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## LAND ACCESS AND HOUSEHOLDS WELLBEING IN CAMEROON: DOES GENDER MATTER?

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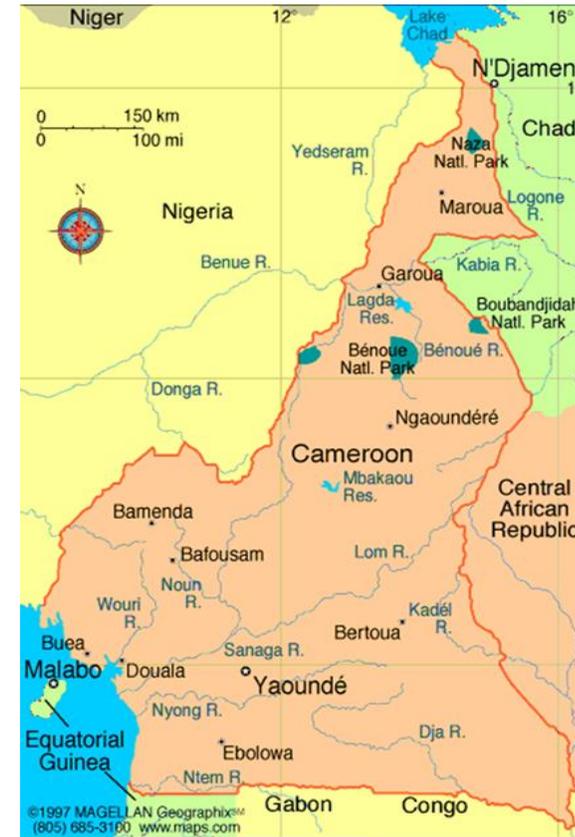
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# GEOGRAPHICAL LOCATION OF THE STUDY

## AFRICA



## CAMEROON



# BACKGROUND OF THE STUDY (1/2)

- ▶ Africa remains a net food importing region spending more than USD 35 billion annually on food imports, although this continent has about 65% of the uncultivated arable land left in the world to feed 9 billion people by 2050 (AfDB, 2016).
- ▶ Land tenure remains a major challenge across the continent and only about 10% of Africa's rural land is registered. In most of African countries, we notice an inefficient land administration leading to transferring land title deeds costs twice the price and takes twice as long as it does.
- ▶ Most of those countries have basic land tenure laws that are incomplete and poorly enforced, deterring private investment. Applicable legislation remains voluntary and non-binding, as well as weak policy and institutional frameworks that are the leading cause of corruption in the land administration. United States Dollar (USD).
- ▶ There is a growing threat to local peoples' land tenure security which directly affects their social, cultural and economic development. This is mostly due to the fast growing large-scale land acquisitions by foreign investors and some locals companies, national governments, rich and also powerful individuals. Such a situation is harmful for local populations, both in rural and urban areas. Since, securing tenure rights over lands and natural resources is very important for poverty alleviation, employment, cultural survival, social cohesion, intergenerational connection, ecosystem sustainability and a dignified life for communities that depend on land.

# BACKGROUND OF THE STUDY (2/2)

- ▶ Land access is vital to generate income to move out of poverty, to produce food in order to address food security concern. Land is also a factor of social exclusion or inclusion and an economic growth driver. In Cameroon, concern with inclusive growth has been nurtured by the recent 2000s international crisis implications. They are the food, climate, financial and economic crisis.
- ▶ Cameroon didn't achieved the MDGs. In September 2015, it moved forward to the 2030 United Nations development agenda with Sustainable Development Goals (SDG 15, SDG5, SDG 2 and SDG1 emphasis on land, gender and wellbeing issues. and the 2063 development agenda of the African Union (Aspiration 6 focus on an Africa whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children. In the same line, the African woman should be fully empowered in all spheres, with equal social, political and economic rights, including the rights to own and inherit property sign contracts, register and manage businesses. Rural women will then have access to productive assets like land, credit, inputs and financial services), with an emphasis on an inclusive approach of economic growth in order to address wellbeing concern. One of the main driver of inclusive growth in developing countries stands to be agriculture. But an agricultural-based structural economic transformation needs some inputs among which land stands to be one of the major one.
- ▶ In Cameroon, land as an asset, an input or an income source is not equally possessed by any individual or household with respect to gender and place of living. This is as a result of some land law, cultural norms and behavior that as in many countries are gender-related and extended beyond biological differences. They are namely the family role of men and women, their social responsibility, their allocation of work time and risk management, their right and access to reproductive resource such as land.



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# PROBLEM

- ▶ From the best of our knowledge, there are very little evidence on how land policies impact on wellbeing in Cameroon. At the time of writing this paper, UN 2030 and AU 2063 development agenda have just been adopted with an emphasis on land, gender and wellbeing issues (SDG 15, SDG5, SDG 2 and SDG1). Cameroonian authorities are on the same path with the RSDSP and GESP on implementation coupled since 2017 to a Structural Adjustment Program with the IMF.
- ▶ The main research question of this study is: What is the effect of land access on household's wellbeing in Cameroon?
- ▶ Specific questions are: (Q1) What are the characteristics of land owners in Cameroon? (Q2) To which extent a gender-based land access can impact on households living conditions?

# OBJECTIVE

- ▶ The main objective of this study is to examine the effect of land access on household's wellbeing in Cameroon.
- ▶ Specific objectives are:
  - (O1) to highlight the characteristics of land owners in Cameroon
  - (O2) to evaluate the extent to which gender-based land access can affect household living conditions.
- ▶ The main hypothesis of our study is that land access better improve household's living conditions when it is headed by a woman.



# RELEVANCE OF THE STUDY

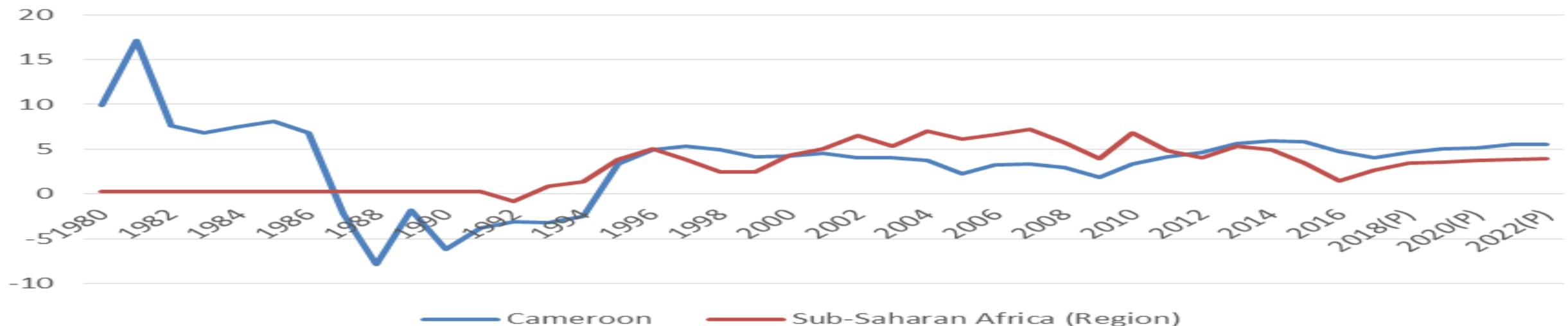
- ▶ Land plays a fundamental role for the development and social inclusion in a country. Land possession by individuals or households can have a relevant impact on their living conditions through its various use. And being landless increases the probability of being poor and vulnerable. Evaluating the implications of land access on wellbeing is a part of the design of development policies in a context of sustainable development strategies. This study is important for academic discussion and stakeholders since, among other things, if even attention to gender and land governance is not new. So that land tenure security and full and equal access of everybody to ownership, property rights and land titles in Cameroon could be seen not only as an asset as others but also as an engine for an agricultural based-inclusive economic growth that can be engaged for the post-2015 development agenda. The paper also contributes to this discussion and the findings could encourage further research in this field.

# Cameroonian socio-economic context of the study

Lower-middle-income country with a population of more than 25 million inhabitants, with a growing population rate of about 2.9% per year. Cameroon is endowed with significant natural resources, including oil and gas, high value timber species, minerals, and agricultural products, such as coffee, cotton, cocoa, maize, and cassava. The number of poor increased by 12 percent to 8.1 million people between 1996 and 2014. Poverty is increasingly concentrated in Cameroon's northern regions, with an estimated 56 percent of the poor living in the north and far north regions alone. This poverty trend is reinforced due to labor market failure and imperfections and land access and land tenure that remain a huge challenge, mostly for poor. In 2019, Cameroon is still suffering from shocks caused by the crisis of early 2000s and a slump in oil prices and increased security threats that started early in 2014. Oil revenue declined and security and humanitarian spending increased, while needed infrastructure programs continued, leading to widening fiscal and current account deficits as well as a rapid accumulation of external debt.



**Figure 1: Real GDP growth (Annual percent change)**



# THEORETICAL LITERATURE (1/3)

- ▶ Goal of economic development is to create material wealth in a country, with impact on wellbeing indicators such as health care, education, housing, sanitation. In fact, since its theoretical conception objective of economic development is complex and multidimensional, and have resulted in the development of a number of theories, explanations, arguments and assertions from various scholars.
- ▶ Four main clusters of classical theories of economic development: The linear stages of growth models (Rostow, 1960), the structural change models (Lewis, 1954; Chenery, 1960; Kuznets; 1971); the international dependence models (Cohen, 1973; Kuhn, 1986; Todaro and al., 2003) and the neoclassical counter-revolution models (Lucas, 1976; Bauer, 1984). With the industrial revolution coupled to the growth in modern industry, those development theories experienced some market coordination failures coupled with an unclear role of the government.
- ▶ Apart from new growth theory of 1990s, structural transformation of the economic is taking place as an alternative approach of development. Therefore, concern like land, social inclusion, governance of local resource for development are more and more highlighted by policy makers and development agencies.

# THEORETICAL LITERATURE (2/3)

- ▶ Our study follows the structural transformation paradigm and is focused on land access and ownership implications. Secure rights to land have multiple benefits for the poor and provide a readily available means for people to rise out of poverty, especially for women. In rural, urban and peri-urban areas where population density is high and land markets can be very competitive, even very small plots of land can provide these benefits. Land access provides a supplementary source of income and food to the poor, as part of diversified livelihood strategies that also include work as wage labourers, trade or cottage industries and remittances. Small plots can also function as sources of credit, social status and security in times of crisis. In fact, the stronger their land security the easier it is for households to invest in the land, improve production and escape from poverty. However, some scholars focused their research on the topic of land. Nevertheless, many scholars paid attention to land
- ▶ Binswanger and Elgin (1998) on land reform and farm size showed that, rural poor have limited access to land even when rural factor markets are competitive and operate efficiently.
- ▶ For Carter et al. (1993), one of the outcome of the competitive market is that poor people whose income are at the subsistence margin are unable to purchase land at a competitive price. Since they cannot reduce their consumption below the subsistence margin in order to finance land purchases, even if the land would be useful for them to generate new and higher income.
- ▶ Ducan et al. (2001) argues that a gradual increase in tenure security leads to agricultural growth and poverty reduction in rural china.

# THEORETICAL LITERATURE (3/3)



- ▶ Many other authors highlight the value of small household plots for the poor in South Asia. Hanstad et al. (2004) show that the distribution of land plots to land-poor households in India has had a positive impact on livelihood opportunities.
- ▶ In Pakistan and Bangladesh (Gazdar et al., 2004), ownership of even relatively small plots of land is associated with supplying enough vegetables, fruit and milk to meet agricultural laboring households own needs and generate incomes from commercial sales. For women, house and garden plots are readily accessible and easily tended with fresh produce available directly, resulting in improved welfare for children and for families as a whole.
- ▶ However, let us mention that land as a production factor or a social asset is not accessible for all in Cameroon and all over the world. The 2008 UN-Habitat reports show some innovation and good practices in providing secure land rights for all such as low-cost registration and formalization of customary rights, temporary occupation licenses, certificates of comfort, and specific measures for pastoralist peoples, and so one and so forth.
- ▶ More recently, the ever-rising demand for food and natural resources has caused a dramatic increase in land based investments in the 2000s. This increase has raised a number of issues and challenges for governments, international agencies and Civil Society Organizations to explore and address the most burning of which being how to ensure that land investments are transparent, sustainable and responsible. As global demand for food and natural resources grows, land-based investments in developing countries like Cameroon have increased dramatically (Feubi P. et al., 2014). To create economic opportunities these investments face challenges of engaging responsibly with local communities and creating links with regional economies without undermining the livelihoods, access to resources and established rights of those who have lived off the land for generations. Foreign investors are usually aware of local tenure rights, however most large land investments fail to take these into account, and consequently the livelihoods impacts that projects will have.

# EMPIRICAL REVIEW (1/2)



- ▶ In the economic literature, numerous studies always seek to explain observed land-use decisions in terms of profit-maximizing behavior, either from the demand or supply side. Then many tools, either qualitative or quantitative-based approaches have been used to highly various socio-economics implications of land related issue.
- ▶ Qualitative studies mostly used Focus Group Discussion (FGD) approach from a simple stratified sampling framework and others used qualitative econometrics models.
- ▶ As far as quantitative studies are concerned, they used quantitative or qualitative variables. For example, from a times series study on data from Latin America, De Janvry and Sadoulet (2000) found that agrarian growth is associated with sharply increasing rural inequality. To empirically test the economic relationship between access to land and rural poverty in Nepal, Adhikari B. et al. (2014) employ a non-parametric technique on a Generalized Additive Model (GAM). Such a model does not make the usual assumption of the linearity of the shape of the relationship between variables and also allows comparisons with result from Ordinary Least Squared (OLS) estimations on linear econometric model. They found that a greater access to land increases income and consumption of the household and thereby reduces poverty. Keswel and Carter (2014), paid attention to the South Africa's Land Redistribution for Agricultural Development (LRAD) program and capture its effects on poverty. They use a propensity score methods to identify the observable characteristics of beneficiaries of land transfer.
- ▶ Since the implications of land transfer as others asset transfer program is not instantaneous, in order to appreciate its impacts on wellbeing, Keswel and Carter (2014) estimate a duration response function by following the Hirano et al. (2004) approach of mapping the generalized propensity score into outcomes and then averaging outcomes by duration. These estimates show that, the living standard of land transfer beneficiaries initially drop for households with less than 1 year under the LRAD and then, after 3 or 4 years their living standard rise to about 150% of their pre-transfer level.

# EMPIRICAL REVIEW (2/2)

- ▶ Due to the imperfections of land market, econometric-based landscape simulation models have also been developed to understand the nature and extent of land market failure problem and to identify and quantify the effects of corrective land-use policies. Plantinga A. J. et al. (2014) discussed landscape simulations based on econometric land-use models in a context of landscapes dominated by private ownership with four basic challenges, namely:- variation in the private economic return to land at the same scale at which land use varies, - modeling the private information that landowners possess about the returns to their land, -the best account for land-use intensity and, -the probabilistic nature of the land-use transition rules derived from econometric analysis as shown by Bokstael (1996). Plantinga A. J. et al. (2014) highly an application of their method based on Lewis et al. (2009) and Lewis (2010) to modeling shoreline development along 140 lakes in northern Wisconsin in United States of America (USA). Their model represents both the decision to develop and the development intensity where the unit of observation is a parcel of land. This model is used in a landscape simulation and coupled with a previously published regression model on green frog population expressed as a function of lake's development density in the sense of Woodford et al. (2003).
- ▶ Among others things, they found that, elimination of the zoning policy increase the likelihood of a larger number of lots being built, and relaxing the zoning constraint along the lakes translates in a greater probability of extinction for green frog populations. At the best of our knowledge, very few or none authors paid attention to the probit model to empirically test effects of land access on wellbeing in Cameroon. In this paper, we make use of a probit regression approach. We assume that more land access for women and used for agriculture could be more useful in improving income and consumption for households.

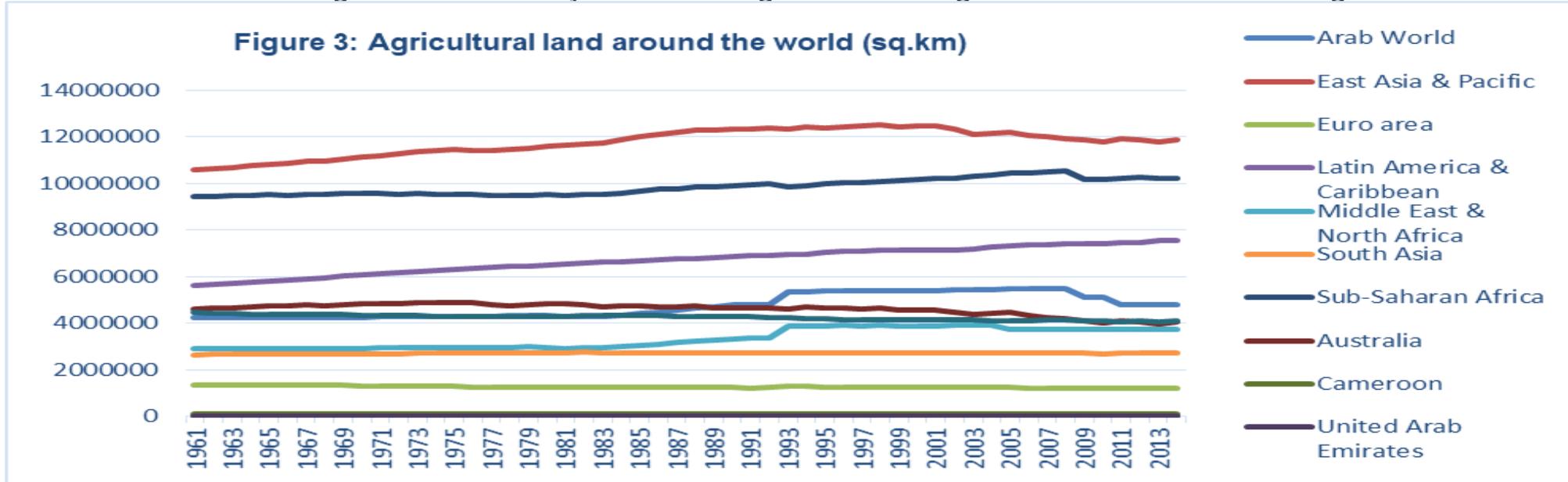


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# RECENT TRENDS ON LAND TENURE (1/5)

- ▶ The land tenure challenge is reinforced by an increasing demand of agricultural land in various regions of the world



- ▶ This situation not only complicates development planning for governments, it also increases vulnerability, especially of poor and marginalized groups. Thus inequalities in land tenure and housing rights between men and women continue to exist, and the average quantity of arable land per individual in the world is even decreasing as shown below (figure 4) with a steady state of the share of total land between rural and urban areas (figure 5).

# RECENT TRENDS ON LAND TENURE (2/5)

Figure 4: Arable land (hectares per person)

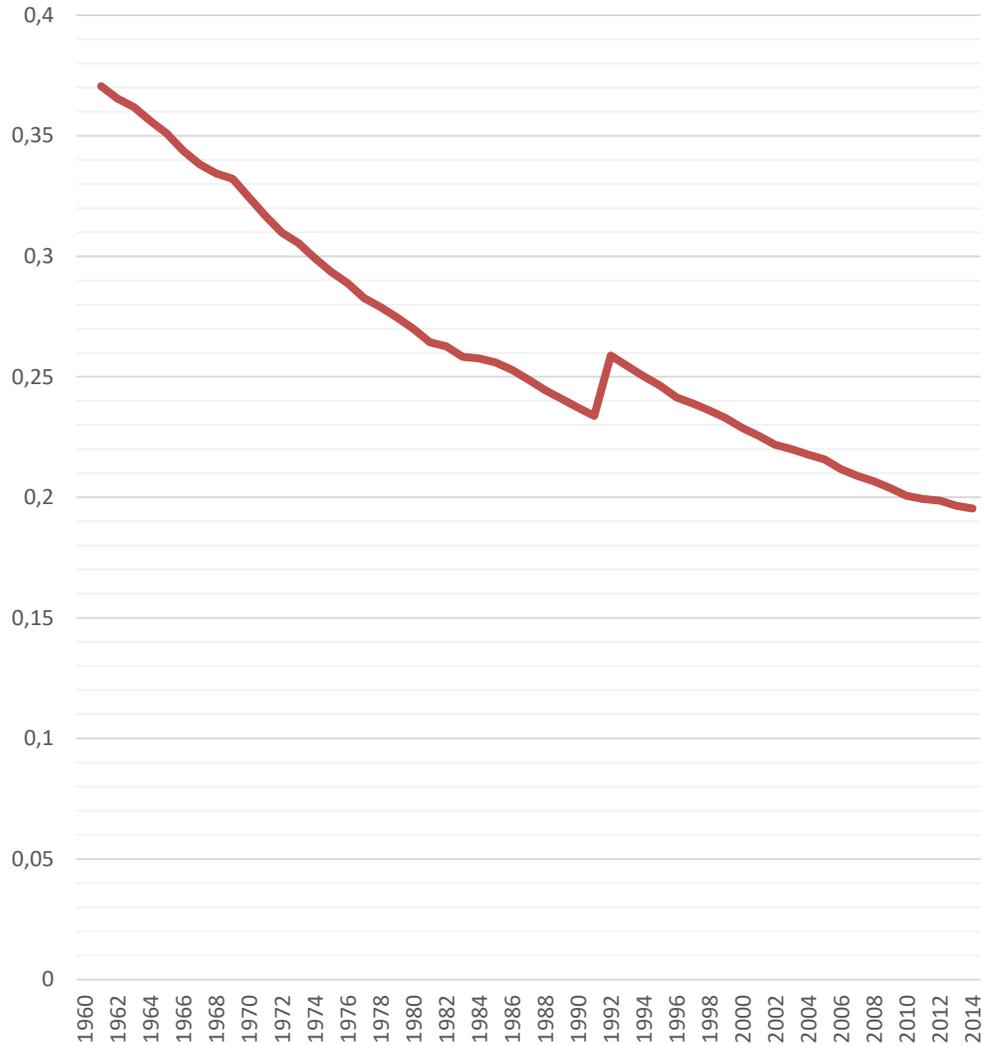
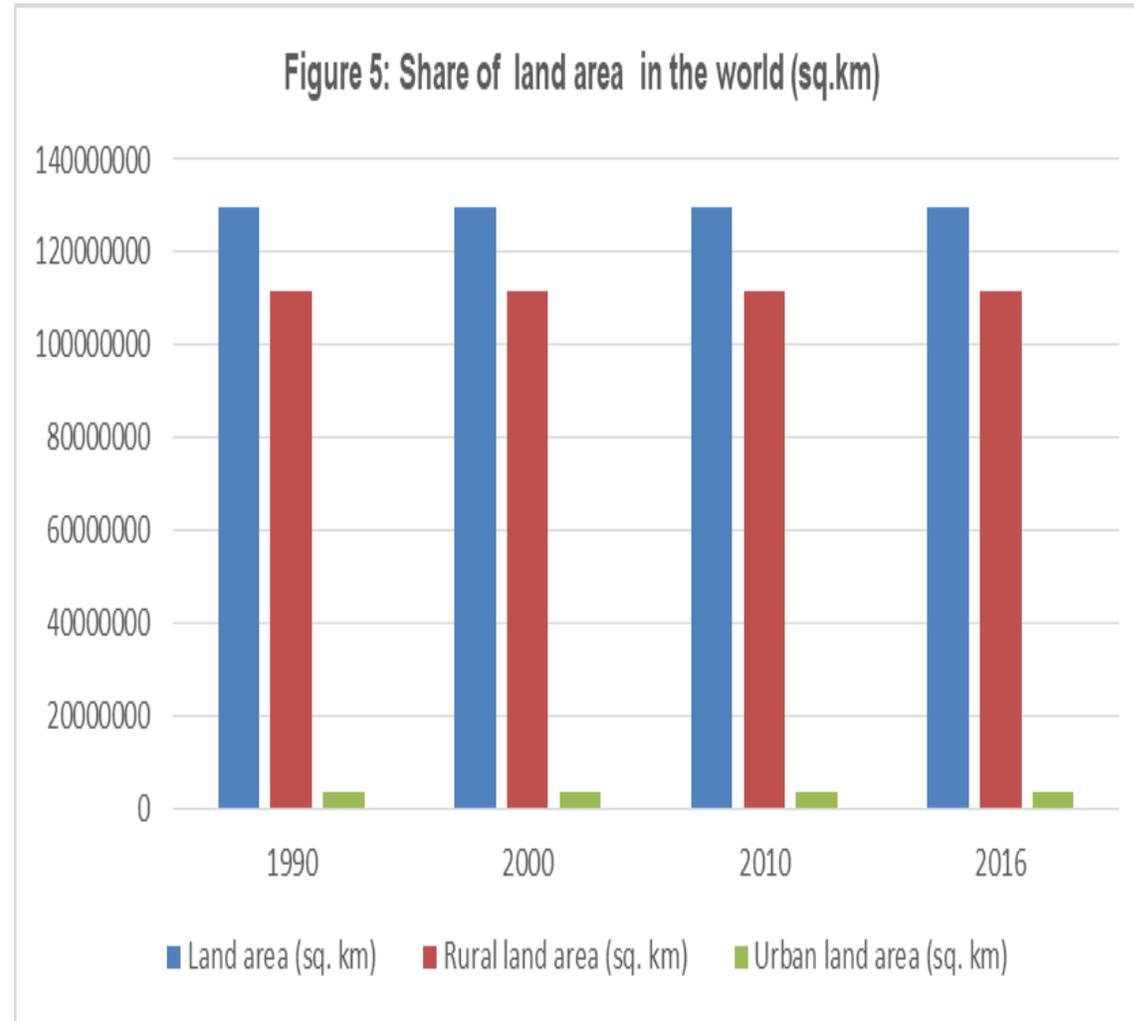


Figure 5: Share of land area in the world (sq.km)



# RECENT TRENDS ON LAND TENURE (3/5)

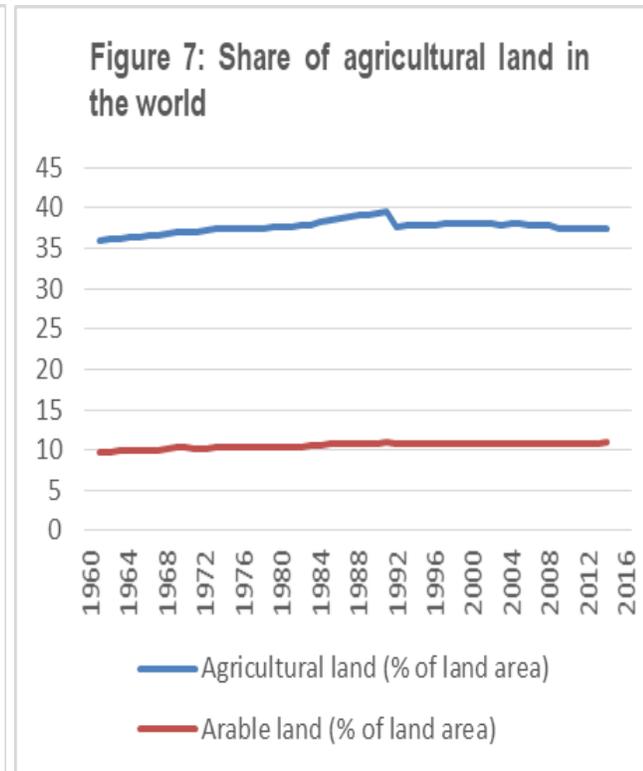
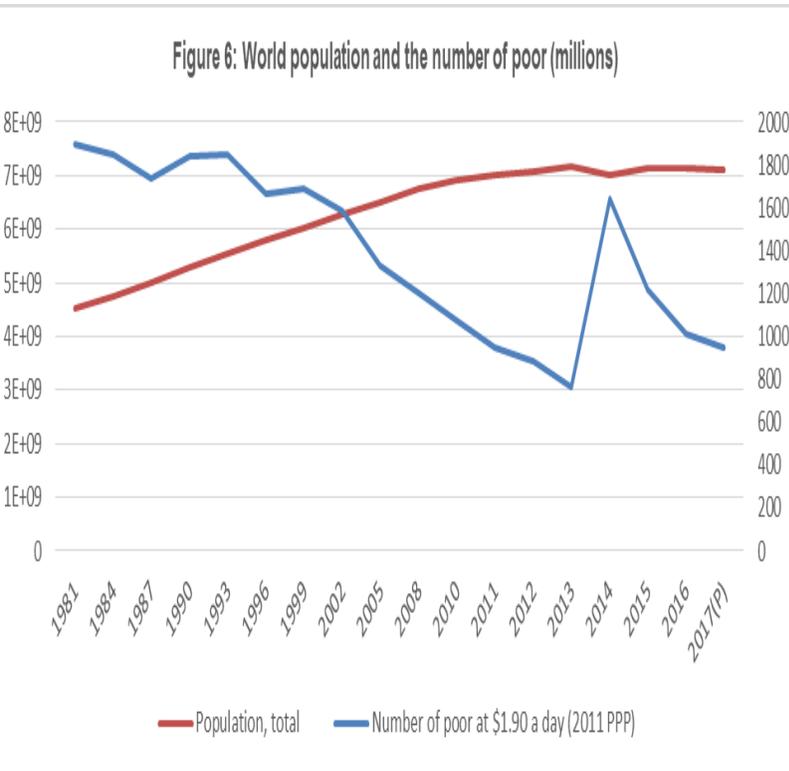
- ▶ In some Asian countries like India, Pakistan and Nepal, women's legal land rights are rarely implemented in letter and in spirit. Socio-cultural and customary practices play an important role in depriving women from their land rights. These practices over-ride law and are highly patriarchal in nature. Wehrmann (2015) shows that in these countries, the most common source of acquiring property for women is inheritance from the natal family, followed by purchasing.
- ▶ As far as Africa is concerned, laws of land tenure date on average to 1970s and some reforms on land tenure in most countries dated to 1980s with two distinct processes, social development and states policies and practices to promoting pro-poor economic growth. In both approaches, decisions driving land use and tenured systems are taken by men as household-heads, women being considered mostly as wives with secondary role to the changes that landholding systems undergo. Consequently, in many African countries formal legislation has been minimally effective in dealing with women's rights to land. While some laws may guarantee gender equality with regard to land rights (for example, a land law), other laws, such as family law, may be based on patriarchal norms and undermine or directly contradict the concept of equal land rights by not giving wives equal rights to marital property or daughters equal inheritance rights. Even where legislation is generally positive towards women's land rights, in many countries the state and its institutions, including the judiciary, have a weak presence beyond major urban areas.
- ▶ In Liberia for example, the government has enacted laws and adopted policies intended to advance the equality of women to men in terms of acquisition of property including land. These include the Domestic Relations and Inheritance Act of 1998 that specifically highlights equal rights in marriage and inheritance under Customary and Statutory Laws, the 2003 Act to Govern the Devolution of estates and establish Rights of Inheritance for spouses of Statutory and Customary Marriages also called the Equal Rights of the Customary Marriage Law of 1998. Other policies include the Liberian National Gender Policy (LNGP), the National Gender-Based Violence Plan of Action (NGBVPA) and the National Action Plan to implement UN Security Council Resolution 1325.



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# RECENT TRENDS ON LAND TENURE (4/5)



In Mali, after political changes in 1991, government authorities began a process of decentralization passing authority down to local governments for the management of land, natural resources and public services. That was done in a progressive, consultative and participatory approach including the creation of local councils. That are local governments established by the voluntary affiliation of neighboring villages, and the demarcation of boundaries. Through decentralization, the national government aimed to empowering local government, encourage development, protect the environment, and foster political stability. Nevertheless, we can notice some difficulties with this decentralization approach of land governance in Mali.

# RECENT TRENDS ON LAND TENURE (5/5)

► In 2019 the challenge about land in Cameroon remains too large through countless land disputes and land restitution requests, farming and housing by vulnerable people chiefly made of women and children who are displaced for various reasons. The situation varies for both women and men. The right to have access to land and property ensures a production security which offers a choice of livelihood and gives room to life autonomy. Nevertheless, there are shortcomings in the gender's rate integration into the access rules and security of land law in Cameroon which impact women's living conditions and make them more vulnerable. Moreover, scan attention is paid to the gender regarding land issue in Cameroon. The overwhelming power of the custom and socio anthropological considerations in rural areas are brought to being by a patrilineal management of land and access right to natural resources to the detriment of women.



Figure 9: Land ownership in Cameroon

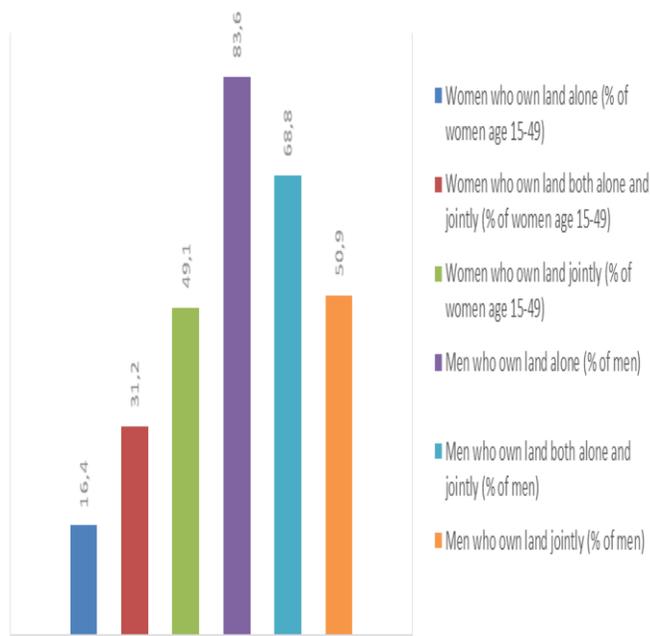


Figure 10: Total population in Cameroon(million)

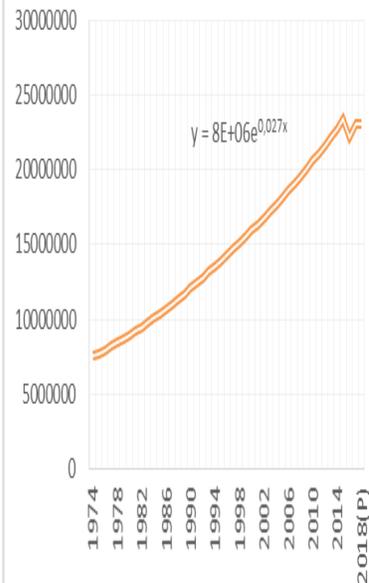


Figure 11: Agricultural land in Cameroon(Sq. Km)

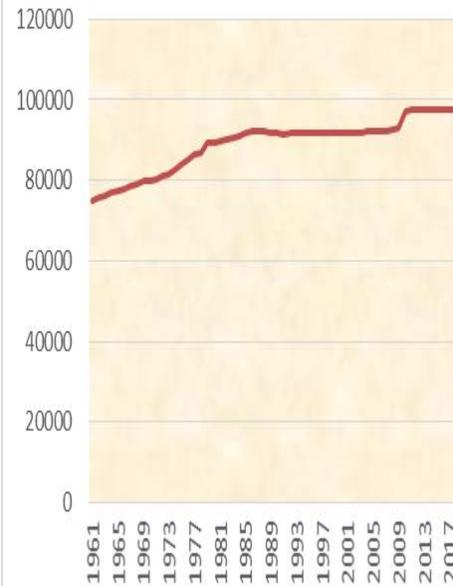


Figure 12: Agricultural population in Cameroon

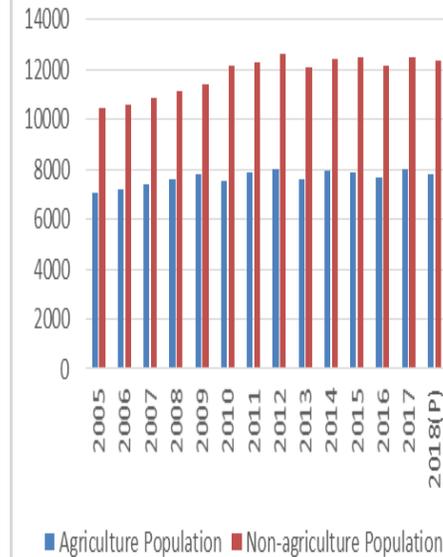
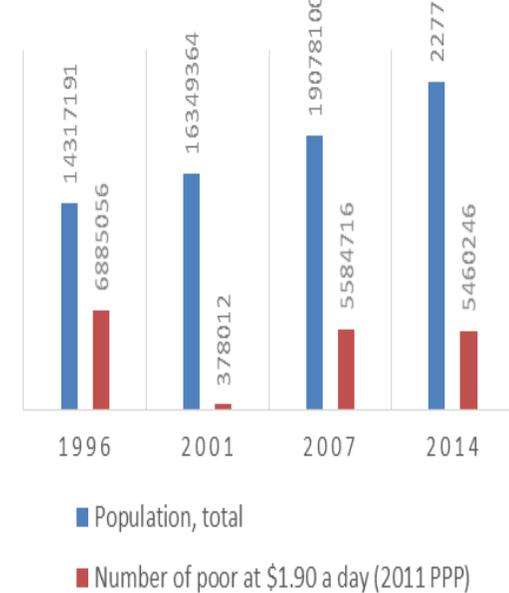


Figure 13: Poverty trend in Cameroon



# METHOD (1/4)

- ▶ Regarding the above-mentioned stylized facts, is it important to have a real idea about what determine land access both for men and women in Cameroon and how it impact on wellbeing.
- ▶ The analytical framework of this study consists of using in one hand the Multiple Component Analysis (MCA) [Asselin (2002 and 2005), Sahn and Stifel (2003)] to identify the determinants of land access in Cameroon. In the second hand, to capture the incorporation of gender and land into wellbeing analysis that may lead to a better understanding of the link between the two phenomena, we use a bivariate probit model that allows for correlated unobserved heterogeneity (Armagan T., 2015). Our study is at the household level and we focus on household heads as they are representative of the amount of information available in the household.
- ▶ MCA derives from inertia approach in the domain of multivariate statistics. In data analysis inertia approach provides many techniques such as the Principal Component Analysis (PCA), the MCA, the Factorial Multiple Analysis (FMA), the Generalized Canonical Analysis (GCA), and so one and so forth. MCA is commonly used in studying poverty and help generating poverty index to identify determinants of poverty or characteristics of poor or deprived people. From a very large set of qualitative and quantitative variables, MCA aims to analyze patterns of relationships between them through a data reduction process using standard correspondence on an indicators matrix. In this view, this multivariate statistical technique also accommodates with quantitative variables that are recoded into nominal or categorical ones, in order to avoid losing information. The objective is to extract the factorial axis remaining with the maximum quantity of information contained in the matrix. This approach is based on some axioms such as the monotonicity also called the First Axis Ordering Consistency (FAOC), measures of discrimination, spreading on the first factorial axis, and the high frequency of non-response and very low frequency of certain modalities. Among this theses criteria, the most important one is the FAOC. MCA also takes into account weight of variables, score derived from it, and variance of the factorial axis. They help to measuring the intensity with which a given variable explains the considered factorial axis.



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## METHOD (2/4)

- ▶ As per regard with using MCA to identify the main characteristics of people having access to land in Cameroon, we start with a set of  $H = 11,391$  households that is the total population in which we focus on household's heads, and a set of  $V = 430$  variables either qualitative or quantitative that characterize them from various points of view regarding living conditions. Among those households, we focus on households head ( $i$ ) having access to land and on what characterize them. The variables of interest are for example the education level, the place of living, the gender, the employment and the marital status, religion, the place of living; age, etc... All the variables are recoded into nominal one and each of them has  $J_v$  levels or modalities. The indicators matrix is of rank  $H \times V$  and is denoted  $IM$ . After successive data reduction into the complete data table (the Burt table) and  $IM$ , and performing correspondence analysis on  $IM$ , we obtain a smaller set  $U$  ( $U < V$ ) of variables that provide us one factor ( $f_1$ ) scores for rows (households head) and another ( $f_2$ ) for columns (variables). These two factors scores are assumed to be scaled so that their variance are equal to their corresponding eigenvalues ( $e_1$  and  $e_2$ ). Those factors are the one with the maximum amount of information contained in  $IM$ . It seems important to precise that this extraction of factors is done after the diagonalization of the Burt matrix denoted  $BM = IM^t IM$ . All this is done basing on one of the main criteria of the MCA's technique that is the FAOC.

- ▶ In addition, since some discrete variables can violate the Gaussian distributional assumption of inertia approach [Ritchie-Scott (1918), Pearson (1922) and Olsson (1979)] and thus bias the analysis, where necessary we use Polychoric MCA based on the Polychoric coefficients. Conceptually, the Polychoric MCA work as follows: let  $v_1$  and  $v_2$  be two ordinal variables with  $c_1$  and  $c_2$  respective categories each derived by discretizing the latent continuous variable  $v_1^*$  and  $v_2^*$  according to a set of threshold  $b_{j,1}, \dots, b_{j,c_j-1}$  for  $j = 1, 2$ :

$$v_j = \begin{cases} q & \text{if } b_{j,q-1} < y_j^* < b_{j,q} \text{ for } q = 1, \dots, c_j-1 \\ 0 & \text{otherwise} \end{cases}$$

- ▶ The polychoric correlation is the correlation for the latent continuous variables  $v_1^*$  and  $v_2^*$  implied by the observed ordinal variables  $v_1$  and  $v_2$ . Assuming a distribution for the latent variables  $v_1^*$  and  $v_2^*$  gives the likelihood function for the polychoric correlation coefficients, which can then be estimated using the observed  $v_1$  and  $v_2$ .
- ▶ Typically a bivariate normal distribution is used, assuming means of zero (0) and standard deviations of one (1) for the latent variables (Olsson, 1979). If one of the observed variables is discrete and the other is continuous, then the polyserial correlation is calculated, which assumes only the discrete variable has an underlying latent variable. Combining pairwise estimates of the polychoric or polyserial correlations gives the overall correlation matrix for the observed data, which can then be used to conduct the final MCA (Kolenikov and Angeles, 2009).
- ▶ Let us recall that, given a set of variables  $v_1, \dots, v_p$ , the MCA seeks to find the linear combinations of those variables with maximum variance: Standard MCA commonly implies both positive and negative weights when calculating principal factors. However, the underlying interpretation of the data and analysis may require that the weights all be positive as both positive and negative weights that are used to calculate principal factors in linear combination of variables may partly cancel each other.
- ▶ At the end, two main interpretations are done on results obtained from the MCA:
- ▶ (a) Each modality of a selected variable has a coordinate on each of the extracted factors (also called axis). That coordinate represent the factorial score ( $\alpha$ ) equivalent to the weight ( $w_{j_v}^\beta$ ) of the variable in that axis. For example, the score of a modality  $j$  of a variable  $V$  on the first factor is computed as  $\alpha_{1j} = \sqrt{\frac{H_j}{J_v}} e_1 w_{j_v}^1$ .
- ▶ (b) While performing the MCA, a discrimination value is calculated for each ordinal value on each factorial axes. That is the variance of the factorial score of all the modalities of the considered variable on the axis. It measures the intensity with which that variable explains the axis.



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# METHOD (3/4)



▶ To capture the incorporation of gender responsive land access into wellbeing analysis that may lead to a better understanding of the link between these two main variables, we use a bivariate probit model that allows for correlated unobserved heterogeneity (Armagan T., 2015). In this paper, we are interested in household head owning land; both land under exploitation or not are taken into consideration. Since in wellbeing or poverty studies, land is usually seen like an asset, a good subject to any exchange on the market; or like an input that can be used to produce and generate additional earnings for the household of individual owning the land. Let us recall that, empirical studies on the measurement of poverty or wellbeing level generally use income or total expenditure per capita or per equivalent adult (or children when it applies), or a wellbeing composite index from selected indicators. Once a household head owning land is identified among the 11,391 households of the total sample size, we compute the probability of having access to land conditional to his living standards characteristics or wellbeing status. Since this study aims at simultaneously analyzes the relationship between land access and wellbeing, we use a bivariate probit model that allows for correlated unobserved heterogeneity. Our model is then specified in the following:

$$\begin{cases} Y_h^{ls} = X_h^{ls} \gamma_h^{ls} + \tau_h^{ls} \\ Y_h^{ws} = X_h^{ws} \gamma_h^{ws} + \tau_h^{ws} \end{cases}$$

▶  $Y_h^{ls}$  is the variable indicating the land status ( $ls$ ) of the household's head. It takes the value zero (0) if the household head owns land and one (1) in the contrary.  $Y_h^{ws}$  indicates the wellbeing status ( $ws$ ) of the household's head.  $X_h^{ls}$  and  $X_h^{ws}$  are the vector of socio-demographic characteristics (detailed in the tables below) of the household's head with regard to land and wellbeing status. And  $\gamma_h^{ls}$  and  $\gamma_h^{ws}$  are vectors of coefficients,  $\tau_h^{ls}$  and  $\tau_h^{ws}$  represent residual terms.

▶ In this study we consider four sub-groups of the main population ( $H$ ), with the respect to the place of living (urban or rural) and the household head gender (male or female). We then have female-headed households living in rural area ( $FHHR, H_1 = 1,393$  people observed on 112 variables), female-headed households living in urban area ( $FHHU, H_2 = 1,648$  people observed on 161 variables), male-headed households leaving in rural area ( $MHHR, H_3 = 3,633$  people observed on 158 variables) and male-headed households living in urban area ( $MHHU, H_4 =$

## METHOD (4/4)

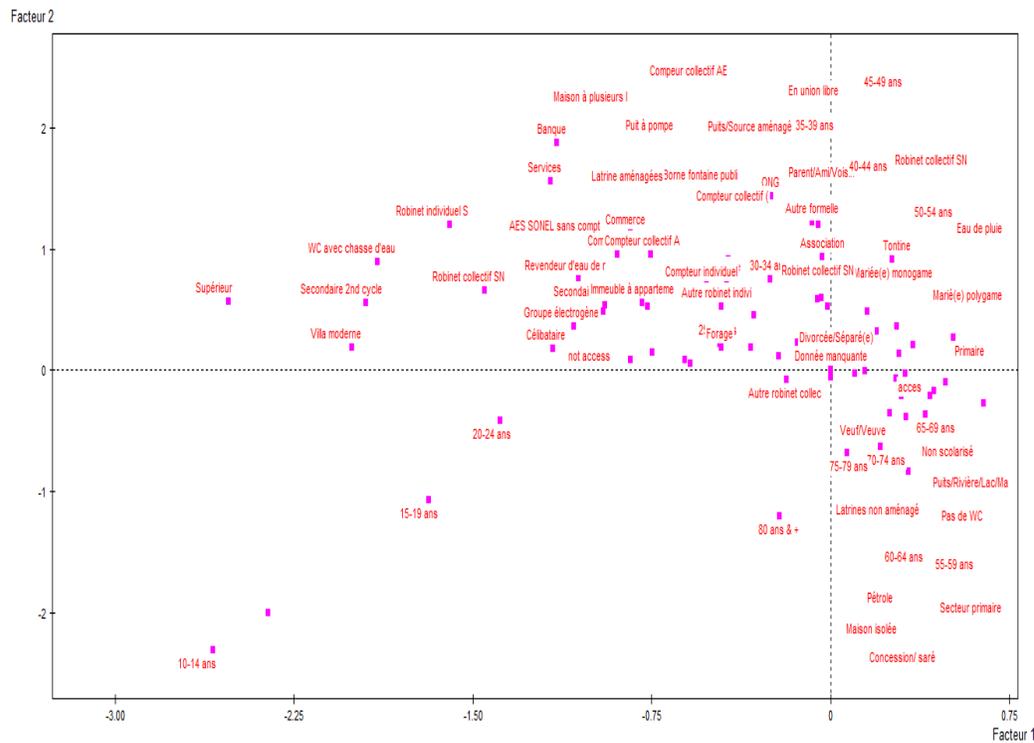
- ▶ In this study Statistics on households living conditions are from cross-sectional microeconomic data from Cameroonian Households Consumption Surveys (CHCS). They are official surveys namely CHCS 1 in 1996, CHCS 2 in 2001, CHCS 3 in 2007 and CHCS 4 in 2014 conducted by the National Institute of Statistics of Cameroon. The aim of those surveys covering all the ten regions of Cameroon stratified into urban, semi-urban and rural strata is to investigate on household living standards and conditions, so that to help updating the poverty profile and served in preparing benchmark indicators to monitor progress in reducing poverty.
- ▶ We also use time series data of the 2017 World Development Indicators (WDI) from the World Bank for land statistics in the world. Statistics on gender are from the World Bank gender portal (2017). Some of those on agricultural are from the Food and Agricultural Organization (FAO).
- ▶ The software used for computation are Excel; SPAD, SPSS and STATA.



# FINDINGS (1/3): LAND ACCESS DETERMINANTS

- ▶ We have a sample size of 1,393 rural female household's head observed on total of 112 variables. Our final MCA shows that 72.86% of them own land. They are mostly widowed (49.03%), follow by married women in polygamy regime (12.77%) and divorced or separated (10.62%). Those women are uneducated (50.03%) or have fulfilled only primary school (33.66%). Regarding labour market, they are engaged in informal activities or in the primary sector. Those women are all aged above 40, can have access to financial service (from credit union of social group) to fund agropastoral activities, and poor characteristics of housing.

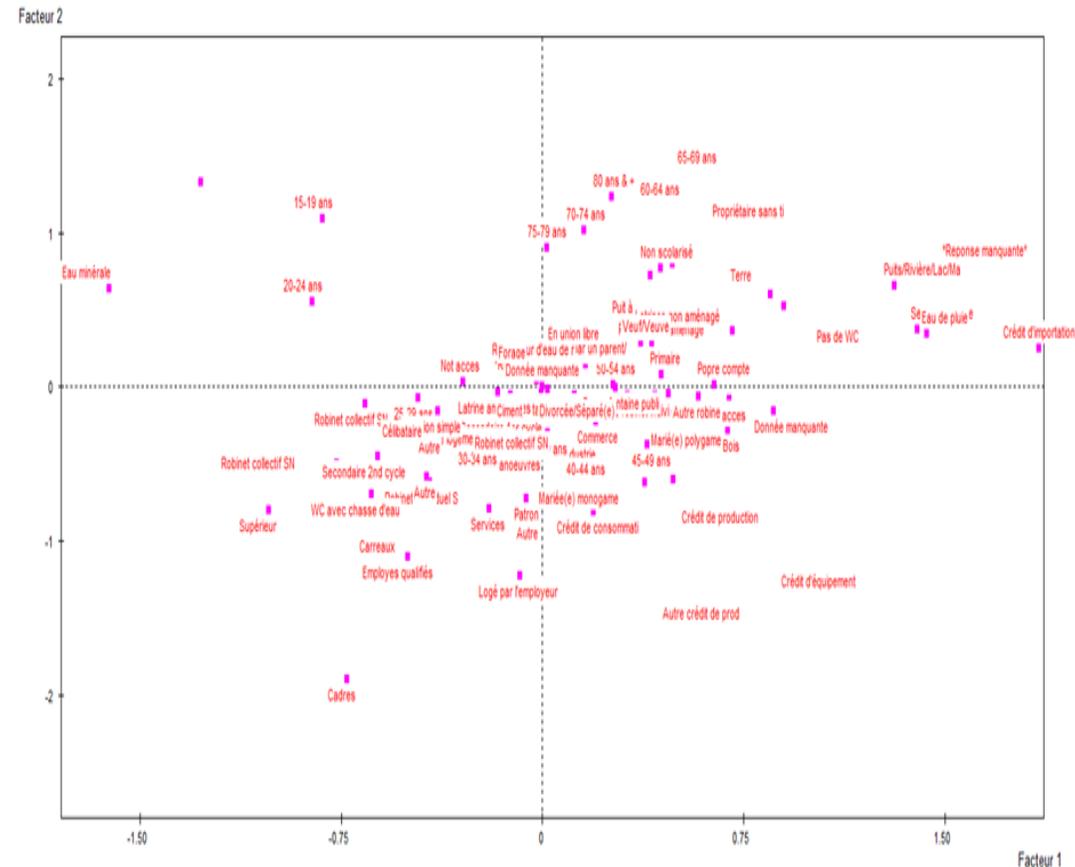
▶ **Figure 14: Cloud of variables for rural women household's head**



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- ▶ In urban area, only 492 of the 1,648 female household's head, that is 29.85%, have access to land and most of them are widowed (33.79%). Some others are married monogamy (14.62%), divorced/separated (11.77%). As far as education is concerned, land owner achieved only primary school (29.55%) or are uneducated (21.17%) and are aged 40-49 years (24%) with access to credit or others financial services

▶ **Figure 15: Cloud of variables for urban women household's head**



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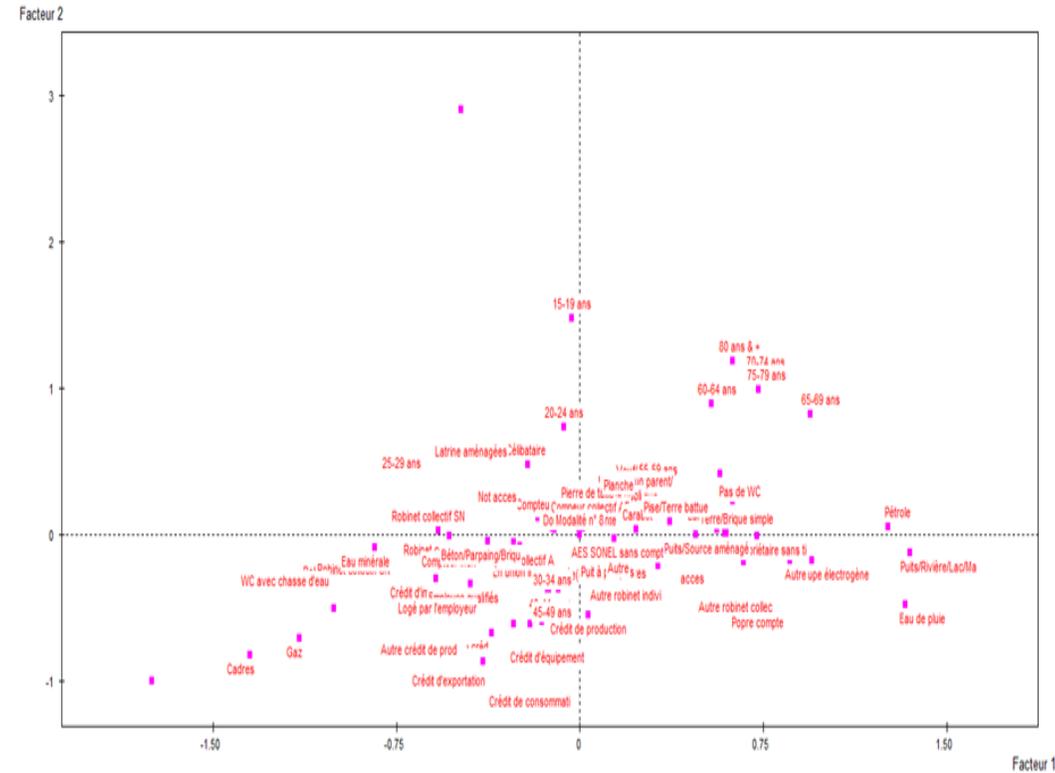
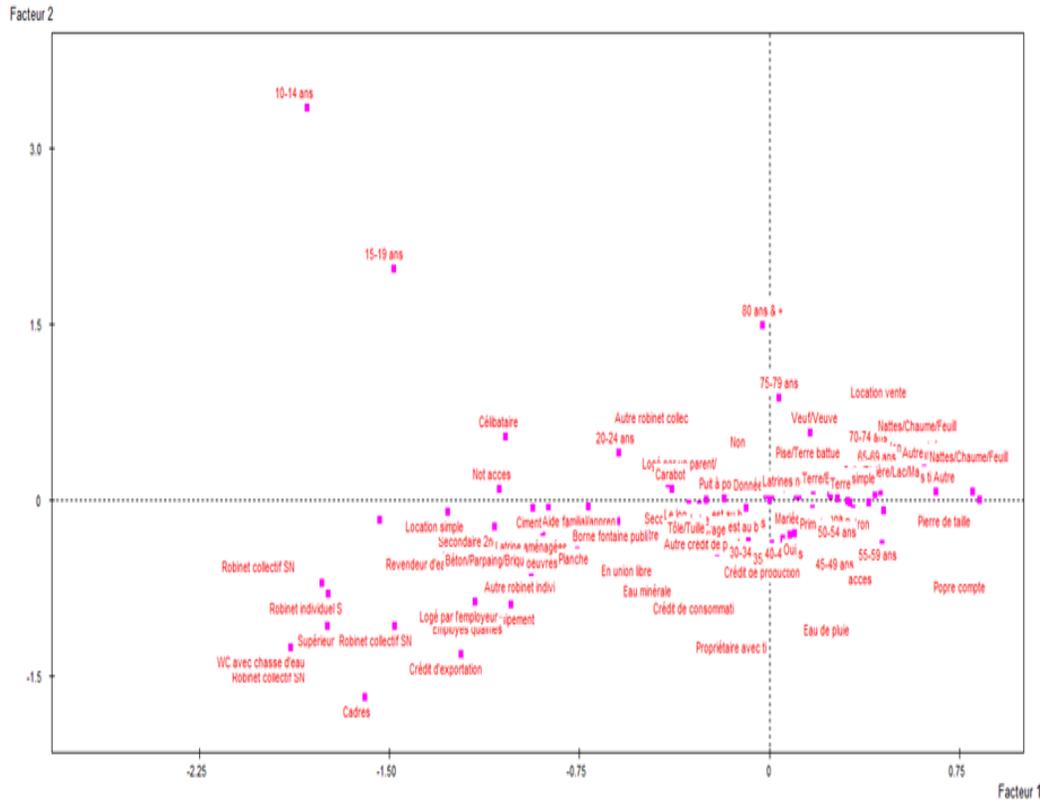
# FINDINGS (2/3): LAND ACCESS DETERMINANTS

► In rural area, only about 23.03% of male household head do not have access to land. They are mostly single and are aged less than 25 years old. 65.67% of those owning land do not have land certificate and as far education is concerned, they have just completed primary education (39.66%). They have poor housing characteristics and difficult access to some basics needs such as water and energy.

► **Figure 16: Cloud of variables for rural men household's head**

► Only 32.107% of male household head in urban area have access to land as shown in table 16. They achieved more than secondary school. Regarding their marital status, they are married monogamy or just living together. The latter achieved higher education. Land owner without land certificate (62.45%) are mostly those working as self-employer or low scale workers. Only 7.53% of male household head has a land certificate in urban area.

► **Figure 17: Cloud of variables for urban men household's head**



# FINDINGS (3/3): IMPLICATIONS ON WELLBEING

- ▶ Our empirical findings (tables 21 and 22) show that, land access has a positive effect on the household wellbeing. In fact, owning land for a household's head increases up to 1.86 the probability to be non-poor, than for household where the head does not have access to land.
- ▶ Living in rural area with access to land is not a significant guarantee to escape from poverty. In others words, having access to land in rural area give only 20% of chance to the household's head to be non-poor, than a household's head having access to land in urban area. Households headed by women owning land, regardless the type of document for the ownership, have 139% of chance to be non-poor than those head by men.

▶ **Table 21: Sign of elasticity coefficients**

| nonpauvres                | Coef.           | Std. Err.       | z            | P> z         | [95% Conf. Interval] |                 |
|---------------------------|-----------------|-----------------|--------------|--------------|----------------------|-----------------|
| <b>urbain#SEXCM#acces</b> |                 |                 |              |              |                      |                 |
| 0#Féminin#0               | -.0245784       | .1452114        | -0.17        | 0.866        | -.3091875            | .2600306        |
| 0#Féminin#1               | .3316798        | .0752294        | 4.41         | 0.000        | .1842328             | .4791269        |
| 1#Féminin#0               | .0024552        | .120616         | 0.02         | 0.984        | -.2339477            | .2388581        |
| 1#Féminin#1               | .0019297        | .1469588        | 0.01         | 0.990        | -.2861043            | .2899637        |
| <b>urbain#acces</b>       |                 |                 |              |              |                      |                 |
| 0 1                       | -1.604385       | .0799101        | -20.08       | 0.000        | -1.761006            | -1.447764       |
| 1 0                       | 1.138401        | .1029333        | 11.06        | 0.000        | .9366555             | 1.340147        |
| 1 1                       | 0               | (omitted)       |              |              |                      |                 |
| <b>acces</b>              | <b>.6213792</b> | <b>.1074919</b> | <b>5.78</b>  | <b>0.000</b> | <b>.4106989</b>      | <b>.8320595</b> |
| <b>_cons</b>              | <b>1.173201</b> | <b>.0813204</b> | <b>14.43</b> | <b>0.000</b> | <b>1.013816</b>      | <b>1.332586</b> |

▶ **Table 22: Odds ratio**

| nonpauvres                | Odds Ratio      | Std. Err.       | z            | P> z         | [95% Conf. Interval] |                 |
|---------------------------|-----------------|-----------------|--------------|--------------|----------------------|-----------------|
| <b>urbain#SEXCM#acces</b> |                 |                 |              |              |                      |                 |
| 0#Féminin#0               | .9757212        | .1416858        | -0.17        | 0.866        | .7340432             | 1.29697         |
| 0#Féminin#1               | 1.393307        | .1048177        | 4.41         | 0.000        | 1.202296             | 1.614664        |
| 1#Féminin#0               | 1.002458        | .1209125        | 0.02         | 0.984        | .7914032             | 1.269798        |
| 1#Féminin#1               | 1.001932        | .1472427        | 0.01         | 0.990        | .7511843             | 1.336379        |
| <b>urbain#acces</b>       |                 |                 |              |              |                      |                 |
| 0 1                       | .2010132        | .016063         | -20.08       | 0.000        | .1718719             | .2350954        |
| 1 0                       | 3.121773        | .3213343        | 11.06        | 0.000        | 2.551434             | 3.819603        |
| 1 1                       | 1               | (omitted)       |              |              |                      |                 |
| <b>acces</b>              | <b>1.861494</b> | <b>.2000956</b> | <b>5.78</b>  | <b>0.000</b> | <b>1.507871</b>      | <b>2.298047</b> |
| <b>_cons</b>              | <b>3.232323</b> | <b>.2628538</b> | <b>14.43</b> | <b>0.000</b> | <b>2.756099</b>      | <b>3.790834</b> |

# DISCUSSION AND EVIDENCE-BASED POLICY ADVICE

- ▶ Land possession by female-headed households have a relevant impact on the wellbeing of the household as a whole in term of income and consumption. And being landless increases the probability of being poor (low income and consumption) and vulnerable.
- ▶ This study is important for stakeholders since, among other things, if even attention to gender and land governance is not new. So that land tenure security and full and equal access of women to ownership, property rights and land titles in Cameroon could be seen not only as an assets as others but also as an engine for economic growth that can be engaged in the UN-2030 and the AU-2063 development agenda.
- ▶ Land should be available for everybody regardless the gender. Obstfeld (2017) as cited in IMF (2017:14) emphasis that, «Gender equality is more than a moral issue; it is a vital economic issue. For the global economy to reach its potential, we need to create conditions in which all women can reach their potential ». Following the same line, we assume that a gender responsive land governance could be useful in Cameroon.



# THANK YOU FOR YOUR KIND ATTENTION



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