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Review Article

Women Empowerment and Entrepreneurship Enhancement in Cameroon

Mbu Daniel Tambi *, Njimukala Moses

Department of Economics, University of Bamenda- Cameroon.

*Correspondence should be addressed to Mbu Daniel Tambi; *tambi2015@yahoo.co.uk*

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Abstract

The main objective of this study is to assess the effects of women empowerment on entrepreneurship enhancement in Cameroon. To carry out this investigation, data was collected from ECAM 4. The data was then analyzed with the use of IV-2SLS approach due to its ability to eliminate the endogeneity bias. The result shows that experience, access to credit, non-poor, ownership of land, access to water and formal training are significant drivers of women empowerment in Cameroon. Women empowerment is significantly observed to enhance entrepreneurship in Cameroon. There is a significant heterogeneity in the effects of women empowerment on entrepreneurship across married and singles in Cameroon. It can be recommended that policies should be made for empowering women in this field.

Keywords: ***Women Empowerment, Entrepreneurship Enhancement, Cameroon.***

1. Introduction

Women, who represent half of the human resource of most societies are often not recognized and regarded due to their marginalised position in society. Women perform in addition to reproductive role, several productive tasks, but often, these roles are not recognized and not visible. It is their reproductive role that overwhelms their productive role of earning and meeting lively hood needs and by extension supporting to community development. Many women face discrimination, lack of access credit, land ownership, employment opportunities and high illiteracy rate. They are often treated as second class citizens despite this, women are responsible for their children and household livelihood. Realizing this, the third Sustainable Development Goals (SDGs) included women's empowerment and promoting gender equality among the eight SDGs (UNO, 2016).

Despite many international agreements affirming their human rights, women are still much more likely than men to be poor, illiterate and unemployed and having little or nothing to contribute to economic growth and development. They are far less likely than men to be politically active and far more likely not to be in groups which will offer them the opportunity to be economically sound and politically active (UNO, 2016). Women in Africa and more specifically in Cameroon experience greater poverty, have three heavier time burdens, lower rates of utilization of productive resources and lower literacy rates (Wouteurse, 2015). Also, there is still inadequate representation and participation of women in major areas of the society especially in political and public service appointments (Barbera and Moores, 2011).

Empowerment has multi-dimensional focus and its success depends on environmental forces in a given society. For that, a healthy environment is a must for women's empowerment at the grassroots level. Drawing lessons from experiences and case studies at the local, national and international levels is important in ensuring women's involvement in groups (Palanivelu and Madhupriya, 2013). According to the World Bank (2020) five important dimensions of women's empowerment and opportunity have been identified concerning global patterns of inequality between men and women. These include; economic participation; economic opportunity; political empowerment; educational attainment and health and well-being. Although significant progress has been achieved in a number of ways that contribute to women's empowerment such as education and share in the labour market; the pace of this empowerment has been slow and uneven across regions (UNO, 2016). Globally, women `represent an increasing share of the world's labour force-over a third in most regions except Southern and Western Asia and North Africa (World Bank, 2020). In Cameroon women constitute about 51% of the population and therefore, by sheer numbers, are a force to be reckoned with in the overall development process of the nation. Although referred to as the `backbone' of the Cameroon's rural economy, the womenfolk in Cameroon are still largely marginalised, without power and influence and left at the margin of society shouldering all the burdens of household maintenance, child care, health and education of the family with little opportunity to advance their status (MINEFI, 2021).

Historically women have been restricted to household chores, and to early and sometimes forced marriages which have consequently limited their chances of pursuing formal education like

their male counterparts and participating fully in the nations' economic and political life. They remain disadvantaged in securing paid jobs, suffer from wage differentials, occupational segregation, and higher unemployment rates. Their disproportionate representation in the informal and subsistence sectors limits their economic advancement. The literacy rate among women aged 15-24 is 77.2% which is below the global rate of 82.3% (UNO, 2016). The girl-boy literacy ratio also decreases from primary through secondary to higher education. In the 1980s the Structural Adjustment Programme imposed by the IMF and World Bank on developing countries including Cameroon saw a further shrinking in social services like education and health. The period of SAP also coincided with the beginning of the economic crisis in Cameroon which reached its peak in the late eighties and the government and some private employers responded to it by slashing salaries by up to two thirds. Women were the greatest losers from all these as their numbers in education at all levels generally dropped and poverty levels increased (World Bank, 2020).

Cameroon's women are among the poorest of the poor in society. Despite legislation which guarantees everyone the right to property ownership, few have control over property. Most do not have access to formal credit facilities. Rural women are very hard working, industrious and ready to learn and work even harder to improve their livelihoods. This effort has been recognised by the Cameroon Government and the many development partners working in Cameroon. This is why women have been described as the `backbone' of the rural economy in Cameroon. In spite of this, the government and the other development partners do not seem to be doing enough to encourage and promote the many grassroots level initiatives by these women which are beginning to enrich lives in many rural communities in Cameroon (MINEFI, 2021). The Government of Cameroon and many of these organisations have policies and programmes in place to foster the economic activities of rural women and help them come out of poverty. However, these policies and programmes are not making significant changes in the lives of rural women particularly those of the North-West who have on their own become very instrumental in the community (MINEFI, 2021).

At the start of the new Millennium the UN has made clear its development agenda summarized in the eight SDGs. Put bluntly, the SDGs are the world's time-bound and quantified targets for addressing extreme poverty in its many dimensions and ramifications-income poverty, hunger, diseases, lack of adequate shelter and exclusion, while promoting gender equality, education and environmental sustainability (Palanivelu and Madhupriya, 2013). Goal three of the SDGs emphasises the need to promote gender equality and empower women. The empowerment of women in Cameroon is the requisite for meeting all other SDGs. This research is concerned to investigate the measures being taken by the government of Cameroon and other development partners to put women into the mainstream development process so as to facilitate the attainment of the SDGs in Cameroon and also to find out what is the contribution of the different partners including women in achieving the targets. Reforming and enforcing legislation guaranteeing women and girls' property and inheritance rights, and empowering women to play a central role in formulating policies especially at the local level is crucial to achieving this.

The UNO (2016) recommends that for the SDGs to be met the central focus of government should be to strengthen the operational capacity of local government to include them in the formulation of relevant national policy. Specific intervention to address gender inequality and ensure women's equal access to economic assets such as land and housing, labour market opportunities, credit facilities and increased representation at all levels of government should be an intrinsic part of all efforts of government (Heryanto, 2013). Improving the socio-legal status of women, improving their education and living conditions through the extension of assistance programmes that would increase their economic role and influence especially in the rural areas remain the main challenges about which this research is concerned. It is crucially important that these be addressed in order to give the Cameroon women the chance to develop their potential to the full and be proud in contributing to their nation building. This would be investigated further by looking at the following objectives: to assess the drivers of women empowerment in Cameroon, to investigate the influence of women empowerment on the enhancement of entrepreneurship in Cameroon and to analyse the influence of women empowerment on the enhancement of entrepreneurship in Cameroon across married and singles in Cameroon (Cancity, 2018).

2. Literature Review

Barbera and Moores (2011) assesses entrepreneurship development in Botswana by examining the impact of policies formulated by the government of Botswana relating to the development of small and medium enterprises, in his study, based on a review of books, government reports and other publications. Wouteurse (2015) points out that the government of Botswana has identified entrepreneurship development as one of the areas in which to reinvest its revenue from the mining sector. After examining several relevant general and specific policies and their impact, “the study revealed that the government of Botswana has been taking an active role in the development of small and medium scale enterprises through direct and indirect approaches”. Anderson and Reeb (2003). shares such an approach by governments to nurture entrepreneurship development. The majority of scholars reviewed 40 above agree generally that training can be conducted to produce people with entrepreneurial skills. A small group is of the opinion that conditions or an environment conducive for producing entrepreneurs can be created.

The literature reviewed in this study shows that limited studies have investigated the determinants of women empowerment. The few studies that have investigated on the determinants of women empowerment, to the best of our knowledge, very limited number are from Cameroon. At the same time, amongst the studies that investigated on the determinants of entrepreneurship, only a few of them are from the developing world. Also, the few studies linking women empowerment and entrepreneurship enhancement, limited are conducted in Cameroon. On a methodological point of view, none of the studies have used the instrumental variable two stage least squares technique. This creates a gap in literature wherein this study is to fill the missing parts. Concerns with women’s empowerment have their roots in grassroots mobilisations of various kinds, feminist scholars helped to move these concerns onto the gender and development agenda Palanivelu and Madhupriya (2013). Their contributions drew attention to the unequal power relations which blocked women’s capacity to participate in, and help to influence, development processes and highlighted the nature of the changes that might serve to promote this capacity at both individual and collective level.

The input of women empowerment to entrepreneurship enhancement has been emphasized in many studies in Cameroon including Kamar. The author noted that those women, particularly rural women, in Cameroon play a very important role in community based development activities, which are very broad and complex

citing two major examples that is food production for home consumption and cash crops to supplement the family income. This approach is built around the belief that the empowerment of the women is the empowerment of the whole community once given a chance (Cancity, 2018). Participation of women in organisations within communities has attracted much debates and studies amongst scholars and academicians in the recent past. In view of philosophers of most forums, every group member needs to promote the economic independence of women and this includes generation of job opportunities, accessibility to credit and resources, illiteracy and poor health status among women. As much as such declaration has been in position to raise the level of awareness and comprehension of challenges that women face besides their special needs. This however has not resulted into significant improvements among women (Wouteurse, 2015).

The Cameroonian government and the World Bank acknowledged women to be vital to the economic recovery process in Cameroon. Women helped the government to weather a potentially explosive situation by cushioning some of the adverse effects of implementation of the Structural Adjustment Policy programmes (SAPs) following the economic crisis of the mid-1980s (World Bank 2012). Since then, several studies have shown that Cameroonian women lived up to these expectations (World Bank 1994). They have done so by using different strategies to reduce the impact of cuts in government spending on social services, and to make up for losses in household income due to a decrease in men's contribution to family livelihoods. These have included extending the hours they spend working, starting up microbusinesses within the informal sector, adjusting the ways in which domestic chores are done, and providing health-care for their dependants. However, despite their record in shoring up family livelihoods over the past two decades, Cameroonian women's full potential has yet to be harnessed. They constitute the majority of Cameroonians living below the poverty line (defined as persons earning less than 21,000 CFA, less than 20sterling, per annum) (World Bank, 2020). The 1999 Human Resource Development report cited 'gender gaps' between female and male achievement in the areas of education, economic activity, and political participation (World Bank, 2012).

Certainly, accessibility to credit has a promising role in strengthening livelihoods of the poor by generating new options and increasing confidence, self-image and status in society for marginalized individuals and families. As noted, Heryanto (2013) credit has the power to turn the lives of individuals from abject poverty to lives of dignity and self-respect. Thus, the importance of the evolution of micro-credit and SHGs as a rural development strategy in the fight against poverty starting from the early 1980s (Lee, 2001) cannot be overemphasized. Women are ready to make personal sacrifices to improve their livelihoods and that of their families by building a brighter future for their children, if they are supported (Anderson and Reeb, 2003). This is because women are strategic and critical actors in the process of moving their families out of poverty as they contribute a much larger share of their earnings to basic family maintenance (Cancity, 2018). Women empowerment create opportunities for the poor who cannot individually secure financial services such as credit from formal credit sources and other productive resources. For instance, in some parts of Cameroon, through women empowerment, women are able to improve their access and control of credit, land, and income generated from farm and nonfarm livelihood activities. This is supported by the findings of Lee (2001) that women empowerment helps women to secure credit are able to turn their existing skills and market opportunities into small businesses and this empowers them and their communities through the financial inclusion. This is particularly so among women in patriarchal societies (Barbera and Moores, 2011). They are able to gain and sustain economic empowerment through financial self-sustainability (Palanivelu and Madhupriya, 2013) recognized the need for women to be represented in groups as a collectivization procedure, which by itself acts as an empowerment strategy.

3. Methodology

To generate reliable parameter estimates needed for the estimation, we have to assume that both women empowerment is jointly and simultaneously determined with female entrepreneurship in Cameroon, thus we present separately in the female entrepreneurship generating function that follows:

$$EH_i = w_1\gamma_{EDi} + \sum_{k=0}^{1} n_k WE_k\, \omega_1 \qquad (1)$$

Where, EH_i is Entrepreneurship enhancement and the endogenous determinant of Entrepreneurship enhancement such as women empowerment (WE_k); w_1 is a vector of exogenous covariates such as individual, household, and community characteristics; γ_{EDi} is a vector of parameters including the constant term and those of exogenous explanatory variables that correlate with the female entrepreneurship generating function to be estimated;$n_k$is the parameter of the potential endogenous explanatory variables (women empowerment) in the female entrepreneurship function; and ω_1 is the error term.

Since women empowerment is endogenous, we identify potential instruments. These are justified in the section on Data. We then derive the reduced form equation of women empowerment that accommodates such instrumental variables.

$$WE_k = w_1\gamma_{EDi} + \sum_{k=0}^{1} n_k CC_k = +\omega_2 \qquad (2)$$

From equation 2, CC is cost of consultation, thus, in the presence of endogeneity, a device must be found to vary the treatment variable exogenously without changing other unobserved or unmeasured variables with which it is correlated. Such device includes instrumental variable (IV) method, natural experiments, and randomization. Implementation of experimental designs are rare in evaluation of broader health and social programs, either because experiments are too expensive, unethical or simply impossible and therefore beyond the scope of this study. This study proposes to use the IV method because its analysis the structure of equations.

Endogeneity can arise due to errors in variables, omitted variables and simultaneous causality (Tambi, 2021). Endogeneity and heterogeneity bias can compromise the validity of the estimators. The IV approach is intended to oxygenise the endogenous regressors using valid, relevant and strong instruments and the most commonly used IV estimation method is the single equation approach of two-stage least squares (2SLS) estimators (Tambi, 2021). The IV method is one of the most powerful tools in econometrics, since it allows consistent parameter estimation in the presence of correlation between explanatory variables and disturbances. The IV technic is the most widely applied approach of identifying causal or treatment effects and its essentially assumes that some components of non-experimental data are random (Tambi, 2021). The instruments are

variables though to have no direct association with the outcome and are powerful predictors of treatment. 2SLS instrumental variable estimation is an effective tool when instruments are valid and strong, otherwise this quality is lost. Caution that finding exogenous instrument is hard work. Studies in developed countries have often used random or natural outcomes as instruments (Tambi, 2021).

Instrument Strength, Relevance and Validity

Two properties of an instrument need to be noted at the outset. First, an instrument is relevant if its effect on a potentially endogenous explanatory variable is statistically significant. Secondly, the instrument is exogenous if is correlated with the structural error term. An instrumental variable that meets all these requirements is a valid instrument, but often very difficult to find (Tambi, 2021). The identification problem in econometrics has to do with being able to solve for unique values of the parameters of the structural model from the values of the parameters of the reduced form of the model. Lack of identification leads to parameters not being identified resulting in misleading inferences (Tambi, 2021) and so 2SLS estimation requires atleast as many instruments as there are endogenous regressors. When an equation is over-identified, the over-identifying exclusion restrictions should be tested. This is accomplished using Sargan,s test statistic as well as the Durbin Wu-Hausman test, done at the second stage regression. An increased number of over-identifying restrictions generally confers the benefit of a higher R-square in the first-stage of 2SLS and therefore yields standard error closer to those of OLS. Over-identification tests formally ask, in essence, whether all of the instruments tell the same story about parameters of interest.

One key to the success of the instrumental variable strategy is identifying an instrument sufficient predictive power. In economic and business studies, instruments or treatment variables are already being used by many authors, though each author attempts to capture it in his own way, for instance. To test for the use of instrument, we use the Durbin-Wu-hausman chi2 test to verify for the exogeneity of the potential endogenous variables, while to verify the validity (relevance and strength) of the instrument, we will use the weak identification test of Cragg-Donald F- statistics and the over-identification test of Sargan statistics.

To construct the women empowerment indicator, the multiple correspondence analysis (MCA) method was used. Given the multifaceted nature of women empowerment, it was constructed using nine modalities which included; whether mother received higher education, received professional/technical training, is a shareholder, receives assistance from family members, has post of responsibility in a professional association, receives assistance from a solidarity association, receives assistance from friends and associates, receives assistance from religious group and has a savings account resulting in nine dimensions which were reduced to one by the MCA method (see Table in the appendix).

Data Presentation

To achieve our objectives, we will use secondary data from the 2014 Cameroon Household Survey 2014 (ECAM4), which was compiled by the National Institute of Statistics (NIS). The main objective of the fourth Cameroon household survey (ECAM4) is to provide indicators on living conditions of populations and to update the poverty profile. The survey is targeting a sample of 12,897 households broken down into 1024 clusters and data collection is carried out through a questionnaire made up of 17 sections. It is the fourth of its kind to be undertaken in Cameroon after those of 1996, 2001 and 2007. It is part of the process to update the poverty profile, the monitoring and evaluation of the national strategy for growth and employment and the progress towards achieving the Millennium Development Goals (MDG).

4. Findings

4.1 Weighted Descriptive Statistics of Selected Variables

The main objective of this study is to assess the effects of women empowerment on female entrepreneurship enhancement in Cameroon. To carry out this investigation, data was collected from ECAM 4. The data was then analysed with the use of descriptive statistics and the Instrumental Variable Two Stage Least Squares (IV2SLS) approach. The findings are reported below beginning with the descriptive characteristics of variables.

The findings presented show that on the average, entrepreneurship stands at 0.594, 5.745 and 5.880 for the full sample, women sub sample and the men sub sample respectively. This sample present deviations of 0.491, 1.575 and 1.657 for the full sample, women sub sample and the men sub sample respectively. This shows that on the average, entrepreneurship is higher for men than for women. The endogenous variable women empowerment on the average stands at 0.0984, 0.426 and -0.0144, with deviations of 0.977, 0.881 and 0.984 for the full sample, women sub sample and the men sub sample respectively. This shows that empowerment is higher for women than for men.

This justifies the suitability of the data structure to study women empowerment. The endogenous variable was instrumented by the log of cluster mean cost of consultation. This instrument on the average stood at 6.738, 6.772 and 6.722, with deviations from the average by 0.945, 0.909 and 0.962 for the full sample, women sub sample and the men sub sample respectively. This show that this instrument performed better for the women sub sample.

Table 1: Summary descriptive statistics for selected variables

Variables	Full Sample		Women Sub Sample		Men Sub Sample	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Outcome Variable						
Entrepreneurship(I=entrepreneur,0otherwise)	0.594328	0.491043	5.744807	1.575912	5.88007	1.657499
Endogenous variable						
Women empowerment indicator	.098383	9775343	.4258519	.8806681	-.014433	.9838718
Instrument for the endogenous variable						
Log of cluster mean cost of consultation	6.73866	.9451256	6.772336	.9097465	6.72238	.961532
Variables used to construct Women Empowerment Indicator						
Received formal education (1= yes, 0= otherwise)	.0668798	.2498248	.0527345	.2235397	.071753	.258094
Received professional educ (1= yes, 0= otherwise)	.4575115	.4982133	.3122238	.4634768	.5075642	.4999727
Post of responsibility in a professional association (1= yes, 0= otherwise)	.1259993	.3318632	.0991412	.2989006	.1352522	.3420132

Receives assistance from family (1= yes, 0= otherwise)	.8263111	.3788583	.8764441	.3291283	.8090399	.3930812
Assistance from friends and associates (1= yes, 0= otherwise)	.7776307	.4158562	.781913	.4130147	.7761554	.4168441
Member of religious association (1= yes, 0= otherwise)	.2820126	.4499992	.3351229	.472111	.2637157	.4406733
Support from solidarity association (1= yes, 0= otherwise)	.3755685	.4842906	.4183902	.493376	.360816	.480266
Saving (1 = Has a savings account, 0 = otherwise)	.0384836	.192369	.0347614	.183205	.0397659	.1954204
Exogenous Characteristics						
HH head work in formal sector(I=Yes,0 otherwise)	.0646562	.303535	.0533053	.254088	.0685667	.3187189
Marital status (1 = married, 0 = otherwise)	.5777995	.493931	.2115235	.408455	.7039845	.4565252
Access to credit(I=Yes,0otherwise)	31.84249	1027.30	8.130621	129.826	40.01142	1188.664
Socio-economic status (1 = non poor, 0= otherwise)	.7090716	.454210	.7432193	.436929	.6973074	.4594508
Ownership of land (I=Yes, 0 otherwise)	8.349648	.455655	8.286292	.420226	8.371475	.465268
Appreciation of corruption (I=Yes, 0 otherwise)	.0766127	.265987	.0769831	.266608	.0764851	.2657887
HH has access to water (I=Yes,0otherwise)	2.301514	3.21083	1.819808	2.21067	2.467465	3.474304
Formal training(I=Yes,0otherwise)	201.4504	100.466	213.902	103.840	197.1607	98.92061
Household size	4.393024	3.02533	3.5877	2.35750	4.670464	3.176704
Experience	42.00609	15.4332	45.67388	16.4669	40.74251	14.8534
Place of residence (1= Urban, 0 = otherwise)	.3701806	.482874	.3668148	.482014	.3713401	.4831921
Observation	11391	11391	3041	3041	8350	8350

Computed by author from ECAM4, using STATA 14.2

The descriptive characteristics for the variables used to construct the women empowerment indicator shows that, the average value of receiving formal education stands at 0.0668, 0.0527 and 0.0718, for the full sample, women sub sample and the men sub sample respectively. The average value of receiving professional education stands at 0.458, 0.312 and 0.507 for the full sample, women sub sample and the men sub sample respectively. Having a post of responsibility in a professional institution presents a mean of 0.126, 0.0991 and 0.135 for the full sample, women sub sample and the men sub sample respectively. Receiving assistance from family on the average is 0.826, 0.876 and 0.809 for the full sample, women sub sample and the men sub sample respectively. Receiving assistance from friends and associates on the average is 0.778, 0.782 and 0.776 for the full sample, women sub sample and the men sub sample respectively. Being a member of a religious association on the average is 0.282, 0.335 and 0.264 for the full sample, women sub sample and the men sub sample respectively. Receiving support from solidarity association on the average is 0.376, 0.418 and 0.361 for the full sample, women sub sample and the men sub sample respectively. Having a savings account on the average is 0.0385, 0.0348 and 0.0398 for the full sample, women sub sample and the men sub sample respectively.

The quality of the exogenous characteristics was also studied on the bases of the means and standard deviations. On the average, house hold heads working in formal sector is 0.0647, 0.0533 and 0.0687for the full sample, women sub sample and the men sub sample respectively. On the average, those who are married is 0.578, 0.212 and 0.704for the full sample, women sub sample and the men sub sample respectively. On the average, appreciation of corruption is 0.0766, 0.0769 and 0.0765for the full sample, women sub sample and the men sub sample respectively. On the average, house hold heads that have access to water is 2.302, 1.819 and 2.467for the full sample, women sub sample and the men sub sample respectively. On the average, formal training is 201.5, 213.9 and 197.2for the full sample, women sub sample and the men sub sample respectively. On the average, house hold size is 4.393, 3.588 and 4.670for the full sample, women sub sample and the men sub sample respectively. On the average, experience is 42.01, 45.67 and 40.74for the full sample, women sub sample and the men sub sample respectively. On the average, place of residence is 0.3702, 0.3668 and 0.3713for the full sample, women sub sample and the men sub sample respectively.

4.2 Synopsis of the Women Empowerment Indicator

Table 2 hosts the MCA results. It is also a method of dimension reduction which gives a small number of new synthetic numerical variables summarizing the initial variables. The table lists the corrected eigenvalues, proportion of explained inertia, the corrected factor scores and contributions for the rows and columns. The quality of the factors is measured by the proportion of the inertia that they explain. The correlation ratios are signing less measure of links used to plot the categorical variables on a space map.

The relative contribution of an individual that receives formal education to the variance of the first axes is 0.035, the contribution of individuals who received professional education to the first axes is 0.060,the relative contribution of individuals who have a post of responsibility in an association to the first axes is0.163, the contribution of individuals who received assistance from family to the first axes is 0.007, the relative contribution of individuals who receive assistance from solidarity association to the first axes is 0.133, the relative contribution of individuals who receive assistance from solidarity association to the first axes is 0.038. The findings for the contributions of the different individuals to the first axes show that individuals who have a post of responsibility in an association and those who receive assistance from solidarity association are close together on the same map given that their relative contributions are high.

Table 2: Synopsis of the women empowerment indicator

Categories	**Mass**	**Quality**	**Scores**		**Correlations**		**Contributions**		**% *Total inertia***
			First axis	**Second axis**	**First axis**	**Second axis**	**First axis**	**Second axis**	
Received formal education							0.035		17.83
Yes	0.009	0.131	-2.917	-0.034	0.131	0.000	0.032	0.000	
No	0.102	0.131	0.252	0.003	0.131	0.000	0.003	0.000	

Received professional/technical education							0.060		14.82
Yes	0.057	0.247	-1.098	0.329	0.230	0.017	0.029	0.002	
No	0.054	0.247	1.175	-0.353	0.230	0.017	0.031	0.003	
Has a post of responsibility in a professional association							0.163		13.3
Yes	0.015	0.522	-4.239	-0.542	0.515	0.007	0.117	0.002	
No	0.096	0.522	0.681	0.087	0.515	0.007	0.019	0.000	
Receives assistance from family							0.007		10.84
Yes	0.091	0.412	0.180	-0.756	0.026	0.385	0.001	0.020	
No	0.412	0.091	-0.817	3.439	0.026	0.385	0.006	0.091	
Receives assistance from friends and associates							0.000		10.46
Yes	0.086	0.462	0.053	-0.953	0.002	0.460	0.000	0.030	
No	0.025	0.462	-0.182	3.258	0.002	0.460	0.000	0.103	
Receives assistance from religious association							0.001		9.47
Yes	0.031	0.333	-0.279	-2.383	0.005	0.328	0.001	0.068	
No	0.333	0.031	0.109	0.928	0.005	0.328	0.000	0.027	
Receives assistance from solidarity association							0.133		8.74
Yes	0.046	0.535	-2.014	-0.510	0.508	0.027	0.078	0.005	
No	0.065	0.535	1.414	0.358	0.508	0.027	0.055	0.003	
Has a savings account							0.038		8.22
Yes	0.005	0.153	-4.280	-1.216	0.143	0.010	0.036	0.003	
No	0.106	0.153	0.188	0.053	0.143	0.010	0.002	0.000	
Source: Computed by author from ECAM4									

Going by the quality of the factors are measured by the proportion of the inertia that they explain, it is seen that individuals who receive formal education explain 17.83 percent of the total inertia, individuals who receive professional education explain 14.82 percent of the total inertia, individuals who have a post of responsibility with professional association explain 13.3 percent of the total inertia, individuals who receive assistance from family explain 10.84 percent of the total inertia, individuals who receive assistance from friends and associates explain 10.46 percent of the total inertia, individuals who receive assistance from religious association explain 9.47 percent of the total inertia, individuals who receive assistance from solidarity association explain 8.74 percent of the total inertia, and finally, individuals who have a savings account explain 8.22 percent of the total inertia. Looking at the quality of the factors is measured by the proportion of the inertia that they explain, it is seen that individuals who receive formal education is of high quality to the women empowerment indicator than the other factors.

This is closely followed by individuals who receive professional education, individuals who have a post of responsibility with professional association, individuals who receive assistance from family, individuals who receive assistance from friends and associates, individuals who receive assistance from religious association, individuals who receive assistance from solidarity association and individuals who have a savings account respectively.

4.3 Reduced Form Estimates of Women Empowerment in Cameroon

Table 3 hosts the reduced form equation estimates for women empowerment in Cameroon. The findings show that a percentage increase in the clustered mean cost of consultation decreases women empowerment by 6.907 percent, significant at 10 percent. This shows that cluster mean cost of consultation is significantly instrumental in influencing the empowerment of women in Cameroon. Those who are married decreases women empowerment in Cameroon by 0.274 compared to singles, significant at 1 percent. An increase in access to credit increases the empowerment of women in Cameroon by 0.143, significant at 1 percent. The findings show that individuals who non poor socio-economic status increases women empowerment in Cameroon by 0.284 compared to those who are of poor socio-economic status, significant at 1 percent.

Table 3. Reduced form estimates of women empowerment in Cameroon

Variables	Coefficient	Standard. Error	P-value
	Women Empowerment		
Cluster mean of the cost of consultation	-.0690708*	.0387713	0.075
HH head work in formal sector (I=Yes, 0 otherwise)	-.1149736	.100877	0.255
Marital status (1 = married, 0 = otherwise)	-.2744878***	.0715876	0.000
Access to credit	0.143221***	.0480138	0.003
Socio-economic status (1 = non poor, 0= otherwise)	0.2835463***	.0826475	0.001
Ownership of land (I=Yes, 0 otherwise)	.4798709***	.0875117	0.000
Appreciation of corruption (I=Yes, 0 otherwise)	.0806937	.0973491	0.407
HH has access to water (I=Yes, 0 otherwise)	-.0292124***	.0110895	0.009
Formal training	0.105636***	.0300784	0.000
Household size	-.1091168	.0695524	0.117
Household squared	.1108709***	.0795117	0.000

Experience	.0001522**	.0003116	0.020
Experience Squared	.4498709***	.0875117	0.000
Place of residence (1= Urban, 0 = otherwise)	0.0010288***	.0003791	0.007
Cons	-1.43611*	.8453429	0.090
R-squared = 0.8637 Chi^2 = 1.44 (16, 935; 0.0000) Observation= 952			

*Computed by author from ECAM4, using STATA 14.2 Note: Values in parentheses represent robust t-statistics while ***, **, * indicate 1%, 5% and 10% level of significance respectively.*

The findings hosted on Table 3 reveal again that households that own land increases women empowerment in Cameroon by 0.479 compared to households who do not own land, significant at 1 percent. Household heads that have access to water decreases the empowerment of women in Cameroon by 0.0292 compared to those who do not have access to water, significant at 1 percent. Households that have obtained formal training increases the empowerment of women in Cameroon by 0.106 compared to those who have not obtained formal education, significant at 1 percent.

At the same time, the findings show that an increase in the household size decreases women empowerment in Cameroon but beyond a certain size of the household, there will be a turning point wherein further increases in the household size will increase the empowerment of women in Cameroon by 0.111, significant at 1 percent. An increase in the experience of the household increases the empowerment of women continuously with no turning point, significant at 1 percent. A movement of a women from rural to urban area increases women empowerment in Cameroon by 0.00103, significant at 1 percent. The adjusted R^2 stands at 0.8637 showing that 86.37 percent of variations in women empowerment is due to joint variations in the explanatory variables included in the model for this study. The Chi2 statistics is significant at 1 percent showing that the model is 99 percent reliable for policy prescriptions.

4.4 Women Empowerment and Entrepreneurship Promotion

Table 4 hosts the probit and the instrumental variable two stage least square (IV2SLS) estimates. Findings may suggest that the IV2SLS approach produce more robust results than the probit approach because it accounts for the potential endogeneity bias. This observation indicates the importance of properly estimating the structural parameters to correctly attribute the effects for policy guidance. We test for the relevance, strength and exogeneity of instruments. The first-stage F statistic and the partial R^2 convey vital information as to the validity and relevance of instruments in the case of a single endogenous variable.

The first-stage F-statistic on excluded instruments are 4.06 and 89.35 percent, respectively (p-value=0.000) for the synthetic variable women empowerment. Table 3 also show that women empowerment is indeed endogenous (Durbin-Wu-Hausman Chi-square Statistic = 6.085, p-value=0.0136), which indicates that the probit estimates are not reliable for inference, implying that the IV estimates are preferred. Lastly, as shown, the Sargan Chi-squared test statistic casts no doubt on the validity of the excluded instruments. This is indication that excluded instruments are justifiably excludable, that is, are appropriately independent of the error process.

The findings show that an increase in women empowerment increases entrepreneurship in Cameroon by 0.861, significant at 1 percent, household heads that work in the formal sector decreases entrepreneurship in Cameroon by 0.735 compared to those who do not work in the formal sector, significant at 10 percent, an increase in access to credit increases entrepreneurship in Cameroon by 0.331, significant at 10 percent, women who are of the non-poor socio-economic status increases entrepreneurship in Cameroon by 0.777 compared to those who are of the poor socio-economic status, significant at 10 percent, women who own land increases entrepreneurship in Cameroon by 0.097 compared to those who do not own land, significant at 1 percent.

Household heads that have access to water improves on entrepreneurship in Cameroon by 0.376 compared to those who do not have access to water, significant at 10 percent, women who have obtained formal training increases entrepreneurship in Cameroon by 0.936, significant at 5 percent, an increase in household size increases entrepreneurship in Cameroon continuously with no turning point, significant at 10 percent, an increase in the experience of the entrepreneur increases entrepreneurship in Cameroon continuously with no turning point, significant at 1 percent, a woman moving from rural area to an urban area increases entrepreneurship in Cameroon by 0.222 compared to a movement from urban to rural, significant at 5 percent.

Table 4. The effect of women empowerment on entrepreneurship promotion

Variables	**Probit**	**2SLS**
	Entrepreneurship Enhancement	
Women empowerment indicator	-.127*** (-4.75)	0.861*** (2.70)
HH head work in formal sector (I=Yes, 0 otherwise)	-.685 (-0.60)	-.735* (-1.82)
Marital status (1 = married, 0 = otherwise)	.171*** (3.24)	.0003 (1.16)
Access to credit	.691*** (5.51)	0.331* (-1.92)
Socio-economic status (1 = non poor, 0= otherwise)	.217 (0.52)	.7773* (1.75)
Ownership of land (I=Yes, 0 otherwise)	-.869 (-0.68)	.079*** (3.32)

Appreciation of corruption (I=Yes, 0 otherwise)	.154 (0.85)	-.437 (-1.09)
HH has access to water (I=Yes, 0 otherwise)	.018*** (10.30)	.376* (1.87)
Formal training	-.034*** (-7.11)	.936** (1.97)
Household size	-.010 (-0.11)	.503 (0.71)
Household squared	.059 (1.27)	.242* (1.81)
Experience	.062*** (5.49)	0.012** (2.29)
Experience Squared	.060*** (5.44)	0.616*** (2.58)
Place of residence (1= Urban, 0 = otherwise)	.157* (1.78)	0.222** (2.01)
Constant	9.645*** (11.04)	3.887 (1.04)
R-squared/Pseudo R^2	0.0435	0.8935
F test of excluded instruments/Wald test	40.38[16, 1941; 0.0000]	4.06[16, 570; 0.0000]
Sanderson-Windmeijer multivariate F-test of excluded instruments	n/a	4.72 [12, 570; 0.0302]
Cragg-Donald F-Stat [10% maximal IV relative bias]	n/a	14.723 [16.38]
Sargan statistic	n/a	0.0000
Durbin-Wu-Hausman χ^2 test	n/a	6.085[0.0013]
Observation	**11391**	

Source: Computed by using author. Note: Values in parentheses represent robust t-statistics while ***, **, * indicate 1%, 5% and 10% level of significance respectively.

4.5 Parameter estimate of Entrepreneurship promotion by marital status

Table 5 hosts the investigation for the heterogeneity in entrepreneurship promotion across marital status. The finding show that, an increase in women empowerment increases entrepreneurship in Cameroon by 3.651 and 1.176 for women who are married and for those who are single respectively, significant at 1 percent, household heads that work in the formal sector increases entrepreneurship for those who are married by 0.042 compared to household heads that do not work in the formal sector, significant at 5 percent but decreases entrepreneurship for those who are single by 0.097 compared to household heads that do not work in the formal sector. Women who are married decreases entrepreneurship for those who are married by 0.519, significant at 5 percent but increases entrepreneurship for those who are single by 0.589, insignificant. An increase in access to credit increases entrepreneurship by 1.682 and 0.575 for those who are married and single respectively, significant at 1 percent.

Table 5: Parameter Estimates of Entrepreneurship Promotion by Marital Status

Variables	**Married**	**Single**
	Entrepreneurship Enhancement	
Women empowerment indicator	3.651*** (2.74)	1.176*** (2.50)
HH head work in formal sector (I=Yes, 0 otherwise)	.042** (-2.20)	-.097 (-0.30)
Access to credit	1.682*** (2.88)	.575*** (2.62)
Socio-economic status (1 = non poor, 0= otherwise)	0.103* (2.01)	0.325** (2.40)
Ownership of land (I=Yes, 0 otherwise)	-.263** (-2.34)	-.068 (-0.10)
Appreciation of corruption (I=Yes, 0 otherwise)	.158 (0.81)	.053*** (3.23)
HH has access to water (I=Yes, 0 otherwise)	-1.32*** (-4.86)	-.432 (-1.49)
Formal training	.001* (1.71)	0.7883** (2.49)
Household size	-.043*** (-3.12)	-.004 (-0.35)
Household squared	-.982	-.258

	(-1.12)	(-0.04)
Experience	.125*** (4.05)	.012* (1.69)
Experience Squared	-.867 (-0.22)	.734 (0.14)
Place of residence (1= Urban, 0 = otherwise)	.064* (1.69)	.8468 (1.75)
Constant	3.136 (1.06)	4.536 (1.01)
Adjusted R-squared	0.2473	0.0874
Wald chi2(df): Prob>chi2	9.34[16, 390; 0.0000]	2.07[16, 163; 0.0118]
Observation	**5700**	**5691**

Source: ***Computed by author***. Note: Values in parentheses represent robust t-statistics while ***, **, * indicate 1%, 5% and 10% level of significance respectively

The findings show again that women who are of non-socioeconomic status increases entrepreneurship by 0.103 and 0.325 for those who are married and for those who are single respectively, significant at 5 percent, women who won land decreases entrepreneurship both for those who are married and for those who are single, significant at 5 percent, women who appreciate corruption increases entrepreneurship both for those who married and for those who are single, significant at 1 percent, household heads that have access to water decreases entrepreneurship both for those who married and for those who are single, significant at 1 percent, an increase women obtaining formal training increases entrepreneurship both for those who are married and those who are single, significant at 5 percent.

An increase in household size continuously decrease entrepreneurship without a turning point for those who are married and for those who are single, significant at 1 percent, an increase in experience initially increase entrepreneurship for those who married but beyond a certain point the effect for further increase in experience for entrepreneurship will be negative for this sub sample. The effect of experience on entrepreneurship for those who are single is positive for continuous increases in experience without turning point, a movement from rural to urban area increases entrepreneurship both for those who are married and those who are single respectively. The adjusted R squares show that 24.73 percent and 8.74 percent of variations in entrepreneurship for those whom are married and for those who are single respectively. The model for married people is globally significant at 1 percent showing 99 percent reliability while that for single is globally significant at 5 percent showing 95 percent reliability for policy purpose.

Synthesis of Result

The findings in this study agree with those of Barbera and Moores (2011) who claimed that entrepreneurial actions are associated with the behaviour of successful entrepreneurs. The findings also agree with that of Heryanto (2013) who described this theory as encompassing a set of activities performed by entrepreneurs. These include preparing the business plan, competency cognition for start-up planning, overconfidence and representativeness heuristics for managing risk, gaining professional intruder assistance for learning, improving business relationships with suppliers for networking and beneficial credit policies, and engaging owner related and delaying-payment methods for managing finance.

Owners may encounter obstacles related to technological advancement and marketing system. This is supported by Cancity (2018) and incur a higher initial cost while introducing new products to the market as the innovation takes a long period of time to complete (Wouteurse, 2015). Thus, these firms need to launch products to a larger market in order to cover the high cost of R&D, to address the short product life-cycle of hi-tech products, and to rapidly reach the domestic markets in order to be profitable (UNO, 2016). As such, the identification of the determinants of high growth firms can help the business to promulgate more efficient production plan.

The findings from this study also agree with those of Palanivelu and Madhupriya (2013). They find that participation in groups certainly help members to empower themselves. Group activities empower members to cope with problems and stresses, and they also empower members in their relations with the organizations that serve them, and with the community where they live. Empirically, it was found that participation in group activities is instrumental in reducing family burden, loneliness, and guilt-feeling, and at a macro-level, Self Help Group members‟ advocacy activities can affect government policies (World Bank, 2020).The strong correlation between self-help group participation and self-confidence, self-efficacy, civil responsibility, and political efficacy has also been supported in research studies (World Bank, 2012).

5. Conclusion

The main objective of this study is to assess the effects of women empowerment on female entrepreneurship enhancement in Cameroon. the findings from this study reveal that the clustered mean cost of consultation decreases women empowerment, married women decreases women empowerment compared to singles, access to credit increases the empowerment of women, individuals who non poor socio-economic status increases women empowerment, households that own land increases women empowerment, household heads that have access to water decreases the empowerment of women, households that have obtained formal training increases the empowerment of women, an increase in the household size decreases women empowerment in Cameroon but beyond a certain size of the household, there will be a turning point wherein further increases in the household size will increase the empowerment of women, an increase in the experience of the household increases the empowerment of women continuously with no turning point, a movement of a women from rural to urban area increases women empowerment in Cameroon.

The findings show that an increase in women empowerment increases entrepreneurship, household heads that work in the formal sector decreases entrepreneurship, an increase in access to credit increases entrepreneurship, women who are of the non-poor socio-economic status increases entrepreneurship, women who own land increases entrepreneurship, household heads that have access to water improves on entrepreneurship, women who have obtained formal training increases entrepreneurship, an increase in household

size increases entrepreneurship in Cameroon continuously with no turning point, an increase in the experience of the entrepreneur increases entrepreneurship in Cameroon continuously with no turning point, a woman moving from rural area to an urban area increases entrepreneurship in Cameroon.

The finding show that, an increase in women empowerment increases entrepreneurship for women who are married and for those who are single, household heads that work in the formal sector increases entrepreneurship for those who are married but decreases entrepreneurship for those who are single, an increase in access to credit increases entrepreneurship for those who are married and single respectively, women who are of non-poor socio-economic status increases entrepreneurship for those who are married and for those who are single, women who own land decreases entrepreneurship both for those who are married and for those who are single, women who appreciate corruption increases entrepreneurship both for those who married and for those who are single, household heads that have access to water decreases entrepreneurship both for those who married and for those who are single, an increase women obtaining formal training increases entrepreneurship both for those who are married and those who are single.

The main objective of this study is to assess the effects of women empowerment on female entrepreneurship enhancement in Cameroon. From the findings of the study, fundamental conclusions that can be drawn based on the objectives of this study are that there are significant drivers of women empowerment in Cameroon. Women empowerment significantly enhance entrepreneurship in Cameroon. There is significant heterogeneity in the effects of women empowerment on entrepreneurship across married and singles in Cameroon.

Declarations

Ethical considerations

Not applicable

Data availability

The datasets used for this study are available from the corresponding author on reasonable request.

Funding statement

Not applicable

Conflict of interest

The authors declare no conflict of interest

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Not applicable

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