




AN EMPIRICAL ANALYSIS OF THE IMPACT OF DECENTRALIZATION ON POVERTY IN CAMEROON

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ABSTRACT

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The objective of this study was to examine the effect of decentralization on poverty in Cameroon in a holistic stand point. This was done using data from the Ministry of decentralization and local development in Cameroon from 2011-2019, African election data and ECAM II and III. A Panel data linear regression model was used and the results showed that decentralization procedure is poverty reducing in Cameroon. These findings have implication for poverty reduction in Cameroon. The paper then suggests that by putting an effective and efficient decentralization strategy (that is letting local councils to exercise their own developmental activities by taking into consideration their local realities, there will be growth and development enhancing). This will equally lead to competition among councils in the country for creativity and other initiatives. To allow for a healthy working environment, both local and central governments should implement decentralization processes without reservations. Inspection, supervision and control should be intensified.

Contribution/Originality: This article contributes to knowledge as a case study in Cameroon. It explains some challenges in the subject matter and gives the policy-maker a chance to appreciate principles of effective implementation of decentralization to reduce poverty.

1. INTRODUCTION

In the world today one of the major causes of extremism and terrorism is the lack of basic necessities by the masses. When most people cannot regularly have what to eat, good water to drink, good medical care, electricity and above all good education, they tend to adhere to the preaching and believes of those who promise to lead them to a safe haven which is void of misery. Since they hardly live their daily problems with the governing class, they are forced by poverty to indulge in serious conflict with the later through extremism in order to achieve their desires. That is to say, governance plays a non-negligible role in alleviating poverty which is a pandemic that has eaten deep into most economies in the world and hence a major objective of the existence of the World Bank.

Nevertheless, every economy has poor people, but in Africa and sub-Saharan Africa in particular, poverty has become a rule meanwhile people who can barely make an honest living have been seen as exceptional creatures. This illness has eaten deep into the inner growth chambers of the CEMAC region in general and to its economic

Lion-Cameroon in particular. As an illustration, out of an estimated 21 million inhabitants, at least 8 million Cameroonians live below the poverty line of 931 FCFA per day (NIS, 2014). Poverty according to the World Bank means not having enough means to meet one's basic needs like food, shelter, clothing and so on (World Bank (2001). To the Development Assistance Committee (DAC) of the OECD, poverty is "the inability of people to meet economic, social and other standards of well-being" (OECD, 2001).

Theoretically, poverty is seen to result from the economic, human, political, socio-cultural and prospective states of the economy and in Cameroon, the causes can be well understood with respect to the environment of the poor. On the economic dimension, poverty results from low-income level of Cameroonians who are highly unemployed and that makes them unable to meet certain basic needs. Secondly, on a human dimension, poverty in Cameroon arises from the fact that individuals cannot easily access basic needs, such as education, health, and nutrition no matter their income levels because a majority of the regions are still enclave and highly inaccessible. On a political platform, it might result from either deliberate or undeliberate deprivation of individuals from basic political and human rights as well as limited influence on public policy-making. On a socio-cultural dimension, it is because of social exclusion and lack of dignity within communities. Lastly, on a prospective dimension, poverty might have aroused from the vulnerability of citizens to social, economic or security-related shocks of the economy (OECD, 2001).

Initially, poverty was believed to be a rural issue since everything there depends almost entirely on subsistence agriculture. Today, poverty has become rampant in urban areas as evident by frequent power outages, water scarcity, habitation problems and what have you. The causes of this phenomenon, its relief and cure have been a matter of serious concern to theologians, statesmen, civil servants, intellectuals, taxpayers and humanitarians, in short to people of all walks of life since the 90s. As a matter of fact some researchers have blamed the existence of poverty on three main causes.

Firstly, on an individualistic point of view, according to which poverty has to be blamed on the poor individuals themselves for failing to work hard. Secondly, on a fatalistic point of view, according to which poverty should be blamed on bad luck, race and fate of the individual, and finally on a structuralistic view point. According to the later, poverty should be blamed on the lack of situational and political factors such as lack of education, low wages and poor governance (Feagin, 1972; Furnham, 1982; Hayati & Karami, 2005). This implies that poor people suffer from a lack of capabilities, opportunities and freedom.

Whatever the cause, it seems to be unanimous that poverty is a complex problem that must be addressed at all levels of society. It was in this light that the World Bank Development Report in 2002 proposed a strategy of "Attacking Poverty" via three complementary elements: promoting opportunities (by giving poor people the chance to improve their material situation of life through access to employment, markets, financial services, road infrastructure, electricity, telecommunication, education, health care, and land), facilitating empowerment (by including all people in the decision-making processes in order to achieve responsive and accountable public actions and policies) and enhancing security (by reducing poor people's vulnerability to different threats, like economic shocks, natural disasters, ill health, disability and personal violence).

These aforementioned elements have better been resumed of lately into Community-driven development programs of the World Bank which encourage villages, urban neighborhoods, or other household groups to managing their own development resources in a bottom-top approach of communities' development and local governance (World Bank, 2001).

Local governance has been a public sector reform adopted by most African countries since the early 90s as a means of governance capable of enhancing development and progress by empowering local officials who are closer to the people and have better information on the needs and preferences of the later, with means and power to generate and provide public goods and services to these people. This local governance is best described by the term "decentralization" which is a term politically correct but has more to its economic meaning and significance.

For the meaning, decentralization is a concept that varies substantially in scale and scope and therefore has no commonly accepted unambiguous definition. However, decentralization is seen by a majority of researchers as “the transfer of responsibilities, functions, authority, and accountability from the central government to local governments” (Litvack, Ahmad, & Bird, 1998; Von Braun & Grote, 2002). This transfer may take several forms like administrative decentralization; sometimes referred to as deconcentration, which involves the transfer of functions from the center to local governments, while keeping decision-making authority with the central government. Political decentralization; which provides greater decision-making power to local government, and fiscal decentralization which reassigns spending and fund-raising responsibilities from the central to the lower levels of government (Litvack et al., 1998; Von Braun & Grote, 2002).

When it involves the transfer of both responsibilities and power or both administrative and political or decision-making authority, the process is referred to as devolution. Fiscal and administrative decentralization are closely related because more functions could imply greater spending and thus the betterment of the living standards of the citizens.

However, despite its popularity, the effectiveness of decentralization on development in general and poverty alleviation in particular has until now remained highly debated. The debate in economic literature has been on one hand, concerning the benefits decentralization can bring to economic wellbeing of communities like improving better service delivery, allocation, and equity of public services (Boadway & Shah, 2009; Oates, 1999; Wallis & Oates, 1988); promoting, monitoring and making local officials accountable (Bardhan, 2002); increasing participation among citizens and hence enhance government responsiveness to the needs of the citizens (Faguet, 2009; Kubal, 2006) and above all promote local development, when effectively put in place (Azfar, Kähkönen, & Meagher, 2001; Bahl, 1999).

On the other hand, counter-arguments like the ability of decentralization to creates potential conflict between local and national interests; exacerbate inequalities with the risk of powerful elites capturing most of the resources to their own benefit; creating some sort of unbalanced regional development. In such imbalances, some sub-national governments which are better-governed and have access to more resources will develop more than others and more importantly that only the central government is more effective in producing public goods than local governments. This is because of it better access to resources, technologies, and other inputs that have been advanced to discredit the views of the advocates of decentralization (Asante & Ayee, 2007; Prud'Homme, 1995).

On this line of reasoning, it is important to note that theoretical literature has advanced four forms of decentralization; Political decentralization (measured by the number of government elections, where the higher the number of government elections, the more representation the citizens have at the local level and the higher the level), this is where voices of the locals are heard through their election of members of parliament and mayors. Administrative decentralization or deconcentration (measured by the number of sub-divisions of a country and the size of sub-national governments relative to population or local government units per population or per land area), where the central government delegates some powers to appointed administrators. Fiscal decentralization (measured by the expenditures/revenue of sub-national governments expressed as share of central government spending/revenue), this means sharing the country's general budget with the local governments for better implementation (Akai & Sakata, 2002; Davoodi & Zou, 1998; Fisman & Gatti, 2002; Zhang & Zou, 1998).

In many developing countries, inter-governmental fiscal transfers-IFTs (revenue transferred from central to local governments using funds collected from various sources) is one of the main sources of funds to sub-national or local governments (Rao, 2007; Shah, 2007). That means the poorest municipalities highly depend on such transfer of funds for their development, whereas more locally-sourced income would have helped the local government perform their functions effectively and implement their own programs. Lastly, Devolution (measured by the ability of the local government to raise its own income to fund its programs without relying on transfers from the central

government) is seen as the best form of decentralization because in this case power is seen to actually belong to the people who can hold the administrator responsible at any time (Akai & Sakata, 2002).

Since different governments have different political purposes and motives for introducing decentralization and these intentions are what determine the kind or form of decentralization that they choose to implement, one cannot clearly say if decentralization has yet bear its fruits in Cameroon. It was in 1996 that this country took into the process of deconcentration even though it seems to have taken a new dimension in recent times one cannot clearly say if decentralization has greatly impacted the wellbeing of Cameroonians or not. That is why as objective of this study, we wish to empirically examine whether or not the decentralization in Cameroon can be more responsive to the needs of the common man through poverty alleviation, from where we ask the question “**can decentralization reduce poverty in Cameroon?**”. The poverty we desire to look at here is the poverty caused by deliberate or undeliberate deprivation of individuals from basic political and human rights as well as limited influence on public policy-making (political dimension of poverty), because as earlier mentioned, poverty can result from different sources and we can only better fight any by facing it cause.

The choice of the country was because Cameroon decentralization reform embarked upon in 1972 Constitution and saw the light of day in 1996 has been in the process for over 26 years and it is simply time to evaluate its achievements and know whether to tell its success story or not. Besides, unlike other African countries, the process coincided with the diverse cultural and political colonial heritage embodied by Cameroon and there is need for pre-existing social conditions for a remarkable success to be realized in decentralization (Boone, 1998). Again, politically it is a means to observe the successes or weaknesses of decentralization in a crisis situation and know how to ameliorate. We therefore contribute to the growth of science by improving on the past studies in three ways.

On the social plan, it will be the first study to the best our knowledge to be carried in Cameroon on the decentralization-poverty alleviation and since decentralization is essentially about distribution of power and resources, it will help statesmen and different governments who have different political purposes and motives for introducing decentralization to revisit their strategies for the good of the poor man.

With this introduction, the rest of the paper includes a brief review of empirical literature (section 2), some stylized facts on the level of Decentralization and poverty in Cameroon (section 3), methodology with econometric models, and data description (section 4), presentation of results and discussions (section 5), conclusion and policy recommendations (section 6).

2. LITERATURE REVIEW

In economic literature, the effect of decentralization has been viewed on a wide range of variables, especially on its relationship with the various development indicators like GDP, income (real output) and poverty. It seems different governments have different political purposes and motives for introducing decentralization. These intentions are what create the structure and form of decentralization they put in place. A majority choose to decentralize central government expenditures, while some choose to decentralize the power of revenue-raising.

Whatever the case, decentralization has long been highlighted by the World Bank as having the potential of increasing government response to pro-poor (World Bank, 2001) even though this optimistic relationship between decentralization and poverty reduction has been theorized, such claims have generally not been supported by empirical evidence. Empirical studies on the relationship between decentralization and poverty reduction in the literature is now gathering pace since the earlier works of Van Zyl, Barbosa, Parker, and Sonn (1995) and Semidei, De Wickzen, and Van Zanten (1996). In this regard we review two sub parts in this section; first, the positive empirical findings between decentralization and poverty reduction and second those with negative empirical findings.

2.1. Positive Relationship between Decentralization and Poverty Reduction

The success story of decentralization and poverty reduction is still limited and told by only a few cases. In Tanzania, Braathen (2008) showed using primary and secondary data from a descriptive approach that the implementation of fiscal decentralization reforms, brings about reduction in poverty at the sub-national level. Similarly, Skira (2006) used 165 countries in evaluating resultant poverty effects of fiscal decentralization and found that it has the potential to reduce poverty. Other countries of relative success include Ghana, South Africa, West Bengal, Bolivia and the Philippines (Jutting et al., 2004). However, none of these countries have attained substantial effects on poverty reduction (Crawford & Hartmann, 2008).

In the African context, the politics of ethno-regional conflict is particularly important in shaping the structure of decentralization and indeed the extent to which it is implemented. This makes evidence for decentralization outcomes in Africa or elsewhere is different and uncompromising. Nevertheless, decentralization is essentially about distribution of power and resources. For this reason, some comparisons have been made using the “degrees” of decentralization and some economic variables especially development indicators like real GDP and poverty. The setting up of new local government execution is so recent, and it might appear too early to conclude on its performance, but most research attempts have preferred to examine its outcome on development indicators and very few on poverty reduction due to the fact that poverty is a multidimensional and complex concept, with causes still contested.

While decentralization has had little impact on poverty reduction in Africa, it is not the same case with other developing countries like, the Indian states of West Bengal and Kerala and the Brazilian states of Ceara, Minas Gerais and Rio Grande do Sul. For example, in West Bengal, democratic decentralization associated with a Program of radical agrarian reforms, which over a period of more than 20 years has produced significant benefits for the poor in terms of participation, growth of agricultural production and human development (Crook & Sverrisson, 2001; Webster, 2000). In Brazil, in spite of radical autonomy given to local governments by the 1988 Constitution, the most positive anti-poverty outcomes have been associated with either federally funded rural development programs, most notably the North East Rural Development Program or state and city level programs launched by progressive reforming parties, the Brazilian Social Democratic Party (PSDB) and the Workers Party (PT) in Ceara, Minas Gerais and Rio Grande do Sul (Heller, 2001; Tandler, 1997; Van Zyl et al., 1995). In Ceara, highly successful and innovative rural preventive health and employment-generating policies were implemented whose performance was primarily the result of a ‘three-way dynamic between local government, state government and civil society’ (Tandler, 1997). Kerala is also known for its successful human development Program through decentralization even though contested by some (Datta, 1997; Heller, 2001).

2.2. The Negative Relationship between Decentralization and Poverty Reduction

Even if some developing countries with a few African countries inclusive can boast of a success in reducing poverty through decentralization, a bulk of studies and in greater majority are still to adhere to such a belief. Contrarily, in most African countries, the linkage between the central government’s decentralization scheme and local officials has entirely different purposes. Here, central governments are using funds either to create ab-initio dependent local elite or to consolidate an alliance with local elites based on availability of patronage opportunities. For example, the ‘party regimes’ of Cote d’Ivoire, Tanzania, Zimbabwe and Kenya decentralized structures to renew or consolidate ruling party power and influence at the local level. Even in South Africa, where conditions might seem to be propitious, the dominant leftist party seems to have a strong control and highly developed discourse over social equality and anti-poverty (Crook, 2001).

The seemingly negative poverty reduction evidence of decentralization in the literature can also be reviewed from the angle of measurement of poverty indicators such as participation, empowerment and socio-economic outcomes. For instance, while Jutting et al. (2004) and Von Braun and Grote (2002) examine poverty reduction

through political, economic linkage, Crook and Sverrisson (2001) look for evidence of poverty reduction through increased responsiveness, participation and improved social and economic outcomes. Furthermore, Braathen (2008) and Skira (2006) also looked for proof of poverty reduction through inter-governmental fiscal transfers and assignment of expenditure responsibilities to different government levels.

The critical difference between these other developing countries and the African countries seems to lie in the kinds of relationships which exist between central and local ruling elites and, more particularly, the political goals of decentralization reforms themselves. As earlier mentioned, the politics of decentralization in Africa comes from particular configurations of ethnic and regional pluralism. Most African states are predominantly multicultural, and have suffered violent internal conflicts based on ethno-regional identities (Crook, 1997). Nevertheless, 'the probability that decentralization will serve the political interests of the regime varies inversely with the power and resources of the ethno-regional base on which the regime rests' (Barkan & Chege, 1989). In other words, decentralization serves the need of a regime based on poorer areas to control and redistribute resources, rather than permit revenue autonomy to benefit wealthier areas. In this regard, it is unlikely that decentralization will empower any real challenge to local elites who are resistant to or uninterested in development of pro-poor policies in Africa, except if the regime sees a political advantage in using local government for this purpose (Crook, 2003).

However, a bulk of these studies were based on country observations and the findings were welfare centered (Braathen, 2008) neglect specific country characteristics while assuming homogeneity of nations in their analysis (Jette, 2005) most of the reviews were based on secondary literature (Crook, 2003; Jutting et al., 2004; Vedeld, 2003; Von Braun & Grote, 2002). Finally, Crook (2003) indicated, most data were derived from partial case studies that were not systematically comparable and with few case studies satisfying the minimum requirements for a valid internal measure of performance.

Worthy of note is the fact that the widest reviews were conducted by Crook and Sverrisson (2001) and Jutting et al. (2004). These studies cut across Asia, Africa, and Latin America and with no attempted study on Cameroon. Interestingly, the findings from these studies share familiar features. That is decentralization and poverty reduction are negatively correlated (Crook & Manor, 1998; Moore & Putzel, 1999) and that decentralization can have a harmful effect on poverty levels (Crawford & Hartmann, 2008) which remains discouraging for the decentralization advocates.

3. STYLIST FACTS ON DECENTRALIZATION AND POVERTY IN CAMEROON

3.1. Stylist Facts on Decentralization

Decentralization comprises an important component of a much wider political reform undertaken by the government of Cameroon since 1996. Historically, two systems of governance (indirect rule and assimilation) were introduced in Cameroon during the colonial era. Under the colonial system of indirect rule, District Commissioners governed through "native authorities" headed by favored traditional chiefs, which was a system characterized by "despotic decentralization". On the other side, assimilation was a system of decentralization by appointed officials. The blend of these two is what makes the decentralization process in Cameroon special as elaborated from figure 1.

In a legal framework, decentralization in Cameroon was conceived by the 1972 Constitution. It was envisaged to ensure effective public service delivery, realize a better matching of local preferences and service delivery, provide for enhanced accountability of public officials, reduce regional tensions, especially in the natural resource rich regions, by providing a share of revenue for the exploitation of forestry resources to effectively provide for the minority and extremely vulnerable groups, such as the Baka; and lead to a better environmental management and conservation of the world's rain forest resources. It was generally feared that a failure to meet these legitimate expectations could generate a political backlash.

But over the years, despite the good intentions in the constitution and subsequent legislation, Cameroon lacks an effective strategy and an operational plan for decentralization. Indeed, the impetus provided to the

decentralization process in 2010/11 appears to have been largely in deconcentrated mode because line ministries appear to regard decentralization as a threat to their control over resources and influence. They argue that local elected officials lack the needed human resource capacities to carry out certain functions and hence cannot easily address certain problems adequately. They therefore prefer to transfer a little portion of their powers to the locally elected officials, also having in mind which is politically correct that if these local officials are given democratically full autonomy it might lead to separation tendencies.

The episode of decentralization in Cameroon has for several years not been implemented fully, it has some functions decentralized, while others retained by the central administration and there have been reports of irregularities in the finances of municipalities. Since Cameroon is one of the few countries in the world not providing GFS data to the IMF, we find it difficult to buttress these points with facts. However, to paint a picture of relative wellbeing in Cameroon through decentralization, we observe that the percentage of population living below the poverty line of less than 738CFAF/day is high in the Far North, North and East regions.

Despite the additional funding and attempts to create growth centers, underemployment in Douala and Yaoundé is above 70 percent, and these areas have the highest dissatisfaction in relation to the provision of electricity, as well as a strong perception of corruption and rent-seeking. Due to difficulties of implementation, the Cameroonian created FEICOM, and CEFAM, two institutions in charge of funding and training of local government administrators.

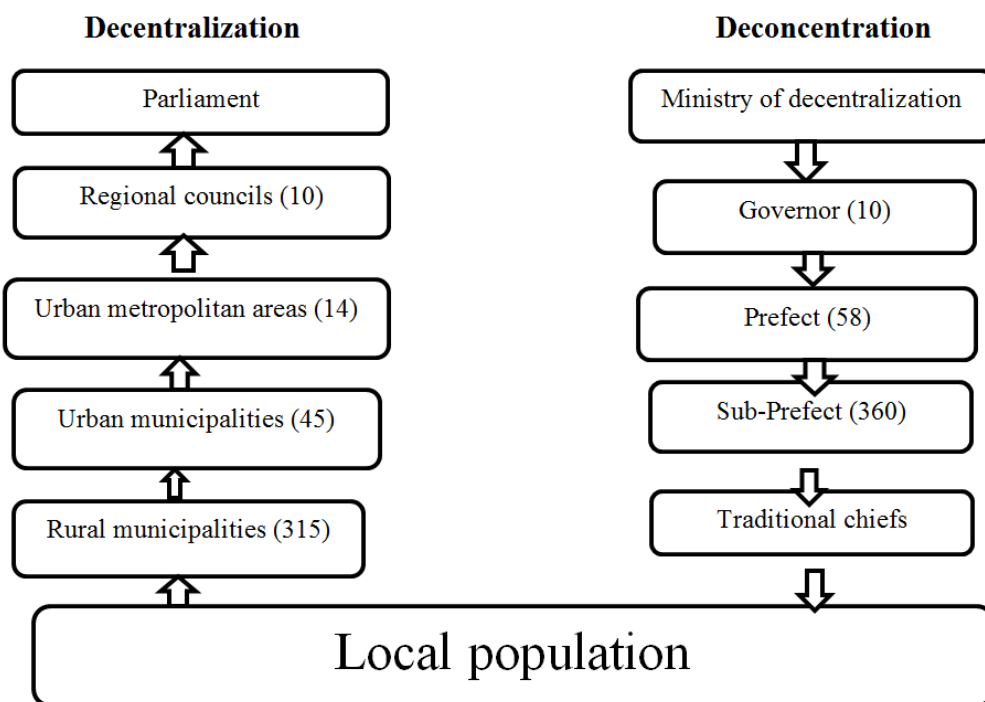


Figure-1. Institutional framework of decentralization versus deconcentration.

3.2. Stylized Facts on Poverty

Although Cameroon is an oil-producing country, with significant mineral and forest resources, poverty remains high at 37.5 percent in 2014 by the national poverty line, even though it declined slightly from 39.9 percent in 2007 and 40.2 percent in 2001.

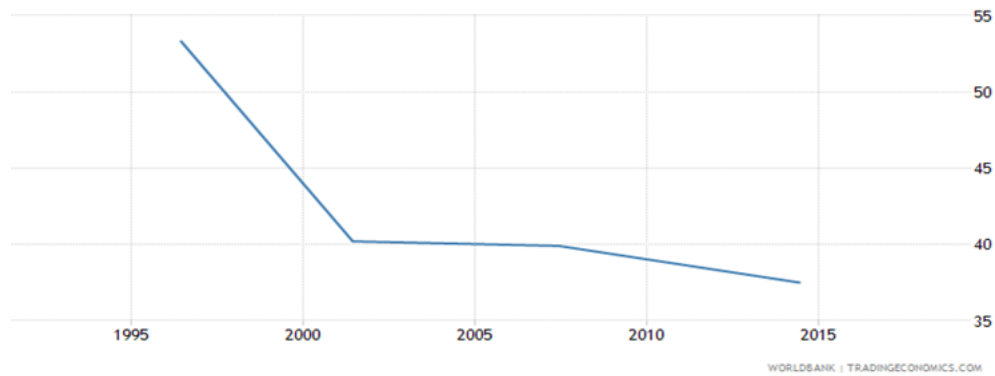


Figure-2. Cameroon - poverty headcount ratio at national poverty line (% of population).
Source: World Bank (2014).

From [Figure 2](#), the highest poor regions in Cameroon are the North, Far north, East and Adamawa (Ecam 3 data). This is due to the fact that these regions experience a fast population growth plus the fact that most public investments are only clustered in urban area like Yaoundé and Douala. Also, the eruption of insecurity in the northern regions furthered deepened the inequality with nearly 45 percent of the population living below \$3.20 a day poverty line in 2014 and about 37 percent are multi-dimensionally poor. The growing economic disparities are also witnessed between rural and urban areas, where the number of poor individuals increased between 2007 and 2014 by 12 percent to 8.3 million people, of which 90 percent live in rural areas and 69 percent in the North regions. Poverty may widen if the Boko Haram- related insecurity issues in the Far North Region, and the ongoing crisis in the two Anglophone regions, are not addressed quickly.

3.3. Conceptual Link between Decentralization and Poverty

Generally, the link between decentralization and poverty alleviation can be seen from both a political and/ or economic dimension. On a political perspective, decentralization brings about increased opportunities for people to participate in public decision-making, from which they are generally excluded in a highly centralized government system ([Asante, 2003](#); [Crook & Sverrisson, 2001](#); [World Bank, 2001](#)). This in itself represents a form of poverty alleviation as poor people are given voice and thus power, provided the citizens' voices are heard ([Goetz & Gaventa J, 2001](#)).

Also, participation can increase the supervisory power of local (poor) people and this in turn can lead to higher accountability of public officials: Due to the greater proximity, citizens can easily monitor and thus influence government actions at the local level ([Asante, 2003](#); [Von Braun & Grote, 2002](#)) and this can again affect the political, and possibly this in turn the socio-cultural, dimension of poverty. Among several possible accountability mechanisms, officials are assumed to be held accountable through local elections, which serve as a means to evaluate officials' past performance. Only if local citizens have the opportunity to observe officials' performance and reward or punish them at upcoming elections, these can be assumed to have an incentive to act in their electorate's interest. In this sense, decentralization can be thought of as a means to bring about good governance, the relevance of which for poverty reduction has been shown by [Kaufmann, Kraay, and Zoido-Lobaton \(1999\)](#).

Economically, elected sub-national units of government have full discretion on most local resources and can therefore use these resources to provide public goods (water, electricity, schools, hospital, road infrastructures) for the welfare of the citizens. This helps in reducing the unequal gap between the rich and the poor and consequently alleviates poverty.

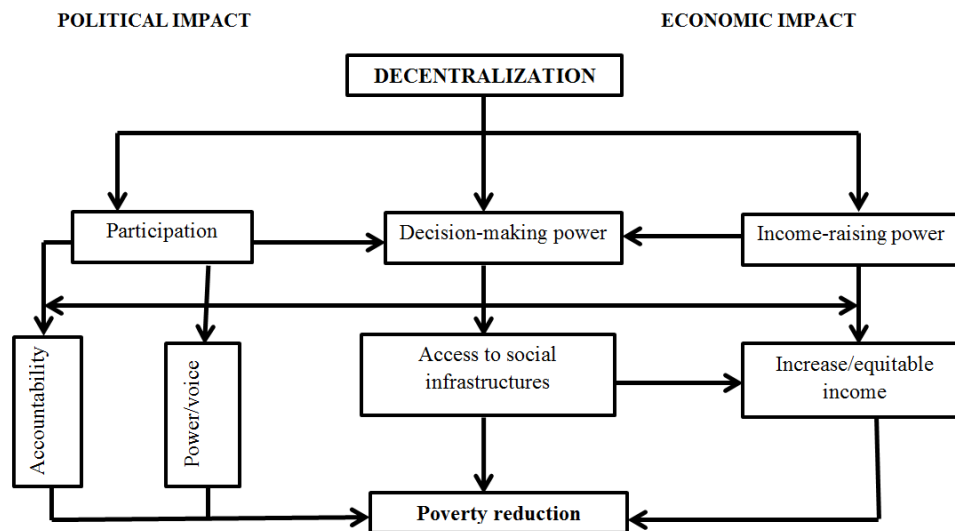


Figure-3. The link between decentralization and poverty.

Source: Authors' illustration adapted and developed further from Jutting et al. (2004).

4. METHODOLOGY

To study the effects of decentralization on poverty, we exploited a dataset from the ministry of decentralization (Devkota & van Teijlingen, 2010). Equation 1 estimates the relationship among the different forms of decentralization (fiscal autonomy, administrative decentralization, political decentralization) on poverty with the absent of control variables.

$$P_{1t} = a_0 + a_1AD_{1t} + a_2PD_{1t} + a_3FD_{1t} + \varepsilon_{1t} \tag{1}$$

Where P = poverty level, AD = administrative decentralization, PD = Political decentralization, FD = Fiscal decentralization

Equation 2 estimates the relationship between decentralization, as measured by fiscal autonomy, administrative decentralization, political decentralization and poverty with some control variables.

$$RPI_{2t} = \theta_0 + \theta_1AD_{2t} + \theta_2PD_{2t} + \theta_3FD_{2t} + \sum_{t=4}^n \theta_t X_{2t} + \varepsilon_{2t} \tag{2}$$

Where RPI is the regional poverty incidence, AD = administrative decentralization, PD= Political decentralization, FD= Fiscal decentralization, X= other control variables like surface area of the region, population of the region governance, institutional quality and number of enrollments per region. The control vector also includes indicators of, which studies have shown to effect poverty (Chakravarti, 2005; Tebaldi & Mohan, 2010).

Equation 3 estimates the relationship between decentralization, as measured by fiscal autonomy, administrative decentralization, devolution, political decentralization and regional poverty incidence with the control variables with an interactive variable which is the region of origin.

$$P_t = \varphi_0 + \varphi_1DECENTRALIZATION_t + \sum_{t=2}^n \varphi_t X_t + \varepsilon_t \tag{3}$$

4.1. Data Set and Variables

The dataset for our study were taken from the Ministry of decentralization and local development in Cameroon. The ministry recorded all the expenditures, surface area, population and other expenditures over the 10 regions for a period of 9 years (2011- 2019). The poverty variable was extracted from Ecam3 and Ecam4. Also, the Africa election statistics gave data on the number of registered voters and the actual voters over the period 2011-

2019. The names of these sampling regions are included in the descriptive statistics. There are 90 observations in 10 groups for the panel regression. The use of data with time-series and cross-section dimensions allow for consideration of region-specific characteristics. Table 1 summarizes the different variables selected for study and their natures.

Table-1. Nature of the variables used for the study.

Variables	Nature	Description
Poverty (P)	Dependent	The number of individuals without basic necessities like water, electricity and housing
Decentralization	Dependent	This variable is an index of decentralization gotten from the principal component analysis by predicting the index
Political Decentralization (PD)	Independent	Political administration is the number of political parties that took part in the legislative election. Number of register voters Number of actual voters
Fiscal Decentralization (FD)	Independent	The expenditures of the different councils in the region
Administrative Decentralization (AD)	Independent	Number of administrators sent to the different municipalities
Population (POP)	Independent	Population of the region
Surface Area (SFA)	Independent	Surface area of the region

5. PRESENTATION OF RESULTS AND DISCUSSION

Table-2. Descriptive statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max
Poverty	90	34.97	49.059	1	207
Administrative Decentralization	90	54.155	2.161518	50	58
Political Decentralization	90	8811846	2977639	3000000	73670982
Fiscal Decentralization	90	10.21507	0.27119	9.558	10.86
Number of enrollments	90	10.2114	0.256179	9.85	10.769
Population	90	1746354	864671.5	634655	3111792
Logsurface Area	90	4.7894	0.546032	4.242	6.236
Register voters	90	7313717	1185409	5000000	9248156
Number of political parties	90	27.77778	4.312974	16	41

Table-3. Correlations.

		Poverty	FD	PD	AD	Decentralization
Poverty	Pearson Correlation	1	-.428**	-.559**	-.608**	-.559**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	90	90	90	90	90
FD	Pearson Correlation	-.428**	1	.000	.040	.000
	Sig. (2-tailed)	.000	.997	.709	.997	.997
	N	90	90	90	90	90
PD	Pearson Correlation	-.559**	.000	1	.565**	0.20**
	Sig. (2-tailed)	.000	.997	.000	.000	.000
	N	90	90	90	90	90
AD	Pearson Correlation	-.608**	.040	.565**	1	.465**
	Sig. (2-tailed)	.000	.709	.000	.000	.000
	N	90	90	90	90	90
Decentralization	Pearson Correlation	-.559**	.000	0.20**	.465**	1
	Sig. (2-tailed)	.000	.997	.000	.000	
	N	90	90	90	90	90

Note: **. Correlation is significant at the 0.01 level (2-tailed).

From Table 2, descriptive statistics of the survey dataset showed that the mean value of poverty is 34.97. The minimum value of poverty is 1, while the maximum is 207 with a standard deviation of 49.059. Also, the mean value

of administrative decentralization is 54.155; minimum value was 50, while the maximum is 58 with a standard deviation of 2.161. From the statistics, the mean value of political decentralization is 8811846 with a minimum value of 3000000 and a maximum value of 73670982 with a standard deviation of 2977639. Furthermore, the results showed that fiscal decentralization has a mean value of 10.21507 with a minimum value of 9.558 and a maximum value of 10.86 with a standard deviation of 0.27119.

From the Pearson correlation of Table 3, we realize that the variables of decentralization all have a negative relationship with poverty in Cameroon. Precisely, the following are deduced:

- Correlation between fiscal decentralization and poverty in Cameroon is significant and negative, with $r = 0.428$ at 1% level.
- Correlation between political decentralization and poverty is significant and negative, with $r = 0.559$ at 1% level.
- Correlation between administrative decentralization and poverty is significant and negative, with $r = 0.608$ at 1% level.
- Correlation between decentralization and poverty is significant and negative, with $r = 0.559$ at 1% level. These results show that decentralization and its variables have a negative relationship on poverty in Cameroon.

From the results of the Pearson Correlation, we proceed to an econometric regression so as to verify its veracity, which will permit us to measure precisely the contribution of the decentralization variables on poverty in Cameroon.

5.1. Capturing the Impact of the Forms of Decentralization on Poverty

Using the ordinary least square regression, we estimate the impact of each of the different dimensions of decentralization variables on poverty in Cameroon.

Table-4. Regression results of equation 1 and 2.

Variables	(1) Ols coff	(2) Ols coff
Administrative decentralization	-0.174** (0.0716)	-0.0906 (0.0687)
Political decentralization	2.958 (5.378)	-7.707*** (1.307)
Fiscal decentralization	-0.722*** (0.107)	0.394 (0.312)
Number of political parties		0.0193*** (0.00622)
Registered voters		13.43*** (2.318)
Log surface		0.0344 (0.0612)
Log enrollment		-1.528*** (0.340)
Population		0.00630 (0.194)
Constant	16.95*** (3.648)	-189.2*** (34.36)
Observations	90	90
R-squared	0.535	0.685

Note: Robust standard errors in parentheses.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

From Table 4, the coefficient of determination R-square of equation 1 and 2 is 0.535 and 0.685 respectively which means that 53.5% and 68.5% of decentralization variables on poverty in Cameroon are explained by the independent variables. This shows that the models are good and are well explained by the chosen independent variables.

Equally, from the regression results, administrative decentralization on its part exerts a negative impact on poverty with a coefficient of -0.174 of equation 1, implying that a unit variation in administrative decentralization will lead to a decrease on the poverty levels in Cameroon by 0.174 (17.4%). The results are in corroboration with those of Adablah (2003) and Mani (2003) who explained that decentralization can, in fact, be made on a number of grounds as follows:

a) Local authorities tend to act more in line with local preferences and conditions, and their response to local needs is more expeditious. Decentralization provides opportunities to marginalized segments, such as women, minorities, etc., to participate at the local level, enabling a more sensitive approach to policy formulation and implementation.

b) Because decentralization tends to enhance transparency and accountability, the amount of money wrongfully diverted away from development often declines. Human Development Report (2003) showed that in 55 countries, decentralization of government spending was closely associated with lower corruption among bureaucrats and reduced rent-seeking by private parties, leaving more money to spend on basic services for poor people.

c) Decentralization increases effectiveness in service delivery, such as reducing absenteeism among government employees, for example, in local schools and health clinics because elected officials receive complaints from their constituents and can improve discipline.

d) Decentralization provides bureaucrats with early warnings of potential disasters, enabling quick remedial action.

Also, the results of political decentralization on its part exerts a negative and significant impact on poverty with a coefficient of -7.707, implying that a unit variation in the political decentralization will lead to a decrease in poverty by 7.707 units. According to the 2009 poverty reduction paper, also shows that renewed decentralization process will better mobilize Cameroon's growth potential, including through the development of regional growth hubs in Douala and Yaoundé. It is also expected that decentralization would lead to better revenue generation. A further objective was to encourage gender equality. The World Bank and other multilateral and bilateral donors have supported these objectives.

The results of fiscal decentralization on its part exerts a negative impact on poverty with a coefficient of -0.722, meaning that a unit variation in political decentralization will lead to a decrease in poverty by 72.2%. showing that the more councils spent on projects in the different municipalities, the more poverty is reduced. These results corroborate with those of Devkota and van Teijlingen (2010) who used panel regression model against the fiscal decentralization index with a range of district controlled variables and found that the coefficient of fiscal decentralization was statistically significant and positive to district economic growth. The relationship is completely robust. Fiscal decentralization enhances the district economic growth and vice-versa.

Also, fiscal decentralization enhances economic growth directly by increasing the efficiency of public expenditures (Oates, 1972; Oates, 1993; Samuelson, 1954) and indirectly through enhancing economic efficiency, creating horizontal fiscal equality and by maintaining macroeconomic balance.

5.2. Capturing the Impact of Decentralization on Poverty

From the regression, we present the impact of decentralization on poverty in Cameroon.

Table-5. Regression results of equation 3.

Variables	Ols3coeff	Ols3coeff
Decentralization	-0.275*** (0.0355)	-0.253*** (0.0331)
School enrollment		-1.170*** (0.199)
Population		0.393 (0.247)
Surface area		-0.000309 (0.0538)
Number of political parties		0.00891 (0.00663)
Constant	0.400*** (0.0433)	9.670*** (1.244)
Observations	90	90
R-squared	0.313	0.561

Note: Robust standard errors in parentheses.
 *** p<0.01, ** p<0.05, * p<0.1.

From Table 5 the coefficients of determination of equation 3 are 0.313 and 0.561 respectively meaning that 31.3% and 56.1% of decentralization on poverty in Cameroon are explained by the independent variables. This shows the goodness of the model and how well variations are explained by the independent variables.

The results show that decentralization on its part exerts a negative impact on poverty with a coefficient of -0.253 of equation 3, implying that a unit variation in decentralization brings about a decrease on the poverty levels in Cameroon by -0.253 (25.3%). The results differ from those of Fischer (1993) which holds even if there is no link between fiscal decentralization and macroeconomic instability, there is wide consensus that poorly designed systems, (for example, allowing subnational governments to borrow without controls with central governments covering any defaults) lead to instability. In these cases, fiscal decentralization could lead to less growth because there is some evidence that macroeconomic instability retards growth.

6. CONCLUSION AND POLICY RECOMMENDATIONS

The regression results for models 1, 2 and 3 show that decentralization is poverty reducing. That is administrative, political and fiscal decentralization are all poverty reducing in Cameroon and variables such as school enrollment have a positive impact on poverty. This indicates that a unit increase in decentralization leads to a decrease in poverty by 23% and 25% respectively. These findings have implications for poverty reduction. By putting in an effective and efficient decentralization strategy, with local and central governments implementing the decentralization processes without reservations should reduce poverty to an extent. Inspection, supervision and control should be intensified.

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