of this dualism, especially when agricultural production or the informal sector is involved. Often, the fundamental opposition is between a commercialized versus a non-commercialized context. The existence of a large gap between real wages in both sectors induces traditional workers to migrate into the modern sector. Labour markets in less Developed Countries (LDCs), and notably for the urban markets composed of formal and informal sectors **(**Muller and Lanot, 1997).

Although many African countries have more women than men, females are less likely to enter the labour market and secure equivalent jobs. Indeed, when they are employed, women are generally in a less advantageous position than men, being overrepresented in the informal sector and earning less in the formal sector. Unemployment rate in Africa stood at 15.6% in 2005, while the female rate stood at 20.7% that same year. Wives are widely involved in labour market as a strategy to maintain household living standards, but as they might still be less educated and more capital-deficient than men, they have to face difficulties to get a new job (Kuepie et al. 2013). Gender equality in employment is a cornerstone of women's economic empowerment in Africa and elsewhere.

According to the third Cameroon Household Survey (ECAM 3) conducted by the National Institute of Statistics (NIS) in 2007, there are 51% women and 49% men. As per the same source, this population is extremely young since more than half is aged below 20 years, 43% under 15 years against 3.5 % aged 65 or above. Currently, the population stands at about 20 million. Following the Employment and Informal Sector Survey in Cameroon conducted in 2005 (EESI, 2005), the labour market is characterized at the same time by a high level of

activity (71.5%), a disquieting level of overall underemployment (75.8%) and a predominance of informal, precarious and poorly paid jobs. Activity levels according to the International Labour Office are 79.5% for women and 86.2% for men. Employment to population ratio for age 15^+ stood at 48.1% for female and 70.5% for male 1991. Ten years later in 2001, the figures stood at 49.3% for female and 71.4% for men. In 2008, the female figure went up to 49.4 and the male percentage fell to 59.1%. And in 2010, the disparity further reduced with female participation rate increasing to 53.5% and men participation rate also increasing to 80.7%.

To address this phenomenon, the Government has created a Ministry of Labour and Social Security in charge of protecting jobs, the Ministry of Employment and Vocational Training in charge of designing employment policies, Women Empowerment and the Family and lastly, the Ministry of Agriculture and Rural Development. The National Employment and Vocational Training Policy and the Growth and Employment Strategy Paper (GESP) highlights government's priorities in the following areas: increasing the offer of decent jobs, matching the demand and the supply in the labour market, and improving the efficiency in the labour market. At the operational level, regional and local councils are increasingly integrating employment in their development plans, based on the Local Economic Development approach (LED). The project on the promotion of decent work for poverty reduction in the North-West region (TC-RAM) is an illustration. Several projects fully or partly using labour-based approaches are also being implemented. Examples of such projects are; the Yaounde Sanitation Project (PADY), the Support to the Promotion of Employment and Poverty Reduction Project (APERP), the National Project for the Rehabilitation and Construction of Rural Roads (PN2R).

In 2012, Chantal Biya in partnership with IAI (Institude Africaind'e Informatique) brought the operation 100,000 women by training them in the basics of computer usage so as to ease job accessibility. This policy was aimed at increasing women's employment in Cameroon. At the international level, Cameroon has ratified a number of international conventions and instruments related to human rights, one of which is the Convention on the Elimination of all Forms of Discrimination against Women (CEDAW), signed on the 6 of June and ratified on the 23 August, 1994 (Sikod, 2007). In addition to government effort to increase women participation, each year around the world, The International Women's Day (IWD) is celebrated on March 8. Again, women are encouraged to run for offices in the legislative and municipal elections anticipated by ensuring that there is gender equality on the list of Candidates. Women are also being appointed to hold high positions of responsibility in the government. With all these measures put in place by the government and nongovernmental organizations (NGOs) in the country as a whole and in the North West region in particular, there is still the issue of gender differences in the Bamenda municipality. This therefore bring to mind the following question; what could be the

causes of gender disparity in the supply of labour and in occupational choice in the Bamenda Municipality? Is there any gender disparity in the supply of labour in the Bamenda municipality?

This study has as objective to evaluate the determinants of gender disparity in the supply of labour and occupational choice and to examine if there exist any gender disparity in the supply of labour in Bamenda municipality. In order to scientific validate the result of the study, our problem will be hypothesised as follows

Ho_1: There are no clear determinants of gender disparity in labour supply and occupational choice in the Bamenda municipality

Ho_2: There exist no significant gender difference in labour supply and occupational choice in Bamenda municipality.

LITERATURE REVIEW

Although the words gender and sex both have the sense ‘the state of being male or female’, they are typically used in slightly different ways: sex tends to refer to biological differences, while gender refers to cultural or social differences. Labour supply can be defined as the number of workers willing and able to work in a given occupation or industry at a given wage rate. Total labour force comprises people aged 15 and older who meet the International Labour organization (ILO) definition of the economically active population: all people who supply labour for the production of goods and services during a specified period. It includes both the employed and the unemployed.

There are several different 'types' of labour supply. We have the individual's supply of labour which shows how many hours of work per week is a worker prepared to offer at different wage rates. The firm's labour supply curve has a shape which depends upon whether the firm is in a perfectly competitive labour market or an imperfectly competitive labour market, or otherwise is not necessarily linked to whether the product market is competitive or not, but imperfect product markets (like oligopoly or monopoly) tend to breed less competitive labour markets. The labour supply curve for the whole industry is the supply of labour to the whole economy, also called 'The labour market'. In this work, we are interested in the individual labour supply.

Occupational Choice is simply the desire to accept a particular job over another. According to Behling et al. (2007), an individual's decision to join a firm may depend on any of the three factors objective factor, subjective factor and critical contact. The objective factor theory assumes that the applicants are rational. The choice, therefore, is exercised after an objective assessment of the tangible benefits of the job. Factors may include the salary, other benefits, location, and opportunities for career advancement. Subjective factor theory suggests

that decision making is dominated by social and psychological factors. The status of the job, reputation of the organization and other similar factors play an important role. Critical contact theory advances the idea that a candidate's observations while interacting with the organization plays a vital role in decision making. For example, how the recruiter keeps in touch with the candidate, the promptness of response and similar factors are important.

Educational and Cultural influence on Employment in Cameroon

Education is one of those factors that account for differences in the supply of labour in Cameroon. Educationally speaking, girls do not have the same access as boys. In Cameroon, the girl/boy ratio in primary education dropped from 85 per cent in 1989/90 to 82.9 per cent in 1997/98: in secondary education, the ratio rose from 82.1 per cent in 1994/95 to 85.6 per cent in 1998/99. These ratios varied greatly from one region to another: the higher the level of education the wider the gap between the sexes. Education in Cameroon is a double-edged sword: it makes it possible for women to get out of their traditional roles through engaging in activities reserved for men Sikod (2007). These vary greatly according to geographic locations, with the gap widening in the rural areas, and where certain religious and cultural structures are very strong. He showed that for the nation, there has been a slight drop – 84 to 83 per cent – from 1990 to 2000. The literacy rate for young women for the nation is just over 77 per cent, varying from a low rate of just over 26 per cent in the rural predominantly Muslim north to a high rate of over 96 per cent in the urban areas. At the socio- cultural level, some parents see no advantage sending their children to school at the risk of endangering their faith when they themselves can teach the girls rural work and initiate them into their future responsibilities as mothers. This is typically the perspective in the Muslim regions of the country. The educational system of Cameroon enables graduates to acquire a variety of educational Levels and diplomas. These individuals either decide to focus on non-remunerating domestic activities or to seek employment in the market. They thus offer their labour to those who likely need it in exchange for payments (Abessolo, 1997).

Apart from educational and cultural factors, the differences in the labour supply of women due to the fact that women are less represented in decision making positions as cited by Sikod (2007). In other to improve on this situation, women have been encouraged to join in politics and stand for elections. Women showed a steady progress in the 2007 elections, though they still hold a fraction of elected offices nationally. The percentage of female councillors in Cameroon rose from 10.7 percent in 1997, to 13.1 percent in 2002, to 15.5 percent in 2007, according to Community Initiative for Sustainable Development. The number of female mayors rose from two in 1997, to 10 in 2002, to 24 in 2007. Out of the 180 seats in the National

Assembly, women attained 10 in 1997, 16 in 2002 and 25 in 2007.In the North West region, there are no female mayors. Of the 1,088 councillors in the region, only 77 are women. Of the 20 parliamentarians representing the region in the National Assembly, just one is female.

Since the pioneer work by Mincer (1962) and Cain (1966), there have been numerous studies on gender differences in labour supply. Boris et al. (2006) paper investigates women's and men's labour supply to the firm within a structural approach based on a dynamic model of new monopsony and found out that labour supply elasticities are small (0.9–2.4) and that women's labour supply to the firm is substantially less elastic than men's (which is the reverse of gender differences in labour supply usually found at the level of the market).

Lixin, (2006) worked on The Relationship between Health and Labour Force Participation: Evidence from a Panel Data Simultaneous Equation Model. Their paper employs a simultaneous equation model to explore the relationship between health and labour force status, allowing for the endogeneity of health. The results confirm the finding in their literature that health has a positive and significant effect on labour force participation for both males and females. Jungho (2006) wrote on Fertility and its Consequence on Family Labour Supply and income. According to him, even if the burden of child care falls mainly on women, an exogenous increase in fertility is likely to change the optimal allocation of time, therefore, the labour supply decision of both female and male in a household.

Edward (2010) using the Demographic and Health Survey 2006 to examine the relationship between female education and labour-force participation on the one hand, and fertility rates on the other, for Uganda. Their results confirm the hypotheses that female education, especially at the secondary and post-secondary levels reduces fertility and increases their likelihood of being engaged in the labour force. They are other studies carried out with similar results like the works of Sarah Brown et al(2009); Shailender Swaminathan and Lee Lillard (2000).

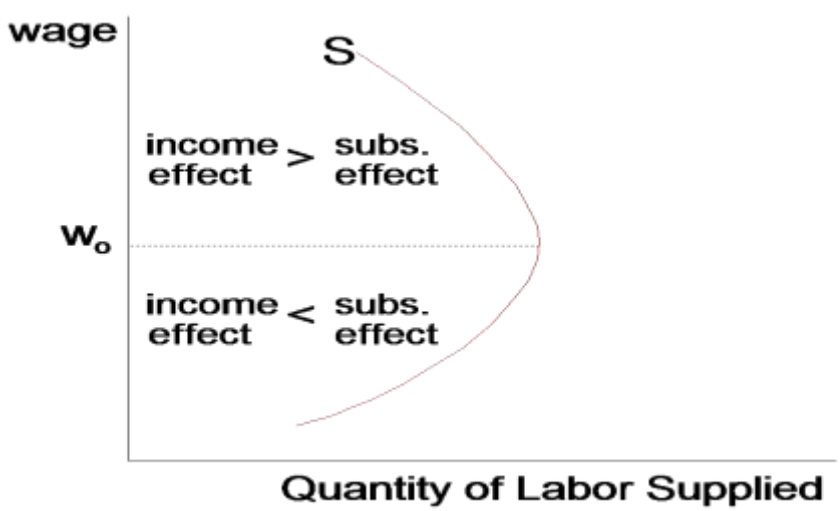
Sonia and Marcela (2010) paper investigates cyclicality in women's labour supply motivated by the hypothesis that it contributes to smoothing household consumption in environments characterized by income volatility. Using comparable individual data on about 1.1 million women in 63 developing and transition countries merged with country-level panel data on GDP during 1986-2006. They found out that the within-country relationship of women's employment and income is, on average, negative in Asia and Latin America but positive in Africa they suggest that amongst reasons why African women behave differently are that the conventional family structure with income pooling which is less than the normal.

THEORETICAL LITERATURE

The Basic Neoclassical Model of Labour Supply (The labour-leisure tradeoff)

This theory was developed by Alfred Marshall (1842-1924) states that every rational individual will divide his time between leisure and labour depending on the wage rate offer. It assumes there are only two possible uses of time: labour and leisure, each individual selects the combination of hours of work and leisure that maximizes his or her level of satisfaction (utility).For individuals who are working; the opportunity cost of an additional hour of leisure time is the wage rate. Individuals choose not to work if the value of leisure time exceeds the market wage. A change in the wage generates: a substitution effect, and an income effect. The opportunity cost of leisure time rises as the wage rate increases. As leisure time becomes more costly, individuals consume less leisure time and spend more time at work. This is the substitution effect resulting from a higher wage. As the wage rate rises, an individual's real income rises. This leads to an increase in the consumption of all normal goods. Given that leisure is a normal good, the higher wage rate will induce the individual to consume a larger quantity of leisure time (and reduce hours of work).This is the income effect resulting from a wage increase. If leisure is a normal good, an increase in the wage rate will cause the quantity of labour supplied to: increase if the substitution effect is larger than the income effect and decrease if the income effect is larger than the substitution effect. This is known as the net effect. These phenomena can be represented graphical using the normal Backward-bending labour supply curve.

Figure 1. Backward bending labour supply curve



The red line is an indifference curve which is a graph of alternative combinations of goods that provide a given level of satisfaction (utility). This utility function assumes that the individual's utility level is a function of two goods: real income (Y), and leisure time (L). In mathematical terms, it is expressed as: U=U(Y, L).

However the theory is criticised on the ground that it's assumed that there are only two possible uses of time: labour and leisure. It is thus criticized because it did not make provision for other activities that most of the population of the Bamenda municipality do like, church activities and schooling which can neither be classified under work or leisure. Also, we can also see that this theory is best suited for developed countries where the government gives unemployment benefits for those not working or disabled and there can maintain full leisure with the same amount of income. In the Cameroonian society, the saying of "no food for a lazy man" holds true. If you are not working, you cannot have full leisure due to the fact that in order to satisfy your needs, you will be force to do even odd jobs. In addition, our wage level in Cameroon is so low that it will be difficult to attain the level of wage that will make you want leisure and reduce work.

Gender Theory

Gender theories take into account a number of explanatory factors of professional segregation that have not been integrated in economic models and that are often considered by economists as exogenous (Conduto de Sousa, 2005). The principal hypothesis is that the position of women in society and the family has a negative impact on women's situation on the labour market. These are consequences of the male-controlled system of social organization. The jobs occupied by the female workforce depend on gendered stereotypes (Anker, 1997) and on discrimination. Social attitudes and cultural prejudices are undoubtedly the determining factors of labour market behaviour. Some employers consider that women are generally less qualified than men; they attribute vacant jobs to men because these jobs are "masculine", or they prefer to hire women without children because they are believed to invest more in their jobs. Employers may also believe women to show more absenteeism or to be more likely to interrupt their careers (Lewis and Shorten 1991).

Akerlof and Kranton (2000) developed the identity theory in assessing how a person's sense of self affects economic outcomes. The inclusion of identity in modelling gender discrimination in the workplace substantively modifies the results of more traditional economic analyses. Gender is a universally familiar aspect of identity. The social categories "man" and "woman" have different ideal physical attributes and prescribed behaviours and one's identity is confirmed by following the social prescriptions for behaviour while not following these gives rise

to anxiety and discomfort. Different actions thus pay off differently. People have identity-related payoffs from their own actions. “Female trial lawyer, male nurse, woman marine – all conjure contradictions. Why? Because trial lawyers are viewed as masculine, nurses as feminine, and a marine as the ultimate man. People in these occupations but of the opposite sex often have ambiguous feelings about their work” (Akerlof and Kranton 2000). But others’ actions matter as well. “A woman in a “man’s” job makes male colleagues feel less like “men”. To allay these feelings, they may act to affirm their masculinity and act against female co-workers” (Akerlof and Kranton 2000). An identity theory of gender in the workplace broadens the economic understanding of occupational segregation.

The Theory of Intentional and Statistical Discrimination

This theory offers a different perspective. Discrimination occurs when an individual sharing identical characteristics with many others faces an unfair disadvantage because of these characteristics, independently of productive characteristics (Plassard, 1987). Such discrimination might be intentional or not. Intentional discrimination characterizes a situation where a voluntary discriminating behaviour results from biased preferences or personal interests. According to this theory (Becker, 1971), an agent has perfect information regarding the market and does not want to be associated with persons who have characteristics that are considered as non-desirable. This principle can be applied to gender discrimination (Bergman 1986, 1989): to recruit a woman could imply a “psychological cost” for the employer in case he has a discriminating preference for men. Non intentional discrimination questions the hypothesis of perfect information and relies on informational asymmetry. Non intentional discrimination is often called statistical discrimination (Phelps 1972): an employer has imperfect information concerning the employees’ productive characteristics. He will recruit a person on the basis of other signals that are supposed to approximate the information that is hidden or not observable (such as the, gender, culture).

Theories on Organisational and Technological Mutation

According to the theories on Organizational and Technological Mutations, the characteristics of the work organization and their interaction with the environment explain gender segregation (Kullis and Miller-Loessi, 1992). The presence of women in an organization depends on the characteristics of this organization such as its size, its prestige, its relations with the public authorities, etc. On the other hand, workers’ motivation depends on their position on the labour market and in the organization itself. Since women are in less attractive jobs, they will be less

motivated and more likely to quit their job, confirming the image of women as less reliable workers (De Meyer et al. 1999).

Other factors linked to the work environment have an impact on segregation (Cotter, 1995) and can reduce it. The growth of the service sector, the decline of industry, and the rise in the level of education are all examples. The technological changes that have occurred over the last decades, such as the expansion of information and communication technologies, have increased the relative demand for skilled workers.

Radical Theory

Radical theories are based on the hypothesis that certain types of workers are demanded on the labour market while others are excluded. This selection depends on the production process but also on social and institutional factors. The market is thus characterized by a continuous movement of attraction and rejection of different segments of the workforce. The odds of men and women of being attracted /rejected are determined by the characteristics that are attributed to each sex: women are responsible for the household and the family, the biological reproduction process of having and raising children, and workforce reproduction (taking care of the working partner). Women are thus more likely to be employed in jobs that are compatible with these roles (part-time jobs, for example). They hold jobs that are typically female and which offers fewer career opportunities (Sanders and Beeks 1993).

The first analysis of segregation as a consequence of entry barriers was carried out by Bergmann (1989). Bergmann's model of overcrowding explains how women's wages are depressed because female workers are overcrowded into a small number of occupations. Bans and restriction that still exist or that used to exist enhance such crowding. Radical theories also explain segregation by the dominant position of men and by the fact that they have an interest in maintaining their privileged position by making it difficult for women to access high-level occupations. This situation is supported by informal agreements and preconceived ideas that are related to discrimination (Wyns and Van Meensel, 1990).

METHODOLOGY

The Study

This work is limited to gender differences in labour supply and occupational choice in the Bamenda municipality, the North West Region of Cameroon. The work is relevant because increasingly there has been much talk on gender and occupation. Again, considering the fact that we are collecting a cross sectional data, using questionnaire for primary data, it is easy for us to have information about the respondent's current situation. The definitional scope for labour

supply is that of the classical theory of labour supply which defines supply of labour as the number of hours a person is willing and able to work at a particular income. Thus our labour supply will be measured by hours of work supply. This study also defines occupational choice as the probability a woman or man has to choose one occupation over another. In order to narrow the scope of our work and ease the collection of data, labour supply and occupational choice in this work takes care only of the formal sector. This thus implies that any work that is not paid for or supplied in the informal sector like house chores and petty trading respectively and which does not pay tax is not considered in this work as either supplying labour or a type of occupation. This research will use the causal comparative research design which is concerned with attempting to establish the cause or the reason for the existence of differences in the behaviour or status of group of individuals. It also seeks to identify association amongst variables.

Model Specification

We used the neoclassical model of labour supply and extend the relationship between wage and labour supply inserting other variables drawn from literature, like risk, fertility, educational level, partner's education, partner's income, parent's education.

max U(w L + π, A) such that L + A ≤ k……..(1)

From equation (1) above, we can represent π with other variables from literature which also influences labour supply and occupational choice. Our new equation will thus read

max U(wL + (Ag, Rel, Sex, Ed, Ped, Wa, Fe, Ms, Pr, Ri), A) such that L + A ≤ k……(2)

In this study, we are interested in the labour supply equation, our equation will now read thus:

LS = B0 + XiBi

Labour supply model (LS)

(LS) = F(Age, Religion, sex, Education, Parents education, Wage,fertility, Marital status, Prestige and Risk)

$LS= b_o + b_1Ag+ b_2Rel\ 1 + b_3Sex1 + b_4Ed + b_5Ped+ b_6Wa +b_7Fe+ b_8Ms + b_9Pr + b_{10}Ri +\mu$.….(3)

Where $b_o \neq 0$, $b_1<0$, $b_2>0$, $b_3>0$, $b_4>0$, $b_5>0$, $b_6>0$, $b_7<0$, $b_8<0$, $b_9>0$, $b_{10}<0$.

For our second hypothesis, we shall state our multinomial model use for analyzing the relationship between gender and occupational choice.

$\acute{Y}=\beta o + x\beta + \mu, \qquad \mu/x \quad N(0,\sigma^2)$

y max(0,Ý). where, the latent variable y satisfies the classical linear model assumptions (normal, homoskedastic distribution with linear conditional mean).

In a simpler term, we can state our equation as:

Occupational choice model (OC) = f (gender) and other variables.

OC= b_o+ b_1Ag + b_2Rel 1 + b_3Sex 1 + b_4Ed + b_5Ped + b_6Wa +b_7Fe+ b_8Ms + b_9Pr + b_{10}Ri +μ……(4).

Where LS= Labour supply which will be measure by the number of hours spent working in the formal sector, OC=Occupational choice, the status of your job chosen over others (part-time, full-time or Self-employed), Age = Number of years lived =15-60, Rel=Christian=1 and Muslim =2, Sex1 = 1 if Male and 2 if female, Ed= Educational level, Higher certificate of respondent, Ped= Parents level of education (choose the highest level for any for the two parents),Wa =Wage, the payment you receive from your work. In this case it shall be considered to be the income you get per month, Fe= Fertility –number of children, Ms= Marital status, Js= Job satisfaction, Ri= Risk, ie if you can lose life or money in the job.

Having measured gender differences, the natural next step is to seek to account for them using the Oaxaca decomposition model. Why do inequalities in labour exist between the male and female? We will thus use the decomposition method known as the Oaxacade composition (Oaxaca 1973), explains the gap in the means of an outcome variable between two groups (e.g., between the female and the male).

The Gender Inequality Equation

This model can be stated thus:

$$Y = \begin{cases} \beta^{\text{female}}\ X_i + \sum_i \text{female} & \text{if female} \\ \beta^{\text{male}}\ X_i + \sum_i \text{male} & \text{if male} \end{cases} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (5)$$

Y = E+C+CE

Where E – gap in ‘endowments’ (“explained”), C – gap in ‘coefficients’ (“unexplained”)

CE – interaction of differences in endowments & coefficients.

The E component known as the explained component measures the expected differences in groups’ labour supply and occupational choice due to the differences in their predictor level. This can be gotten from our OLS and multinomial model above. This Oaxacade composition model brings out the C component also known as the unexplained component which accounts for the sources of discriminations in the labour supply of female and male.

The Gap Mean Equation

The gap mean outcomes can be stated as

$Y^{male} - Y^{female} = \beta^{male}X^{male} - B^{female}X^{female}$…….(6)

Where Y= the gender gap, X=the explained and β =the unexplained source of gender differences. This thus considers both the explained and the unexplained components of gender differences in labour supply.

Method of Data Collection

This study seeks to evaluate gender differences in labour supply and occupational choice in the Bamenda municipality (dividing it into Bamenda 1, 2 and 3). The data used in this study is from the primary source, with the use of 350 close ended questionnaires issued using the simple random sampling method. This questionnaire was issued randomly because of the homogeneous nature of Bamenda 1, 2 and 3. These questionnaires were issued only to people working in the formal sector and who own businesses that pay taxes to the state. We had a response rate of 7/8 since we issued all together 400 questionnaires and 350 were returned to us correctly answered.

Method of data analysis

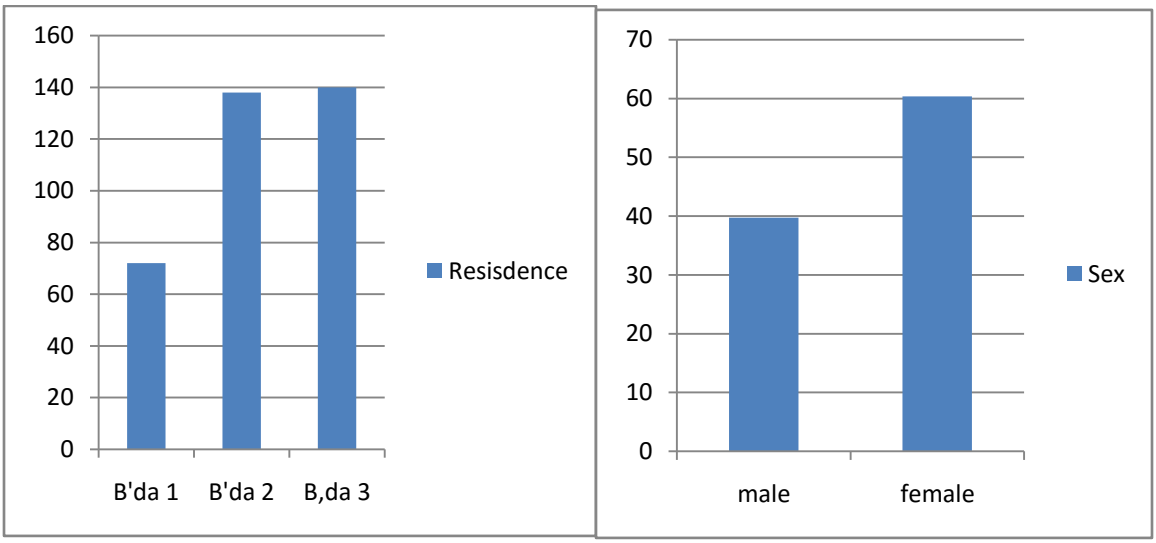
In this study, we employed the multinomial logit model to estimate our occupational choice model and the OLS model to estimate the labour supply equation. In order to analyse the gender differences in labour supply and occupational differences, we followed two different steps according to our two hypotheses. We will first of all analyse the gender differences in labour supply and the determinant of labour supply using equations (3) in the above model with OLS. Secondly we shall also analyse gender differences in occupational choice to answer the other hypothesis represented by equation (4) using the multinomial logic. The use of the OLS model to analyse our equation (2) is accounted for by its Best Linear Unbiased Estimate BLUE properties. The use of multinomial logit to validate our hypotheses on occupational choice is accounted for by the fact that dependent variables (occupational choice takes more than two variables i.e. not working, part time, full time and self-employed). This model therefore deals with multiple category response variable where OLS will not be appropriate in this estimation because coding is based on choice. Therefore the difference between category 1 and 2 will not be the same as the 2 and 3 but OLS will treat them as one. We used individual variables for gender and control for other variables which may affect the sex accounted differences in occupational choice and labour supply like health, fertility, education etc.

We also used the Oaxaca Decomposition in explaining differences between Groups: male and female labour supply and occupational choice. This method is employ based on the fact that it can best give us differences in labour supply of male and female not because of differences in the independent variables like education, fertility, health e.t.c but by the fact that they are male or female. The gap between female and male labour supply is decomposed into parts that is due to group differences in the magnitudes of the determinants of the outcome in question, on the one hand, and group differences in the effects of these determinants, on the other. For example, women may supply less labour not only because they are less educated but because they are less knowledgeable on how to obtain a job. The decomposition methods reveal how far inequalities in labour supply and occupational choice can be explained by inequalities in, say, innate ability rather than inequalities in, say, education. This is captured by equation 5 while in equation 6 will estimate the gap gender differences in labour supply and occupational choice in the Bamenda Municipality.

FINDINGS AND DISCUSSION

In presenting our result for the various models, we started by presenting some descriptive data although not all due to space in order to enhance a better understanding of the demographic, economic and professional distribution of our sample.

Figure 1: Distribution of the respondent according to area and Sex of the respondent



From the above figure, we can see that more of the respondents came from Bamenda 3(140), followed by Bamenda 2 (138) and then Bamenda 1(72) according to the population density. This can be explained by the fact that Bamenda 3 subdivision is actually the most populated

amongst the three. Our sample area had more women than men. The sample constituted of 39.71% of men and 60.38% of women. That is, we have 139 men and 211 women in our sample size. This shows that more women are represented in this work and that more women supply labour in the Bamenda municipality.

Figure 2: Division of the Origin and Weekly Labour Supply of the Respondents

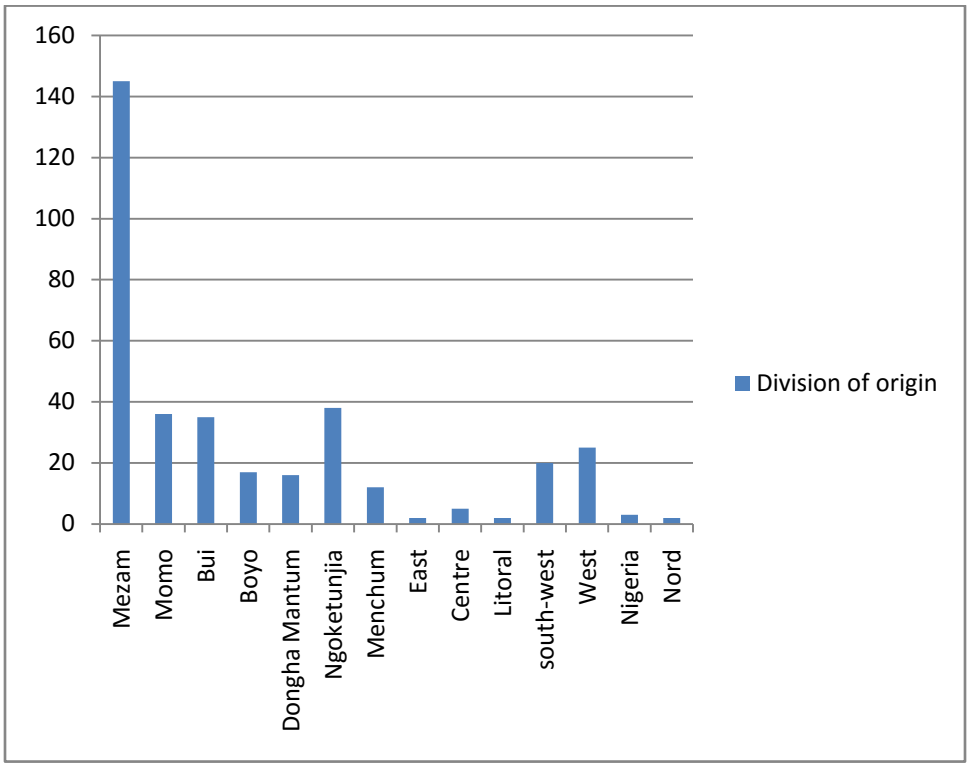
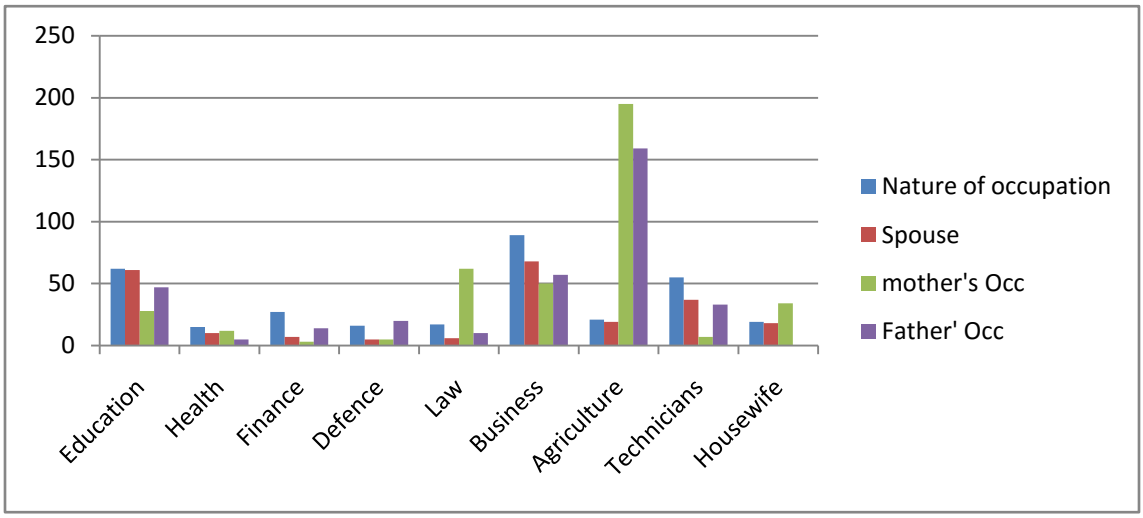


Figure 2 show that most of our respondents originated from Mezam with followed by Bui, Ngeketunjia, Momo, South-west, West, with the least population coming from the North, Nigeria, East, Litoral and the Centre region of Cameroon. This statistics show us that more of people participating in the labour market in the Bamenda Municipality originate from Mezam division.

Figure 3 below shows us that the highest occupation we have in the Bamenda municipality is Business and we can also observe a close link between people doing business and their spouse and parents occupation. This population is followed by technicians and lastly by those working in defence, health, law and finance. We can also observe that the person involved in agriculture has the highest number of parents involve in agriculture while spouses (whether husbands or wives) of educationist for example are mostly in the educational sector themselves with their parents especially the fathers also being educationist. We can thus conclude that people in the Bamenda Municipality has agriculture as the highest occupation.

Figure 3: Distribution of Respondents Occupation



After presenting the descriptive data we proceed to determine the descriptive statistics which are not presented here because of space before our regression results.

Table 1: Regression Result for labour supply.

Variable	coefficient	Standard deviation	T-value	p-value
Constant	2.9227	0.4252	6.87	0.000*
Age	0.0044	0.0025	1.71	0.089***
Religion1	0.0956	0.1013	0.94	0.346
sex1	0.0986	0.0471	2.09	0.037**
Education	0.0597	0.0237	2.51	0.012**
Parents' education	0.0080	0.0202	0.40	0.692
Wage	0.0525	0.0189	2.77	0.006*
Fertility	-0.001	0.018	-0.00	0.998
Married	0.0345	0.0501	0.69	0.492
Job satisfaction	0.0459	0.0244	1.88	0.062***
Risk	0.0704	0.0184	3.82	0.000*
R^2				0.1949
$\bar{R}^2$				0.1555
F(11, 225)				4.95*

*, ** and *** = Represent 1%, 5% and 10*the level of significant respectively

From the above labour supply results, we can observed that the coefficient of age exerts a positive influence on labour supply. Meaning a year increase in age will result to 0.004 unit increase in labour supply. This effect is statistically significant at the 10% level of significant.

This explains that the age of a person is an important factor when determining labour supply in the Bamenda municipality. For the sex variable, our value is positive (0.0986) indicating being male (sex1) increases the labour supply by 4.7% more than female within the Bamenda municipality. Our P-value results (0.037) show that the effect is statistically significance at the 5% level of significance. Indicating that for any appropriate decision to be taken on labour supply, sex differences should be given due consideration. Theory of Intentional and Statistical Discrimination which explains that to recruit a woman could imply a "psychological cost" for the employer. So in many case they have a discriminating preference for men. Employers prefer to hire men, since, they are considered more suitable for the vacant jobs (Tijdens and Goudswaard, 1994).The level of education(Ed) for the individual also positively affect labour supply. This means a year increase in an individual's educational level will lead to a 5.97% in the labour supply of an individual. This indicates that individuals who are more educated tend to supply more labour in the Bamenda municipality, thus, need to increase worker's level and quality of education The findings of this study is in line with the theory of human capital and the work of Henderson and Poole, (1991).

The wage (Wa) coefficient indicate that a franc increase in wage will increase labour supply by 5.2% hours. The p-value (0.006) shows that this effect is statistically significant at 1% level of significance. This indicates that a policy aimed at increasing labour supply in the Bamenda Municipality should consider increasing wages. This is in conformity with the work of Benjamin Fomba Kamga (2008). This is also in line with the neoclassical theory of labour supply which stipulates that increase wage will lead to increase labour supply .The coefficient of job satisfaction (JS) is positive (0.0459) implying that the more individuals feel satisfied about their job the more labour they will supply. The results show precisely that an increase in feelings of job satisfaction from one level to another will lead to a 4.6% increase in the labour supply. This effect is statistically significant at 10% level of significance, indicating that job satisfaction is a key determinant of labour supply in the Bamenda Municipality. This findings is in line with the pollution theory.

The variable risk (Ri) also shows that individuals engaged in risky job supply 7.04% more labour than those engaged in non-risky jobs. This means that people with more risky jobs put in more hours per and effort per week than those with less risky jobs. The p-value coefficient (0.000) show that the result is statistically significant at 1% level of significance, indicating that policy recommendations aimed at increasing working hours or labour supply in the Bamenda Municipality should consider the of risk involved in the job. The coefficient of multiple determinations shows that more than 15% of the variation in the labour supply in the Bamenda Municipality is explained by the factors included in the model. Our R^2 is however low because is

a cross sectional study and most cross sectional studies have low R^2. This is in line with the results of the work of Karen (2012) and Serje (2012). Moreover, our model has its statistically predictability ability validated by the F-Statistics test.

Table 2: Presentation of the Multinomial Logit Results

Choice	Coefficient	Standard error	z-term	P>|z|
1. **PART-TIME**				
age	-0.0179	0.0201	-0.89	0.372
religion	-0.7616	0.7908	-0.96	0.336
sex1	-0.2459	0.4013	-0.61	0.540
Education	0.0121	0.2411	0.05	0.960
Parents education	0.1279	0.1802	0.71	0.478
Wage	0.2442	0.1622	1.51	0.132
Fertility	-0.4304	0.1786	-2.41	0.016
Married	0.0872	0.2452	0.36	0.722
Job satisfaction	-0.6006	0.1929	-3.11	0.002
Risk	-0.2472	0.1468	-1.68	0.092
Cons	2.2069	2.8106	0.79	0.432
2. **FULL-TIME**				
Age	-0.0214	0.0168	-1.27	0.202
Religion	-0.3374	0.5436	-0.62	0.535
sex1	-0.9736	0.3295	-2.95	0.003
Education	0.2983	0.1896	-1.57	0.001
Parents' education	0.0959	0.1482	0.65	0.518
Wage	0.6413	0.1332	4.82	0.000
Fertility	-0.0954	0.1186	-0.80	0.421
Married	-0.1852	0.2049	-0.90	0.366
Job Satisfaction	-0.6799	0.1738	-3.91	0.000
Risk	-0.3016	0.1203	-2.51	0.012
Cons	-24.9108	1228.681	-0.02	0.984
3. **SELF- EMPLOYMENT (base outcome)**				

Interpreting the results of the variables in our first panel(working part-time relative to self-employed), the age coefficient is negative which indicate that an increase in age makes it less likely to work as part time as opposed to be self-employment. Implication is that if a worker's age were to increase by one year, the log-odds for working part time (PT) relative to self-employed (SE) would be expected to decrease by 0.02 units holding other variables constant. This means that older people in the Bamenda municipality prefer to be self-employed than working on a part-time base. For fertility, the coefficient is -0.4304 meaning that individuals with more children have a lower likelihood of working part time relative to self-employment. Thus they will prefer to be self-employed. These finding can be justified by the work of Porter and King (2009) which states that as fertility declines around the world, it is likely to have a different

impact on the ability of women to work outside the home and on the decisions they make regarding work and childbearing. In terms of job riskiness, individuals with higher perception that the job is risky have a lower likelihood to work as part time employee as opposed to be self-employed. Thus, they preferred to work as self-employed if the job is riskier. In terms of job satisfaction, the coefficient is -0.6006 which shows that individuals who have a higher perception of job satisfaction are less likely to work as part time. Though the gender component of our work is insignificant the results show that men prefer to be self-employed rather than being part time. This finding can be justified by Soo Cho (2011) who explains why women have a lower entrepreneurship rate, earn less, and work fewer hours than men. Data from the NLSY 79 confirms findings that women are more risk averse than men. However, while less risk adverse men tend to become self-employed and more risk adverse women are likely to choose paid-employment. Men are more likely to be engaged in the creation of new businesses (Delmar and Davidsson 2000; Langowitz and Minniti 2007) and women are outnumbered by men in established business ownership (Allen et al. 2007).

In the second panel the multinomial logit coefficient for being a male relative to female is - 0.97. This implies that males are 0.97 times less likely to work on full-time bases relative to females. Thus, men as in the Bamenda Municipality prefer to be self-employed while women prefer to work more on full time bases. This findings supports the argument of Paul Sullivan (2006) and Gerardo Jacobs (2007) who revealed that females are primarily clustered in white-collar and full time jobs. This difference is statistically significant at the 1% level of significance. In terms of education, the results show that the individual's education level have a positive coefficient. The implication is that as the level of education increases, the likelihood of being a full time employee as opposed to being self-employed increases. Specifically, if an individual's educational level increases by one level, log-odds of working full time relative to self-employed is expected to increase by 0.098. This tells us that as the level of education in the Bamenda Municipality increases, it influences the likelihood to work on a full time bases rather than being self- employed. The results further show that there exist a positive likelihood between the wage rate and choice of occupation. The results precisely show that an increase in one franc of wage rate will increase the multinomial log-odds of working full-time relative to self employed by 0.64 units, everything being equal. This effect is statistically significant at the 1% level of significance, indicating that, as wages increase, workers in the Bamenda Municipality will prefer to work full time than to be self-employed. The consumer choice theory can better explain this. This theory states that as wages increases, individuals are willing to supply more labour and vice versa, thus as wages increases, people will prefer to be self-employed with flexible work schedule than to offer their labour on a full time base. In terms of perception of job satisfaction and riskiness,

the results show that there exist a negative likelihood between these two characteristics of a job and the choice between full time and self-employment. The coefficient for job satisfaction is -0.68 and job riskiness is - 0.30. The implication is that individuals who feel they are very satisfied with their jobs are less likely to work in full time employment. Similarly, those who feel that their jobs are more risky are less likely to work on full time bases as opposed to being self-employed. Both results are statistically significant at the 1 and 5 percent level of significance. Thus, workers in the Bamenda Municipality who have risky jobs and are very satisfied with their jobs are more likely to be self-employed rather than working on full time bases.

Table 3: The Blinder-Oaxaca Decomposition Results

lhours	**Coefficient**	**Standard Error**	**z-value**	**P>|z|**
Differential				
Prediction_1 (female)	3.5365	0.0310	113.98	0.000
Prediction_2 (males)	3.6700	0.0380	96.47	0.000
Difference	-0.1334	0.0491	-2.72	0.007
Decomposition				
Endowments	-0.0733	0.0308	-2.39	0.017
Coefficients	-0.1318	0.0521	-2.53	0.011
Interaction	0.0717	0.0387	1.85	0.064

The decomposition output reports the mean predictions by groups and their differences in the first panel. In the above sample, the mean of the log hours is 3.54 for women and 3.67 for men, yielding a labour supply gap (women-men) of -0.133. Hence, we need on average 13.3% increase in female labour supply for there to be gender equity in labour supply in the Bamenda Municipality. The second panel is divided into three parts. The first part (-0.073) reflects the mean decrease in men's labour supply if they had the same characteristics as women. The second term quantifies the change in men's labour supply when applying the women's coefficients to the men's characteristics (-0.132). This is thus the differences that are accounted for by differences in the coefficient of the independent variables like age, religion, marital status etc. The third part is the interaction term that measures the simultaneous effect of differences in endowments and coefficients. This is (0.072) indicating that the differences between the difference in labour supply is as a result of differences in their independent variable (coefficient(C)), the differences in their innate ability (endowment (E)) giving us the interaction (CE) between women and men's labour supply. The above thus tells us that men supply more labour than women in the Bamenda municipality and that this differences is due to both their innate

ability to work and the higher coefficient of their variables. For example, they may be more educated, earn more wage and preferences to risky jobs etc. These results thus tell us that there exist a difference in the labour supply of men and women in favour of men. These results thus fall in place with that of Gender theories whose principal hypothesis is that, the position of women in the society and the family has a negative impact on women's situation on the labour market. The jobs occupied by the female in the workforce depend on gendered stereotypes (Anker, 1997). Social attitudes and cultural prejudices are undoubtedly the determining factors of labour market behaviour. Some employers consider that women are generally less qualified than men; they prefer to hire women without children because they are believed to invest more in their jobs. Some banks for example employ women on the condition that the stay for at least two years without giving birth. Employers may also believe women to show more absenteeism or to be more likely to interrupt their careers.

RECOMMENDATION AND CONCLUSIONS

This study was designed to investigate into the determinants of gender disparity in the supply of labour and occupational choice and to examine if there exist any gender disparity in the supply of labour in Bamenda municipality. We used multiple regression model and multinomial logit model to identify the effect of gender gap, labour supply, and occupational choice respectively. These two models also provide for other determinants of labour supply and occupational choice respectively. The Blinder-Oaxaca Decomposition model was used to test for differences in gender labour supply in the Bamenda municipality. Our results show that there exists a difference in the labour supply of men and women to the tune of 7.2% in favour of men. Therefore, companies should follow the careers of workers for promotion rather than considering workers for promotion or wage increase due to his/her sex. This is recommended because if women are continually paid lower wages they will be force to reduce their labour supply in favour of leisure. This choice can easily be made because contrary to men, women have many house chores which the society has attribute to them and thus will still have much work to keep themselves busy round the clock (usually known as housewives).

Women like the men should endeavour to venture in more risky jobs than wanting to do only white collar jobs. This can be done by women upgrading their education into the technical fields where they will learn more risky trades and thus increase their supply of labour to these types of jobs. This recommendation is based on the fact that our field work shows that so many men said they are drivers, lawyers, engineers for example while women were more into teaching, secretary, hair dressing and tailoring for example.

Lastly, women are called to be innovative and entrepreneurial so as to get into self-employed jobs. This will thus go a long way to close the occupational gender gab existing in the Bamenda Municipality. Men are also called upon to love part time and full time job. This is recommended because men are never patient to wait for a decent job. For example while men starts doing anything they can survive on by starting a business or driving taxis just to name a few, women will prefer to stay at home until they find something worth sacrificing the time they need to care for their families. They prefer to go in for jobs that have pride attached to even if it has lower paid packages. For example they will want to work full or part time in a well-organized organization and earn 20,000francs per month than drive taxi or be a carpenter that will give them 50,0000frs a month. The reverse is true for men who by their nature of in-submissiveness will prefer a job with less prestige and more income than to answer "yes sir" for no reasonable pay. This goes a long way to explain why they will prefer self-employment than being employed part-time or full time.

In this study, we adopted an econometric approach and found that the huge inequalities that exist in labour supply and some occupations are due to differences in people's innate ability as man or women(sex) first, before the differences in the values of the independent variables like Wage, education, job satisfaction and risk. At the econometric level, we therefore proof that the hypothesis that there exist no significant difference in labour supply and occupational choice in the Bamenda municipality is rejected. Therefore, we accept the null and thus conclude that there exist a significant gender difference in labour supply and occupational choice within the Bamenda municipality. However, this study is limited only to the Bamenda municipality in Cameroon due to the time and cost involve thus restricting generalizability of the research findings.

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