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Legitimacy of agriculture extension services: Understanding decoupled activities in rural Ghana

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Abstract

In this paper we explore the links among institutionalisation and legitimacy, within capacity-building efforts in the context of development. We study the network of linked activities for agricultural extension service provision; at the level of policymaking, district management and at the field level in Ghana. Our mixed-method research approach includes extensive qualitative (observation and interviews), as well as quantitative (spatial mobility data) fieldwork at three districts. Findings concerning service delivery at the different operational levels, are heavily scaffolded by means of Activity Theory; while Institutional Theory informs our answer to the research question, “*how do technical and institutional pressures, on the ground as well as at the policy level, shape performed extension activities and management strategies?*”. The empirical contributions of this work include explanations of institutional decoupling effects; and understandings of decoupling as a district level strategy for maintaining legitimacy with external rural constituents and with internal organisational stakeholders. The theoretical contribution of this work involves the synthesis of Activity Theory and Institutional Theory, into an approach for the generation of meaningful insights. A further contribution is the use of a mixed-methods research strategy.

Keywords: activity theory, decoupling, institutional theory, agricultural extension

1 Introduction

The notion of decoupling in organisational studies is used to explain the gap that emerges and is sustained between formal policies and actual organisational practices. Such gaps occur for various reasons. Decoupling arises in institutional environments where technical pressures are exacerbated by even stronger institutional pressures. It is also a well-recognised strategy

for gaining, maintaining and repairing legitimacy (Suchman, 1995) within socially constructed environments. The links among legitimacy, institutionalisation, and sustainability are accepted as elements of capacity-building in the theorising and practice of international development (Brinkerhoff, 2005). Successful capacity development efforts need to reach beyond enhancing technical capabilities (e.g. systems, procedures); and ensure congruence with societal sense-making “*myths*”, and with widespread, socially appropriate “*ceremonies*”.

We explore the process of decoupling within the context of capacity building in the Ghanaian agriculture sector. We trace three levels of activities concerned with the delivery of agricultural information services¹ to smallholder farmers (farming families with livelihoods based on growing a mixture of cash and subsistence crops) in rural Ghana. We do so, with the understanding that knowledge transfer activities form a “*recognized area of institutional life*” (DiMaggio & Powell, 1983) in the developing country context; and that it is ultimately undesirable for institutional theorists to analyse “*socially legitimate, albeit inefficient organisations*” (Scott, 2008). We aim to understand how the demands of technical/market rationality are balanced against the institutional demands for legitimacy, within Ghanaian public extension services. We draw upon activity theory, as a conceptual and analytical framework; and institutional theory, as a sense-making lens for explaining how activities and the narratives surrounding them have led to misalignment between activity motives and their objects (Suchman, 1995).

In the Ghanaian context, the institutional transformation of agricultural advisory services from an aid-driven to a market-driven paradigm has been successful within the scope of top level narratives. Pluralist modalities for service delivery and multiple stakeholder partnerships, have gained prominence (Section 4). Yet, the transformation remains less successful at the grassroots level amongst farmers; with demand articulation by smallholders, as payers and beneficiaries of the agriculture advisory services, remaining a significant challenge (Dar & Slavova, 2013). The Ministry of Food and Agriculture (MoFA) remains the dominant stakeholder (Mitchell, Agle, & Wood, 1997) in terms of power, legitimacy and urgency; in the field of agricultural advisory service supply in Ghana. We deconstruct extension supply by MoFA at the policy, field and management levels. In particular, we answer the research question “*how do technical and institutional pressures, on the ground as*

¹ Agricultural information services provide rural people with information and knowledge, geared to increasing the productivity and sustainability of their farms; thereby improving the quality of their lives and livelihoods. Henceforth, we use the term interchangeably with “extension services” and “agriculture advisory services”.

well as at the policy level, shape performed extension activities and management strategies?”.

The contribution of this paper is twofold. Empirically we contribute by explaining decoupling effects in terms of conflicting institutional and technical pressures, and illuminate upon how this serves as a strategy for maintaining legitimacy with external rural constituents and with internal MoFA-based policy stakeholders.

Little existing research has tackled the complementarities between activity theory and institutional theory (Barab, Thomas, Dodge, Squire, & Newell, 2004). With some exceptions (Ogawa, Crain, Loomis, & Ball, 2008), most research that refers to the two approaches only does so *en-passant*. Therefore, this work offers a significant theoretical contribution by synthesising the two approaches to generate meaningful insights. We also extend the use of activity theory for analysing organisations within the context of international development and capacity building. Development can be thought of as the transformation of traditional institutions; as learning, and change through the resolution of systemic contradictions and tensions (Karanasios, 2014). A further contribution is the use of a mixed-methods approach in order to answer our research question and develop deep activity theoretic insights.

The remainder of this paper is structured as follows, we continue by reviewing the theoretical underpinnings of the argument, in terms of institutional theory and activity theory. In Section 3, we present the methods for the study, including descriptions of the research setting, the data collection process and the conceptual framework which links activity theoretic tools to institutional understandings. We continue by reviewing the historical context (Section 4) to extension service activities, and outlining our findings with regards to current practices at the policy level (Section 5.1), at the level of field services (Section 5.2) and district management (Section 5.3). On the basis of our activity theoretic findings, we infer institutional explanations in terms of decoupling (Section 6.1) and maintaining legitimacy (Section 6.2). Lastly, we conclude by remarking on the multi-layered institutional complexity, characteristic of international development initiatives.

2 Theoretical Underpinning

2.1 Institutional Theory

New institutional theory (DiMaggio & Powell, 1983) offers powerful explanations for individual and organisational action; and demonstrates how institutions serve to drive change and shape the nature of change. It explores the legitimisation of routines into organisational

practices. Yet, it is also concerned with organisational rationality, and market-based indicators of performance and efficiency. Such concerns are particularly prominent for agricultural extension service delivery in rural Ghana; where externally driven efficiency demands, results-based performance measures and resource limitations are inscribed over existing traditional patterns of communication, relationship management and knowledge creation.

Institutional theorists argue that the institutional environment can strongly influence organisations and individuals. A characteristic response to institutional pressures is “*ceremonial conformity*” (Meyer & Rowan, 1977), where institutional influences are merely accepted ceremoniously in order for the organisation to gain or maintain legitimacy in the institutional environment. In this way institutionalised organisations adopt structural changes, vocabularies and surface level behaviours while decoupling them from actual practices which correspond to local circumstances. Decoupling of structure from action is observed to varying degrees among organisations. In the development context it is particularly common where there is a trend for governments and organisations to conform to the requirements of donors, while the activities on the ground are decoupled from this discourse and shaped by the demands of the local context.

Organisations from all sectors are subject to varying degrees of technical and institutional pressures. See Meyer & Scott (1991) for a taxonomy of the demands faced by organisations from different societal sectors. Technical/ market demands consist of pressures on organisations to provide their services efficiently and effectively. Such pressures are typically prominent in organisations whose operational funding is self-generated, and contribute to the quality and customer focus of the delivered products or services. By contrast, technical/market pressures are less prominent in public organisations, even if cost-effectiveness and sustainability are clearly stated objectives. In such cases, formal pressures from the institutional environment are translated into strong procedural requirements. Complex administrative procedures are characteristic of organisations under pressure from the institutional environment. For organisations operating in the international development sector, those procedures typically amount to stringent schedules for delivery of monitoring and evaluation reports. In addition to the formal institutional pressures for delivery of agricultural extension services in Ghana, the operational environment within which the service is delivered is characterised by a vibrant rural culture. The interactions occurring in

the enactment of the service are embedded within the context of strong personal ties, established expectations and patterns of communication.

Our interest in institutional theory lies in examining decoupling proposition with regards to Ghanaian agricultural extension services. While institutional theory is concerned with institutional level analysis, sense-making and the unravelling of the notion that the actions of organisations are independent and autonomous; we are particularly concerned with understanding the institutional forces and technical pressures. We document and explain how they are manifested within agricultural extension service delivery. In order to do so we turn to activity theory, as a theory of social-action, mediation and activity. In particular, we draw on activity systems as an analytical framework for examining the interplay amongst knowledge transfer activities and institution building activities. We also consider the interplay within agricultural extension service supply of actions at the policy level; at the intermediary level of district management; and finally, actions observable at the field level, on the ground.

2.2 Activity Theory

In terms of activity analysis, we draw on Engeström's (1999) third generation of activity theory. In particular, we focus on several of the underlying activity theoretic principles of: (i) interlinking systems, where object-oriented activities are seen in relation to a network of other activity systems; (ii) "multiple-voices", where interactions between the community and the subject introduce alternative accounts for the activity; and, (iii) the identification of contradictions as sources of change and development (Engeström, 2001; Karanasios & Allen, 2013). The focus on the activity object concerned with development links with the notion of "runaway objects" which have the potential to expand and open up possibilities of emancipation and well-being (Engeström, 2008).

While activity theory has a strong tradition in conceptualising and understanding organisational activities (Kajamaa, 2011) and interpreting and explaining of data (Allen, Brown, Karanasios, & Norman, 2013; Er & Lawrence, 2011); there is often a need to draw on broader theories to make sense of the analysis in an enlarged way (Allen et al., 2013). We therefore, use institutional theory to examine the proposition of decoupling, with regards to Ghanaian agricultural extension services. We document and interpret contradictions and tensions, observed at the grassroots, at the district management and at the national policy level, within the network of related activities. We observe contradictions in the

understandings of different actors which result in decoupling between policy-level discourse and ground-level implementation.

3 Methodology

3.1 Research Setting

The research setting of our inquiry is the District Agriculture Development Units (DADUs) at Bongo, Kasena-Nankana East (KNE) and the Tamale Metropolitan districts in Northern Ghana. These administrative units were selected because of existing trust and working relationships; and the expectation of considerable access and quality data. All districts lie within the Guinea Savanna agricultural belt in Northern Ghana, and are considered representative of farming practices and agriculture advisory activities in the area. Furthermore, the districts span a range of levels of urbanisation, including rural areas and market towns, as well as highly urbanised and peri-urban communities. Table 1 summarises the contextually relevant characteristics of the districts.

Table 1: District characteristics

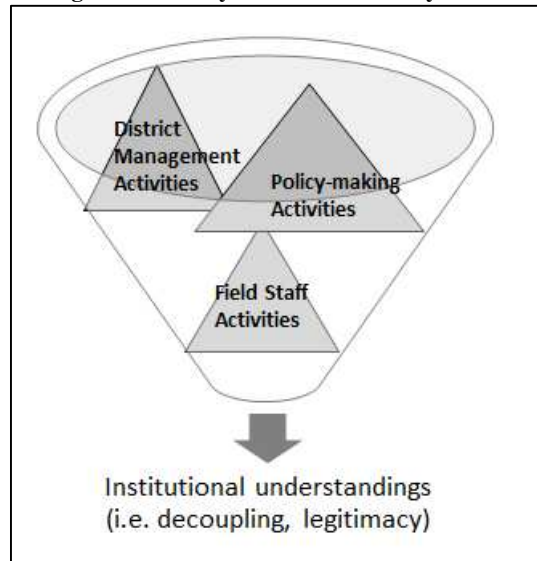
Community	Location boundaries	Population	% of employment in agriculture	Est. cost of reaching farmer
Bongo	Burkina Faso, Kassena-Nankana West and East Districts, and Bolgatanga District.	99,890	90%	€1.21
KNE	Kassena-Nankana West, Bolgatanga, Builsa, West Mamprusi and with Burkina Faso	79,187	68%	€0.72
Tamale	Savelugu/Nanton, Tolon/Kumbungu, Central Gonja, East Gonja, and Yendi.	293,881	60%	€2.53

Source: (Arkorful, 2010; Bongo Dadu.; KNE, n.d.; Regional Planning Co-ordinating Unit., 2006)

3.2 Conceptual Framework

Conceptually, we focus our fieldwork and data collection on understanding and describing agricultural extension activities on three levels; activities by policy-makers within the institutional context of MoFA, decentralised activities at the level of district authorities (district management), and field level activities by operational staff. We capture understandings of activities at these three levels, with the help of tools from activity theory. These understandings are consolidated and expanded, with reference to the institutional theory concepts discussed in Section 2.2.1 (Figure 1).

Figure 1: Activity-Institutional theory funnel



3.3 Data Collection

The data collection, preliminary analysis and reporting were conducted collaboratively by staff from the Ghanaian offices of the International Food Policy Research Institute (IFPRI), where one of the researchers was employed; two out-posted fellows of Engineers without Borders (EwB), Canada; and by five Ghanaian observers. IFPRI developed the research agenda and the methodology for the study, while EwB, with their considerable working knowledge of the districts, facilitated access and helped manage the data collection process. IFPRI's immediate objective consisted of documenting the efficiency, effectiveness and equity in the delivery of frontline extension services, at the district level. The research built on previous work (Kolavalli et al., 2009), which established very low levels of efficiency of face-to-face interaction modalities, with the costs of reaching a single farmer varying from €2.53 (Brong Ahafo Region), through €15.42 (Northern Region) to €22.41 (Western Region). As a result of this detailed time and motion study, were produced largely improved estimates in the range €0.72 - €2.53 (Table1). The data collection and analysis were heavily scaffolded by activity theory, as explicated in Section 2.2.2.

Local stakeholder support was crucial in providing access to the necessary participants (Bulmer, 2001). In order to encourage stakeholder engagement, prior to the study, EwB and IFPRI held three workshops with extension staff in each of the three districts. Stakeholders to the research were introduced to its goals and their input was collected in the construction of random observation sample frames for the fieldwork. Follow-up workshops were carried out in order to validate and disseminate preliminary findings.

The bulk of the data collection took place in June-July 2011, during the cropping season, characterised by land preparation and the planting of cereals (e.g. early millet, sorghum, maize and rice). Consequently, the data is not fully representative of MoFA's field activities throughout the agricultural crop cycle.

A mixed-methods approach to data collection was employed. In particular, we drew on (1) non-participant observation; (2) field interviews; (3) time and distance measurements; and, (4) documentation analysis. The details of our data collection are summarised in Table 2. The synthesis of qualitative/quantitative and primary/secondary data was necessary for ensuring data completeness in our inquiry of a large scale, emergent phenomenon (Hackney, Jones, & Losch, 2007; Piccoli & Ives, 2003). Furthermore, it provides corroboration and adds strength to each technique (Bhattacharjee & Premkumar, 2004) through triangulation (Eisenhardt, 1989; Venkatesh, Brown, & Bala, 2013) and helping us overcome biases in field research (Karanasios, 2008).

A further methodological point is that our data collection approach shares many similarities with ethnographic research (Harvey & Myers, 2002). Additionally, it is consistent with the epistemological commitments of activity theory (Vygotsky, 1978), which relies on rich data spanning sufficient periods of time and gathered in a naturalistic setting (Moran & John-Steiner, 2003).

Our mixed-methods data collection (Table 2) allowed us to deliver a stratified form of analysis informed by our activity theoretic perspective. We account for field level activities by considering observation data on the work of crop agricultural extension agents (AEAs), and develop an understanding of how field activities connect to the institutional level by observing the activities of District Agricultural Officers (DAOs). DAOs perform monitoring tasks and provide "*backstopping*" for AEAs, as such they are more qualified, better paid and spend more time in the office. The collected observations were coded immediately by the Ghanaian enumerators, using a survey instrument structured by means of activity theory systems. Questions included codes classifying the activities carried out, the AEAs' motivations, the tools they used and the presence of supporting staff. Time and distance measures were used for calculation of the costs for reaching an individual farmer by means of the extension service, and for spatial analysis of the reach of the service. Alongside with structured field level observations, EwB collected detailed resource profiles for the districts

visited during the fieldwork. These additional documents were complemented by detailed interviews of selected informers at the district management level.

Table 2: Data collection

	Objective	Focus	KNE	Bongo	Tamal e	Analysis
Observations of field and office duties	Observed tasks included field and office administrative duties, monitoring field operations, sensitising farmers about interventions, supporting the delivery of programs, measuring and demarcating plots, and selecting farmers/fields for registration on certain programs.	Field staff, District management	2 AEAs 1 DAO, 5 days 97 tasks	2 AEAs, 1 DAO, 5 days 82 tasks	2 AEAs, 1 DAO, 5 days 109 tasks	-Structured observation through a survey instrument -Thematic analysis of detailed field notes
Interviews	Interviews with high-levels of local policy making such as the Director of Agriculture as well as management and staff in the local districts.	Policy makers, District management, Field staff	4 interviews: District Director of Agriculture (DDA), Management staff and Information System Officer	4 interviews DAO Monitoring and Information Systems Officer (MISO) DDA Veterinary officer	4 interviews DAOs MISO DDA	-Thematic analysis of interview transcripts
Time/distance measurements by GPS logging devices	Time and distance measurements to account quantitatively for the productivity of extension services. Measurements were carried out using Columbus V-900 ² data logging devices with GPS and audio tagging. This data is critical in understand the cost of reaching farmers and the spatial element of the rural operational environment.	Field staff	5h 13min ppd 21.18 km ppd	5h 26min ppd 28.44 km ppd	5h 34min ppd 40.75 km ppd	-STATA statistical analysis -ArcGIS spatial analysis
Additional documents	Documentation to develop profiles of the districts and a baseline understanding of the work activities. Used to reconstruct knowledge around key aspects important to the study context such as details of training, resources, budgets and business assets within the regions.	Policy makers, District management	District details on human resources, trainings, mobility resources, financial budgets, assets. Policy documents			-Thematic analysis

4 Agricultural Information Services

We set the context of our study within the process of transitioning away from an aid-based paradigm for the delivery of agricultural extension services, and strengthening their market-

² <http://www.pocketgpsworld.com/columbusv900.php>

orientation. We review the broader background to these changes (Section 4.1) and the historical background to changes in Ghana (Section 4.2).

4.1 From 'Extension' to 'Advisory Services'

Because of their promise to sustainably improve welfare outcomes, agriculture information and knowledge services do not cease to excite interest in the academic and donor communities. Past notions of agricultural extension conjure up images of inefficient public sector services, carried out by uniformed workers who travel around the countryside, on motorbikes and liaise with farmers. In recent years, the term 'extension' has been replaced by the term 'advisory services'; indicating services that provide information and knowledge demanded by farmers, as well as other stakeholders in agri-food systems (Christoplos, 2010). Since small-scale producers, traders and processors lack the capacity to meet market demands for quality, quantity and timeliness; they have been largely unable to take advantage of market opportunities (Christoplos, 2009). Therefore, agricultural advisory services have evolved the goal of providing smallholders with understanding of improved practices and facilitating their equitable inclusion in agricultural value chains.

4.2 Historical Context in Ghana

Structural Adjustment Policies (SAPs): 1982- 1991

After the famine of 1982, the political orientation in Ghana turned towards market reforms supported by the IMF and the World Bank. The Economic Recovery Programme mandated staff cuts in public services and led to the initiation of the Agricultural Sector Rehabilitation Programme. Rehabilitation was pursued by enhancing the institutional capacity at MoFA and implementing a 15- 20 year strategic master plan for agricultural research. At the heart of the reform agenda were capacity-building policies aimed at staff training and retention, and broad-based farmer participation. served as a model for well-prepared demonstration programs and for its encouragement of farmer and community participation (Nubukpo & Galiba, 1999).

Post-SAP: 1992- 2007

In the 1990s, the earlier gains were consolidated through the National Agricultural Extension Project (NAEP), funded by the World Bank (MoFA, 2001). It ran from 1992 until 1999, and was aimed at improving the management and delivery of extension services, and including farmers in a dialogue aimed at identifying relevant research problems. The pluralistic foundation of extension was strengthened by forging linkages between research, teaching and

extension. Market rationality was enacted through the introduction of Unified Agricultural Extension System which emphasised the delivery of messages regarding all crops and all topics, by a single AEA over a fixed operational area. Additionally, it introduced a group-based approach in order to facilitate learning (e.g. promote awareness, train farmers, demonstrate new technologies) and to capture indigenous agricultural innovations. For reasons of efficiency, farmer groups have remained the dominant modality for extension delivery in the agriculture service sub-sector.

After the close of NEAP in 2000, its outcomes were ranked “moderately successful” (Picciotto, Ingram, Barbu, Nelson, & Kumar, 2001). Nonetheless, the institutional arrangements implemented under NAEP in terms of routines for operations, reporting and supervision were maintained within MoFA. Even though understandings of these routines were entrenched, they remained ineffective after funding from the World Bank ended. In terms of lessons learnt from NAEP, it has been acknowledged that the adoption of recommended agricultural practices among farmers remained low (MoFa, 2001) and future implementation strategies should be pro-poor and “*place the knowledge transfer process increasingly in farmers' own hands*” (Picciotto et al., 2001). The low level of appropriation of technologies introduced through extension messages clarified the need for establishing demand-driven extension services in Ghana. Experiences showed that bottom-up and participatory approaches are workable if well-funded.

Follow-up funding was acquired through the Agricultural Services Sub-sector Investment Project, which became operational in 2001 (Asuming-Brempong, 2003). Its market-oriented extension interventions included the streamlining of service demand drivers through the strengthening of primary farmer-based organisations. Furthering pluralism, in 2004 MoFA established a fund for publicly funded but privately delivered extension services pilots in eight districts. This fund served as entry point for the private sector providers, including NGOs, in the delivery of agricultural support services.

Current Policy: 2007 - Present

More recently, the homogenous approach to stakeholders in the agriculture sector has been acknowledged as a weakness and replaced by the value chain concept (Republic of Ghana., 2007). The concept has gained currency in agriculture development policy (Altenburg, 2006; Webber & Labaste, 2010) and aligns with the market orientation of Ghanaian agriculture policy. Direct policy strategies for its implementation rely on fostering multi-stakeholder

alliances; while indirect strategies rely on enabling agriculture support services. It is expected that improved value chain linkages can contribute to demand-led coordination of farming production and marketing practices.

5 Findings

In this section, we expand on our understandings of the agricultural extension activities of policy-makers (Section 5.1); of AEA field staff (Section 5.2); and the mediating activities characteristic of district level management roles (Section 5.3).

5.1 Policy Level: Multiple Voices

The activities of Ghanaian policy-makers, geared towards agriculture extension, are inscribed within the MoFA mission of promoting “*sustainable agriculture and thriving agribusiness through research and technology development, effective extension and other support services to farmers and fishers, processors and traders for improved livelihood*” (MoFA, 2009). Current extension service delivery policies are aimed at establishing a coordination role for the extension service, whereby district staff are engaged in facilitating value chains linkages (linking exporters/processors, farmers and input suppliers such as fertiliser sellers). Building multi-stakeholder partnerships (World Bank, 2004), such as partnerships with NGOs, research institutes and commercial partners; is favoured as a strategy for effective delivery of agronomic innovations, attuned with market rationality. In contrast to the traditionally perceived role of extension officers “*to transfer [agriculture] technology and also to advise farmers on what they are supposed to be doing*” (KNE, DDA; interview), policymakers communicate to district-level staff building relationships and facilitating interactions among stakeholders in the agriculture space as an operational strategy for the delivery of extension services:

What do you see as the main purpose of extension?

[...] the current approach with MoFA is to look at the value chain to try to see how best you can get farmers to be part of this chain. If you can identify areas that will require building relationship and linking farmers we (the extension service) do our best to promote that. Also, when our collaborators are coming in we serve as the conduit for whatever new technologies they want to demonstrate on the ground.” (KNE, DDA; interview)

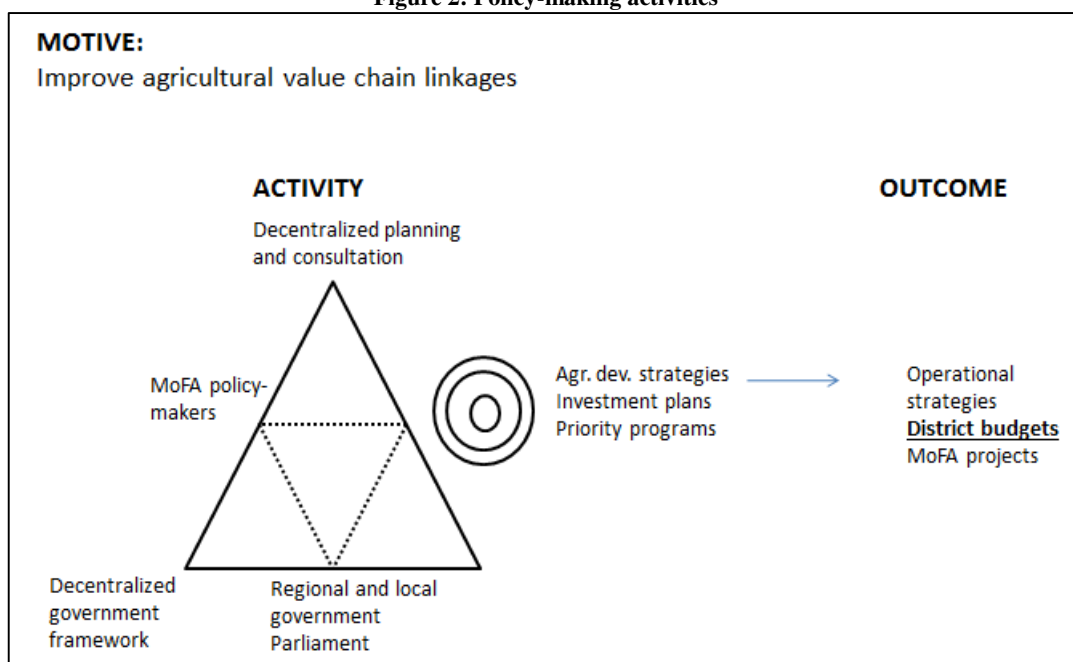
Within the network of activities by MoFA policymakers, district management and field staff, the definition of a policy direction, such as facilitating value chain linkages; can be thought of as an output of policy-making activities (Figure 2). Additional outputs include guidelines with regards to operational strategies, district budget allocations and the formulation of MoFA priority projects for local implementation. The policy-making process is facilitated

through institutionalised routines for decentralised planning, consultation and budget allocation.

We interpret those routines as abstract tools in Figure 2:

[Planning sessions] are meeting[s] with the farmers at the community level, you meet the farmers, look at the activities they are doing, what are the problems that they face in carrying out those activities. So these problems come out and they are priorities, look at those that can be solved by the district and those that can't we send out [what is sent out mean here?]. After that there is a district session so that we correlate all the issues to do with agriculture in the district. This then goes to the regional planning session where each district makes a presentation so that issues that are common go together, issues that we believe research can tackle are also discussed. The planning sessions are between MoFA, the researchers and farmers. Actually the larger one, the regional and national involves other stakeholders.”
 (KNE, DDA; interview)

Figure 2: Policy-making activities



In Figure 2 we capture the activities of policy-makers as being oriented towards a congruent set of nested objectives; including the identification of agriculture development strategies, their support through investment plans and the implementation of priority programs. We also show that agricultural extension services are delivered by MoFA according to the rules and norms specified by the Ghanaian decentralised governance system.

Even though district budgets are developed through decentralised planning processes, they are approved nationally and remain institutional tools for coercion and control. By specifying the budgets, central government (the policy level activity) imposes structure on the activities undertaken by district level management and by field staff. As tools made available by the

central government for the delivery of national extension goals, district budgets carry tensions between stated national policies and local understandings:

“So every district was to do its district plan, so the district plan we have from there you develop your annual budget, so these annual budgets are then supposed to be put together and sent to the national level for the further work on it before presentation and all that. Along the lines we realised that sometimes what we plan for is not exactly what they agree on the plan at the national level that’s sent to the parliamentary hearing.” (Bongo MISO; interview)

As one of the main outputs of policy-making activities, district budgets are passed on within the network of activities as tools for service delivery. They serve as reification of national policy priorities i.e. conversions of abstract policy concepts into concrete activities on the ground and expenses. Table 3 illustrates the balance of the budgets set by the policy level for district level activities. It clearly shows that over 80% of the district budgets for extension delivery is earmarked for ‘personnel emolument’ i.e. staff time. Effectively, this leaves between 10.93% and 18.35% for expenses towards the delivery of embodied and disembodied agronomic knowledge to rural farmers. The narrative of decentralised government bestows upon district extension managers a level of autonomy, yet their budget flexibility is strictly limited. While the accepted policy vision of extension practitioners consists of conducting demand-driven advisory farm visits and interacting with farmers in the field; we find that the vision is at odds with the tools provided, in terms of minimal expenses allocated to the delivery of agronomic knowledge to rural farmers.

Table 3: District budget allocations

	Tamale Metro	Bongo	KNE
2011 Personnel Emolument	80.16%	87.88%	86.42%
2011 Administration Activity Expense <i>(Utilities, General cleaning, Office consumables, Printing and publications, Travel and transport, Repairs and maintenance, Other allowances)</i>	1.49%	1.15%	2.65%
2011 Service Activity Expenses <i>(Training and conference cost, Travel and transport, Materials and consumables, Special services)</i>	18.35%	10.97%	10.93%
AEA avg. distance travelled per person per day	47.57 km	32.53 km	28.78 km

Source: MoFA (2011)

Additionally, as outputs of their activity, national policy-makers outline government priority programmes (e.g. Root and Tuber Improvement and Marketing Program [RTIMP], Western Africa Agriculture Productivity Program [WAAPP]) and specify district project deliverables, as well as operational expenses for them. Interviews revealed contradictions between the

national budgeting guidelines for such programs and the budgets, reaching the AEA activity level:

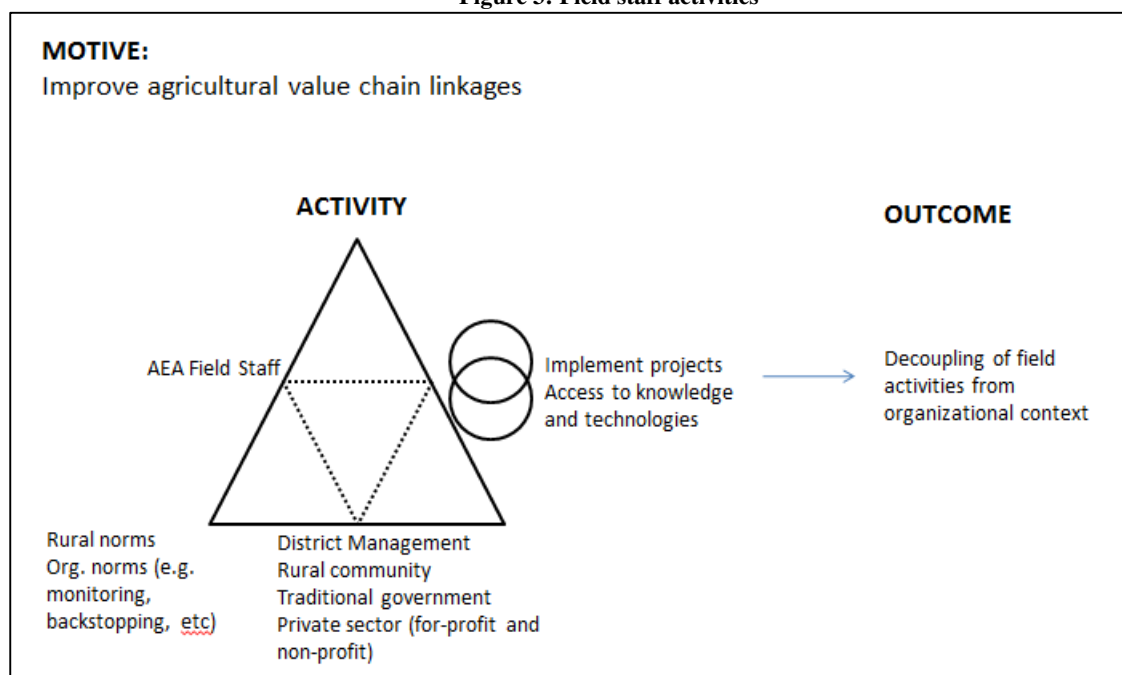
“Extension department for me has suffered since the decentralisation or the restructuring of the ministry, putting all of us under one director. Of course all the resources of extension he controls. In my district it’s even better, in other districts it’s terrible the resources don’t go to extension. I can give you an example I was on some program and the AEAs were to take 2 gallons [of fuel] , in all the districts, here I was lucky and the DDA gave me control of the resources and gave them [the AEAs] 2 gallons, in other districts the director gave them 1 gallon. This is just an example.” (KNE, DAO; interview)

In summary, considering the activity of MoFA policymakers we find that it is structured in pursuit of logically defined policy objectives for agriculture development in Ghana. By identifying policy priorities, strategies, and investment programs, policymakers are able to hand over tools and objects for the delivery of services locally. Yet, contradictions arise in the understandings of policy outputs as they are transferred to the district organisational and operational contexts.

5.2 Field Activities: Dual Object

Field level agriculture extension delivery activities takes place within a context blending competing expectations. On the one hand, AEAs are expected by their Ghanaian constituents, to conform to traditional rural norms; while on the other hand, they operate within MoFA which embraces a culture of pluralist values and partnerships. Thereby, they are expected to follow market logics in their operations. In this Section, we present the contradictions between reality of the object of AEA activities and their personal motivations as subjects (to transfer knowledge and expertise). Making sense of their role, field staff identify the main reason why extension exists as, *“to disseminate technology to farmers to boost agriculture production”* (Tamale DAO, interview). In essence, it is possible to identify dual, non-identical objects of AEAs’ field activities (Figure 3); one emerging through their activity links within the MoFA organisational environment, and the other being set in their interactions with the rural context where they operate.

Figure 3: Field staff activities



As shown in Figure 3, AEA activities are governed by rural social norms and structures, as well as by their explicit duties, as set by district executives. By adhering to rural norms AEA have been able to generate among farmers taken-for-granted status (Suchman, 1995) for their work, as a professional practice. For example, AEA consistently make a point of conforming to social customs by following funeral rites and showing respect for traditional governance roles such as chiefs (activities classified as N/A in Figure 5 **Error! Reference source not found.**). Such conformity amounts to informal institutional pressure and has operational consequences such as postponed meetings and project progress delays. This creates contradictions between formal work expectations (such as establishing farmer groups, measuring farm plots, distributing inputs, etc.) and the need to operate within the cultural norms of AEA's operational areas. For instance, during our month of observation fieldwork our enumerators repeatedly documented how conformity to rural social norms is weaved within the operational reality of extension service delivery:

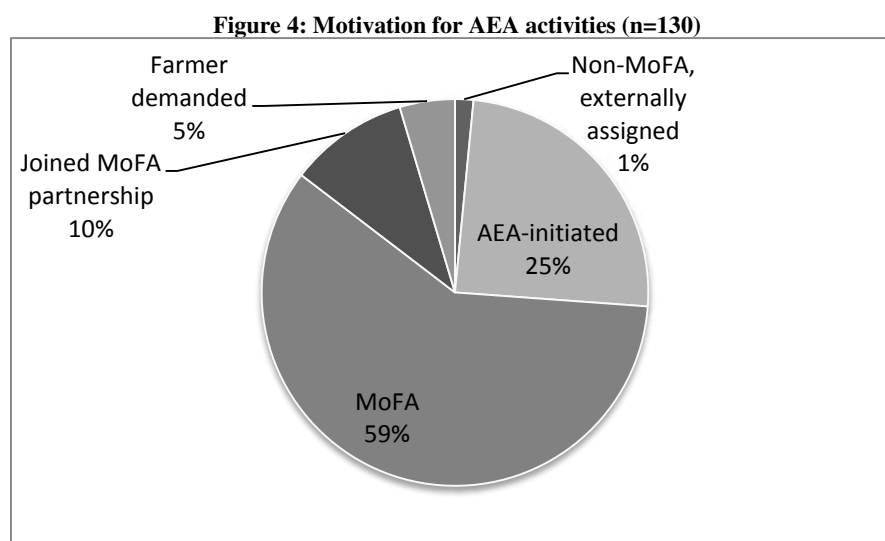
6:00 AM: As arranged the day before, AEA is to meet women's group and attend MoFA meeting at the office. AEA calls to inform [the enumerator] in the morning that there is a funeral so meeting with women's group would not be possible, only the staff meeting at the office is possible.

....

11:28 AM: The AEA arrives at the MoFA premises. He gets down from his motorbike. He greets his colleagues and tells them about the funeral he had to attend in the morning. (Observation Notes, 8/06/2011)

Additionally, our data also shows weak correspondence between AEA field activities and the policy vision within MoFA. By analysing quantitatively the data from the coded structured observations, we find that compliance with the formal institutional pressure to move towards market-based delivery of agriculture advisory services is weak, as only 5% of agents' field activities are motivated by farmers' demands (see Figure 4). While the narrative about agriculture advisory services perpetuated at the policy level frames the AEA role as addressing farmer concerns and providing farmer-demanded knowledge and technology transfers; our analysis reveals that this narrative is supported only through the decentralised planning process and not by the observable field level interactions.

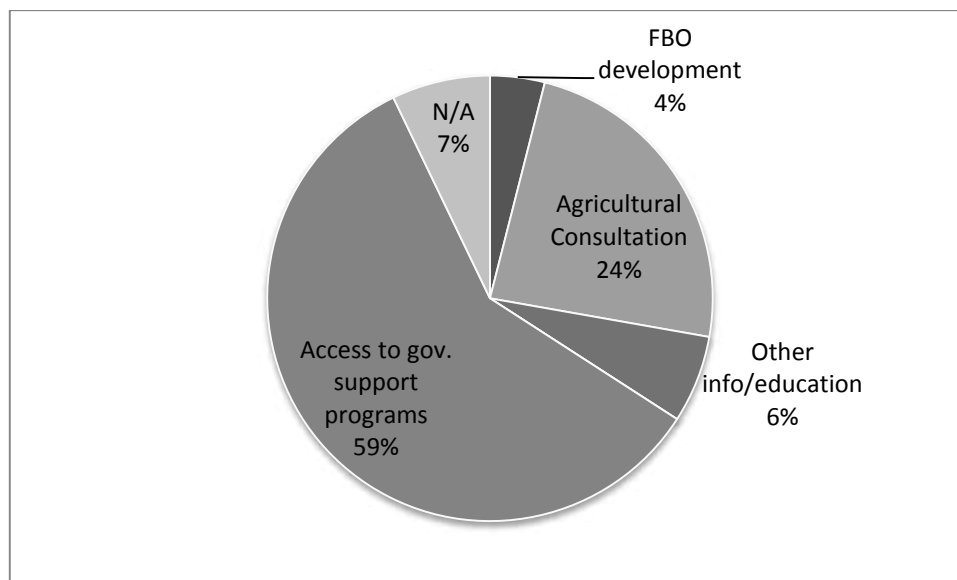
In our data collection we captured the motivation for AEA activities by asking observers to select answers to the question “*Who made the AEA do the task?*” (Figure 4). This showed that on the ground level, almost 60% of AEA activities, across the three districts, are motivated by internal MoFA deliverables, as outlined within policy strategies, investment plans and agriculture development programs. Alternative motivations include supporting government (10%) and NGO (2%) partnerships.



In fact only 25% of activities (such as ensuring farmers are ready to participate in government projects, or that they follow agronomic advice) were triggered by AEA's initiative and only 5% fit within the frame of directly responding to farmers' concerns. This reveals the top-down nature of extension field activities and suggests an interpretation of the current AEA role as diverging from the narrative of demand-driven extension services. We find that even though participatory planning tools are used in developing MoFA programs (Section 5.1), the motivation for field level activities tends to be hierarchical delegation, rather than responding to bottom-up service demands.

While Figure 4 illustrates the motivation for the AEA activities, Figure 5 illustrates how enumerators classified the primary AEA activities they observed. AEA activities are predominantly classified as oriented towards the delivery of access to government support programs (59%), with only a fraction (24%) that can be described as agronomic consultations (e.g. ascertaining *Striga* infestations, demonstrating thinning out techniques, responding to inquiries how to react to “*pesti [pesticide] attack*” on a mango plantation). Over half of the tasks carried out by AEAs consisted of enabling access to government support programs (Figure 5), with approximately 67% of the observed tasks requiring the use administrative or organising skills (not shown). In summary, we find divergence between the observed AEA activities and their subjective motivations. AEAs demonstrate willingness to identify themselves as knowledge workers who “*disseminate technologies*”, while their operational activities can be more adequately described as field-level administrators of government projects.

Figure 5: AEA primary field activities (n=130)



The presence of multiple motivations, and thereby objects, of AEA’s field activities brings perceived contradictions that interfere with agents’ sense-making process. AEA’s identity as knowledge workers orients them towards activity objects such as delivering agronomic consultations or preparing field demonstrations. Such professional identity links agronomic consultations to a heightened experience of community and a standard of morality; while the immediate object of AEA labour i.e. administering government agriculture development projects, appears alienating. The contradiction between the two distinct objects of their activity leads to disaffection and prevents AEAs from thinking “*[they’re] very comfortable with that*”:

[How do you know the district is achieving success or not?]

“For example last year we didn’t carry out any MoFA demonstrations and these are the aspects that will actually make us to say that yes we are pushing ahead. So if we are not carrying out those core extension activities for me I don’t feel very comfortable. Some of the projects – they are many – but some of them are helping because they make us undertake our actual field work and make our impact felt which will also go to assist the farmers more. RTIMP they are carrying out demonstrations on the field, like this WAAPP thing that I’m carrying out in the field and I’m happy with them. So if you are not carrying out these things, we used to call them critical extension activities. Now staff training is one, farmer training, demonstrations, and field days. So when you are not doing these things, because they are things that actually make you go to the ground and meet the farmers and help them to increase their yields and whatever. When you are not doing them in a district you are actually not pushing forward.” (KNE, DAO; interview)

The emerging distinction between “*critical extension activities*” and “*projects*” is supported in conversations with district management representatives. They corroborate the narrative that the main motivation for “*the job of the AEA is to just help [farmers] resolve problems with what they are doing presently and also to introduce farmers to new technologies to enable them to improve on what they are doing today*” (KNE, DDA; interview). The legitimate field activities for addressing this goal are considered to lie within the space of agronomic consultations and advisories (e.g. demonstrations, field days, etc.). Yet, recognising the dominant role of government project delivery in the routine activities pursued by extension service staff; district officials attempt to reconcile the operational reality with the narrative about AEA activities:

“Sometimes the emphasis shifts, today we are doing more of Block Farms [aka Youth in Agriculture Program]. The Block Farm too is an area that could serve as a platform for introducing new technology because we are promoting new seed varieties, use of fertilizer, proper agronomic practices and we are hoping it will increase the yield of individual farmers. And from there adoption will come.” (KNE, DDA; interview)

A closer look at the details of the collected observation field data reveals socio-material complexities of the technology transfer learning process; situated at the boundary between material artefacts and abstract ideas. Even though the primary objective of the majority of recorded interactions is enablement of government service provision, more than 70% of the observed encounters carried learning as a secondary objective (not shown). Within the work of AEAs, the learning objective is weaved within the texture of the more pragmatic and immediate objective of delivering access to government support projects. We find that with regards to the adoption of improved technologies and practices in rural Ghana, learning is embedded within the material context of agriculture activities and the multiple interweaving objectives of AEAs contribute to processes of learning-in-practice.

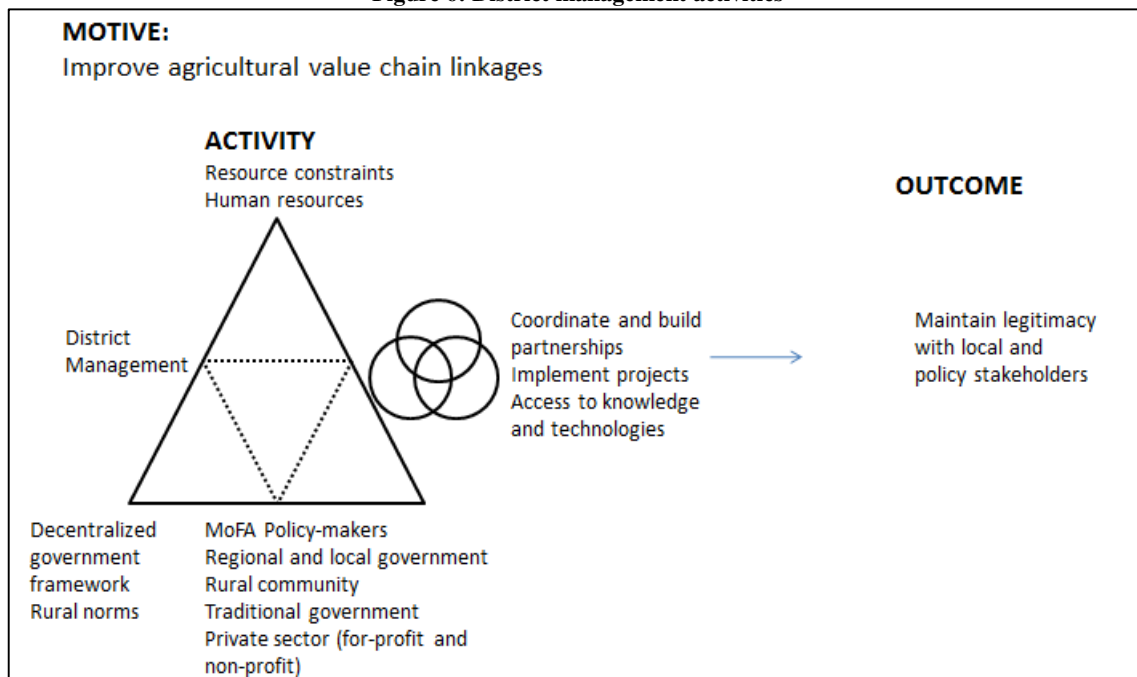
5.3 District Management: Constrained Resources

At the district level, agricultural extension services operate within the Ghanaian system for decentralised local government, and are known as DADUs. Through decentralisation and unified extension, their role has evolved into a coordinating role among specialised departments. This arrangement contrasts established notions of extensionists as independent subject matter specialists:

“So the district agric [agriculture] extension officer was made the coordinator so the other departments were subject matter specialist departments, like crops and animal husbandry were supposed to train the extension staff. So the concept of district agric coordinator came and all the district agric extension officers were made district agric coordinators that coordinated the activities of all the other departments in the district. That was the beginning of the decentralisation. All the departments at the district level came together to form the directorate of agric at the district level, and some of us who were lucky were made district directors.”
(Bongo, DDA; interview)

Figure 6 captures the multiple objectives facing district management staff of the agricultural extension service in Ghana. Besides policy-mandated objects such as coordinating local subject-matter experts, and building market-based partnerships with external stakeholders; district executives face pressure rooted within the rural context, to respond to immediate farmer needs by delivering access to knowledge and facilitating access to government programs.

Figure 6: District management activities



By adhering to the rules and norms of decentralisation, and liaising with policymakers with regards to budget allocations, district level managers are faced with resource constraints, as

demonstrated in Figure 6. The most pressing technical challenges of extension service delivery comprise largely of inadequate human and financial resources. Budget pressures, usually referred to by field staff as shortages of “logistics” or “motivation”, are reiterated by district level managers; and attributed to structural reasons:

“[...] we had various departments, livestock, vet, extension, crops, which had their own programs, so now we’re trying to see how we can coordinate all those activities to achieve the results we’re desiring as a ministry, though it came with certain challenges. [...] Most had their own [logistics], for instance extension could have their vehicle, but today the whole district you may only find one vehicle.” (KNE, DDA; interview)

[There’s logistical constraints, what do you mean by that?]

“[laughs] yesterday I was, or the day before yesterday the director talking about the issue where he says it’s a problem, his car is over how many years more than 15 years old now the consumption of that car in terms of [diesel and], the running of that car is not an easy job.” (Bongo, MISO; interview)

Probably the most prominent technical pressure for district managers is revealed in terms of quantity and quality of human resources. Staffing shortages are prominent in rural districts, while overstaffing characterises the one metropolitan district in our study (Table 4). We find that staff mobility is particularly low and recruiting for available positions is particularly challenging, in rural districts. For example, in KNE for various extension roles staff tenure within MoFA is on average 21, 28 and 33 years. Low levels of mobility are observed not only in rural districts with staff shortages, but also in the Tamale Metropolitan area. In terms of qualifications, we find few bachelor degree holders (five in Tamale, three in KNE and eight in Bongo), with AEAs holding predominantly agricultural college qualifications.

Table 4: Staffing levels

	Bongo	KNE	Tamale
DAOs at post	7	7	8
Av. gross monthly DAO salary	€250.12	€209.51	€252.82
Av. DAO MoFA tenure³	24 years	21 years	20 years
AEAs at post	11	7	24
Av. gross monthly AEA salary	€171.62	€248.78	€209.52
Av. AEA MoFA tenure	21 years	28 years	17 years
Understaffing (DAO and AEA roles only)	13 understaffed (all AEAs)	18 understaffed (1DAO+17 AEAs)	5 overstaffed (2 DAOs+3 AEAs)

Sources: Update of Activities for the Month of May 2011, Ministry of Food and Agriculture, Bongo District, Upper East Region; KNE DADU organogram and current staff records; Tamale MADU current staff records; Bongo, KNE DADU and Tamale MADU staff salary slips issued by Government of Ghana, May 2011.

In summary, the activities of district level management staff are shaped by institutional pressures to transition towards a coordinating role, and to strengthen local value chains by establishing partnerships. Alongside with the institutional pressures to conform to the new model of agriculture extension delivery, district managers face technical pressures in terms of

³ Including DDAs

resource constraints, insufficient capacity and staffing. Last but not least, by operating at the district level managers are closer attuned to the operational challenges of service delivery in terms of ensuring congruence with rural social norms and responding to farmers' knowledge needs. Thereby the activities of district leaders amount to balancing policy compliance and strong operational challenges:

“[Does this current model work well?]

[Pause] I don't think there's anything wrong with this model, it has to do with the capacity of those doing the technology transfer. Because we lack staff we aren't able to reach out to as many famers as we'd like. [...] Of course if you strengthen supervision, and the logistics are there, and you have a good plan; I believe it should work well. Because at the end of the day you find people who should be doing specific activities are doing other activities just because we don't have the staff [...].” (KNE, DDA; interview)

6 Analysis

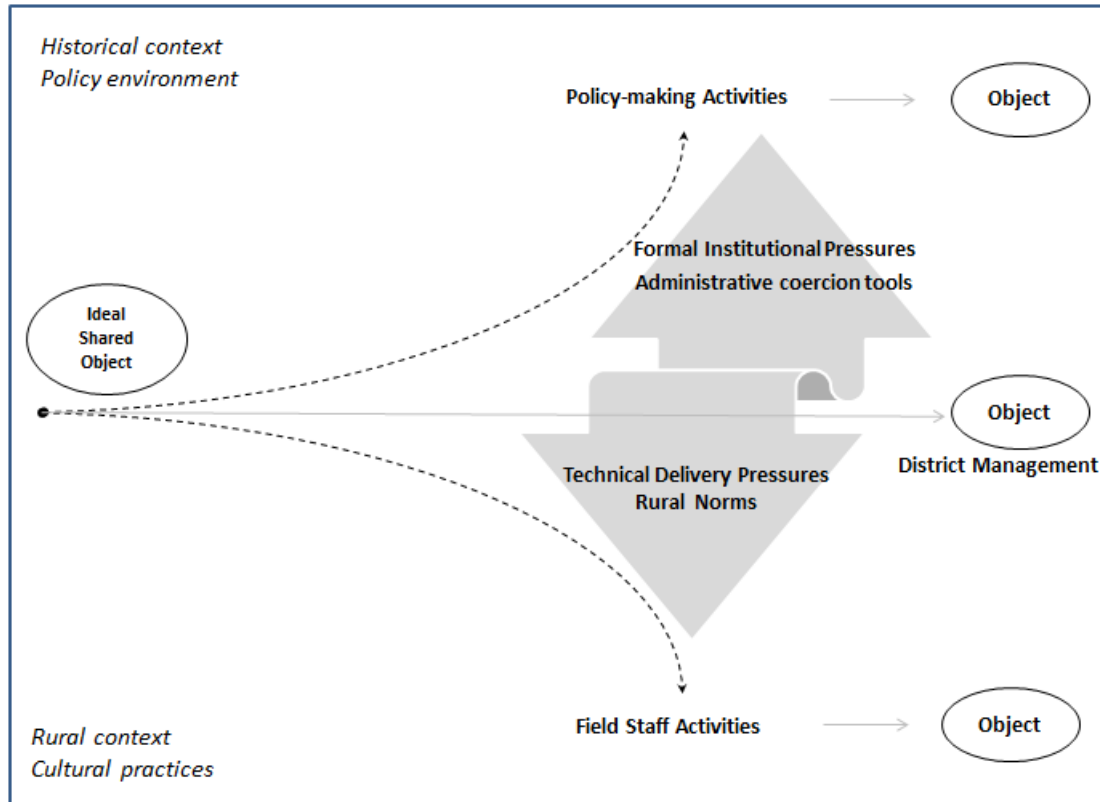
6.1 Decoupling

We have observed formal institutional pressures to move extension service delivery towards a market model, based on pluralistic partnerships and farmers' demand for advisory services; as well as the use of administrative coercion tools in this direction. Furthermore, in our analysis of group level AEA activities we encounter severe technical pressures in terms of insufficient human resources and mobility resources. We also find that service delivery is shaped by established rural norms of behaviour, ceremony and ritual. Consequently, consistent with institutional theory, we propose the presence of a decoupling effect within extension activities (Figure 7). We argue that the activities of policymakers and AEA field staff are oriented towards multiple and distinct objects; while the activities of district management are aimed at balancing the technical and informal institutional pressures on the ground, with formal requirements from policymakers.

The decoupling effect attributed to technical and institutional pressures in the work of the extension service, is reinforced by observations of contradictions and tensions within the extension activity system which did not trigger change. For instance, there exists a strong policy imperative to include women in extension activities (Section 4.2). These pressures were externalised and translated into technical pressures through the introduction of gender-focused staff roles (Women in Agriculture Officers) and specialised NGO activities (Section 5.2). Nonetheless, informal rural institutions tend to go against the grain of agriculture policy and formal intent. Consequently, on balance we find that only approximately 20-30% of the participants in agriculture advisory field activities are women. This shows a contradiction between the two strands of activity, where the decoupling effect sustains each existing

system. The policy narrative of inclusion of women is sustained on the ground by maintaining the ratio across different interaction formats (e.g. groups, individual encounters, etc.). Yet, the ratio remains skewed in favour of male participants; which is largely in contrast to the gender balance in farming field operations, where women constitute the majority of the work force.

Figure 7: Institutional decoupling



The pragmatic objective of delivering government assistance relegates the problem of addressing agronomic knowledge gaps among smallholders to the periphery of extension work activities. As a result, extension activities are decoupled along the lines of the market and the aid paradigms framing agriculture advisory services. On the one hand, the prevailing aid narrative is consistent with the view of extensionists as “*disseminating technologies*” to farmers on individual basis; which contradicts observed extension field activities. This springs up tensions within the district managers’ role, and engenders the emergence of “*ceremonial conformity*”. On the other hand, conformity to the efficiency criteria inscribed within the market paradigm of service delivery often conflicts sharply with the institutionalised informal rules of rural life, and can undermine grassroots support and the taken-for-granted legitimacy of the organisation (Meyer & Rowan, 1977). The myth of market-driven agriculture advisory services is reflected in the formal structures and institutional environment; while remaining at odds with the pragmatic concerns which

surface at the operational level. We find the emergence of loosely coupled district-level extension organisations, enveloping persistent contradictions, as a stable solution.

6.2 Legitimacy

Legitimacy can be defined as the “*generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions*” (Suchman, 1995). We consider legitimacy as stemming from congruencies between organisational activities and the cultural-historical context within which they are carried out. The two distinct contexts which envelop the three levels of extension activities consist of the rural context of cultural practices and behavioural norms; and the policy context of historical reforms (Section 4). We argue that institutional decoupling serves as a strategy for maintaining legitimacy within the two contextual frames.

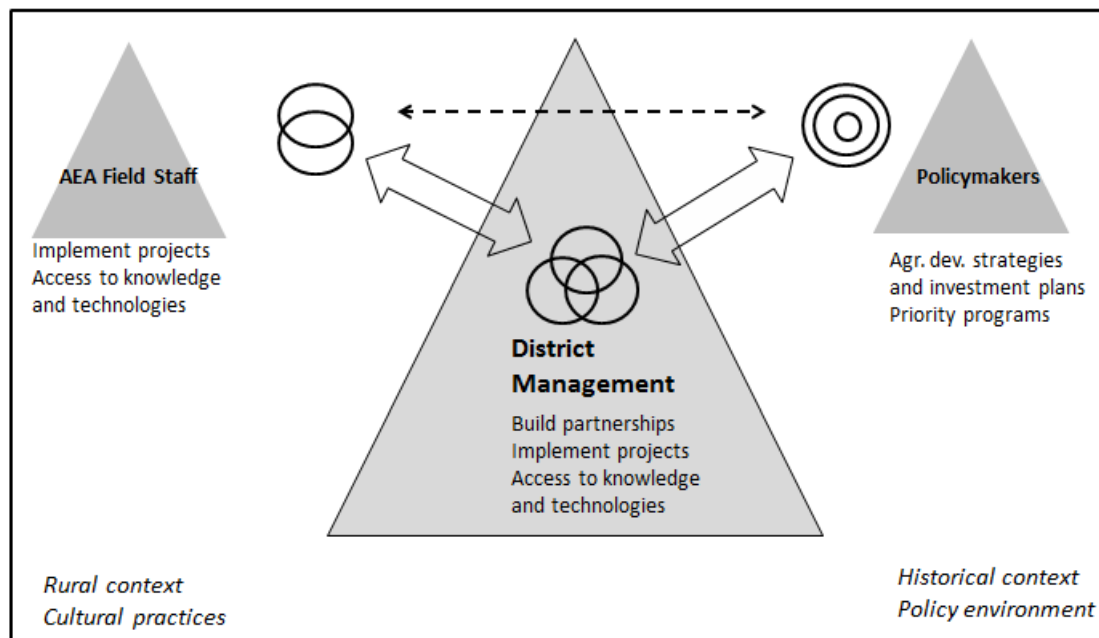
Organisations which incorporate institutionalised myths are more legitimate, successful and likely to survive (Meyer & Rowan, 1977). This is a likely explanation for why interest in extension work has persisted, despite its less than optimal outcomes. The role of district-level managers is critical in balancing the pragmatic demands of rural constituents who take for granted the legitimacy of the extension service within perceptions structured by the aid paradigm of international development; with the symbolic demands of policy stakeholders who insist on legitimising the delivery of the service within the market-sustainability paradigm for the operation of agriculture support services.

District level managers respond to the need for maintaining the pragmatic, moral and cognitive legitimacy of the extension service on the ground, and at the policy level by decoupling activities which support different myths (Suchman, 1995). The strategy allows them to sustain pragmatic legitimacy for the service in terms of exchange value for farmers who receive access to government support; as well as for policymakers who gain an effective partner for the delivery of their interventions. Therefore, there are coexisting motivations and activity objects. In terms of moral legitimacy, decoupling strategy allows extension field staff to be perceived as professional agronomic advisors, while administering policies encapsulated within the government agriculture development agenda.

Figure 8 summarises the top-level findings from the analysis of district management oversight activities; as balancing the technical and informal pressures put on AEA field staff, with the formalised institutional pressures exerted by policy stakeholders within MoFA.

Decoupling is captured as the multiple and distinct objects of the activities of policymakers, AEAs and district managers. The object of the AEA activity can be articulated as (1) administering government projects (i.e. farmer lists, collections and repayments); and (2) responding to farmer needs by delivering agronomic knowledge consultations and technologies. AEA’s object (1) corresponds to policymakers’ nested goals of furthering the Ghanaian agriculture development agenda by implementing policy strategies and government projects. AEA’s object (2) corresponds in part to policymaker’s goals, and in part is shaped by perceptions in the rural environment, consistent with the aid paradigm. For district managers of extension services, balancing grassroots objectives with those of policymakers, translates into maintaining the pragmatic (i.e. exchange), moral and cognitive (i.e. taken-for-granted) legitimacy of the extension services, among rural residents and among policy stakeholders. This is enacted by ensuring exchange value for farmers by means of access to government support; and for policymakers by acting as reliable local partners. Furthermore, district managers balance moral legitimacy by enabling field staff to “*disseminate technologies*” according to their moral standard; and by supporting policy in taking up a coordinating role and facilitating locally multiple stakeholder partnerships. Thereby, we show how the object of the activity of district managers is shaped by the objects of policymakers and field staff; yet it is constructed independently as maintaining legitimacy.

Figure 8: Interacting objects of extension activity systems



7 Concluding Remarks

The identification of a decoupling effect as a strategy for maintaining legitimacy reflects the challenges of institution building within the context of international development.

Nonetheless, the purpose of this paper is not to claim inefficiencies in extension work, but rather to illuminate upon the multi-layered institutional complexity of capacity building activities in the Ghanaian agriculture sector. Theoretically, the paper suggests benefits from the concurrent use of activity theory with its analytical and descriptive potential; and institutional theory with its explanatory power.

By capturing the rural context, as well as the organisational context related to the transition from aid-based structures to market-driven ones, cultural-historical activity theory enables us to discuss the impact of formal and informal institutional pressures. Thereby, we are able to illuminate on the contradictions encountered in the move from traditional rural norms and cultural practices, to ones based on market rationality and agronomic knowledge (Tripp, 1993).

In recent years, access to mobile technologies, has been viewed as a way of relieving technical pressures in the delivery of agriculture information services (World Bank, 2011). Considering our structured observation surveys, we find that approximately 18% of AEA activities involve use of mobile phones. Consequently, activity theory can allow us to capture technical pressures arising from the operational challenges of service delivery. Future research can consider how information tools, ranging from in-person delivery by AEAs on motorbikes to mobile technology solutions, can be incorporated within the extension activity system to ease the balance between technical and institutional pressures.

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