The Imperatives of Institutional Framework and Collaboration Mechanism in Agriculture Modernization: The Case of Abim District, Uganda

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The paper shows that Uganda lacks an adequate institutional framework to achieve agriculture modernization. Based on constellation model, the paper proposes an effective way to promote agricultural development through policy and institutional partnerships at various levels of governance and action by various stakeholders in the sector. From this theoretical perspective, the paper raises salient research questions: Why is Abim District an important focus for Agricultural development? What is the effect of institutional arrangements and partnerships in agriculture development in Abim District? What forms of institutional partnerships and collaboration framework can effectively address the challenge in the District and Northern Uganda as a whole? These concerns are important obstacles to improved agricultural performance in Uganda as dysfunctional institutional arrangements and norms are major constraints to agricultural development.

The findings demonstrate that institutional gaps, bureaucracy, institutional proliferation and overlapping roles have derailed agriculture modernization. Hence, the development strategy proposes creating and rejuvenating all essential players operating in the region, developing or deepening their inter‐linkages through judicious and sustainable partnerships with all the principal players in Abim District.

Key words: Constellation Model, Agricultural Development, Sustainable Partnership, Abim District, Uganda

I. Introduction

Many decades of study of underdevelopment have focused on the deficiency of factor endowments, such as lack of capital or foreign exchange, with little attention being paid to institutional arrangements and collaboration (Bardhan, 2001). While the modernization of agriculture is a multi dimensional task, institutional framework plays a vital part (Parsons, 1966). Institutions shape the incentive structure and affect decisions of key stakeholders in agriculture. Other factors such as infrastructure development and technological change are all affected by institutional arrangement in a given context (Kirsten et al., 2009). In agrarian economies the definition of land rights affects agriculture and needs governmental mechanisms to supply and protect tenure. More importantly, they determine how factors of production are utilized and developed, and provide a viable vehicle by which to deliver resources for agriculture development. This also means, however, that institutional innovation must be in sync with agricultural development.

This paper takes a critical look at the critical role of institutional arrangement in agriculture modernization, based on Uganda’ s agriculture modernization experience. The paper therefore contributes towards deepening readers’ understanding of the dynamic character of agriculture development and the critical factors that need thoughtful consideration for the success of modernization of agriculture.

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II. BACKGROUND

In Sub Saharan Africa small holder producers account for well over 80 percent of agricultural production in the region. In most of these countries, majority of rural dwellers are employed in agricultural activities. While most of them cultivate small pieces of parcels, they are faced with low input low output scenario, which is mainly attributed to difficulty in accessing agricultural inputs (Africa Agriculture Report, 2014). While this phenomenon is reflected across the continent, the intensity of the situation varies across countries. One of the critical challenges in most of the countries in the region is that the growth in the sector is very slow, or some time negative. This means that the the income for the majority of those whose livelihoods depend on Agriculture is deteriorating, a factor that is responsible for the prevalent poverty rate in the region. Additionally, while composite farming and nurturing full time farmers have been noted for success in improving rural incomes in countries like S. Korea, agricultural diversification among smallholder farmers is still very low due to limited opportunities the region faces. Sub Sahara Africa also has a very high population of youth, who could be gainfully employed in the agricultural value chains. However, since agricultural productivity and value addition in the sector is precariously low, most of the youths are abandoning agriculture in search for alternative lucrative opportunities in urban areas(Africa Agriculture Status Report, 2015). The low agricultural productivity in the is partly due to low mechanization of Africa in the entire region. The main constraints to mechanization include low income by farmers, low demand, low mechanization supply and high capital cost of mechanization(FAO, 2013).

In Uganda, agriculture is a key sector, as over 80 percent of the population lives in the rural areas (Uganda Bureau of Statistics, 2011), where agriculture is the main employer with 73 percent of the total employment. Of those employed in agriculture, 77 percent are women, while 63 percent are youth (NDP II 2015/16 – 2019/20). Nevertheless, the sector has recorded dwindling performance for the last two decades. For example, in comparison to the countries within East African Community, Uganda has been receding one of the poorest agricultural GDP growth rates. Table 1 compares real agricultural GDP growth rates across East African countries.

Consequently, the government of Uganda has enacted numerous reforms in the agricultural sector. The culmination of the reforms is agriculture modernization, which emphasizes the potential of agriculture in transforming Uganda from a peasant to a modern and prosperous country (MFPED, 2004).

| Country | 2007 | 2008 | 2009 | 2010 | 2011 |
|---------|------|------|------|------|------|
| Burundi | 8.8  | 2.1  | 3.0  | 3.8  | 4.4  |
| Ethiopia| 9.4  | 7.5  | 6.4  | 5.1  | 5.2  |
| Kenya   | 2.3  | 4.3  | 2.5  | 6.3  | 1.6  |
| Uganda  | 0.1  | 1.3  | 3.5  | 0.3  | 2.7  |
| Rwanda  | 2.6  | 6.4  | 7.7  | 5.0  | 4.7  |
| Tanzania| 4.0  | 4.6  | 3.2  | 4.1  | 3.4  |

Table 1. A Comparison of Real Agricultural GDP Growth Rates in East Africa(%)

Source: World Bank country economists.

Agriculture modernization itself consists of farmers adopting good agricultural practices, employing productivity enhancing farm inputs, making decisions about input use and choice of crops or livestock to maximize their profit and selling more of their output on the market (Tumusiime Mutebi, 2013). Thus, Commercialization of agriculture requires concerted efforts of multiple stakeholders, with the active involvement of the state and heavy capital investment.

Despite the reforms, institutional challenges still persist in key areas that affect agriculture directly. One reason for the persistence of unproductive institution is because some people benefit from it (Bardhan, 2001). These concerns are crucial obstacles as dysfunctional institutional arrangements and norms are a major constraint to agricultural development. This paper attempts to address these challenges in answering the following salient questions: Why is Abim District an important focus Agricultural development and how can Institutional partnerships affect agriculture development and food security in the region? What is the effect of institutional arrangements in agriculture development in Northern Uganda? What forms of institutional partnerships and collaboration framework can effectively address the challenge in the District and Northern Uganda as a whole?

The objective is to elaborate that institutional failure is the bane of agricultural development and food insecurity in Northern Uganda2). The paper views the institutional problems bedeviling Uganda’s agriculture from two perspectives. One, there are still

1) This is the annual rate of growth of agricultural GDP. Value added in agriculture measures the output of the agricultural sector (ISIC divisions 1 5) less the value of intermediate inputs.
2) Agriculture development is used alternately with Food insecurity in this context because agriculture development or modernization is geared toward solving food insecurity in the region.
Agriculture development is also vital to Karamoja region due to the prevalent chronic food insecurity in the region. The region marked with cyclical droughts, and sporadic rainfall, which affects both crop and livestock production. Periods of extended dry spells exert a great deal of pressure on water availability in most parts of the region. There is also severe environmental degradation as the inhabitants seek alternative sources of livelihoods from environmental endowments, such as charcoal burning (UNDP, 2014). The level of disease outbreak in the region is unfathomable, with the prevalence of malaria, diarrhea and poor sanitation making child mortality rate astoundingly high. Accompanied with extreme poverty, this situation has deteriorated the residents' survival capacity, leaving them precariously vulnerable (OPM, 2009). This makes intervention in agriculture and other livelihood improvement measures a matter of urgency. Such modernization would be a source of social stability by improving household income for the farmers and guaranteeing food security in the region.

### Table 2. An overview of the Situation: Comparing National Average and Karamoja (Northern Uganda).

| Indicator                             | National Average | Karamoja |
|---------------------------------------|------------------|----------|
| Population living below the poverty line (UNDP, 2007) | 31 % | 92 % |
| Maternal mortality Rate (per 1000 live birth) (UDHS, 2009) | 465 | 750 |
| Infant Mortality rate (per 1000 live birth) (UNICEF/WHO, 2008) | 7% | 1% |
| Global Acute Malnutrition (GAM) (UNICEF/WFP, 2008) | 5% | 95% |
| Access to Sanitation facilities (UNICEF, 2008) | 62 % | 9 % |
| Access to safe water (UNICEF, 2008) | 60% | 30% |
| Literacy rate (UDHS, 2009) | 67% | 11% |

Source: OCHA/UN(2009)

The level of suffering is devastating in Abim District; prior to 2013, over 5,000 households headed by women and Orphans and Vulnerable Children (OVC) in the District continued to rely on relief food and nutritional support, 300 other households were in dire need of farm inputs, while another 400 got economic strengthening support (Abim District statistics, 2013). The District also has a high number of malaria related deaths at 81 percent. Moreover, the District is classified by UNDP as a high risk region, with drought, floods, crop and animal disease, and land conflicts ranked closely as the most dangerous and high risk hazards (UNDP, 2014). In periods of acute food shortage, the cereal prices can rise by as much as 65 percent (Ellen, 2010).

However, the region has agricultural potential. Among the Districts in the Karamoja sub-region, Abim District has the highest amount of rainfall of up to 1350mm per annum (Abim District statistics, 2013). There is also an abundance of other resources such as access to water and land.
as soils, forest, wild animals, wetlands, livestock, water, human Resources, minerals, sun and wind. Nevertheless, this bounty has not been adequately utilized because of poor functioning of institutions. The land tenure system is the vital source of the tragedy of commons the land is undergoing in the region (UNDP, 2014). The region is divided into two livelihood zones, the agro pastoral zones and wet agricultural zones; with the latter having the most fertile soils that can support various crop activities. Out of the 233,700 ha of agricultural land, only 3600 ha is currently being used productively. Furthermore, women in Abim District are key stakeholders in agriculture, meaning that the underperformance of this sector impacts women and children most.

IV. The Effects of current institutional arrangements on Agriculture Development in Uganda.

From 2010, the government reviewed many policies to enhance agriculture modernization. These include policies for the allocation and use of water resources, Investment planning and decision making, facilitation and regulation of commercial investments in agriculture and the provision of effective irrigation services (Avery, 2014). The latest National Agricultural Policy (NAP) was a great leap in the planned modernization. Its major thrust were plans to ensure food security, increase income for farming households, support demand led profitable value chains, promote trade in agriculture at regional and international levels and finally of enhanced sustainable use of agricultural land (MAHIF, 2010). However, the reforms have been beset with institutional gaps at District or local government level, thereby slowing down the planned modernization. In small producer dominated situations like Uganda’s agriculture, the role of institutions become even more salient considering that structural and enterprise limitations inhibit performance of the sector, including high transaction cost, heavy investment involved, lack of market integration and interlocking of factor and output markets which only institutions can address effectively (Singh and Ahmedabad, 2012).

The institution of land management is very important in agricultural modernization. In Northern Uganda, the government faces serious hurdles in its efforts to efficient reallocation of land due to vested interests (Kobusingye, 2014). The lack of secure tenures results in conflicts, displacement and increased vulnerability of Communities (Baumgartner, 2014). These conflicts lower agricultural productivity by up to 17 percent (Mweesigye and Matsumoto, 2013). As a result of this ineffective land governance and overlapping land rights, peasant farmers continue to till the land they don’t own, which is a disincentive to proper land management. The other problem is that even though customary land ownership is legal, the law failed to recognize customary land dispute resolution mechanisms, despite that it offers a speedy solution to land held under the customary system (Baumgartner, 2014). The institution of patriarchy also adversely affects land in the region. With regard to land, patriarchy means male domination in land ownership. This norm contravenes the realities of agriculture production in Northern Uganda and means a mismatch between land ownership and production. The implication of this stereotype is that women who are major stakeholders in Agriculture are not allowed to own land. The males who own land emphasize cash crop production, which means only limited land is available for food production. This in turn results in lower food production and persistent food insecurity (Bategeka, Kiza and Kasirye, 2013).

Similarly, access to extension services is vital to agricultural production. Nonetheless, adequate institutional measures to strengthen agricultural extension services have been lacking. In this regard public policy should promote an effective agricultural extension system which can reach smallholders in the countryside and with main objective to provide technical advice to farmers to promote the adoption of good agricultural practices and improved seed varieties (Turnusime Mutebile, 2013).

The agricultural extension services reforms that were spearheaded by National Agriculture Advisory Services (NAADS) were compromised by institutional rivalry, whereby a donor led group advocated radical reforms and enhancing the role of the private actors in the provision of the services, while technical oriented group preferred the public sector to lead the provision of extension services. Consequently, the reforms that materialized allowing both the private and the public sector players to provide the extension services failed to meet the object of the reforms. The failure to reach a consensus between the stakeholders also led to lack of ownership and technical input in the design of the reforms (Rwamigisa, et al., 2011).

Moreover, after the liberalization and decentralization, the government did not accompany reforms with feasible plans to increase its human resource capacity to reach rural areas. This resulted in shortages of qualified and experienced staff to deliver agricultural extension services and a lack of training opportunities to develop professional and technical expertise. Consequently, the poor smallholders who cannot pay private extension services cannot access the services. In addition, Abim District is a hardship
area and thus, most experts are reluctant to work in the region (OPM, 2009). Thus, the extension services are poor, delayed and inaccessible. Currently the majority of smallholders in Karamoja has not adopted the full suite of feasible good agricultural practices. Women who are the major players in agriculture have the lowest access to extension services (NDPII, 2015). The government must invest extensively in rural road networks, and increase capacity of agricultural training institutions to produce local experts and extension officers. There is also a need to provide better incentives to experts who accept to work in the region.

A related Institutional gap is prevalent in Research and Development (R&D). Despite being the focus on eradicating food insecurity in the entire Green belt region, Northern Uganda has only one underfunded Agricultural Research and Development Centre (OPM, 2009), while Abim District has none. Therefore, there is no bridge between research and the productive sector. It is not surprising, therefore, that even though integrated crop and livestock husbandry is being promoted in the region, no explicit studies has been conducted in that respect (Avery, 2014). Even among its peer countries in the region, Uganda registers the lowest ratio of public agricultural researchers to its population (Table 3). This in effect means a low capacity in agricultural research. Nonetheless, linking agriculture to institutions of research will be of foremost importance for Uganda before introducing new crops in its value chain. Currently, large scale land holders in Northern Uganda practice cash crop farming, while the government prefers food crop farming to tackle food insecurity. Adopting new crops requires researching on the new crop varieties, land quality and size and availability of the market for the surplus.

Furthermore, organic production identified as a core component of the PMA and a high value activity requires new processes, managing bio inputs and sometimes producing on the farm. All this involves new products and new processes, markets, new institutions, networks and new information (Sing and Ahmedabad, 2012). This means heavy investment in training for farmers and local officials, extension officers and agricultural cooperatives. Juma (2012) has solemnly recommended building training institutes close to demonstration farms and focusing on the entire value chain. Additionally, in gender sensitive contexts like Uganda, it would be appropriate if the government trains and employ more female extension agents for effective coverage.

Table 3. Public Agricultural Researchers, per million population

|       | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| Burundi | 10.6 | 10.6 | 13.8 | 8.6  | 9.0  | 9.3  | 10.2 | 11.2 | 11.6 | 11.9 | 13   | 13.9 |
| Ethiopia| 11.3 | 13.1 | 14.6 | 15.6 | 15.7 | 15.9 | 16.2 | 17.5 | 17.5 | 17.0 | 18.8 | 21   |
| Kenya  | 28.2 | 28.1 | 28.8 | 27.5 | 27.2 | 26.9 | 26.5 | 25.9 | 26.1 | 26.8 | 26.8 | 27.3 |
| Rwanda | 12.6 | 12.4 | 12.6 | 12.2 | 13.6 | 15.0 | 15.0 |      |      |      |      |      |
| Tanzania| 16.2 | 17.9 | 17.8 | 17.9 | 17.9 | 17.4 | 17.5 | 17.5 | 16.3 | 15.7 | 15.4 | 17.6 |
| Uganda | 10.5 | 9.9  | 9.1  | 9.0  | 8.3  | 8.5  | 9.4  | 9.9  | 9.8  | 10.0 | 9.5  | 10.1 |

Source: ASTI/IFPRI (http://www.asti.ciqar.org/data/)

Due to the failure in R&D and extension services, farmers in Northern Uganda have demonstrated low participation in adopting new crops and technologies (OPM, 2009). They are only willing to adopt new innovations and raising their yields if they perceive them as more profitable (Tumusime Mutebile, 2013). But the 2008/09 Agricultural Census showed that only 40 percent of maize grown in Uganda is sold on the market, while millet and sorghum stood at 19 percent and 14 percent respectively (UBOS, 2012). Based on evidence from other contexts, the government may consider contract farming projects (Goldsmith, 1985). The system provides backward and forward market linkages and guarantees a profitable market for the output to smallholders. This assurance can create the incentive to participate in commercial agriculture. In a context dominated by smallholders who farm with rudimentary tools, this system can avail input and production services on credit, introduce new technology and aid the adoption and learning of the new skills (FAO, 2001). Another strategy recognizes the difficulty of adopting new technologies and institutional constraints in finance and marketing and recommends reorganizing agriculture development around low input crops such as cocoyam and potato (Mgbada, 2007).

The institutions of finance and credit are the other vital players in agriculture development. Indeed access to financial services that are in sync with the needs of the rural population is requisite in rural development. The role rural finance and credit institutions includes relaxing credit constraints among smallholders, thereby leading to higher input use, adoption of new technology and makes diversification possible (Iqbal et al., 2003). Evidence shows that where agriculture has expanded rapidly, it has been accompanied by the expansion of institutional credit (Mellor, 1995; Iqbal et al., 2003). For example, new productivity increasing technology requires capital availability, either as working capital for the purchase of fertilizer, or fixed capital for the use of high tech farming techniques. Thus, external financing is needed for rapid adoption of new technologies (Desai, 1989). This should be

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3) Contract farming is an agreement between farmers and processing or marketing firms for the production and supply of agricultural inputs. The system works well in small holder dominated situations, because access to agricultural services is limited to this category (FAO, 2001).
accompanied by institutional capacity building to handle increased demand and new needs such as value chain financing arrangements between financial institutions, farmers and agricultural organizations (IFC, 2011). On the demand side, skills and training on the use of credit is necessary. Nonetheless, while both increasing rural financial services to farmers and agro-processing and marketing were pillars of the PMA, and MAAIF Development and Investment Strategy (DISP) little progress was made on their implementation in Uganda (MAAIF, 2010).

Rural Financial Institutions (RFIs) can also play this crucial role by providing both credit and deposit taking services (Mellor, 1995). However, in Uganda rural financing is very scarce and most farmers do not have information on how to access them (USAID, 2007). Furthermore, due to lack of secure land tenure, smallholder farmers do not have the collateral to access credit. Other challenges include weak institutional framework, policy inconsistencies on agricultural financing, high interest rates, and limited financial literacy (Munyambonera et al., 2012). A household survey by AfDB revealed that women and less educated people are less likely to demand and apply for credit (AfDB, 2008). The magnitude of the problem is demonstrated by the fact that currently, the agricultural funding gets less than 10 percent of Uganda’s national budget (Bategeka, Kiiza and Kasirye, 2013). This has created a funding vacuum, part of which is being filled by donors. But the challenge of giving donors such a huge leverage is that they may have more influence in the sector, while their priorities may not be aligned with that of the government. The state should thus play a catalytic role by pumping agricultural finance and underwriting risks (Bardhan, 2001). The government can also support the establishment of a rural Agricultural Development Bank to prioritize agricultural financing. Skills and vocational training policy should also be pursued along with the modernization of agriculture.

In light of producer cooperatives, the government facilitated the scaling up of the cooperative movements in tandem with agricultural modernization. It has also promoted the cooperatives in the privatization of agricultural services to provide extension services. However, institutional challenges exist that include financial and human resource limitations and weak linkage with the government (Nannyanjo, 2013). To compound this problem, Northern Uganda, which bears the brunt of poverty and inaccessible to credit has the least number of cooperatives compared with the rest of the country at only 9 percent. Singh and Ahmedabad (2012) noted that the structure of traditional producer cooperatives organized makes them vulnerable to elite capture, which drives them to inefficiency and loss making. This is mirrored in Northern Uganda, where the dysfunctional structures, including weak leadership, lack of internal cohesion and inadequate technical support by the government has limited their functionality (Enzama, 2014).

A new approach would be to overhaul the structure of the old cooperatives to make them more oriented on market and resource mobilization. In the US and India, for example, the traditional producer cooperatives were transformed into New Generation Companies (NGCs), capable of using information efficiently throughout the vertical system. Unlike traditional cooperatives, NGCs have restricted membership, links product delivery rights to producer member equity, can raise capital by trading equity shares among members, distribute returns based on volume of business as well as venture in value addition and marketing (Nilsson, 1997). Furthermore, the tradability of delivery rights and individualized ownership means there is a consonance between business operations and ownership. In this way, NGCs can better serve commercial farming.

Finally, the institutions for Water resources management are the other vital players that underscore the success of modernizing agriculture. The region receives substantial downpour in the wet season, but due to inadequate harvesting, high evaporation, unsuitable location for water sources accompanied by poor

Data source, MAFAP (2014)
operation and lack of maintenance, surface water is scarce (IUCN, 2011). The limited and unreliable rainfall patterns that have been exacerbated by climate change, makes a lack of weather information is a great impediment to agricultural production in Abim District (OPM, 2009). A joint stakeholder sector review agreed to prioritize Water Management Plan in water resources zones (Joint Sector Review, 2009). The MWE has developed guidelines for integrated water resources management. However, the development of Water resources in Abim or Karamoja region heavily depends on the availability of historical resource databases which are currently fragmented (Avery, 2014).

Furthermore, the region still lacks its own water resource management plan, which means that the current water resources intervention are not being done in conjunction with a well established framework whose sustainability is feasible (IUCN, 2011). It is also lamentable that climate data monitoring initiative has been lacking in the region for long (OPM, 2009). Similarly, while the government is promoting irrigation farming as the alternative to rain fed agriculture, there is still no irrigation master plan for Abim District (Avery, 2014). These revelations bespeaks profound institutional lag.

The government’s policy also seems oblivious to the practicality of sustainable irrigation agriculture in the region. For example, even though it was estimated that the available water could support irrigation farming, new studies have shown that the irrigation need exceeds the available water resources (IUCN, 2011). The figure below shows water availability and demand in the region.

| Water Resources | Availability water MCM/yr | Type of Water Demand | 2010 Demand MCM/yr | 2017 Demand MCM/yr |
|-----------------|--------------------------|---------------------|-------------------|-------------------|
| Runoff water    | 180                      | Domestic use        | 4.9               | 6.35              |
| Ground water    | 306                      | Livestock           | 8.12              | 9.99              |
|                 |                          | Irrigation          | 5.06              | 665               |
|                 |                          | Industrial use      | 0.0034            | 0.0048            |
| TOTAL           | 486                      | Total               | 518               | 681               |

Source, Calculations by the author based on data from IUCN, 2011

A further consequential setback on water and environmental management is the absence of wetland policy in the Karamoja region, especially at the District level (MWE sector report, 2013). The Wetland is a key livelihood area and a critical agricultural resource in Northern Uganda. It is the epicenter of crop production among the livelihood zones in the entire region. In Abim District alone, for example, the Wetland is the most fertile area ideal for production of crops such as sorghum, maize, millet, and wheat (Abim District statistics, 2013).

The existing National Wetland Management Policy, is however not in touch with the reality at the district level (Glass, 2007). The challenges of implementing the policy include shortage of funding, bureaucratic discord, politicization of the process and a lack of Wetlands knowledge. One objection to the policy is the lack of stakeholder input. It further failed to provide a feasible alternative to those whose livelihoods depend on Wetland resources, and who were directly affected by the policy. In this way, the policy failed to build the momentum to coherently mobilize action on agriculture development around the Wetlands. There is a need for a comprehensive policy and a legal and regulatory framework. More fundamentally, Institutions for wetlands management should be established at the District local government and primary stakeholder level. There is also need to establish collaboration among related sectors, build capacity of allied institutions and promote community participation (UN, World Water Report, 2006).

Besides being that the irrigation potential is higher than available water capacity as projected in the figure above, further studies show that irrigation development in the arid regions like Abim has many technical challenges that need to be addressed first (Avery, 2014). The government acknowledged that progress in irrigation agriculture is marked with limited success due to the population’s lack of experience in handling irrigation technologies and modern farming systems (OPM Assessment Report, 2013). In view of these assertions, livestock farming is seen as a better alternative because nomadic way of life is a source of resilience to drought and other calamities due to dynamic mobility in times of drought. Normadism is also consistent with the availability of pastures within the semi arid lands in the region. It is also apparent that turning the dry land in the region to crop production will drastically interfere with the lifestyles and the resilience of the pastoralists, and require additional policy intervention. However, the government without any comprehensive study is stuck by exclusively promoting irrigated crop farming, in the misconception that cattle keeping is unsustainable and that growing crops is the viable way to avert hunger and reduce poverty (IRIN News, 2014).

V. Institutional arrangements and impact on Collaboration in Agriculture development in Uganda.

Due the multidimensional nature of poverty and food insecurity,
there is a proliferation of NGOs and government institutions working in Northern Uganda. Especially after liberalization of agriculture and decentralization of core services, many autonomous agencies were set up to implement pro-market reforms. From the MAAIF evolved 12 departments under four directorates. In addition, the public agricultural system also has eight semi-autonomous sector agencies. This multiplicity of agencies has created a coordination problem as the parent ministry has no coordination mechanism. As a result, there are weak institutional linkages between the ministry and sector agencies on one hand, and amongst sector agencies on the other (Bategeka and Kisirye, 2013). This poses a challenge to the way of delivering key agricultural services to peasant farmers (Bategeka and Kisirye, 2013).

In response to the weak coordination mechanism by the MAAIF, donors created parallel institutions to deliver agricultural services. But this has only exacerbated the problem as the increased numbers of donors create stand-alone projects. Additionally, departmentalization and short-term projects to deliver public service have been the natural consequence of too many autonomous actors in the sector. This kind of departmentalization and empire building indicates the absence of cross-functional teams within MAAIF and a lack of intra-agency, intradepartmental coordination framework.

The land management system in the region exhibits similar challenges resulting from legal pluralism in the land tenure, whereby citizens are governed by different sets of rights and obligations regarding access and use of land (Unruh, 2003). This is because state law and customary law were not merged and has given rise to conflicts stemming from administrative decisions, bureaucratic competition for responsibility and resources and a lack of clarity on which system governs the land rights (Carfield, 2011). The National Land Policy (NLP) attempted to integrate and harmonize the isolated pieces of legislation to resolve the overlapping and competing institutions operating in parallel (Ministry of Lands, Housing and Urban Development, 2013). Nonetheless, decentralization of land led to a proliferation of institutions and confusion over land conflict resolution (Kobusingye, 2014).

In the provision of extension services, the liberalization and decentralization of the agricultural extension system led to too many organizations, including public sector institutions, farmers’ associations, private companies, NGOs, and CBOs providing the services. While private sector and NGOs’ involvement in the agricultural extension system alongside the public sector could be beneficial to the people of Uganda, the management of the complex partnership created managerial confusion and inefficiencies that result from extension staff having two centers of power, one in the NGO and the other in local government.

The management of water and irrigation in the region has also experienced coordination failure and overlapping of functions. For example, the Ministry of Karamoja Affairs, the MWE and the MAAIF are all responsible for promoting large water investment projects, but at different levels of intensity (Avery, 2014). Without a collaborative framework, these institutions cannot leverage their synergies.

The collaboration challenge is further exemplified in providing humanitarian assistance in Northern Uganda. For example, in the Peace Development Recovery Plan (PDRP), not all NGOs and INGOs were willing to submit information about their planned recovery activities to be integrated into District Development Plans by the district authorities (Ellen, 2010). This is a strong manifestation of self-interest. Collaboration is further constrained by lack of proper procedures on how to manage and access resources. There are suspicions that resources channeled through the government hardly reach the beneficiaries (Devex, 2012; Basahaasha et al., 2011). Similarly, local Organizations have demanded an enhanced role in agricultural development program.

As a result, there is a need to find a coordination framework where all actors are involved, maintain their autonomy and build mutual trust.

VI. The Proposed Collaboration Framework

1. Overview of constellation Model

The need for networks and partnerships arises from the need to address complex issues that cannot be addressed by one partner, the need to improve efficiency and effectiveness of resources, and avoid duplication of effort (Anandajayaseke et al., 2009). This idea recognizes that when an organization environment becomes too complex for one organization to manage, an interorganizational approach can change the perspective from the single organizational level to a “domain” level (Trist, 1983). In Northern Uganda, a large web of actors is involved; MAAIF, MWE, Ministry of Local Government, Ministry of Gender, Labor and Social Development, Ministry of Tourism and Wildlife, UNDP, FAO, Uganda Red Cross Society (URCS), Ministry of Education and Sports, Adventist Relief Agency (ADRA), USAID / FEWSNET, Uganda Wildlife Authority, District Local Government (OPM, 2009). Hence, based on the discussion in section four, we propose a constellation model of partnership.
The most compelling aspects of the model are that it harmonizes multi sector agency collaboration, encompasses institutional perspective, strengthens sharing of information and underscores the involvement of local stakeholders. More fundamentally, it helps partnering institutions to overcome power differences, to be pragmatic, and to quickly harness innovations. While successful interaction hinges on the careful management of differing organizational characteristics and philosophies during the interaction process (Reid, 2004), issues on how to maintain autonomy and preserve diversity, set collective goals or share responsibility can pose a challenge to collaboration (Surman and Surman, 2008). These challenges have been seen in Northern Uganda wherein NGOs/INGOs, and local organizations are reluctant to partner with the government for fear of domination by the government. On the other hand, the government agencies are keen to preserve their legitimacy and bureaucracies (Ellen, 2010; Kobusingye, 2014).

By identifying institutional interdependence, such as common interests, shared resources and tasks and then developing common values and norms, the model can bridge inter‐organizational relationships in Uganda. The diagram below depicts how action focused constellations form clusters.

Figure 3. Constellation Model

Source (Surma 2006).

2. Structural and institutional dimensions of the Model

The success of this collaboration strategy hinges on three elements which makes it suitable to Uganda’s context:

2.1. Light weight Governance

The constellation model works in an environment where there is an opportunity, called a magnetic attractor. This means that the model arises from the need to work collectively on a pressing development problem. In Northern Uganda, food insecurity is already a compelling magnetic attractor.

Upon converging around the magnetic attractor, the institutions need a stewardship group to drive the group’s collective vision. The group ensures that the constellation and the partners coordinate their efforts, avoid duplication, and enhance work toward the greater goal (Surma, 2006). The stewardship or coordinating committee comprises representatives of the various actors converged around the magnetic attractor. This coordinating mechanism was successfully attempted in Northern Uganda in a cluster program in the post conflict period. The model was found to be an effective coordination platform for information sharing, reducing duplication and filling gaps and a vehicle for strengthening accountability through the monitoring of funding flows (Ellen, 2010).

The stewardship group is also useful when there is a power imbalance between partners (Surma, 2006). For example, in Abim District, there are large international organizations, government agencies and CBOs, with the result that power is unevenly distributed. The committee can diffuse the power asymmetries. The main task of the steering committee would be to draw strategic plans which articulate the overarching goal of the constellation, such as enhancing sustainable food security and improved incomes, as well as supporting government sector policy initiatives that aim to improve smallholder agriculture. Actors easily dissolve once the problem is solved.

2.2 Action focused work Teams.

One of the core advantages of the constellation is its pragmatism. Participants in the alliance direct their actions around the domain that brought them together (Gray and Wood, 1991). Constellation usually takes the form of clusters in which the actors participate depending on their core competencies and self interest. These should be organizations working to address the same problem, hence projects or work groups. In Abim District, for example, all institutions dealing with issues of land resources management and disputes, including traditional and modern institutions can form one constellation. Similarly, all those dealing with water and sanitation, or education, humanitarian relief, or R&D and technology dissemination can each form different constellations. However, all these work teams must relate their work to the magnetic attractor, in this case, sustainable food security and improved farmer income.

The incentive for the model is that money flows through the
agency that initiates the action and leadership is given to the constellation member that steps up the initiative and moves it ahead. As a result the resources are spread around in a fairly even manner (Surma and Surma, 2008). This ultimately tackles the challenge managing the access and use of resources that is identified as a problem in Northern Uganda.

3. Third Party Coordination

The secretariat is the other important element in the model. It acts like the collaborative convener that establishes, legitimizes and guides the collaborative alliance around the magnetic attractor (Wood & Gray, 1991). Even though this role can be assigned to one of the partners, traditional perspectives of interorganizational collaboration argue for a neutral mediator (Gray, 1989). This principle underlines organizational interdependence and the need for partners to exert mutual influence (Brown & Tandon, 1994, Surman, 2006). The secretariat is an organization or person with experience in the planning, facilitating meetings, supporting emerging work teams, fundraising for joint projects, handling conflict, disseminating information and capacity building for the entire group to work towards common outcome (Surma and Surma, 2008). One of its critical roles is the facilitation of information flow to all stakeholders. Besides enhancing transparency, it solves information asymmetry. Such a role cannot be overemphasized in a multi stakeholder strategy like agriculture development.

Given its critical role, the secretariat works with the stewardship team to develop norms and rules and enforcement mechanisms for interaction among different sector institutions. These institutional norms reduce the complexity and confusion. Moreover, this mediated multi sector collaboration nurtures social learning process with the potential to produce lasting institutional arrangements and promote future collaborations. Successful capacity building enables multiple organizations to understand and work together effectively in the future (Brown & Ashman, 1999). Having noted that Uganda’s PMA is set back by lack of institutional norms of interaction among different institutions addressing food insecurity and poverty, this approach offers a new breath of life to the plan.

Currently, the department of disaster preparedness in the office of the Prime Minister plays a similar role (OPM, 2009). Even though the role of the government as a convener can be a vital source of legitimacy owing to the government’s control of various resources (Wood and Gray, 1991), it has limitations. One bottleneck is that it alters the power dynamic in the collaboration, giving more power to government. This is a disincentive especially smaller partners.

Furthermore, the convener need not have a formal authority like a government agency in order to oversee the problem domain (Gray, 1989). In the proposed arrangement, the function would be detached from the office of the Prime Minister. One of the central attributes of this type of convener is perceived fairness and trust. It is vital that stakeholders do not inhibit the fear that the convener’s authority may be used arbitrarily. Enhancing participation of small actors in the collaboration can affect sustainable agriculture development in the region.

VII. Conclusions

1. Discussions

Agriculture development is necessary not only for food sufficiency, but as a counterpart to industrial development through backward and forward linkages. While agriculture contributes up to 50 percent of Africa’s GDP and close to 80 percent of its trade, Africa is the only continent in the world where the sector is stagnated (FOA, 2008). The case of Uganda provides an insight into the problems ailing the continent’s agriculture. Critically, it leaves no doubt that institutional framework is a major concern in agriculture development. However, in many instances, this critical aspect of has been ignored as development actors and governments overemphasize financial resources constraint as the key issue in agriculture development. While it is no doubt that many developing countries face this constraint, institutional arrangement has proved to be even a more salient obstacle. The effective and efficient deployment of resources for agriculture development depends on the institutions in place. The critical role of institutional framework has been demonstrated in countries like China, US and India which made bold changes to traditional institutions to foster modernization of agriculture. Nonetheless, reforming institutions is often a difficult undertaking given that most of them are keen to preserve their bureaucratic tendencies that profit office holders. Furthermore, agriculture modernization and rural development involves multiple stakeholders that requires a judicious collaboration mechanism that aims to avoid duplication of functions by harmonizing institutional roles, while providing incentives for actors to initiate and drive action on agriculture. This attempt similarly proves difficult as most stakeholders are often concerned with preserving their autonomy.

1.1 Implications

The case in Uganda proves that when financial resources are

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available, agriculture modernization cannot proceed if the above two aspects of institutional arrangement are not taken into consideration. Despite Uganda making significant reforms in agriculture, there are still serious institutional gaps that constrain goal of modernizing agriculture. The current arrangement does not offer adequate incentives for peasant farmers to adopt modern farming techniques or new crop varieties. Farmers will only have incentives to invest in land management and avoid rudimentary practices which damage the long term productivity of the soil when they have secure land tenure. The prevailing cultural system of patriarchy in land ownership constrasts government policy that emphasize crop production for self sufficiency. Limited credit, unwillingness to apply for credit or lack of awareness regarding its availability all means that the peasant farmers who are targeted in the agriculture modernization in Uganda are still largely left out. On the other hand, certainty about market for the surplus produce is an an integral part of the modernization campaign that has received little attention. If this uncertainty persists, farmers will be unwilling to change from cash crop farming whose market is certain, to food crop farming that is being promoted by the government. Further, institutional arrangements are a major constraint to collaboration. The issues of proliferation of institutions, the multiplicity of agencies with overlapping and uncoordinated functions creates confusion, competition for resources and preoccupation with preserving the institution’s legitimacy that leads to poor service provision to small holders.

1.2 Suggestions

Further interventions are needed to strengthen land tenure rights for smallholders. A recognition and harmonization of traditional and legal rights to land is essential for speedy resolution of land disputes and to curb overlapping land rights. There also needs proper institutional arrangements in the provision of credit, including financial education, the government pumping more funds to the sector and creating public awareness on how to access credit. In water resources and wetland management there is need to build a reliable database and improved technical skills in data management. Training and incentives for extension workers willing to work in Northern Uganda is paramount for the program, but has been lacking. This should include training of female extension officers owing to the gender sensitive context of Uganda. The government must also take a proactive role to secure market for farmers. This can take numerous dimensions including promoting contract farming, the government undertaking to purchase surplus produce and signing regional trade deals with neighboring countries that provide a ready market for Uganda. Infrastructure development linking rural to urban centers will enhance mobility of the produce.

Further, agriculture modernization is a multifaceted task that takes a domain approach to institutional management. While the government’s role is essential as a coordinator of the program, it is failing because other players perceive corruption, inefficiency and power imbalance. Hence the need for a third party coordination as envisaged in the proposed constellation model of instututinal collaboration. This model, by enabling multi sector collaboration, nurtures institutional social capital development. Since the approach emphasizes the active involvement of local organizations, it develops their own capacity through the learning process. In so doing, this model provides a road map for sustainable agriculture development and food security in the region, which are the thrust of PMA and the NDP in Uganda.

At the international level, agricultural development impasse in Uganda provides an opportunity to further international cooperation and knowledge sharing on best practices and experience from other continents that have transformed agriculture into a progressive and gainful activity. Foremost, the situation is a indication that financial aid to Africa is not sufficient in tackling the continent’s myriad challenges. Technical assistance on institutional development and mechanization of agriculture are salient areas to improve productivity growth in the region’s agriculture. To this end, a country such as S. Korea, which had a successful case of agriculture development and industrialization at the same time, could provide useful experience. Evidence shows that S. Korea successfully invested in agriculture mechnaization, at 241 tractors per 1000 hectors of farming land compared to Africa’s 28 tractors/1000 hectors (WB, 2007). In addition to its success, Korea’s agriculture development goals are consistent with Uganda’s agriculture modernization goals and those of many other countries in the continent. These include goals aiming to improve rural household income, self sufficient and socioeconomic stability to mitigate rural urban migration. These goals were accomplished in Korea through an integrated investment in agriculture, rural infrastructure, institutional agricultural financing initiative and a series of policies to support agriculture, such as ‘agricultural product price stabilization law’. It is noteworthy that land reforms which preceded the modernization of agriculture was cornerstone to Korean success. Inevitably these experiences can have a remarkable impact in the modernization efforts in Uganda and other African countries.
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농업 근대화에 있어 제도적 체계와 협력 메커니즘의 역할 : 우간다 아빔 사례

Ochieng, Haggai Kennedy Otieno

요 약

이 논문은 우간다의 농업 근대화를 이루기 위한 제도적 체계의 부족한 실상을 보여준다. 컨스텔레이션 모델을 바탕으로 (Constellation Model), 이 논문은 농업 분야의 다양한 이해관계자들의 활동과 정부 차원의 제도적 협력과 정책을 통해서 농업 개발을 촉진할 수 있는 효과적인 방법을 제안한다. 이러한 이론적 관점으로부터 이 논문은 핵심적인 연구 문제를 제안한다. 아비드 지역(Abim District)은 농업 개발에 있어 중요한 게임을 받게 되었는가? 아비드 지역의 농업 개발에 있어 제도적 마련과 협력의 영향은 무엇인가? 어떤 유형의 제도적 협력과 협력 체계가 북쪽 지역의 우간다와 아비드 지역에 문제를 효과적으로 나타낼 수 있는가? 이런 우려는 우간다의 농업 성과를 향상시키는 데 중요한 장애물이 될 수 있는데, 이는 역기능적인 제도적 마련과 규범은 농업 발전에 제약이 되기 때문이다. 연구 결과, 제도적인 차이, 관료주의, 제도적 확산과 중복된 역할은 농업 근대화에 걸림돌이 되어 왔다. 그러므로 개발 전략은 이 지역의 모든 관계자들에 활력을 주고, 아비드 지역의 주요 관계자들과 협력하는 지속적인 협력을 통해 연결조직을 발전 및 심화시킬 것을 제안한다.

주제어

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