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Democratic Deepening and the Provision of Public Goods: A Study on Decentralization and Agricultural Development in 30 Countries in Sub-Saharan Africa

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DEMOCRATIC DEEPENING AND THE PROVISION OF PUBLIC GOODS: A STUDY ON DECENTRALIZATION AND AGRICULTURAL DEVELOPMENT IN 30 COUNTRIES IN SUB-SAHARAN AFRICA

by

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ABSTRACT

Slow agrarian development has often been blamed on the absence of civil society mobilization. This paper quantitatively analyzes the effect of political and fiscal decentralization on agricultural development in 30 democratizing African States. Hence two hypotheses are tested: H_1) New democracies that combine elected sub-national governments with fiscal decentralization will be more likely to spend more in agriculture. H_2) In such system we should observe better agricultural outputs, other things equal. Results reveal that counter-intuitively simultaneous democratic and fiscal decentralization have a negative impact on public investment in agriculture. On the other hand, as expected fiscal decentralization does not have any significant impact in the absence of democratic decentralization. Most importantly democratic decentralization is found to have a highly positive impact on the provision of agricultural related public goods when fiscal decentralization is low. The test also reveals that fiscal and political decentralization positively influence agricultural production.

INDEX WORDS: Decentralization, Democratic deepening, Accountability, Agricultural development

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1 INTRODUCTION

Agriculture often has not been placed at the fore front of the development agenda across the developing world and especially in Africa. This is a contradiction considering that a majority of the work force in many developing countries is concentrated in rural areas. For many throughout the developing world subsistence farming is the primary means of fulfilling basic needs. The scope of the world poorest has been estimated at more than 1.2 billion, of which three quarter are rural dwellers (Taeb and Zakri 2008) and these proportions are estimated to be even higher in some regions of Sub-Saharan Africa which has been characterized as " a sleeping agricultural giant" (Carter 2008, 46). "Food security is the most familiar type of security associated with poverty and directly related to agriculture (Taeb & Zakri, 2008, p. 3), therefore it has been argued that agriculture should be considered a crucial way of addressing under-development especially in Sub-Saharan Africa which suffers from extensive rural poverty. According to some World Bank projections a 1% increase in crop yield would decrease poverty by .72% in Africa, which is the highest impact across regions (2005, p. 5). Low food production and acute poverty have also been correlated with onset of violence, therefore "political stability in Africa may be threatened by the failure of agriculture" (Bienen 1987). The stability of many African states rests primarily on their ability to relieve poverty, and this goal could be achieved by empowering the vast majority of rural dwellers through initiatives aimed at modernizing and increasing food production. "Raising farm productivity in subsistence agriculture is one of the highest priorities for empowering subsistence farmers. Farmers income depends on factors such as land, water, and farm inputs; technology; and access to local or international markets" (Taeb & Zakri, 2008, p. 7) which should be provided by the states under the form of public goods and greater allocation of public funds and subsidies.

However, governments throughout the developing world have consecrated very few resources to developing the sector of activity hiring the majority of their countries' workforce. Indeed, between 1990 and 1998 the share of total public expenditure geared toward agriculture declined across regions. In Africa although agriculture represented 18.8% of the GDP in 1998, only 5% of total public expenditure was directed toward the sector (The World Bank, 2005, p. 94). The decline of public expenditure in agriculture among African countries is a major problem, because despite empirical evidence of the economic and social benefits of increasing public spending in the sector, little progress has been observed in reversing the trend. Therefore, in many countries the lack of government's input in the primary sector of activity has jeopardized the prospect for poverty reduction and that despite the third wave of democratization. Indeed, the needs of vast impoverished agrarian populations remain poorly addressed in many parts of the developing world. It seems important and legitimate to try understanding why in some consolidating democracies with vast agrarian majorities, most particularly in Sub-Saharan Africa, there is limited governments' involvement in promoting agricultural development.

This paper is an attempt to draw a relationship between democratic institutions and agricultural development through the analysis of the effect of political and fiscal decentralization on agricultural input and output in 30 countries in Sub-Saharan Africa over a period of ten years between 2000 and 2010. Democratic decentralization is believed to favor the empowerment of rural constituents and strengthen mechanisms of accountability at the local level. When local leaders are elected, and accountable to their constituents they are more likely to be responsive and provide public goods to assure electoral support from the community they are representing. Within a democratic framework the provision of public goods to rural citizens will more likely aim at fulfilling their primary needs which should translate into greater public investments in the sector of activity that employs a vast majority of the rural population. Increased government's input in agriculture should also translate into greater output in the sector. To test the argument a cross-sectional time series regression model is preferred to better capture the variations of both the dependent and independent variable as decentralization is an ongoing process in most of Sub-Saharan Africa.

2 EXPLORING THE LITERATURE

The literature extensively discusses the lack of agrarian reform throughout the developing world. Therefore many approaches and arguments have been brought to bear on the question. This section provides an overview of the arguments developed in the literature to explain slow agricultural growth in the developing world.

Collective Action Dilemmas. In industrialized countries, strong civil societies are often organized around agricultural policies and policy reform thus favoring government responsiveness to rural constituents; whereas in developing states where the rural population is predominant the literature displays little evidence of social mobilization around rural interests. According to Gyimah-Boadi (1996), the weakness of civil society in developing areas has been linked to collective action dilemmas. The normative argument revolves around the fact that in many areas of the developing world, there seems to be a pattern of fragmented civil societies which are developing along ethno-regional and religious divides. This has been the case in many African states, where high ethno-linguistic fractionalization has been exploited by politicians to mobilize support in a 'divide to better control' type of scheme. When social movements are organized along identity lines and on the ground of competing with other identity based groups it seems difficult to successfully mobilize homogeneous movements pushing for major common economic interests. Putnam's analysis (1993) suggests that successful civic engagement has more often occurred through networks encompassing large segments of society thus encouraging collaboration at the community level; whereas networks based on strong social bonds such as blood, kinship and identity ties tend to result in the development of small particular groups which have less weight in influencing political outcomes or institutional efficiency. According to this analysis, the networks of civic engagement have to cut across social cleavages to yield the widespread societal cooperation necessary to pressure governments into investing in the agrarian sector. Therefore, throughout the developing world "the contribution of civil society to democratic consolidation has been more disappointing in the key areas of economic reform and development" (Gyimah-Boadi, 1996).

The Modernization Approach. A well advanced industrialization has often been posed as a vector of empowerment for the agrarian sector. According to Varshney (1995), "the historical trajectory of rural power […] has been paradoxical in nature. In the early phases of development, when rural dwellers constitute a majority of a country's population, they have historically been the weakest" (Varshney, 1995 p2). On the other hand, it is generally recognized that the power of farm groups in developed states has often led to high protectionist measures for the agricultural sector under the form of subsidies which represent greater government input in a sector of activity constituting a very small share of developed countries' GDP. This is observable in the United States or the European Union where the agrarian sector is a highly protected one as government provides farmers with unfair advantages relatively to the international market. Some have argued that in developed states, industrialization and the transfer of workforce from the primary to the secondary and tertiary sectors of activity have enabled rural organization to become easier and more efficient because interest groups have become smaller thus minimizing collective action dilemmas. Therefore, some scholars and critics attribute the weakness of rural civil society in developing areas and the slow agrarian development to low levels of industrialization (Orvis, 2003).

Democracy and Rural Empowerment. However, while looking at India, we observe that despite the vast concentration of labor in the farming sector, the relatively low level of industrialization, and the high heterogeneity of the social structure, rural populations have acquired substantial power in the political process and enjoy better access to public goods. Varshney argues that in the case of India, "democracy preceding an industrial revolution, has led to the empowerment of the rural sector within the polity" (1995, p. 3). This argument suggests a relationship between democracy, empowerment of rural constituency and agricultural development. According to Varshney (1995), the early democratization of the Indian society enabled the vast majority of the constituency to translate their interests into policies that lead to significant reforms. In India, the strengthening of rural mobilization can be observed for example through the fact that a relatively high number of Indian Congressmen have rural backgrounds and are dedicated to pushing forward the interests of the vast agrarian society. This argument emphasizes the importance of political institutions and embedded political leadership in translating the interests of constituents into efficient economic policies. This analysis suggests that democratized agrarian societies tend to be more responsive to farmers' demands even in the absence of industrialization. However, the empowerment of the rural sector at an early stage of development in India has been described as exceptional. We observe that in many consolidating polities, where industrialization has not yet happened, this trend has yet to be observed. The puzzle remains why in transitioning democracies the immediate economic interests of the majority of the constituency has often not translated into the implementation of more efficient agrarian policies and increased government's input in that sector.

A Structural Approach. According to Heller (2009), the farmers' movement in India politically mobilized 'well off' farmers who are a minority compared to the largest constituency of landless laborers. Heller (2009) suggests that in India any movements of the agrarian poor took place outside the political arena, under the form of insurrections. Heller's analysis characterizes the policy based agrarian reform described by Varshney (1995) as the result of the mobilization of interests among agents of the 'political society' rather than 'civil society'. The extensive literature on consolidation often exclusively focuses on 'de jure' aspects of democratization and the institutionalization of democratic processes and norms. However, the subsequent institutionalization of democratic rules has not always automatically translated into the effective exercise of 'citizenship'. The literature on democratic deepening distinguishes between the political society and the civil society while discussing consolidating democracies. The political society has been defined as "the set of actors that compete for, and the institutions that regulate (in a democratic system) the right to exercise legitimate political authority (p. 124); whereas the civil society "refers to non-state and non-market forms of voluntary association that are governed by communicative practices" (p. 124). Putnam (1993) makes a similar distinction between different types of citizenship. Putnam introduces the notion of 'civicness' and civic engagement as the "active participation in public affairs" (87) and posits 'civic virtue' as the determinant factor explaining whether democratic institutions succeed or fail. Heller (2009) points that although the literature assumes that civil society and political society have mutually reinforcing relationships, in consolidating states they are often in tension with each other thus hindering the process of democratic deepening. This analysis suggests that the dichotomization of the citizenry leads to the political domination of one group by the other, and favors the concentration of political power in the hands of a limited group of citizens within the democratic framework. According to this analysis, the political society in transitioning democracies has been overshadowing civil society. Based on the case studies of India and South Africa, Heller (2009) argues that the dichotomization of the citizenry in consolidating polities is the result of structural-historic unbalance of power that has been established from the first days of independence. Heller develops a path-dependency argument in explaining the weakness of the civil society which is attributed to the need of the emerging political class to maintain control over the masses in order to achieve stable political transition and the institutionalization of democratic processes without much opposition. However, the necessity of maintaining the masses weak has also lead to the emergence of dominant elite classes' coalitions which have secured both political and economic positions along the process thus keeping rural masses from actively participating and gaining public goods from their representatives. Although the path dependency argument is compelling, there is also a structural question with regards to institutions and their role in including and serving the interests of the vast majority within a democratic context.

In many developing nations, where democratic rule is consolidating, the 'political society' has tremendous power and exercises control over the larger group of 'inactive citizens'. In such polities, political actors and citizens often share vertical relations of authority and dependency, state-society relations are dominated by patronage and populism; therefore citizens become dependent clients of political leaders upon whom they have very little means of accountability. Often political parties and party leaders rely on patronage strategies which are more cost-effective in cases where votes can be bought in bulk by bribing a few opinion leaders. From this perspective the universality of public service looks useless. Instead of seeking popular approval through the provision of public goods, politicians provide private goods to secure the endorsement of influential public figures such as religious chiefs, or traditional leaders able to rally the masses. Therefore, the interests of the masses are not directly taken into consideration provided that political actors in office are not accountable to them but rather to a smaller constituency. The provision of such private goods has been identified as highly detrimental to agricultural GDP (Allcott & Lederman, 2006).

Synthesizing. The literature identifies both structural and normative causes to explain the absence or the slow rural development in democratizing agrarian societies. Most arguments are built around the demand side of the public good provision equation. Civil society mobilization is posed as the principal vector of government responsiveness to the needs of the majority in emerging democracies. Explaining the lack of agrarian development in democratizing agrarian societies has been heavily correlated with the lack of mobilization among the masses. The distribution of political power has been identified as the variable influencing civic engagement and government responsiveness to citizens' needs.

However, this analysis raises the question of what role is played by citizens' access to political institutions or lack of thereof as well as its impacts on governance. Rondinelli (1979) suggests that "without pervasive administrative support or the mobilization of sufficient political power among rural beneficiaries to maintain steady pressure [...] reform will slowly dissipate" (397). Rondinelli (1979) asserts that rural development programs will only gain significant impacts if they are accompanied by a political reorganization and governments can break patronage linkages by providing public goods and services superseding those provided by local patrons. However, in states where the patrons are often not only private actors but also political leaders who manipulate and control the large peasant voting blocs, it seems unlikely to break the vicious circle unless institutional reforms are implemented to enhance democratic deepening thus empowering rural constituents. There is a relative scarcity of work that considers the link between decentralization of political and fiscal power towards localities and the provision of agriculture related public goods. Therefore exploring the supply side or institutional variables, could help further our understanding of the slow agrarian development observed in areas of the world where it is greatly needed. Democratic deepening or access to political institutions has been shown to have an impact on accountability (rural empowerment) and government's responsiveness to constituents. According to the literature on development and poverty reduction, decentralization has been widely sought across the newly democratized world as a process leading to democratic deepening, better governance and increased state capacity and service delivery.

3 THEORY AND HYPOTHESES

The literature extensively explains the lack of agrarian development as a result of poor mobilization among the major beneficiaries of such reform which can be identified as small-scale farmers, rural entrepreneurs, shifting cultivators, and landless laborers. Seeking explanations about why in some consolidating democracies where the rural population is more often than not a majority, we do not observe agrarian development, raises the need to evaluate the role played by democratic institutions in providing the public goods necessary for growth. In this section we will build an institutional argument linking decentralization and most specifically political and fiscal decentralization to agricultural development in consolidating democracies.

Why are Institutions pertinent?

This paper is mainly focusing on democratic systems of governance. In such polities, we assume that political power rests in the hands of the people who choose their political representatives through free and fair elections and therefore have the leverage to influence politicians' behaviors. Politicians are the representative agents of the population subject to its oversight and sanctions thus being accountable. Therefore, institutions in democratic systems in essence are designed to represent and serve not only the selecting group but the majority and act to fuel increased political power for such majority. Democratic systems have sometimes been characterized as majoritarian systems in which the government should be responsive to the majority of the people (Lijphart, 1999) and thus seek to fulfill the interests of the majority. However, Lijphart (1999) also describes the majoritarian model of democracy as one that is exclusive in nature, as well as competitive and adversarial. In a democracy any majority is decisive; alternatively a smaller subset of the citizens might be decisive (Humphreys & Bates, 2005). This has often been the case in some parts of the developing world, and particularly observable in presidential democracies, which are common in Africa. According to Humphreys and Bates (2005), in new democracies, governments are responsive to a decisive subgroup of citizens who determine the government tenure in office based on its ability to provide the decisive group with private goods.

New Democracies and the provision of Public Goods

According to the literature on economic voting, in the context of democratic systems, voters decide to cast their votes accordingly to their perception of economic performances. This approach assumes "an agency relationship between voters and politicians" (Dutch, 2001, p. 895). Elected officials are in charge to serve the people that they represent by providing them with the public goods that they prefer and in exchange their constituencies would keep supporting them.

The main assumption is that political leaders seek legitimacy through elections and seek re-election through the distribution of public goods. However, mechanisms of accountability have been extremely weak in many transitioning states due to little democratic deepening. As mentioned previously governments in transitioning polities tend to favor policies sacrificing public interests for private ones. The development of patronage politics in many new democracies has been linked to the fact that in such polities the citizenry is divided between the political society on one end and the ‘inactive’ citizenry on the other. Lewis (1984) argues that “The third World’s failure with agriculture has been mainly at the political level, in systems where the small cultivator carries little political weight” (quoted in Bienen, 1987, p. 299). The lack of access to political power or the exclusion from the democratic process have negatively impacted rural citizens’ ability to exercise accountability mechanisms on their local officials, thus depriving them from effectively demanding public goods delivery. The concentration of political power in urban centers and among urban political actors has had a negative impact on rural empowerment and rural development in Africa.

New democracies have often been described as resting mainly on an urban constituency. Indeed, in many developing countries, governments have often been responsive to the demands of elite citizens living in urban centers. “Most African leaders of today, [….] have been teachers, trade unionists, soldiers, party organizers, and civil servants whose ties with rural areas are tenuous and their political and institutional bases of power usually are in urban areas” (Bienen, 1987). Political power in Africa is also constrained by the limited amount of resources, especially those geared toward policy implementation. The politics of patronage enables politicians to secure a support base by providing economic rewards to their supporters on the basis of personal and communal loyalties. The new leaders tend to base their political support on urban voters, who are geographically closer and able to mobilize their economic interests into political demands. Therefore we can presume that in predominantly agrarian societies, the urban support base for politicians hinders the prospect for agricultural development in the sense that in order to fulfill their primary goal of remaining in power, political leaders must take into account the interests of those who staff the ruling institutions rather than responding to the needs of the majority. The provision of private goods rather than public goods leads to de-prioritizing the pressing need for greater government's investments toward agricultural development and rural empowerment. Allcott et al. (2006) find that the provision of such 'non-social' subsidies has been harmful to per capita agricultural GDP. Meanwhile empirical analysis have found a positive relationship between increased provision of rural pubic services, fostered by fiscal decentralization, and increase in agricultural GDP.

Decentralization and the Provision of Public Goods

Decentralization is a concept that has tremendously evolved during the past half century. Throughout political history it has been implemented through a range of institutional design and has aimed at achieving diverse goals. Indeed, when discussing decentralization one has to differentiate the many processes that fall under this general concept. From Deconcentration to Devolution, Delegation and Delocalization (Kauzya, 2007) decentralization has yielded different results depending on how much power and state capacity the center has been willing to relinquish to subnational institutions and local populations. Deconcentration refers to the process that was predominant in the 1970s and 1980s (Cheema & Rondinelli, 2007) which primarily aimed at diffusing hierarchical government structures and bureaucracies; in other words it consisted purely on geographically restructuring the institutional design without changing the distribution of power between the center and subnational tiers. Therefore, political power and state capacity remained very much concentrated in the center having very little impact on public goods delivery at the rural level.

However, in the late 20th century the concept of decentralization shifted toward a more inclusive approach covering political power sharing, fiscal decentralization, democratic participation through civil society mobilization and economic liberalization. This type of decentralization is known as Devolution which goal has been “to strengthen local governments by granting them the authority, responsibility, and resources to provide services and infrastructures, protect public health and safety, and formulate and implement local policies” (Shabbir Cheema & Rondinelli, 2007, p. 3). In most recent years decentralization in the developing world, has been sought as a way to enhance good governance and service delivery as well as a strategy to achieve poverty reduction. There has been a shift from decentralizing government to decentralizing governance (Cheema & Rondinelli, 2007). Decentralization has been advocated as a mean to widespread democratic participation and decision-making. Most countries with democratic systems have developed some form of subnational administrative structures. By the end of the twentieth century, about 95% of the countries with democratic political systems had subnational units of administration or government (Cheema & Rondinelli, 2007).

The conventional wisdom in the fiscal federalism literature posits decentralization as an optimal strategy for public goods delivery when citizens’ preferences are divers across localities. The literature identifies three classic channels through which fiscal decentralization is beneficial to economic growth: informational advantage at the local level (Hayek, 1948), interjurisdictional competition (Tiebout, 1956) and higher preference homogeneity (Oates, 1972). Tiebout (1956) makes the argument that decentralization increases service delivery efficiency by allowing governments to be responsive to the specific preferences of citizens in different regions. According to Oates (1972) other things equal, local governments are more important in generating policies of public-service provision leading to rapid economic growth. However, this is all conditional on spillover effects across jurisdictions. Indeed, the theorem argues that in highly heterogeneous societies the provision of public goods with spillover effects at the local level constitutes a disincentive for local politicians to optimally provide goods that will also benefit neighboring localities. Therefore, in such cases the conventional wisdom emphasizes the need for some degree of centralization for an optimal distribution of public goods. However, such centralization should only aim at providing locally elected officials with further incentives to fulfill their responsibilities and be responsive to their constituents 'needs. Ndegwa (2002) talks about 'upward' accountability whereas the central government supervises local governments, as opposed to controlling it, by establishing institutional mechanisms of public accounts auditing, developing service delivery standards as well as monitoring and evaluating performances. The literature on fiscal decentralization stresses the importance of local governments' autonomy and spending decision powers. Elhiraika (2006) study of fiscal decentralization and the provision of public goods in South Africa finds that the heavy reliance on central transfers towards subnational units reduces the prospect of enhanced transparency and increased accountability to local citizens which is posed as the vector for improved service delivery. In polities where most of local governments' budgets are financed by the central government, subnational units have very little room to maneuver in terms of expenditure allocations. In South Africa, intergovernmental transfers make provinces more accountable to the center therefore the enforcement of central management standards takes priority over meeting the needs of local constituents. In cases where local authorities have limited autonomy, increased provision of public services is highly contingent on the central government ability to respond to local preferences known to be better identified by local leaders (Elhiraika, 2006).

For Seabright (1996) elected local officials are always more accountable to their constituents compared to the central government. Seabright (1996) argues that despite the need for some degree of political centralization, deconcentration, or government appointment of local officials does not benefit decentralization outcomes since accountability is entirely to the central government rather than to local constituents. This argument emphasizes the importance of democratic decentralization in establishing accountability through the democratic election of local officials. However, Bardham (2002) argues that in immature democracies the weakness of electoral mechanisms only provides for limited accountability at the subnational level. Indeed, one of the recurring arguments against decentralization is the increased potential for the capture of local government by corrupted elites which has often led to reduced accountability and poor service delivery at the local level. Others such as Tresman (2000, 2007), Tanzi (2002), Shah (2003) and Manor (1999) make a similar argument on the risk posed by ill trained, unprofessional bureaucrats and political elites (Hankla, 2010) who do little to serve their communities but rather adopt predatory behaviors in managing local affairs. This argument reinforces the position advocating for some degree of centralized oversight, and policy coordination to prevent predatory behaviors. Nonetheless, to observe effective decentralization, local governments should be able to retain their decision-making autonomy in order to capitalize on their informational channel advantage.

Bardham (2002) makes the very compelling argument that analyzing the impact of decentralization processes in developing countries requires moving beyond the traditional approach that centralization is better for dealing with spillovers and decentralization is better for dealing with heterogeneity. The major factors that have to be taken into consideration are institutional processes as well as accountability at the local level and at the center. The central government plays a significant role in the decentralization process by providing state capacity to local authorities but also monitoring and establishing standards of service delivery performances.

Therefore, we might say that in states where the procedural exercise of democracy is properly implemented, political decentralization establishes proper mechanism of accountability for local constituents thus increasing the prospects for a better response to local needs. The arguments in favor of decentralization are all built on the assumption that local politicians have political incentives to be responsive to the needs of their constituents. Hence the argument developed in this theory proposes that combined political and fiscal decentralization are sufficient conditions for increased provision of agriculture related public goods which constitute the local preferences needed to foster agricultural development. The literature has explored the impact of decentralization on the provision of public goods. However, the focus of such studies has mainly been on the delivery of educational and health services and not so much on agriculture related services. Very little attention has been given to the effect of decentralization on agricultural development although many development agencies such as the World Bank or the International Found for Agricultural Development (IFAD) have advocated for greater government's input in the sector in order to foster growth. Indeed, the private sector is unlikely to supply investments necessary to sustain agricultural productivity because such investments would take the form of public goods over which there are no returns. For example private companies do not have any incentive to build roads or maintain them because they cannot control the free rider effect. Broad based agricultural growth cannot happen without a sustained government commitment to supply the goods necessary such as technology, infrastructure, markets and disease control systems essential to sustained growth (Haggblade, 2007). Moreover, evidences suggest that private input subsidies are far less efficient, in terms of returns, than investment in public goods. Subsidies for private inputs have been found to be of little efficiency across the developing world due mainly to resource misallocations and corruption whereas investment in public goods such as agricultural research and extensions as well as rural roads and irrigation have been found to typically produce returns two to six times greater than spending geared towards input subsidies such as fertilizers (Haggblade, 2007).

Research on the effect of decentralization on various development variables such as economic growth and citizen's participation and service delivery has revealed mixed and uneven empirical evidences. Davoodi and Hang-Fu Zu (1997) find that there is no positive relationship between fiscal decentralization and growth. However, their study is limited given that their measure of fiscal decentralization does not account for the degree of autonomy in expenditure decision-making at the local level thus not incorporating the argument developed on the assumption of better informational capacity which enables local officials to better identify the areas that need to received public investments. Also, the focus on fiscal decentralization alone does not enable to assess the strength of the mechanism of accountability at play in rural areas. Therefore, one could deduct that fiscal decentralization is a necessary but not sufficient condition to observe the impacts of decentralization on growth. Political decentralization has been found to play a fundamental role in empowering local citizens and providing them with the ability to make demands and be actively involved in determining the policies that better serve their primary interests. However, the impact of decentralization on civil society mobilization and citizen participation has been similarly found to widely vary depending on the nature and characteristics of the decentralization process implemented. For example in Africa, local governments' attitudes toward their citizens have often been a replica of the central government's attitude, which generally have permitted little citizen participation within a context of democratic consolidation.

Despite the mitigated outcomes of decentralization processes in consolidating democracies, the failures have been associated with poor implementation rather than as being inherent to the concept itself. Decentralization is a process that has not always been successfully implemented in the developing world and most particularly in Africa. As previously mentioned, in many developing countries successful decentralization has been threatened by the potential increase of elitism, nepotism and corruption at the local level, as well as by the timid transfer of fiscal power to local governments which is needed to enhance local state capacity and service delivery. Kauzya (2007) notes that in Rwanda, six years after decentralization was implemented, the lack of bureaucratic will prevented the effective decentralization of education, health and agricultural services that had been legally decentralized. In order to observe better performances of decentralization civil servants at the center must be willing to facilitate "the process of transferring power, authority, functions, responsibilities, and requisite resources" (Kauzya, 2007,p. 80) to the localities. Often the many stakeholders and actors of decentralization have had divergent interests.

Decentralization is likely to be successful when certain conditions are met, some of the conditions identified in the literature point toward a committed political leadership accompanied by a willingness to share power and authority as well as resources with localities. According to a World Bank's evaluation (2008), although such conditions are not sufficient for successful decentralization they are necessary to improve the prospects of increased accountability and service delivery. Therefore, the efficiency of decentralization processes is contingent on central governments' commitment and ownership of such processes.

The lack of access to political institutions both in terms of democratic decentralization of power, and fiscal decentralization (state capacity) play a crucial role in explaining the lack of agricultural development. Rondinelli (1979) suggests that developing countries have been unwilling or unable to create the decentralized institutional structure that seems essential to meet the needs of the rural population. Rondinelli (1979) suggests that the implementation of development programs in rural areas must be localized by decentralizing power which can be achieved either by creating field organizations, or by "devolution of functions of local institutions" (406). Extending Rondinelli's latter argument; the argument developed in this paper suggests that in addition to institutional and fiscal decentralization which are necessary but insufficient, political decentralization is required to foster agricultural development. *Democratic decentralization accompanied by fiscal decentralization motivates better provision of agriculture related public goods thus favoring agricultural development*. Hence the theory developed in this paper draws the following hypothesis:

(H_1): New democracies that combine elected sub-national governments with fiscal decentralization will be more likely to spend more in agriculture. .

(H_2): In such systems we should observe better agricultural outputs, other things equal.

This research will contribute to the literature on agrarian development by linking political and fiscal decentralization with better provision of agrarian public goods and services leading to growth in the sector.

It is important to explain and define Decentralization as used in the context of this research. Many studies on the efficiency of decentralization have been conducted and most have revealed that it is a process which can yield different results depending on the context and the motives of the major actors involved in designing and implementing it.

Table.1 Theoretical Expectations

IV / Expectations	Political Decentralization	Fiscal Decentralization	Interaction Term: Fiscal and Political Decentralization
	-Increased accountability -Provides greater incentives for locally elected officials to be responsive to their constituents and secure re-election through the allocation of expenditure toward local preferences, here assumed to be agricultural services. -However expenditure is also contingent on revenue and spending capacities	-Revenue transfers increase spending capacities. - Provision of public goods contingent on accountability -Increased accountability to local constituency is contingent on the decentralization scheme: (a) localities dependent on the central government are more likely to see their spending directed by the center toward services not always reflecting local preferences or priorities (b) localities able to generate a significant amount of their own resources are more likely to spend toward priority areas such as agriculture services	-Increased accountability provides greater incentives for locally elected officials to be responsive to their constituents by allocating funds towards priority services meeting constituents' preferences. -The availability of fiscal resources will increase allocation of expenditure for agriculture related services in predominantly agrarian communities if local governments totally control their budget and are able to generate a portion of their own revenues
DV / Outcomes	Input/ Output	Input/ Output	Input/ Output
	Increase in public resources for agriculture likely if fiscal resources are available. An increase in Input would favor greater Output other things equal	If there is an increase in public goods provision it would more likely be towards areas others than agriculture that are prioritized by the central government.	Increased public resources for agriculture related services which should have a positive impact on production other things equal

When talking of democratic or political decentralization, I refer to the definition used by Kauzya (2007) as to say “transferring the power of selecting political leadership and representatives from central governments to local governments; and transferring the power and authority for making socio-politico-economic decisions from central governments to local governments and communities” (p. 76). This definition not only includes the procedural definition of the democratic process but also incorporates the substantial definition of the practice of democracy. Political decentralization therefore not only improves the inclusion of rural constituents in the electoral process but also empowers them by providing them with the capability to directly influence the making, implementation, monitoring and evaluation of decisions directly impacting their communities economic and social well-being and therefore enabling them to access mechanism of accountability with regard to their local leaders. Moreover political decentralization provides local authorities with some degree of decision-making autonomy from the center.

In order to be efficient democratic decentralization has to be accompanied by fiscal decentralization which provides local governments with spending resources and decision making capacities. Indeed, the delivery of public goods is influenced by increased accountability of the leadership but also by the degree of local authorities’ capacity to deliver such goods and determine allocations by order of priority. Usually, when local governments are granted revenue collection powers, the revenue they are able to generate are very low and stagnant “and they can never cope with more than a fraction of the mandated service-delivery costs” (Wekwete, 2007, p. 248). In general local governments throughout the world have not been expected to raise enough revenues given that often central governments retain the power to levy and collect all the buoyant taxes (Wekwete, 2007). Therefore local governments often need funding from the center and from the private sector, under the form of transfers, grants and loans in order to build their institutional capacity. However, the efficiency of rural governments is also influenced by the degree of revenue spending discretion they have which is highly contingent on the source of revenue. Since local leaders are closer to the communities they serve, they can better assess the priority sectors that need greater public input and have greater incentives to serve the interests of those who directly elect them. Therefore the more revenue autonomy local governments have the more likely they are to become efficient in responding to local needs.

4 METHODOLOGY

This paper seeks to analyze the impact of decentralization on agricultural development in consolidating democracies by using data from 30 countries in Sub-Saharan Africa from 2000 to 2010. The sample analyzed is taken from a previous study realized by Ndegwa (2002) for a survey on decentralization performances in Sub-Saharan Africa. Ndegwa (2002) findings reveal different degrees of overall decentralization across countries (fig 1) but also points out variations within countries with regard to different elements of decentralization. An overall decentralization index was developed by using three decentralization indices: political, administrative and fiscal decentralization and merging them together with other indices of accountability and system durability.

Restraining the empirical study to 30 countries in a specific region limits the generalizability of the theory. However, given that agricultural development is a pressing issue that more acutely plagues the African continent, it is important to focus on this specific region. Moreover extensive data collection at both the national and sub-national levels has been achieved by the Food and Agriculture Organization (FAO) on countries from Sub-Saharan Africa which gives researchers more room for within region comparison. In light of the secondary data already gathered from both the World Bank and the FAO a quantitative method of analysis is preferred since it would enable the comparison of large datasets on various agricultural variables and their evolution over time.

One has to note that a major limitation of this study is the lack of data on fiscal decentralization for much of the countries in the sample. Indeed, the International Monetary Fund (IMF) Government Financial Statistics (GFS) database has very few entries indicating fiscal decentralization over the country/year selection. Therefore, the fiscal decentralization score calculated by Ndegwa (2002) will be reused and interacted with the Hankla et al (2010) variables on political decentralization. The following section details how the independent and dependent variables are measured.

4.1 Measuring the Independent Variable (IV): Decentralization

This paper is testing the impact of decentralization on agricultural development. More specifically the focus is on the effect of democratic decentralization and fiscal decentralization on agricultural development. In order to measure the Independent Variable the political decentralization variable developed by Hankla et al (2010) will be interacted with the fiscal decentralization index developed by Ndegwa (2002).

Political Decentralization. In light of the arguments previously discussed, in order to evaluate political or democratic decentralization it is necessary to take account whether local officials are directly elected by their constituents. In order to measure democratic decentralization the variables developed by Hankla et al (2010) will be re-used.

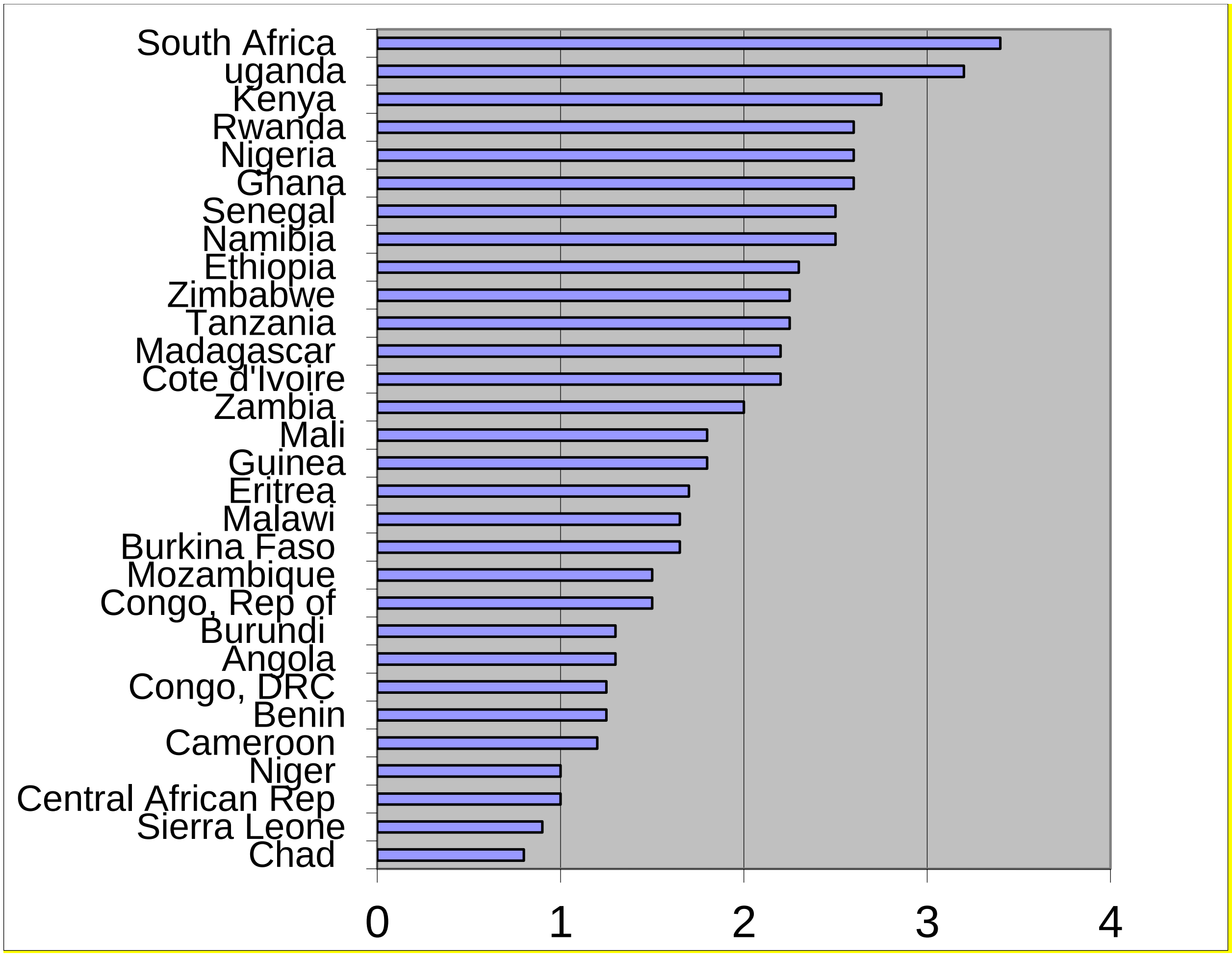

Figure.1 Ndegwa (2002) Overall Decentralization Score

In the study two dummies were generated accounting for the presence of local elections. The first dummy variable labeled Municipal Election, Party Centralization (D_1) is coded '1' when there are local elections and more than 75% of local council seats are occupied by national parties and local party nominations are controlled by national party leaders. The second dummy labeled Municipal Election, No Party Decentralization (D_2), is coded '1' when local elections are observed and either less than 75% of local seats are occupied by national parties or party nominations at the local level is not control by national party leader or both. Both dummies take on a value of '0' in the event that there are no local elections. For the purpose of this study a dummy variable political decentralization is generated by merging the two previously described variables and only accounting for whether or not there are local elections discounting the measure of party politics centralization. The dummy political decentralization is coded 0 when both D_1 and D_2 are equal to 0; and coded 1 when $D_1=1$ or $D_2=1$ or both.

Fiscal Decentralization. Ndegwa *(2002)* generated a fiscal decentralization index using two indicators: revenue transfers from the central government to localities and the score evaluating the proportion of total public expenditure controlled by the localities. This methodology is assumed to capture both spending capacity and decision-making capacities at the local level. The Fiscal decentralization index is simply the mean of the two indices. One could question such methodology which assumes that these two variables are equally influencing the degree of fiscal decentralization. Bardham (2002) suggests that mostly in the developing world fiscal decentralization remains challenging because local institutions heavily rely on transfers from the center in order to fulfill their spending functions, thus limiting their autonomy in spending decisions. Therefore, the focus should not only be on the proportion of public spending controlled by local governments but also on their ability to collect their own revenues and their power to decide where to spend the money since they benefit from better information due to their proximity to their constituents. In that the fiscal decentralization index developed by Ndegwa (2002) is limited, as it does not capture whether or not local governments are able to generate a significant amount of their own spending budget. The fiscal decentralization score ranks from 0 to 4, with 0 being the lowest and 4 the highest. Countries with an established and often-used formula for fiscal transfers and a high proportion of public expenditure being locally-controlled would score high whereas countries with ad-hoc fiscal transfers to localities and a small share of public expenditure being locally controlled would score low.

Ndegwa (2002) specifies that overall fiscal decentralization remains marginal across the sample analyzed. The study reveals that less than 5% of the national public expenditure is controlled by local government in 19 of the 30 countries analyzed. Across the developing world on average 14% of the public expenditure is controlled by local government, Africa is lagging behind with an average of 10%. It seems necessary to note that in 2002 only South Africa was found to have a high degree of fiscal decentralization comparable with non-African developing countries. Other countries such as Nigeria, Uganda and Zimbabwe scored relatively high within the sample with 5-10% of the public expenditure being decided at the local level. Kenya, Rwanda, Ghana, Senegal, Burundi, the DRC and The Republic of Congo were found to have relatively moderate level of fiscal decentralization with 3-5% of their public expenditure controlled by local authorities. Finally, all other countries were found to have very low levels of fiscal decentralization. Each country was awarded a score which will be used and interacted with the political decentralization variables in order to evaluate de degree of overall decentralization in each country. A more recent study on Decentralization in Africa shows that the proportion of public expenditure controlled by local government is not enough to speak for the efficiency of fiscal decentralization. Indeed, in South Africa and Nigeria, although subnational units have substantial public service responsibilities, they raise only a very small fraction (10% or less) of their overall revenue (Dickovick & Riedl, 2010). When fiscal decentralization heavily relies on intergovernmental transfers, it is highly likely that the central government would retain control on expenditure allocations through earmarks and directives. Therefore, the provision of public services might not directly reflect local constituents’ preferences.

It is with no doubt that any result generated using the previously described index would have to be considered with caution. Ndegwa (2002) explains that although his measure of fiscal decentralization includes an assessment of rules of fiscal control and revenue collection, such assessment remains weak as very little hard facts were found. It is therefore difficult to distinguish the expenditure that was disbursed by local authorities but actually allocated and earmarked by central authorities from funds totally controlled by local governments. Re-using the score generated by the 2002 study also means that there are no newly calculated values for each country-year; rather the initial scores are used for all country-years.

4.2 Measuring the Dependent Variable: Agricultural Input and Output

When referring to agricultural development, we are referring to both agricultural input and output. Although we only have one dependent variable which is agricultural development, it is preferred to operationalize it into two different measurements: Input and Output. Input refers to the provision of public goods directly related to agriculture and susceptible to foster growth in that sector thus reflecting structural changes whereas output would capture the actual progress made in the sector in terms of production which is influenced by inputs.

Measuring Input: In order to measure inputs two indicators developed by the Mo Ibrahim foundation (2011) will be used: Land and Water for Agriculture, Public Resources for Rural Development. They all specifically evaluate the role of the policy and institutional framework in promoting and providing agricultural input from the public sector. Each one of these indicators has scores varying from 0 to100 based on the normalization of initial scores. The detailed definition for each of these indices is available in index.

Measuring Output: Agricultural Output will be measured by evaluating the evolution of conventional parameters of agricultural production. It is important to capture if the countries ‘food production levels are increasing in order to truly capture de notion of development since food security is one of the main development challenges that could be tackled with greater investment in the agrarian sector given that the vast majority of the rural population is involved in subsistence farming and the production of food crops. As previously mentioned in this paper an increase in crop yield is projected to have a positive impact on poverty reduction Total Quantity of Cereal produced will be used as a proxy to measure effective development and not just growth in the sector which has often been attributed to cash crops production and exports as opposed to food production.

4.3 Control Variables

Given that we are building the theory on the assumption of democratic systems, a Polity IV score will be used to evaluate the overall level of democracy. Moreover being that the sample analyzed is composed of countries which are highly vulnerable to political unrest, there is a need to control for it as any major change in political stability could have major impacts on both decentralization processes and economic growth especially in the event of civil unrest or armed conflicts. Thus we add a measure of political stability by using the political stability estimate generated by the World Bank (2011) which captures the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including domestic violence and terrorism. Input or the provision of agriculture related public goods is contingent on accountability, which is believed to be increased by democratic decentralization. Nonetheless the literature emphasizes the risk posed by the capture of local governments by local elites which would annihilate any incentives to provide public goods and rather favor the development of patronage politics. Therefore it is appropriate to add a measure of local accountability using the Mo Ibrahim foundation (2011) ‘Accountability Transparency & Corruption in Rural

Areas' (rur acct) score which takes on values varying from 0 to 100. Also the provision of agriculture related services can be influenced by the proportion of rural population. The idea is that the larger the rural population the more likely we are to have large demands for rural public goods. Finally to incorporate the most recurrent argument found in the literature to explain the lack of agricultural development, a measure of rural political empowerment is added by using the Mo Ibrahim foundation's Dialogue between Government and Rural Organizatio score which accounts for the rural poor ability to lobby government representatives. This indicator is coded on a normalized scale varying from 0 to 100.

The literature emphasizes the crucial role of central government in terms of revenue transfers to localities. In Africa where local governments often mostly rely on grants and transfers from the center in order to fulfill their spending functions it is necessary to add a measure of overall governance effectiveness to assess the center's capacity to fulfill its functions. The World Bank (2011) developed a Government Effectiveness Estimate which captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Countries have scores on the aggregate indicator which vary from -2.5 to 2.5 in units of a standard normal distribution. Moreover the literature on fiscal decentralization underlines the need for some degree of centralization to maximize the efficiency of public service delivery at the local level. The theory developed by Hankla et al (2010) proposes that democratic decentralization accompanied by party centralization would maximize the distribution of public goods with spillover effects such as transportation and communication networks, which are very important to both rural and agricultural development. Hankla et al (2010) argument builds upon Tiebouts (1956) and Oates (1972) and goes beyond by proposing that the control of local politics by national parties curbs the negative impact of the spillover effect on public goods delivery by providing local leaders with incentives to optimally spend in services that might also benefit other communities. Therefore, we will control whether party politics is centralized reusing the Hankla et al (2010) dummy variable previously discussed.

Given that agricultural production is the dependent variable it is necessary to control for alternative explanatory variables such as: variations in GDP and GDP/capita as countries with higher GDP are expected to be able to invest more in agricultural services and therefore yield better outputs. Moreover, the overall economic stability can also explain variations in the dependent variable. Outputs can also be influenced by climate since we are focusing on agricultural and food production. Crops heavily rely on climate conditions, droughts or flooding can have devastating effects on harvests. To assess climate conditions, we choose to focus on water availability and the average precipitation in volume (km^3/year) for each country/year as measured by the FAO Aquastat division.

Table.2 Summary of Variables

INDEPEND-ENT VARI-ABLES (IV)	POLITICAL DECENTRALIZATION	FISCAL DECENTRALIZATION
	Hankla et al (2010) Political decentralization generated by adding two variables measuring the presence of municipal elections. coded 0 or 1	Ndegwa (2002) Fiscal decentralization index Coded 0 to 4
INTERAC-TIVE VAR-IIABLES	Political Decentralization*Fiscal Decentralization	
DEPENDENT VARIABLES	AGRICULTURE INPUT	AGRICULTURE OUTPUT

(DV)		
	Mo Ibrahim foundation (2011) (1) Public Resources for Rural Development (2) Land and Water for Agriculture	FAO Statistical Database (2011) (1) Total Quantity Cereal Produced
CONTROL VARIABLES	-%Rural population (The World Bank , 2011) - Accountability Transparency & Corruption in Rural Areas (The Mo Ibrahim Foundation, 2011) - Dialogue between government and rural Organizations (The Mo Ibrahim Foundation, 2011) -Political Stability Estimate (The World Bank, 2011) -Polity IV Index: overall level of democracy (Marshall & Keith, 2010) -Central Government Effectiveness (Marshall & Keith, 2010) -Variation in GDP and GDP/capita: overall economic stability and income levels (The World Bank , 2011) -Average Precipitation in volume (FAO, Food and Agriculture Organization, 2011) -Degree of party politics centralization (Hankla et al, 2010)	

5 TEST & RESULTS

In order to test the hypotheses developed in the theory we will run multiple cross sectional time series regressions. The data was gathered from multiple dataset as mentioned previously. It is important to briefly describe the data in order to provide a better understanding of what is being assessed as well as verifying the distribution pattern.

5.1 Data Summary and Description

The following table gives a statistical summary of the main variables used to construct the regression models.

Table.3 Summary Statistics

Variable	Computation Method and Source	Mean	Range	Expectation
Public Resources for Rural Development	Evaluates: (a) adequate emphasis to the sector in its planning and budgeting (b) effective financial management (c) allocation and making available appropriate proportions of the sectorial budget to the different levels of government Index Score ranging 0-100 (Source: Mo Ibrahim foundation)	50.17	0 to 95.75	Dependent variable (Input)
Land and Water for Agriculture	Institutional, legal and market framework for rural poor access to land' and 'access to water for Agriculture' Index Score ranging 0-100 (Source: Mo Ibrahim foundation)	41.75	.02 to 79.74	Dependent Variable (Input)
Total Quantity of Cereal	Cereals production in tones	3254841	9953 to 3.02e+07	Dependent Variable (Output)
Political Decentralization	Dummy variable coded 0 = no local elections 1= local elections (Source: Hankla et al 2010)	.70	0 to 1	Positive but smaller than with fiscal decentralization
Fiscal Decentralization	Index computed by averaging the score on revenue transfers from the central government to localities and the score evaluating the proportion of public expenditure controlled by the localities. The Index varies from o to 4 where 4 is the highest level of decentralization. (Source: Ndegwa 2002)	2.08	1 to 4	Positive but smaller than with political decentralization
Political & Fiscal decentralization	Interactive Variable: Political Decentralization*Fiscal Decentralization	1.58	0 to 4	Positive
Political Stability	World Bank Estimate	-.742178	-2.60 to 1.18	Positive
Dialogue between government & rural organizations	Assesses whether the rural poor are able to enter into dialogue with government or to lobby government representatives	56.44067	0 to 97	Positive

	Score: 0-100 (Source: Mo Ibrahim Foundation)			
Rural Accountability	Assesses the extent to which, at the local level: (a) government (both the executive, e.g. the ministry of agriculture, and the legislative, e.g. the district council) can be held accountable to rural poor people for its use of funds and the results of its actions; and (b) public employees and elected officials are required to account for the use of resources, administrative decisions and results obtained. Both levels of accountability are enhanced by decentralization of authority and responsibility for public functions, and by transparency in decision-making and disclosure of information Scored 0-100 (Source: Mo Ibrahim Foundation)	49.20	6.75 to 87.43	Positive
Government Effectiveness	captures perceptions of the quality of public services coded -2.5 to 2.5 (Source: World Bank)	-.74	-1.96 to .73	Positive
Polity2	High Score = More democratic (Source: Marshall & Keith, 2010)	2.15	-7 to 9	Positive

In order to correctly analyze panel data, intraclass correlation needs to be taken into account. In panel data the standard errors of the estimates will be off (usually underestimated), rendering significance tests invalid. This happens because the standard errors that are normally reported with an analysis assume that each observation is independent of all other observations in the dataset. To the extent that this is not true (i.e., as the correlation becomes larger), each observation contain less unique information. Therefore, we will use the random effects with AR1 correction to generate more efficient parameter estimates.

5.2 Results

Table.4 Results of the Input Models

Variable	Model 1	Model 2
	Random Effects with AR1 correction: Public Resources for Rural Development (N= 143, 27 countries) (R2 = 0.7537)	Random Effects with AR1 correction: Land and Water for Agriculture (N= 159, 27 countries) (R2= 0.6200)
Interaction Term	-5.999077* (3.121514)	**0.3205904** (2.937616)
Political Decentralization	18.5897*** (6.888317)	**-1.338451** (6.414058)
Fiscal Decentralization	**2.524601** (3.105713)	**3.112203** (2.909666)
Polity2	0.2741641 (0.3322766)	-0.2375212 (0.3077586)
GDP	1.55E-10** (7.27E-11)	-2.83E-11 (6.78E-11)
GDP/capita	2.06E-10 (4.33E-10)	8.43E-10** (4.05E-10)
Rural Population	0.5910875*** (0.1487529)	0.143612 (0.1349615)
Government Effectiveness	7.325691** (3.592579)	11.0879*** (3.305402)
Rural Accountability	0.1806246* (0.0926125)	0.0411554 (0.0858773)
Political Stability	4.17056** (2.029015)	0.9330063 (1.810329)
Dialogue Between Government & Rural Organizations	0.1966184** (0.0764355)	0.3388967*** (0.069185)
Municipal Election National Party Control	-5.249921 (3.47734)	-2.240472 (3.056765)

***p<.01, **p<.05, *p<.10

Table 4 shows the impact of the interactive variable (Political decentralization*Fiscal decentralization) on Public Resources for Agriculture and on Land and Water for Agriculture. The coefficient on Public Resources for Agriculture is significant; however its direction is opposite to the predicted effect in H_1. On the other hand, when fiscal decentralization is absent, we observe that political decentralization has a highly significant positive effect on Public Resources for Agriculture. The model shows that for every municipal election, there is an 18.6 percent increase of the score for the Public Resources for Agriculture index. It can also be observed that in the absence of political decentralization, fiscal decentralization has a positive coefficient, however it is not significant. Rural Population, Government Effectiveness, Rural Accountability, and Dialogue between Government and Rural Organizations all have significant positive effects on Public Resources for Agriculture. GDP/capita, government effectiveness and debate between government and rural organizations are the only variable having significant impacts with regard to Land and Water for Agriculture. The model shows that for a 1% increase in the government effectiveness score, there is an 11.1% increase of the Land and Water for Agriculture index 'score.

The interaction term reveals that local elections are very good for public investment in rural development under low levels of fiscal decentralization and that fiscal decentralization does not matter without elections. However, the model also shows that when there are local elections, increases in fiscal decentralization actually reduce public investment in rural development. This latter observation is counter intuitive to the argument developed in this paper. Overall the test does not fully support hypothesis 1. One explanation could be that the lack of fiscal data on both revenue transfers to localities and local governments own-revenue sources lead to biased results. Local revenue collection capacity and decision making autonomy are not accounted for by this model, but they are important variables to take into consideration when evaluating the efficiency of public service delivery at the local level. Most importantly, a newly published USAID study on decentralization in Africa (Dickovick & Riedl, 2010) provides evidence that simultaneous democratic and fiscal decentralization do not immediately lead to increased state capacity (local resources and expenditure capacities). For example, the study shows that in Senegal, new local elections and simultaneous transfer of responsibility to local tax collection triggered a dramatic decline in tax revenue. This phenomenon has been explained by the fact that newly elected local politicians are hesitant to implement existing taxes or new sources of tax revenue for fear of retaliation by voters. On the other hand, citizens lack trust in the new institutions and are not yet convinced that the funds will be properly allocated toward public goods in a context of new interparty competition. Dickovick & Riedl (2010) describe the situation as a transitional adjustment. In South Africa, Ghana, and Mali evidence show that initial hesitance has been replaced by systems which lead to increased trust (payment), participation (monitoring) and local fiscal autonomy.

Yet another explanation of why simultaneous fiscal and political decentralization do not encourage increased public investment in agriculture would be that in general the most commonly decentralized services have been the two major public services of health and education and few responsibilities in local economic development have been decentralized. The USAID study finds that over a sample of ten countries (of which 8 are being evaluated here), of all social services some degree of devolution was mostly observed in education and health. Therefore, one could assume that depending on the fiscal decentralization scheme, agriculture related public services would come after health and education services. In cases where accountability is first to the central government and second to local constituents, it is more likely that local economic development related services will be second to health and education.

This latter explanation supports the central argument in this research that political decentralization, by increasing downward accountability, encourages greater provisions of public goods at the local level. In predominantly agrarian societies such public goods would more likely include agricultural development related services. Political decentralization, if properly implemented within a functioning democratic framework, should empower local citizens and make them the primary source of accountability for locally elected officials. Accountability is the key mechanism at play, and political decentralization is the key vector for increased accountability among rural citizens. The test shows that political decentralization has a tremendous positive effect on public investment in rural development. Building on these findings could lead to further investigating what type of electoral system, state structure, and type of government most effectively lead to an efficient political decentralization.

Table.5 Result of the Output Model

Variable	Model 3
	Random Effects with AR1 correction: Total Cereal Production (N = 121, 26 countries) (R2= 0.6266)
Interactive Term	**1595163**** (832630.7)
Political Decentralization	-2350489 (1537000)
Fiscal Decentralization	908552.6 (843020.9)
Public Resources for Rural Development	13052.56 (19484.51)
Polity2	123203 (96813.54)
GDP	.0000471*** (.000018)
GDP/capita	-.0003254*** (.0001221)
Rural Population	7657.856 (39426.68)
Government Effectiveness	-1559046* (913292.2)
Rural Accountability	30311.55 (20545.41)
Political Stability	-360736.9 (558140.2)
Dialogue Between Government & Rural Organizations	-25795.7 (16878.93)
Lagged Average Precipitation	1372.817** (690.1112)

***p<.01, **p<.05, *p<.10

Table 5 shows the results of the models on Output. The interactive term has a significant impact on Total Quantity of Cereal Produced. In the event that we observe simultaneous political and fiscal decentralization, we can also observe the total production of cereal increase by1595163 tones. In the absence of fiscal decentralization we observe that political decentralization does not have a significant effect on cereal production, although it is to be noted that the coefficient is negative. Similarly when no political decentralization is observed, fiscal decentralization is found to have no significant impact on cereal production. These results confirm H2 as the interactive term has a highly significant effect on the dependent output variable.

GDP and Precipitation have positive effects on cereal production, although in different proportions. It can be observed that for each additional km3 of precipitation per year there is a 1373 tones increase in total cereal production. On the other hand both GDP/capita and government effectiveness have significant negative effects on the dependent variable which is counter-intuitive. The model shows that for a 1 point increase in the government effectiveness score there is a 1559046 tones decrease in cereal production.

6 CONCLUSION

This research aims at evaluating the impact of simultaneous democratic and fiscal decentralization on the provision of agriculture related public goods in 30 Sub-Saharan African countries. The main implication of the theory developed here is that the combination of democratic decentralization and fiscal decentralization tend to lead to increased provision of agriculture related public goods. Democratic decentralization ensures that local officials are responsive and accountable to their constituents, while fiscal decentralization provides local institutions with the means necessary to carry out their spending functions. Studies on the impact of decentralization on the provision of public goods delivery have already been conducted, but very few focused on agriculture related public services. To empirically test the hypotheses a dataset was built using indicators from multiple sources which were accounting for governments' input, agricultural production, and the presence of local elections as well as the availability of fiscal resources at the local level. The model shows that political decentralization has a clear positive impact on public resources for agriculture while fiscal decentralization did not yield any significant results. Government effectiveness and rural accountability are also found to have significant positive impacts on public input towards agriculture.

However, overall the findings do not support the theory developed in this paper. The interaction term when significant has negative coefficients on all dependent variables. Also, very few parameters have any impact on Outputs. The model developed here has to be taken with caution provided that very little reliable data was found on fiscal decentralization. The proxy used to evaluate the degree of fiscal decentralization does not account for local governments' autonomy and independence in spending decisions, which have been described in the literature as being necessary conditions for a better provision of public goods and increased downward accountability and efficient responsiveness. The results of this study draw our attention on fiscal decentralization and its importance in shaping local governments' capacity. In general, the literature finds subnational governments in Africa to be highly dependent on intergovernmental transfers. Therefore, they have very little autonomy over their own spending choices and this is especially true in unitary states where resources decentralized have also been found to be inadequate to meet the decentralized service responsibilities. In such cases fiscal decentralization seems to represent more of a central government effort to reduce the load of its responsibilities rather than an effort to enhance governance (Dickovick & Riedl, 2010).

Ultimately this paper's goal is to understand the role played by local governments in responding to the needs of the vast majority of rural constituents in African consolidating democracies. In order for any such quantitative study on multiple African polities to be reliable and successful, more data has to be made available. This project should be revisited and further developed as more data is gathered. Also greater attention should be paid to local governments 'ability to generate their own revenues and its impact on responsiveness to local constituents' preferences and the provision of economic development related public services.

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APPENDIX

Accountability Transparency & Corruption in Rural Areas

(The Mo Ibrahim Foundation, 2011)

Definition: “This principal indicator assesses the extent to which, at the local level: (a) government (both the executive, e.g. the ministry of agriculture, and the legislative, e.g. the district council) can be held accountable to rural poor people for its use of funds and the results of its actions; and (b) public employees and elected officials are required to account for the use of resources, administrative decisions and results obtained. Both levels of accountability are enhanced by decentralization of authority and responsibility for public functions, and by transparency in decision-making and disclosure of information. A high degree of accountability and transparency is likely to discourage corruption or the abuse of office for public gain”

SCORING METHOD

Scored 0-100 based on normalization of the following indicator: Accountability, Transparency and Corruption in Rural Areas Index; 1-6 where 6 is best

Source: International Fund for Agricultural Development (IFAD)

Average Precipitation in Volume

(FAO, Food and Agriculture Organization, Aquastat 2011)

Definition: Long-term average (over space and time) of annual endogenous precipitation (produced in the country) in volume.

Unit: km3/year or 109 m3/year

Calculation Criteria: [Average precipitation in volume] = [Total area] * [Average precipitation in depth] / 100000

Central Government Effectiveness

(The World Bank , 2011)

Definition: Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.

Crop Yield

(FAO, Food and Agriculture Organization, 2011)

Definition Harvested production per unit of harvested area for crop products. In most of the cases yield data are not recorded but obtained by dividing the production data by the data on area harvested. Data on yields of permanent crops are not as reliable as those for temporary crops either because most of the area information may correspond to planted area, as for grapes, or because of the scarcity and unreliability of the area figures reported by the countries, as for example for cocoa and coffee.

Sources: FAO Statistics Division

Dialogue between government and rural Organizations

(The Mo Ibrahim Foundation, 2011)

Definition: This principal indicator assesses whether the rural poor are able to enter into dialogue with government or to lobby government representatives and express their concerns and priorities with regard to issues crucial to their livelihoods. It looks at whether the government is responsive to rural poor people, whether it takes into consideration their views in developing the policy, strategic and investment framework for the sector, and whether it provides a conducive environment for such exchange.

Scoring Method: Scored 0-100 based on normalization of the following indicator:

Dialogue Between Government and Rural Organizations Index; 1-6 where 6 is best

Source : International Fund for Agricultural Development (IFAD)

Land and Water for Agriculture

(The Mo Ibrahim Foundation, 2011)

Definition: "There are two components to this indicator at source: ‘Access to Land’ and ‘Access to Water for Agriculture’.

Access to Land: This principal indicator assesses whether the legal, institutional and market frameworks provide the basis for the rural poor to have secure access to land – both individually held and common property resources – and whether the poor are able to benefit from these.

Access to Water for Agriculture: This principal indicator assesses whether the policy and institutional framework provides for the rural poor, on the one hand, to have equitable user-rights over water resources for agriculture, and, on the other hand, to effectively manage those resources."

Scoring Method: Scored 0-100 based on normalization of the following indicator: Land and Water for Agriculture Index; 2-12 where 12 is best

Source : International Fund for Agricultural Development (IFAD)

Political Stability Estimate

For detailed definition refer back to The World Bank , 2011

Polity IV Index

For detailed definition refer back to (Marshall & Keith, 2010)

Public Resources for Rural Development

(The Mo Ibrahim Foundation, 2011)

Definition: This principal indicator focuses on government policies, strategies and investment programs for the agricultural and rural development-sector, and on the efficiency, consistency and transparency with which resources are allocated and managed, and their use is reported on. It assesses whether government: (a) gives adequate emphasis to the sector in its planning and budgeting and has in place policies, strategies and investment programmers that are appropriate and consistent with each other; (b) has in place effective financial management systems to ensure that expenditures are consistent with the approved budget, and to provide for timely and accurate financial reporting and auditing; and (c) allocates and makes available appropriate proportions of the sectorial budget to the different levels of government (national, state, provincial, district and below, as relevant).

Scoring Method: Scored 0-100 based on normalization of the following indicator:

Public Resources for Rural Development Index; 1-6 where 6 is best

Source : International Fund for Agricultural Development (IFAD)