

Demand-based extension models for smallholder farmers in Malawi

Hastings Chiwasa^{ab}, Daimon Kambewa^b

^a Centre for Development Research, University of Natural Resources and Life Sciences, Email: hastings.chiwasa@boku.ac.at

^b Lilongwe University of Agriculture and Natural Resources, Email: dkambewa@luanar.ac.mw

Abstract: Demand driven extension service is one of the recent models for delivery of agricultural extension services. Two decades after the adoption of the pluralistic and demand driven extension policy, farmers' extension needs and the type of services provided by various extension organisations do not match. This study was conducted to unveil the realities in extension delivery in developing countries using the new model. A qualitative study was conducted in Dedza district of Malawi to validate the implementation of demand driven agricultural extension services among providers and users of extension services in Dedza district in Malawi. The study found that Malawi has relevant policy frameworks aligned to demand based extension and pluralism. However, implementation of a demand based extension service is limited by lack of structures for identifying and expressing farmer demands; limited finances to fund extension needs and lack of accountability systems to extension users. Extension organisations are more accountable to the sponsors of their projects whilst the government extension also delivers programmes recommended from the central government but with little relevance to farmers' immediate needs. Furthermore, farmers in Malawi lack a choice to select from as the extension organisation are allocated specific geographic areas in the move to avoid over concentration of extension efforts in one area. The study concludes that realisation of the demand driven extension service delivery among smallholder farmers in countries like Malawi can only be meaningful proper if mechanisms for coordinating extension efforts and articulation of farmer demands, existence of structures for demand and sustainable financing can be put in place. It is important to consider a systems perspective to engage more players including the private sector to make demand driven mode of extension meaningful to farmers.

Keywords: demand driven, agricultural extension, Malawi, extension needs

1. Introduction

1.1. Overview of demand driven extension services

Demand driven services is one of the paradigms that has emerged in the field of agricultural extension following the dissatisfaction over the sectors' contribution to development. Since the Green Revolution, huge investments in agricultural development have been focused on setting up extension systems in developing countries as a way of scaling out the success of the green revolution. According to Anderson and Feder, (2004) agricultural extension has the greatest impact in the introduction of new technologies until when it reaches the dissemination disequilibrium. The World Bank sponsored Training and Visit is one of the development strategies that have enjoyed heavy investments from national governments and global institutions, however, since 1980s, there have been numerous questions over the sustainability and efficiency of such systems, prompting a diversion to alternative strategies for management and delivery of agricultural extension with pluralism of players, decentralisation and privatisation as key (Chipeta, 2006). Apart from contributing to improved efficiency, decentralised and demand driven extension services have since been advocated as one way of ensuring that extension programmes are relevant to needs of various stakeholders including farmers (Davis, et al., 2009). Malawi adopted the demand driven extension policy in the year 2000 as a way of shifting its extension delivery towards more extension users' involvement.

Almost two decades down the line, there is limited literature to explain the performance of this demand driven service provision and how the various players have responded to the shift in the focus of agricultural extension in Malawi. This paper questions the realities of demand driven services in Malawi by answering three research questions: (a) What is the existing governance structure for extension organisations? (b) Are the extension services demand driven? (c) What are the mechanisms for demand driven services in the country? (d) How do service providers respond to farmers' demands?

1.2. History of demand driven agricultural extension in Malawi.

Since the beginning of a formalized extension system in Malawi in 1903, the provision of agricultural extension has been dominated by the government. The Ministry of Agriculture is the key provider of agricultural information to most smallholder farmers who are the producers of the country's staple food, notably maize (Masangano and Mthinda, 2012). The main motive of agricultural extension was to "force" farmers to follow prescribed land resource management technologies in order to increase production of coffee, tea and cotton for the market in England (Peters, 1997). The extension approach later shifted to more persuasive model farmer approaches where individual farmers were supported with agricultural information and inputs for others to emulate the results of proper farm management with more group based approaches adopted later in the 1980s. The Block Extension system, a modification of the World Bank supported Training and Visit system with strict supervision and scheduling of intensive farmer trainings was introduced in 1980s and its top down approach has remained to date. The Block Extension System is blamed for the top-down model of extension delivery, which emphasized transmission of national interests to the disadvantages of farmers' individual interests (Masangano et al., 2016).

The dawn of multiparty democracy in the 1990s also affected the management of extension. New players emerged to complement the efforts of the state whilst farmers were given more power and authority to hold service providers accountable to them. Since the year 2000, the government of Malawi introduced the first extension policy in the history of the country that was aligned to the contemporary discourse of demand driven and decentralised extension service delivery. Although the demand driven extension calls for more players in extension delivery, the Malawi extension system remains dominated by the state in terms of funding, geographic coverage and staffing levels providing quality control and supporting public good services such as attainment of national food security. However, the sustainability of extension funding in the demand driven mode is challenged by over dependence on

international financing of extension both within the public and Ngo sector. Masangano and Mthinda (2012) note that most extension organisations in Malawi would not operate if donor funding stopped flowing.

1.3. Rationale of demand driven extension services

Demand driven services, according to Klerkx, et al., (2006) entail finding a balance between services and information that is needed and what is offered by extension service providers. The demands in a demand driven extension service operate at two levels, economically, as willingness of farmers to pay for services, and the interest the farmers have in the services offered (Klerkx et al., 2006). Chipeta (2006) mentions farmer's needs, values and willingness to spend in terms of time and resources as important elements of farmers' demands. Experience from Malawi reveals that farmers have multiple interests in extension services, but their expenditure for extension is limited (Masangano et al., 2016). Review of literature on these emerging changes in extension point to the fact that by improving privatisation of extension, the extension providers are tuned to be accountable and responsive to farmers' aspirations and demands with farmers seen as extension clients and not beneficiaries of extension services (Kidd et al., 2000).

According to Chipeta (2006) a demand driven extension service needs to meet three principles, namely, services are driven by user demand; service providers are accountable to the users; and users have free choices to make on who should provide the services they need. The extension approach in a demand driven service comes along with a transformation from top-down centrally controlled service delivery to bottom-up, farmer needs oriented service. A transformation from top-down towards demand-driven bottom up services therefore calls for availability of structures through which extension clients articulate and express their demands. The demand driven extension approach therefore needs to be complemented with a multiplicity of service players such as the private sector, farmers and farmers' organisations and international development agencies playing various roles to make demand driven service a reality. Davis et al., (2009) point out the need for farmers' organisations such as farmer field schools, farmer study circles and facilitation circles to strengthen farmers participation in articulating extension demands. On the others hand, international development organisations complement public efforts by targeting marginalised groups of farmers that can be left out whilst advancing public and private good interests (Minh, Friederichsen, Neef, & Hoffmann, 2014). The key to these strategies is the ability of farmers to observe, learn as a farm unit or collectively and articulate their needs requiring extension support through participatory approaches.

2. Study approach

The study employed a variety of approaches including interviews with representatives of agricultural organisations operating in Dedza district. The study was implemented as part of a larger research project aimed at testing use of videos in training farmers, implemented in Kasungu and Dedza districts of Malawi. We started with identification of key agricultural organisations in Dedza district through interviews with the district agricultural coordinating office and later followed up with relevant organisations working in agriculture in the district. A total of eight individual interviews were conducted using a checklist of open-ended questions. Respondents included management and frontline extension staff of organisations that offered agricultural services in Dedza district and also selected farmers supported by the organisations. Four groups of farmers were interviewed with males and females in separate focus groups to understand their experiences with agricultural extension services. Individual interviews were conducted with representatives of service providers and focus group discussions were conducted with extension beneficiaries. The main questions during the interviews were on the nature of agricultural programmes offered, farmers challenges that need extension support, availability of extension organisations and their extension strategy and the role of farmers and extension organisations in articulating extension demands.

3. Results and Discussion

3.1. Socio economic profile of farmers in Dedza

Dedza district has two different topographies with the South and East comprising of hills and valleys whilst the Centre, West and North is part of the Lilongwe Kasungu plains. It is one of the rich agricultural areas producing a variety of horticultural crops, cereals and legumes by smallholder farmers. As smallholders, the farmers own small pieces of fragmented land averaging and intercropping of maize with other crops is preferred. Livestock ownership is dominated by small stocks such as chickens, goats and pigs. Table 1 below shows livestock ownership among smallholder farmers in the project area.

Table 1: Livestock ownership among farming families in Dedza district.

| Livestock type | Percent of households, n=33 | Average livestock numbers |
|----------------|-----------------------------|---------------------------|
| Goats | 60.6 | 5.1 |
| Chickens | 45.0% | 5.8 |
| Pigs | 24.2% | 2.5 |
| Cattle | 12.1% | 4.0 |
| Rabbits | 6.1% | 9.0 |
| Sheep | 3.3% | 2.0 |
| Pigeons | 3.3% | 28 |
| Ducks | 3.3% | 6.0 |

Due to climatic shocks such as dry spells and excessive rains experienced more frequently of late, several NGOs have intensified efforts to promote smallholder livestock ownership through free distribution of small stocks to groups of farmers who pass on the offspring to next members of their groups and smallholder irrigation farming to enhance farmers' resilience to such shocks. The Malawi Vulnerability Assessment Committee (Malawi Government, 2015) reported about 95,000 people having experienced some weather-related shock in 2015 and suffering at least 3 months of food deficit.

Potatoes are the most important crops cultivated under both rain fed and irrigation, primarily for cash earning. Other important crops are groundnuts, kidney beans, soya and various horticultural crops. Almost all farmers grow maize which is the staple food in most parts of Malawi.

3.2. Governance of extension systems.

3.2.1. Government extension

The delivery of extension services is dominated by the Ministry of Agriculture, which has an extension structure that operate from the farming communities to national level but coordinated at district offices. There is a district agricultural office which is managed by the District Agricultural Officer with support from subject matters specialists as Heads of four key technical departments i.e. extension and methodologies; land resources and conservation; crops development; and livestock development departments. The extension department is responsible for coordinating and managing all district level extension in areas of nutrition, food security, agribusiness development and gender as core areas whilst the remaining three departments provide subject matter services in support of extension personnel in the district.

At community level, the Ministry operates through 10 Extension Planning Areas (EPAs), headed by the Agricultural Extension Development Coordinator and supported by Agricultural Extension Development Officers (AEDOs) as front-line extension workers. Every AEDO is allocated a geographic area of operation. Much as the whole district is sub-divided into units to be managed by the front-line government extension officers, farmers complained about limited support from the public extension workers. High staff shortage, large geographic coverage area and limited funding for extension activities were mentioned as key challenges facing agricultural extension workers. On the other hand, we also noted

that farmers were on the receiving end awaiting the extension workers to initiate extension activities rather than initiating the demands on their own.

We found that the ministry was using the green belt approach whereby a chain of fields in an area of high visibility would be targeted for integrated extension trainings and demonstrations. The aim is to make the stretch, e.g. a road side lush with deep green crops as an indication of good crop management. Compost manure making is the second most important extension intervention for the ministry with specified targets made for each extension worker.

3.2.2. Non-governmental organisations

Dedza is one of the districts that have enjoyed availability of non-governmental organisations (NGOs) for a long time. Due to the war in Mozambique, NGOs such as World Vision started operating to support the refugees relocating to the border district due to the war, but later shifted their focus to complementing government agricultural development work when the Mozambique war ended. Through consultation with the district government staff, we found that there were three NGOs that have agricultural interventions, namely, Concern Universal (now changed to United Purpose), World Vision and the Catholic Development Commission of Malawi (CADECOM). Whilst the government has full district coverage, the NGOs were operating in selected EPAs. All the NGOs were also only working with selected groups of farmers in the target areas. For example, all the three NGOs we interviewed operated in separate EPAs but also with selected farmer clubs. CADECOM prioritised working with farmers who could afford to provide labour for agricultural activities and also poor, referred to as the Productive Poor, whilst Concern Universal worked with farmers who paid up an annual membership fees of MK2000 (about US\$2.8) in clubs. World Vision however worked with any category of farmers as long as they were in clubs. The quote below summarises how the NGOs target their beneficiaries.

We work with the Productive Poor farmers, these are farmers who can provide labour to implement agricultural activities and have land for farming. The elderly can be incorporated if they can supply labour for their agricultural activities. Interview with CADECOM staff, Dedza district.

The selective targeting of farming communities to receive extension support from a specified NGO is supported by the 2000 national extension policy which seeks to avoid over concentration of extension efforts in one area. This however limits the farmers' freedom of choice of who should serve them (Chipeta, 2006) in line with their extension needs.

3.2.3. Private sector

The study noted that there was limited participation of the private sector service providers. Much as private traders exist in the district, there is limited collaboration for streamlining their efforts within agricultural extension. Whilst farmers complain about lack of sustainable markets access, the private traders operate separately and only emerge during purchase of agricultural produce through door to door unstructured marketing.

3.3. Assessment of Farmers extension training needs.

We asked farmers in focus group discussions to describe the nature of challenges they encountered that were limiting their farming. We noted that farmers in Dedza are confronted by a myriad of challenges with some more linked to poverty than others. The focus group discussions revealed shortage of farming equipment, poor market access, limited financial income opportunities and increase in population as the most important challenges among farmers supported by the government. We noted that the farmers' challenges are mostly interlinked. For example, farm income was the primary source of cash among the farmers and shortage of cash due to poor prices and absence of structured and reliable markets for agricultural produce meant that farmers were limited in their ability to invest in other areas of farming such as purchase of irrigation equipment, sprayers for pest and disease control and other inputs among others. There were slight differences between men and women whereby

women mentioned other challenges beyond farming but were important to their performance of reproductive gender roles such as children's education, limited access to potable water and shortage of health facilities in the area.

This section describes the four challenges that are more linked to farmers' needs that are agricultural in nature.

Farming equipment. Shortage of farming equipment and inputs was mostly mentioned in regard to irrigated farming. Farmers mentioned absence of water lifting devices especially treadle pumps, and also sprayers for chemical application in vegetable production as the most important farming equipment. Whilst the study established existence of NGO support with irrigation two years ago, the study still revealed absence of sustainability of independence of the farmers to procure treadle pumps on their own. Farmers' failure to access irrigation equipment was attributed to poor market prices of agricultural commodities, absence of collective efforts such as establishment of irrigation clubs and schemes and lack of information on where to procure the needed equipment.

Pest and diseases. Since the 2016/2017 growing season, Malawi has since experienced the emergence of army fall worms for the first time with both farmers and extension workers displaying limited knowledge of how to manage the outbreak. Farmers reported to try various indigenous methods which were not effective. On the other hand, it was obvious that extension workers were elusive to provide recommendations as they too were not familiar with the new pest.

Access to markets. Access to good markets has remained a big challenge to farmers due to the existence of informal middlemen who purchase agricultural commodities at the farm gate. Furthermore, efforts to establish collective efforts have not been sustained by extension organisations. Farmers often reported that most organisations come to their areas and establish groups for collective marketing but fail to get contracts for marketing the produce. This implies that there are no specified obligations between the producers and buyers who in turn can abandon the contract any time.

Low incomes. The problem of low income is linked to absence of structured markets. We found that there are limited financial opportunities in the villages prompting farmers only to rely on income from farming. Farmers expressed the interest to diversify their income sources into other areas such as small-scale businesses if their farming became profitable. However, with the high prices of chemical fertilizers and low prices for agricultural produce, farmers experienced challenges to purchase fertilizer with the majority awaiting to benefit from the government supported farm input subsidy which enabled farmers to procure fertilizer at reduced prices.

3.4. Response to farmers' extension demands

We followed up with farmers to determine how extension organisations have responded to their extension needs. We noted that extension organisations have specified geographic areas of operations and specified extension clientele to work with. In all the FGDs, farmers showed a bundle of interventions that they were supporting. Farmers must belong to the list of farmers grouping such as clubs in order to benefit from all the services of the organisation. We noted that extension organisations implement extension interventions that are in line with the sponsors of the organisations and tend not to be very flexible to accommodate with current and emerging needs of the farmers once the project has rolled out.

Secondly, extension organisations did not have regular contact with farmers in deciding on extension needs. Whilst the demand driven extension approach required service providers awaiting farmers to knock on their doors, there were no mechanisms for allowing this process. Asked how the extension workers from various organisations helped in addressing the challenges, the quote below shows a typical case of lack of assistance.

We understand our extension workers because they have so many farmers and so many areas to attend to so that they may not always be available when we need them, FGD, Ndzamerabowa village, Dedza.

Thirdly, except for selected programmes, extension workers were generally absent in the areas as they only showed up when special projects or visitors came. Interviews with farmers revealed that government extension only shows up in the areas in support of other organisations coming to the area. We noted that all NGOs depend on government extension workers to train their target farmers whereby the NGOs only provide financial resources. Whilst this is encouraged in a pluralistic extension service system, we found that the engagement of extension workers was not formalised as NGOs collaborated directly with extension workers for ad hoc programmes without the involvement of the agricultural office. A quote below highlights the dependence of NGOs on the government extension workers.

We work with government extension system and use their extension workers... Most of the work on the ground is done by [government] agricultural staff. We have field officers but they work hand in hand with the local agricultural staff. The organisation just supports agricultural staff so that they should do the training. We complement agricultural staff work and we provide resources to complement work of agricultural staff. Concern Universal representative.

Government extension is often not well funded to accommodate farmer trainings whilst at the same time NGOs do not have technical personnel to deliver training in specific enterprises. Government extension also reported weak farmer commitment to training which was attributed to lack of training resources.

The study probed on the mechanisms that service providers put in place to identify farmer demands. Interviews with both government and NGOs confirmed our earlier hypothesis that the top down, transfer of technologies approach has remained dominant despite the adoption of the demand driven extension policy. In case of the public extension, the extension activities are decided at the national level and allow for minor modifications especially in the targets per each local area. However, the type of intervention that every extension worker should focus on is the same. Asked if the agricultural activities in Dedza districts would be different from those in other districts, the below highlights the uniformity of the extension plans transcended from the central government:

The activities are more or less the same. We [Department of Extension Services] go for consolidated activities and want to implement similar activities with templates that are compiled from extension workers. Every extension worker indicates his/her targets in the template. If one extension worker has a special programme, he or she indicates a footnote on the template to indicate the additional tasks he wants to implement in his area. Government Extension staff, Dedza.

We noted the existence of a demand driven extension policy document that allows for farmer participation in the determination of the farmers extension needs. However, there is a gap in terms of knowledge on the translation of the policy especially at extension worker level. There is limited engagement of farmers in setting extension activities they are interested in whilst the whole responsibility remains with the extension worker. Furthermore, existence of decentralised structures in the district has varied performance with the majority of the structures not working. The government introduced the District Agricultural Extension Services Implementation guide in 2003 with an aim of operationalising the implementation of the demand driven policy through promotion of establishment of decentralised structures from community to national level. However, the low knowledge among low level extension staff and commitment towards decentralising decision making to community levels have hampered the functionality of the structures.

The case of NGOs is different. We found that almost all NGOs indicated that they conduct baseline surveys to identify priority areas of intervention for farmers in each community. However, whilst farmers acknowledged to have participated in information sharing during surveys, we noted that they feel that they were not adequately engaged in the final decision process of determining extension needs.

3.5. Context for demand driven extension services

We explored mechanisms that are employed by the extension systems in Dedza to understand how farmers' demands for extension services are identified and the respective response. In general, we found three factors that led to a mismatch in the demands of farmers and the type of services offered by extension organisations which are: (a) absence of demand structures; (b) individual processes of demand articulation by service organisations; (c) poor coordination of extension services.

3.5.1. Absence of functional demand structures

We found the existence of structures for generation of demands including the local government structures such as the Village Development Committees (VDCs) and Area Development Committees (ADCs), District Executive Committees (DEC) which comprise agricultural and non-agricultural stakeholders from community level for needs identification and to district level for prioritising and response. The 2000 demand driven extension policy and the 2003 guidelines for implementation of DAESS also call for establishment of agriculture relevant structures such as Village Stakeholder Panels (VSP) and Area Stakeholder Panels (ASP) for identification and communicating farmers demand to the District Agricultural Extension Committee and the DEC. Figure 1 below displays the two decentralised systems.

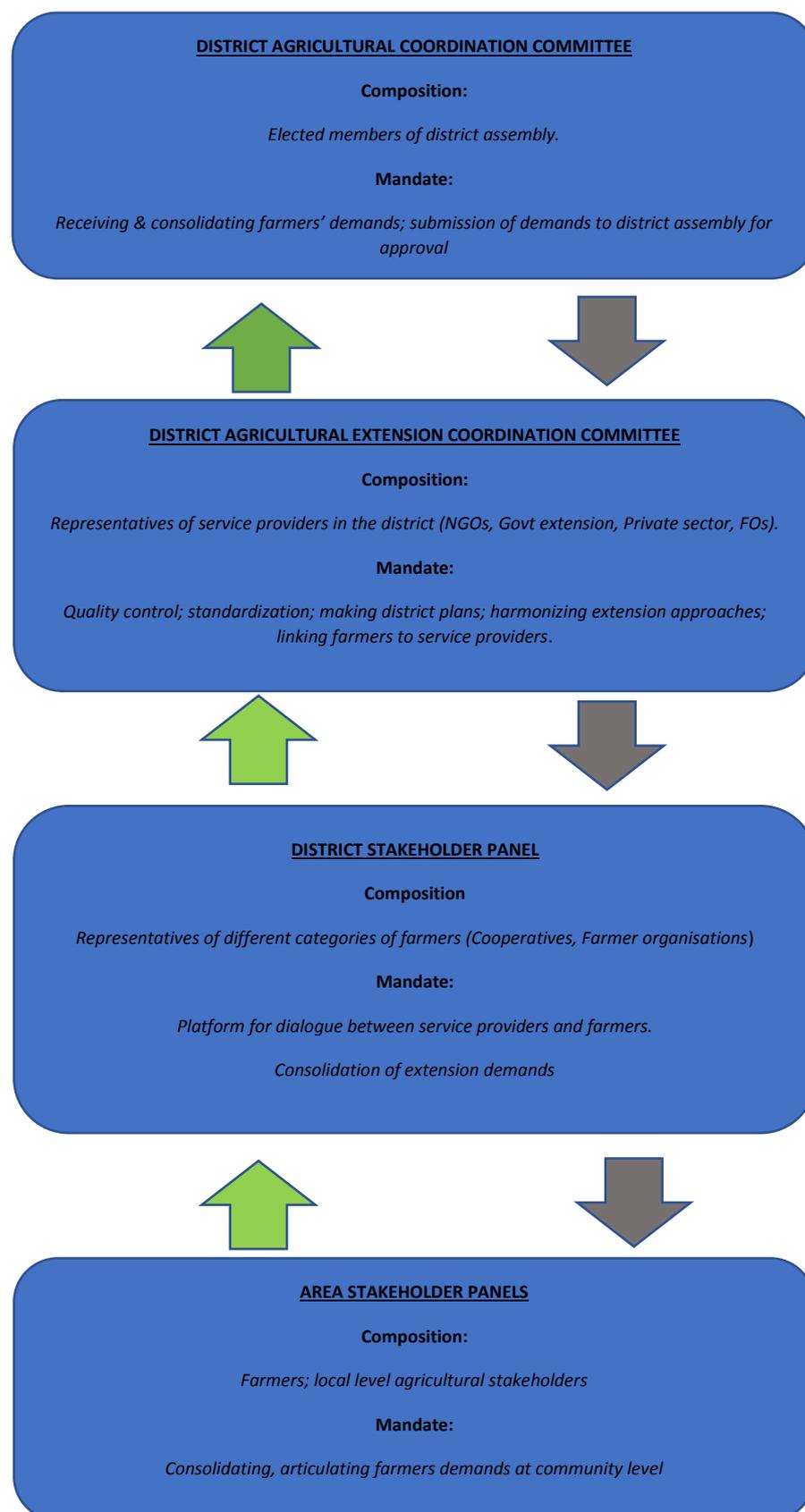


Figure 1: Decentralised structures for demand under the Ministry of Agriculture and the Ministry of Local government.

Interviews with service organisations revealed no existence of such platforms except the DAEC and DEC and the VSP and ASP whose mandate goes beyond agriculture to other areas as health, education among others. The absence of agricultural relevant structure implies that agriculture suffered from thorough articulation of the farmers' challenges.

We attended one DAEC meeting in the district. Our observation was that the DAEC meetings are convened to translate the plans of extension organisations instead of reflecting on the problems using the bottom up approach. Whilst service organisations reported to conduct PRAs, interviews with farmer groups could not confirm such activities or their relevance.

Furthermore, there was a general lack of awareness on the concept of demand driven extension among field level extension workers. Interviews with district level extension revealed that the extension policy was known by district and national level extension personnel, however, front line extension staff were not properly oriented. The lack of awareness of the concept limited extension workers' ability to support existing ASPs and VSPs and to engage farmers effectively in generating extension needs at community level.

3.5.2. Processes followed by extension organisations in needs identification

We found that all extension organisations depended on baseline surveys and secondary literature whenever possible to identify areas of interventions. By depending on generalised problems for the geographic areas, there is a high chance of development of extension programs that are not in line with the actual demands of farmers. According to Masangano et al., (2016), the Malawi extension systems lack front line structures at village level for demand generation. The low levels of awareness on the roles of extension workers poses a threat of weak processes of generating farmer demands.

In essence these committees are supposed to be used to collect, discuss and analyse farmers' demands from communities for support by the district executive. The study found that whilst such structures exist, they are not functional. This is compounded by the absence of agricultural structures at community level for identifying and following up on the demands, and the limited knowledge of the processes of needs articulation by members of the committees, extension workers and farmers as well.

3.5.3. Coordination of extension

We asked representatives of NGOs operating in the district on the process they take to identify areas of intervention and priority setting. We found that all NGOs follow the same system of starting with a baseline survey and later plan a development intervention for a defined project period. We found dependence on baselines to be the main cause for the mismatch. Farmers' needs are complex, dynamic and vary depending on the time of the year. For example, farmers expressed shortage of seed, pest and disease management and fertilizer as important at the onset of the growing season and have their priorities on market access soon after harvest.

Whilst Dedza is one of the districts that have many NGOs, the extension policy calls for limiting duplication of extension efforts on one area while depriving the same of other areas. We found that the extension organisation are mostly complementing government efforts in attaining food security and emergency recovery through supporting farmers with seed, irrigation and livestock pass-on programmes and training. A notable feature in the NGO extension operates in a defined geographic area which is not covered by other NGOs. There were however overlaps in the nature of interventions among NGOs. For example, all the three NGOs were promoting village savings and loans, irrigated farming and supply of seeds but to selected farmers in their specific geographic area.

Despite the diversity of extension services offered, we found that access to such services was limited to the prioritised extension clientele. Extension trainings, support of inputs and equipment of all NGOs are limited to selected farmers in the EPA, implying that despite the

services being relevant, the fact that the NGO is not operating in the other EPA. This is also the same for farmers who are not registered as members of farmer clubs. The services are therefore not available to the majority of the extension clientele within the target areas of the NGOs.

4. Conclusions

Malawi, and Dedza, in particular, stands a good chance of advancing the implementation of a demand driven extension strategy due to the existence of policy frameworks in support of the strategy. The demand driven model offers an opportunity for more farmer participation that could ensure that extension services are relevant to the needs of farmers. However, successful implementation of demand-driven extension services is dependent on establishment of demand structures and enhancing farmers capacity to express their needs. Furthermore, the low participation of the private sector in agricultural extension service delivery limits farmers' right of choice of extension services from the service players. The dominance of the public and international organisations in extension delivery with no involvement of the private sector limits the chances of addressing farmers' individual and private interests in extension. It is therefore important to trigger more private sector engagement through the decentralised demand structures and establish systems for demand with improved capacity of farmers at community level to make the demand driven model a reality for developing countries.

5. References

- Anderson, J. R., & Feder, G. (2004). Good Intentions Extension: Agricultural and Hard Realities. *The World Bank Research Observer*, 19(1), 41–60. <https://doi.org/10.1093/wbro/lkhO13>.
- Chipeta, S. (2006). *Demand Driven Agricultural Advisory Services*. Lindau.
- Davis, K., Faure, G., Nahdy, M. S., & Chipeta, S. (2009). Institutional changes and challenges for agricultural advisory services in Africa. In *Theory and practice of advisory work in a time of turbulences. XIX European Seminar on Extension Education, 15-19 September 2009, Assisi, Italy* (pp. 41–45).
- Kidd, A. D., Lamers, J. P. A., Ficarelli, P. P., & Hoffmann, V. (2000). Privatising agricultural extension: Caveat emptor. *Journal of Rural Studies*, 16(1), 95–102. [https://doi.org/10.1016/S0743-0167\(99\)00040-6](https://doi.org/10.1016/S0743-0167(99)00040-6).
- Klerkx, L., de Grip, K., & Leeuwis, C. (2006). Hands off but strings attached: The contradictions of policy-induced demand-driven agricultural extension. *Agriculture and Human Values*, 23(2), 189–204. <https://doi.org/10.1007/s10460-005-6106-5>.
- Malawi Government. (2015). 2015 / 2016 National Food Insecurity Response Plan, 1–65.
- Masangano, C., Chiwasa, H., Kambewa, D., Kakwera, M., Chimombo, M., Matita, M., & Gausi, W. (2016). Making the demand driven extension services systems work through decentralised structures: Prospects for the future extension service delivery in Malawi. *Journal of Agricultural Extension and Rural Development*, 8(12), 240–249. <https://doi.org/10.5897/xxxxxxxxxx>
- Masangano, C., & Mthinda, C. (2012). Pluralistic Extension System in Malawi, (April). Retrieved from <http://www.ifpri.org/publication/pluralistic-extension-system-malawi>.
- Minh, T. T., Friederichsen, R., Neef, A., & Hoffmann, V. (2014). Niche action and system harmonization for institutional change: Prospects for demand-driven agricultural extension in Vietnam. *Journal of Rural Studies*, 36, 273–284. <https://doi.org/10.1016/j.jrurstud.2014.09.008>.

Peters, P. (1997). Against the Odds. *Critique of Anthropology*, 17(2), 189–210.