Female Inclusion and Economic Development: 
The Case of Cameroon

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Abstract
The present paper aims at investigating the status of the economic development in Cameroon and female inclusion problems with the use of annual data on Gross Domestic Product (GDP) and assets of household survey between 2007-2011 and 2012-2016 from National Institute of Statistic of Cameroon and, the different education statistical data available on UNESCO and World Development Indicator of 2016. Our investigation particularly aims to uncover the level of women inclusion in Cameroon while putting a special focus on education. The paper finds that due to a global amelioration in female inclusion effort, Cameroon has also improved its condition. It can be concluded that growth in Cameroon has not been as inclusive because as growth advanced equity did not. Hence, despite positive developments, women inclusion still faces many problems in Cameroon which can be confirmed by their very low representation in important function of the country. In addition, the number of girls having a chance for proper education is low in Cameroon. Furthermore, we move forward in education and we observe that lesser percentages of females are presented in each category of education: pre-primary, primary and secondary.

Keywords: Cameroon, inclusive growth, female inclusion, education, income distribution, income per capita

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INTRODUCTION
Economic growth is a big concern for every state worldwide due to the impact it can create in the living condition of the population. Developing countries are mostly affected by the change in their GDP without a positive repercussion on their society. Cameroon, among those countries, is facing big challenges which can be confirmed by this relationship. The country is experiencing inequality and poverty which are direct consequences of inclusive growth. Global amelioration in female inclusion effort in Cameroon also benefitted from such change. Hence, despite positive developments, women inclusion still faces many problems in Cameroon which can be confirmed by their very low representation in important function of the country. In addition, the number of girls having a chance for proper education is low in Cameroon. In a global view on economic sector in the country, it can be concluded that growth in Cameroon has not been as inclusive because as growth advanced equity did not.

This paper intends to look at the status of economic development between two time periods, 2007-2011 and 2012-2016, and women participation problems in Cameroon. It also focuses on economic inclusion and the level of women inclusion in Cameroon while putting more attention on education in 2016. In addition, it underlines barriers of developing inclusive growth in political and institutional sectors of developing countries as well as Cameroon.

Evolution of Government Policy on Female Inclusion in Education and Entrepreneurship in Cameroon
Women participation in Cameroon has been a big concern for the state since the big crisis of 1987. The president of the country is mindful and worried about female status in the society thus was created by decree the Ministry of Women Affairs. This Ministry is charged to elaborate on the measures for the respect of female rights and establish equality within political, economic and socio-cultural sectors. Besides, the empowerment of women starts with education and followed by entrepreneurship. For these reasons, the state thought about strategies than can be more suitable and sustainable for the insertion of women in those special areas.

Government policy on female inclusion in education in Cameroon
“Education must once again become one of the cornerstone values of our world, it must once again flourish, and it must be instilled as a force of
happiness, fulfillment and hope.” Nelson Mandela, 1996. Opening an access to basic education for everyone can be considered as a first step for putting boys and girls at the same level. In addition, girls can be allowed to drop out of school if they have an acceptable learning level. Further, they need to be encouraged, pushed and guided at the end of any successful level. We need similar approaches to open the door of education to disadvantaged groups (Tchombe, 1994).

In Cameroon, either money for school or school retirements are the problems that have been slowing female education, especially in the primary education. The number of girls rated as undereducated within the country is 70% which approximately makes them 3 million (Yermishova, 2017). The strategies that are now applied for the good proceedings of female education are:

• A fund is created to finance young girls wishing to study in scientific and technical area,
• Age limitation is removed from the entire education system,
• Formation centers in all fields are opened for girls who are over age for the secondary school,
• National and non-official literacy education program is established for young girls,
• New orientation law for females as well as males is created for the education system in Cameroon.

Government policy on female inclusion in entrepreneurship in Cameroon
Due to the low level of women education in Cameroon, they are mostly investing in agriculture. The strategy used for growth in their activity is ‘food crop’, and it is the reason why they are called ‘female food crop entrepreneurs’ (Fonjong, 2004). They are divided into three specific groups: women who grow and sell local food crops in the rural markets; buyam-sellams who buy food crops from small farmers, transport and sell it in big towns and cities; and finally women who grow their own crops, by-pass the buyam-sellams and sell directly to urban dwellers. Women Food Crop business is important for the country because it really helps to satisfy the increasing demand of the population. The activity remains on a national level and has never been affected with the repeated inflation faces
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by the country. The Ministry of Female Condition of Cameroon (Plan d’Action National pour l’emploi des femmes, MINEFOP, 2009) created by the government underlines women problems and came out with some specific points of intervention as solutions which are:

- Support of a firm creation,
- Guaranty the access to formation, information and advice for a suit integration,
- Support easy access to the market,
- Facilitate the access to credit and funds,
- Create a big chain of partnership.

Female Participation in Education in Cameroon

Female inclusion in education is analyzed with a special focus on pre-primary, primary and secondary education. When we look at the pre-primary education in Cameroon the relationship between the number of students enrolled in the education system and the number of full time equivalent teachers (Pupil/teacher ratio) is 20.81%, which means twenty pupils for every full time equivalent teaching position. The examination of those teachers reveals that 54.507% of the teachers teaching in pre-primary education are women. Gross enrollment ratio which is 39.91% showed that there are a very small number of females that were inscribed in the elementary level without age consideration. Since female GER is very low, it means that in Cameroon, many young girls did not enter elementary education despite the fact that it is almost free. The situation is the same with the net enrollment rate which actually informs us that 28.97% of young girls between GER have the age of school participation of the elementary education all over the country. In conclusion, observing the percentage of girls eligible to access elementary education, females are not too much involved in the pre-primary school in Cameroon.

Furthermore, the primary education number of student per teacher ratio is 42.74 which indicates that the whole school in Cameroon has at least 42 pupils for every full time equivalent teacher. Schools in primary level have 104860 teachers in general with 62.2804% trained female teachers. Female Gross intake ratio in the first grade of primary education is 125.79% which means there are a lot of female new comers having the primary education official age. Since it exceeds 100%, we can conclude that the
level of access to primary education for girls is very high with the huge capacity of Cameroon’s education system of providing accommodation, and a cheap school fee for everyone. The percentage of female Gross intake ratio in the last grade of primary school is 71.41 which shows that just a few numbers of girls reach the last grade of the primary school. In addition, since it is less than 90% only few girls point out with a high degree of completion of primary education. Many females do not enter last grade of primary education even though school is compulsory to a certain age in Cameroon. Gross enrollment ratio is 112.89% and shows that majority of young girls are present in the primary school without age consideration. Due to the fact that GER is very high and exceeds 100%, Cameroonian young girls massively enter primary education with the help of the state that establishes a kind of free primary education for its youth. Net enrollment rate indicates that 91.02% of girls have the age to be enrolled in the primary. But the total number of girls officially known as joined the primary (adjusted net enrollment rate) are 91.018% with an adjusted net intake rate to Grade 1 of 89.9541% girls. In addition, 11.39% of girls have repeated primary school, 71.4128% girls complete it and finally, 45.4036% girls are among the gross graduation ratio. Percentages of female presence in the primary education in Cameroon are 47.0053% for students and 54.507% for teachers. Even though many young girls are present in the primary education in Cameroon, 167597 girls are still out of it and do not receive any education at all for one reason or another.

The Pupil/teacher ratio of the secondary education in Cameroon is 19.26 meaning at this stage, there is only 19 students for each full time teacher. So, we have 114601 teachers in secondary education, with 47.0053% of women as trained teachers and also, we have 36.5979% female trained teachers in upper secondary school and 60.0459% female trained teachers in lower secondary school. Furthermore, the secondary education enrolment in technical and vocational education and training is 20.73% for girls reaching this step of education.

Also, the gross enrolment ratio is 57.09% which shows that less are the female adolescents in the secondary education. Since GER is low and less than 90%, the information we get from that is many young girls do not enter secondary level because it is a selective level which requires more
revenue than elementary and primary education. Thus, the net enrollment rate actually informs us that 44.31% of young girls between GER have the age of school participation of the secondary school all over the country. Finally, 45.8987% female students are present in the secondary education and, 48.0446% of girls have the opportunity of successfully completing the lower level of the secondary.

With a net enrolment ratio of 28.97% for female gender, Cameroon did not achieve a universal pre-primary education for all the girls within the territory. Cameroon had a net enrolment ratio for female gender of 91.02%, but only 71.41% of children of primary school with the starting age were expected to complete primary school. Moreover, to determine if universal primary education has been reached, it is recommended to look at the number of completion which often gives a clear picture of it. The net enrolment ratio at lower secondary school of females reaches 44.9%, but the number of adolescents out of school in the country is 410.66%. Sub-Saharan African countries have expanded access to lower secondary school; it will only take time and effort to boom into a high completion rate. Nevertheless, there is still a high inequality in the education system.

In sub-Saharan Africa, the pupil/teacher ratios are among the highest in the world. Out of the 162 countries (Education for All Global Monitoring Report, 2013), Cameroon had a pupil/teacher ratio of 20.81 in pre-primary education, 42.74 in primary education and 19.26 in secondary education. Cameroon put an accent to increase its number of teacher in the workforce. In 2016, Cameroonian government recruited 114601 secondary education teachers to reach a ratio of 19.26 pupils per teacher and 104860 primary education teachers to reach the 42.74 pupils per teacher. Teachers do not only need to be recruited but to be trained as well. The country had as female trained teachers in that year 36.59% in the upper secondary education, 60.04% in the lower secondary education, 47% in the whole secondary education, 62.28% in the primary education and 54.5% in the pre-primary education. To increase the number of female teaching workforce in Cameroon there is a need of creation of flexible policies and require qualifications. With the huge number of female youth in school in Cameroon, we still have a lot outside without any training or opportunity of education. We have in other, 167.597% of female children between 4 to 14 years old and 410.660% of adolescents between 15 to 24 years are out
of school. This is eventually due to the reason that Cameroon has gender equality in education of 0.66667% which gives advantage to boys than girls.

**Table 1:** Adapted UNESCO Statistic Data 2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pupil/teacher ratio Pre- primary</td>
<td>20.81</td>
<td></td>
</tr>
<tr>
<td>Gross intake ratio into the first grade of primary (%)</td>
<td>125.79</td>
<td>139.61</td>
</tr>
<tr>
<td>Gross intake ratio into the last grade of primary (%)</td>
<td>71.41</td>
<td>79.37</td>
</tr>
<tr>
<td>Pupil/teacher ratio primary</td>
<td>42.74</td>
<td></td>
</tr>
<tr>
<td>Enrolment in technical and vocational education and training (TVET) as % of the total enrolment in secondary education</td>
<td>20.73</td>
<td>26.48</td>
</tr>
<tr>
<td>Pupil/teacher ratio secondary</td>
<td>19.26</td>
<td></td>
</tr>
<tr>
<td>Percentage of repeaters in primary (%)</td>
<td>11.39</td>
<td>12.24</td>
</tr>
<tr>
<td>Gross intake ratio into the last grade of primary (%)</td>
<td>167,597</td>
<td>10,140</td>
</tr>
<tr>
<td>Out-of-school children (%)</td>
<td>410,660</td>
<td>336,810</td>
</tr>
<tr>
<td>Out-of-school adolescents (%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education level</th>
<th>Gross enrolment ratio (%)</th>
<th>Net enrolment rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-primary</td>
<td>39.91</td>
<td>28.97</td>
</tr>
<tr>
<td>Primary</td>
<td>112.89</td>
<td>91.02</td>
</tr>
<tr>
<td>Secondary</td>
<td>57.09</td>
<td>44.31</td>
</tr>
</tbody>
</table>
Findings on Growth Inclusion in Cameroon

The study gives a constant inclusive growth measure with the absolute definition of growth in favor of the poor. The methodology for the investigation is a descriptive analysis where inclusive growth will be divided as a component of equity and a component of efficiency. Efficiency demand for the general improvement of the country and equity requires that development be equitably distributed among the different individuals in the population. The measure of welfare applied in this research includes: per capita income and the household index. So, we will explain the social mobility curve of Cameroon during 2007-2011 and 2012-2016 survey of per capita income and households giving by the National Statistics Institute of Cameroon (NIS). So, table 2 summarizes basic elements of the sample. It made use of approximately 100,978 households per year. Throughout that, 60% of households are from urban regions and 40% from rural regions. The average size from the poorest in the upper quintile since in 2007-2011 and 2012-2016 are approximately 3.75 and 3.60 and the average size of households from the bottom quintile is respectively 5.60 and 5.74. The average household income increased for all periods. The social mobility curve of Cameroon is schemed for the periods 2007-2011 and 2012-2016 at a set level using per capita income and the household survey. The principal aim is to gauge the proportion where the rate of economic growth has better the rich and poor condition.

Table 2: Descriptive Statistics of Sample Households for the Periods 2007-2011 and 2012-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>region</th>
<th>Number of household</th>
<th>Average size of the bottom quintile</th>
<th>Average size of the top quintile</th>
<th>Average income of the bottom quintile</th>
<th>Average income of the top quintile</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-2011 Cameroon Urban</td>
<td>100,978</td>
<td>5.60</td>
<td>3.75</td>
<td>8406</td>
<td>45199</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>60%</td>
<td>5.92</td>
<td>3.80</td>
<td>12055</td>
<td>62342</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>40%</td>
<td>5.57</td>
<td>3.87</td>
<td>7333</td>
<td>36450</td>
<td></td>
</tr>
<tr>
<td>2012-2016 Cameroon Urban</td>
<td>100,978</td>
<td>5.74</td>
<td>3.60</td>
<td>7713</td>
<td>37508</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>60%</td>
<td>5.79</td>
<td>3.60</td>
<td>9897</td>
<td>51160</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>40%</td>
<td>5.68</td>
<td>3.83</td>
<td>7247</td>
<td>3003</td>
<td></td>
</tr>
</tbody>
</table>
When we look at the shape of the curve, the beginning indicates that income growth is equally divides among group of people. But, when the curve is more pronounced, it appears that gradually the portion of income is getting bigger, this states that income is not distributed smoothly among population.

**Figure 1:** Concentration Curve of Income per Capita of Cameroon in 2007-2011 and 2012-2016

- Figure 2 that follows represents the concentration curve of income per capita in urban areas of Cameroon from 2007-2011 and 2012-2016. The curve indicates that at the beginning, the two lines are a little flatter but, as we move forward, it becomes more pronounced, which shows that there is an improvement in the distribution, but the inequality has not diminished in this particular area.
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Figure 2: Concentration Curve of Income Per Capita of Urban Areas for 2007-2011 and 2012-2016

- Figure 3 below is concentration curve of income per capita of rural Areas for 2007-2011 and 2012-2016. The curve of 2012-2016 is on top of the curve 2007-2011 which means that there is huge increase of income in rural population. It indicates that there is an income distribution, and when the curve becomes more pronounced, there are still some signs that inequality has not diminished in rural area of Cameroon. The betterment of life quality of the population in rural regions of Cameroon is higher than other region during this period.

Figure 3: Concentration Curve of Income Per Capita of Rural Areas for 2007-2011 and 2012-2016

The wealth index is a composite measure of a household’s cumulative living standard. The wealth index is calculated using easy-to-collect data on a household’s ownership of selected assets, such as televisions.
and bicycles; materials used for housing construction; and types of water access and sanitation facilities.

Generated with a statistical procedure known as principal components analysis, the wealth index places individual households on a continuous scale of relative wealth. DHS separates all interviewed households into five wealth quintiles to compare the influence of wealth on various population, health and nutrition indicators. The wealth index allows researchers to identify how much household economic status affects health outcomes by using both bivariate and more sophisticated multivariate methods. Therefore, the wealth index was also used to assess the inclusion of growth in Cameroon. The wealth index was formulated from the data of the Cameroon household survey conducted by the National Institute of Statistics. The data provide information on the ownership of productive and unproductive assets per household. Figures 4, 5, and 6 show the concentration curve using the wealth index. According to the concentration curve, ownership of assets decreased during the 2012-2016 and 2007-2011 periods. The reduction in asset ownership was not seen from the upper quintile of the population. The one fallen is precisely for the lower Quintiles. It indicates that only poor group of the population has suffered from a decrease on the economic situation. In other words, the rich maintain their economic status or get richer. This can be illustrated in the curve below:

![Concentration Curve of Wealth Index](image)

**Figure 4:** Concentration Curve of Wealth index of Cameroon from 2007-2011 and 2012-2016
The concentration curve of this wealth index shows a difference in results according to the one obtained in the concentration curves of income per capita. The curve of income per capita shows marks of amelioration for all income groups, while the curve of wealth shows a permanent decrease of income, between the end of the study (2007-2011 and 2012-2016). The previous interpretation was the increase in income which has not been able to maintain a rhythm due to an increase of the price of goods as the inflation is rising in the country. When the price of goods increase, income increase will definitively be used for consumption and, it will not allow the increase in savings or the growth of wealth.

The result of the concentration curve income per capita shows that there was an improvement for all income groups and, fair improvement was tested using the social mobility index and the income equity index. The figures below expose the differentiation within the average income per capita, the social mobility index and the income equity index for 2007-2011 and 2012-2016 periods of the whole Cameroon. The magnitude of the change in the distribution of income is expressed through the use of the index of social mobility which is the area under the concentration curve.
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Figure 6: Concentration Curve of Wealth index of Cameroon Rural Areas from 2007-2011 and 2012-2016

Figure 7 illustrates an increase in average income per capita for the given period in Cameroon; it reveals some evidence of amelioration in income. This increase is more in urban area than rural area.

Figure 7: Average Income per Capita for 2007-2011 and 2012-2016

Social mobility is the movement of individuals, families, households, or other categories of people within or between social strata in a society. The Social Mobility Index is used to weight up opportunity that children from a disadvantaged back ground will do well at school and get a good job in the urban and rural regions of Cameroon. Thus, Figure 8 illustrates a betterment of the social mobility during the given period in Cameroon; it is a mark of amelioration in income.
Figure 8: Social Mobility Index for 2007-2011 and 2012-2016

Figure 9 is the comparison between the average income per capita and the social mobility index for the given period. It shows that the average income per capita is higher than the social mobility index. This means that the distribution of income is not equal because the average income per capita of all groups is not equal. The population of Cameroon is suffering from an inequality among socio-economic group that increase the level of poverty within the country. Between areas in the territory urban regions have the highest percentage of inequality.

Figure 9: Social Mobility Index and Average per Capita Income of 2012-2016 and 2007-2011
Figure 10 below is the income equity index and it is used to measure income inequality. It is between zero and one and as far as equality increases it gets closer to one. In this case, income inequality is less than one in all regions for the given period. The value obtained for the entire Cameroon is less than 0.5, which shows a high level of inequality and the index is lower as the years increase, meaning the income inequality is getting worse.

**Figure 10**: Income Equity Index for 2007-2011 and 2012-2016

This study analyses if Cameroon has obtained an inclusive growth between the periods of 2007-2011 and 2012-2016. For that, we needed to see a general amelioration in income and equity. The graphs given above demonstrate the economic development status of Cameroon. We obtain that Cameroon meet all the conditions that implies growth per capita to the detriment of equity. Hence, with the combination of all those income measurements, we can strongly conclude that the growth in Cameroon is not inclusive.

**Conclusion**

In conclusion, this paper presents the status of the economic development in Cameroon and female inclusion problems. It also explains the annual data on Gross Domestic Product (GDP) and assets of household survey between two time periods of 2007-2011 and 2012-2016. We found that due to a global amelioration in female inclusion effort, Cameroon has also improved its condition. This positive change can be detected from
the concentration curve on employment. But, because the concentration curves have increased over time, there is a big sign indicating inefficiency. We further used the same approach with the social mobility and the income equity index. Further, the average income per capita is higher than the social mobility index, which means there is inequality in income distribution, with an income index smaller to one which indicates inequality is in the upper level. Nevertheless, inequality level changes by region. With this inclusion of growth condition, rural areas of Cameroon are on the third condition of growth per capita which really affects the equity. With respect to urban regions, the rate of the growth, the income equity index and the average income per capita index are higher than zero, that is a good sign of inclusive growth. The concentration curves of the wealth index fall starting from 2007-2011 to 2012-2016 period, which illustrates a contradiction with the concentration curves of income per capita. It can be explained by the fact that high revenues are used for high expenses without supporting the savings. Unfortunately, with an increase in GDP in Cameroon, the rich socio-group is getting richer and poor socio-group is getting poorer. Thus, it can be concluded that growth in Cameroon has not been as inclusive because as growth advanced equity did not. Hence, despite positive developments, women inclusion still faces many problems in Cameroon which can be confirmed by their very low representation in important functions of the country. Cameroon is successful in the integration of women precisely in the food crop business because the business is successful in helping to satisfy the food demand of the population; and also due to the fact that the business is not into importation, whenever there is inflation in the country the prices are not affected. The traditional place of women in society, as the housekeeper and baby-sitter, has strongly slowed women empowerment in Cameroon. Our discussion reveals that female inclusion still faces a huge problem in all African countries which have sex segregation in both economic activity and education. Without education there is a quasi-absence of women presence in the economic sector. In addition, the number of girls having a chance for proper education is low in Cameroon. Cameroon has gender inequality in education of 0.66667% which gives advantage to boys than girls. All in all, the low female participation in education is most of the time due to the over age, dropping out due to pregnancy, early marriage and family ideas
about the position of a female in the society. We also observed that lesser percentages of females are presented in each category of education: pre-primary, primary and secondary. In order to deal with this state of affairs, Cameroon must focus on encouraging females and creating policies to facilitate their insertion. Since female inclusion plays an important role in the workforce and makes the economic growth sustainable and durable, such policies are required. For the inclusiveness, the government should be more concerned on formulating policies that will award the betterment of growth equally and reduce inequality.

REFERENCES


[20] DFID (2004) “What is Pro-Poor Growth and Why Do We Need to Know?”, Pro-Poor Growth Briefing Note 1, Department for International Development, London.


INTERNET RESOURCES


