

Drivers of collective action and innovation adoption in successful poultry farmer groups in Wakiso District in Uganda

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ABSTRACT

The study investigated drivers of collective action and innovation adoption (innovativeness) in successful poultry farmer groups (FGs) in Wakiso district, Uganda. The potential role of FGs as rural institutions for collective uptake of agricultural advisory services has been recognized. But literature on drivers of innovativeness in successful groups remains minimal or undocumented triggering a need to investigate factors involved. Results from eight Key Informant Interviews and six Focus Group Discussions indicate that FG innovativeness and success were a function of access to institutional knowledge, resources and adherence to regulations. The experience individuals in a group had and group involvement in diverse income generating activities contributed greatly to FG success. To enhance innovativeness and success, group access to resources and adherence to regulations must be emphasized. Additionally, individual experience and group involvement in diverse activities needs consideration.

Key words: Collective action, farmer groups, innovation adoption, poultry, Uganda, Wakiso

RÉSUMÉ

Cette étude a examiné les moteurs d'action collective et d'adoption des innovations par les groupes d'aviculteurs (GAs) ayant prospéré dans le district de Wakiso, en Ouganda. Les GAs ont un rôle potentiel reconnu en tant qu'institutions au niveau rural pour l'utilisation collective des services de conseil agricole. Toutefois, la littérature sur les moteurs d'innovation dans les groupes ayant eu du succès reste minime ou non documentée, ce qui entraîne un besoin d'investiguer les facteurs impliqués. Les résultats obtenus à partir de huit entretiens avec des personnes ressources clés et de six focus groupes indiquent que l'innovation et le succès des GA étaient fonction de l'accès aux connaissances institutionnelles, des ressources et du respect de la réglementation. L'expérience des membres d'un groupe donné et la participation active au sein du groupe à diverses activités génératrices de revenus, ont considérablement contribué au succès des GAs. Pour améliorer innovation et succès, l'accès des groupes aux ressources et le respect des réglementations doivent être soulignés. De plus, l'expérience individuelle et l'approche participative au sein du groupe doivent être prises en compte.

Mots clés: Action collective ; groupe d'agriculteurs ; adoption de l'innovation ; aviculture ; Ouganda, Wakiso

INTRODUCTION

Collective action as a condition to support rural development, agricultural modernization and a better market for farmers has been emphasized (Crespo *et al.*, 2014). In Africa, farmer groups (FGs) as institutions for collective action, have enhanced participatory access to advisory services and innovations (Kilelu *et al.*, 2016; Prager and Creany, 2017). This makes FGs useful in addressing rural hunger, unemployment, poverty, and environmental conservation concerns (Shumsky *et al.*, 2014). According to Crespo *et al.*

(2014) and Chagwiza *et al.* (2016), Farmer Groups (FGs) have promoted organization of rural farmers to develop a common vision, shared interest, reciprocity and cooperation between members.

In Uganda, the Government instituted the National Agricultural Advisory Services (NAADS) programme, which *inter alia* was to develop farmer-controlled institutional structures. NAADS, a farmer-owned and demand-driven programme, was an organizing framework to bring various categories of farmers together. Using a farmer

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institutional development (FID) approach, it was to help farmers register and organize into groups to access resources collectively (NAADS Act, 2001; MAAIF, 2013a). New groups were formed and old ones which had existed under various local arrangements were re-aligned to fit NAADS demands.

The old groups had depended more on members' pooled resources and income from various activities they indulged in to survive. Under NAADS, a FG was a collection of individuals with a common farming interest, who regularly interacted and influenced each other, to achieve a common goal to enhance commercial farming skills and increase income (MAAIF, 2013a). In this context, collective action refers to individual action taking place within FGs to achieve institutional goals using adopted NAADS' advisory services.

Groups formed under NAADS were to demand services meant to ensure food and nutrition security and market-oriented farming. Under this arrangement, training courses and material support were to be availed to beneficiaries within FGs dealing in various enterprises, poultry inclusive (PMA, 2000; PMA, 2005; NAADS, 2013a).

To succeed in poultry, farmers were to participate in technology development and transfer; and address agricultural challenges in production, value-addition and marketing. As Inguaggiato *et al.* (2014) similarly noted, the primary objective was to improve primary poultry production, productivity and product quality using adopted innovative technologies.

Many chose poultry because of its nutritional value and marketability (NAADS, 2011; MAAIF, 2013a). Its popularity among the youths and women was due to the little space poultry rearing required, as many lacked land. Most FG members especially women, chose to rear chicken jointly and also market products together. Others opted to work and market individually.

Despite more than 15 years since NAADS'

establishment and implementation, reports on poultry FGs performance indicate little success (Benin *et al.*, 2008; UDN, 2010). Many groups have had little access to service delivery and rarely participated in technology development. Most FGs failed to achieve food security hence had little for the market. However, despite failure of many groups, there are some groups that registered success. How these FGs were effective in achieving success is the gap this study investigated.

Understanding mechanisms responsible for the increase in small farmer incomes and innovativeness will inform policies to promote successful methods to improve livelihoods. Based on this, the study was guided by the following research questions: what factors drove poultry FGs resilience and success?; how were incomes increased with inadequate NAADS services/inputs?; what particular institutional mechanisms were most important in promoting collective action and farmer innovativeness?

METHODOLOGY

The study involved six cases of purposively selected FGs from six sub-counties (i.e., Kasanje, Kakiri, Kira Town Council, Nangabo, Makindye Ssabagabo and Nabweru) in Wakiso district, central Uganda. The district was purposively selected as it had many poultry farmers who benefited from NAADS poultry programme. Its developed infrastructure and markets for poultry products made it ideal for the study.

Data collection. The study used a case study design based on qualitative evidence. The design was appropriate to explain the causal links in real-life interventions that are too complex for the survey or experimental strategies (Stake, 2010). This helped in gaining a holistic view on the subject from poultry farmers and NAADS officials. Successful poultry FGs were identified from sampling frames obtained from district headquarters based on: having been registered and served by NAADS; still existing and dealing in poultry. Such FGs had on average between 25 to 30 members.

Data collection methods involved documentary analysis, complemented by six Focus Group Discussions (FGDs) and eight Key Informant Interviews (KIIs). This ensured result reliability and validity (triangulation). Data collection occurred from March 2014 to July 2015. Information on institutional knowledge, resources and regulatory dimensions, was collected during the study.

Regarding knowledge (cognitive domain), information centered on *inter alia*; training in poultry knowledge, rearing skills and techniques, and record keeping. On resources (allocative domain), information involved: resource mobilization, procurement and allocation methods. The regulatory domain information focused on the presence/absence of FG laws, rules, constitutions, etc. Information on farmer innovativeness involved acquisition and usage of new ideas, processes and practices in poultry management. Social data involved group formation, experience and activities poultry FGs indulged in. The fact that the initiatives were on-going provided the opportunity to follow the processes in real time. For each of the single case studies, the unit of an analysis was the poultry FG and innovativeness. Since the Institutional theory deals with group organization, structures, roles and functions (Rica *et al.*, 2014; Kang *et al.*, 2015), it offered explanatory power during analysis.

Data analysis. Data were systematically analyzed from all interview transcripts, field notes and other relevant documents in order to identify first-order concepts. In the second stage of analysis, there

was axial coding to build up more abstract and robust descriptions of farmer group development and innovativeness. Once these categories were developed, they were fleshed out with examples of quotes taken from the primary data and our results presented below.

RESULTS

Cases of interviewed poultry FGs from six sub-counties of Wakiso district are shown in Table 1. The data show that the egg laying layer-type chicken was the most preferred by farmers. Three FGs out of six reared both layers and improved locals.

Socio-demographic characteristics of poultry FGs. Most of the FGs were dominated by female farmers (62.24%), with males contributing 37.76% showing a disregard for gender balance and marginalized groups like people with disabilities (PWD) as stipulated in the NAADS Act, 2001. From FGDs and observations, PWDs were not present in most of the FGs and the youths were few contrary to the provisions in the NAADS Act, 2001. The female youths who had children at a tender age were also marginalized. They could not be taken as adults yet they never considered themselves as youths.

Female dominance was attributed to *inter alia* changing roles of women who increasingly are becoming sole family breadwinners. Additionally, the male preference for faster income generating activities than intensive poultry farming was alluded to by some FG members that;

Table 1. Successful poultry Farmer Groups and areas they were interviewed from, poultry type and sample size

Farmer Group (Cases)	Sub-county	Type reared	Number of respondents
Abagumikiriza group	Kasanje	Layers	6
Abesiga Mukama Womens' group	Kakiri	Layers	10
AGA –AWA	Kira	Layers, improved locals	6
Nangabo farmers' group	Nangabo	Improved local, layers	10
Kuteesa group Ndejje	Makindye-Ssabagabo	Layers	11
Nabweru poultry farmers	Nabweru	Layers, improved locals	10

Source: Field data from Wakiso district

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'Men and youths prefer quick, easy money especially gambling; ... some women are widows and though others have spouses, they look after their families; attend meetings and work in groups to survive.' (Nangabo farmers' group, 2015).

Table 2 shows that most poultry farmers were married (69.81%), one mechanism that could account for FG strength, discipline, cooperation and shared decision-making. Results in Table 3 show that most FG members adopted income diversification strategies to increase their income base. Experience in handling pooled resources from diverse sources, made FGs like 'Kuteesa' and 'Aga-Awa' overcome challenges and stay together in poultry and other small businesses. One NAADS official stated that;

"Farmer group survival, sustainability and success was based on whether the group had money or money generating enterprises. Everything rotated around money...No money no farmer group and we shouldn't pretend about it. Give the poultry farmers money or means to make money and the groups will stay...short of that forget and don't bother people!" (NAADS official, September, 2015).

A district official also said:

'Farmer groups and fora were active but we could not separate what was happening in the general population from what was happening in fora and groups. Their performance was good when financial resources were availed to them under NAADS; it is poor now due to scarce resources.' (Wakiso district technical officer, 2015).

As stated in the NAADS training manual, *Financial resources are as equally important because they aid the use of other resources. However, financial resources are a constraint to groups, which need to be mobilized from different sources* (NAADS Training manual, 2013).

Many FG members revealed they indulged in multi-income sources (MIS) i.e. secondary activities like handcrafts, trading, and mobilized savings to cope up with scarcity and fluctuations

in market prices to sustain groups.

Influence of institutional dimension factors on innovativeness in poultry farmer groups.

According to the responses in Table 4, organizing farmers in groups with functioning structures and committees increased their participation in group decisions. The results show that FGs that had rules and/or constitutions and adhered to them had a great probability of advancing group discipline, trust, cohesion and collective focus. For instance as remarked below by a member;

"By members abiding to the group constitutional provisions enabled us work as a team...there are punishments for those who don't follow group laws." (Remarked a member of 'Abagumikiriza' farmer group in Kasanje Sub-County).

Laws enabled farmers to collectively elect FG leadership, and to participate in needs assessment and enterprise selection. One poultry FG respondents said:

'We used NAADS regulations and our group constitution to elect our leaders democratically. The leader must be social, hard working and of permanent settlement in our area.' (Nangabo farmers group 10th August, 2015).

According to Aga-Awa poultry FG one provision in their constitution stated *inter alia*:

'Members shall elect the Chairperson if they decide, every year. To be a chairperson, you must have the leadership qualities especially passion. A member must be 18 years and above and should attend all group meetings. Should a member miss meetings for five consecutive sittings that member ceases to belong to our group.' (Aga-Awa farmers group in Buwaate, Kira Town Council Wakiso district).

Presence of guiding principles and group laws was another mechanism that promoted harmony and equity in these FGs as one female member observed:

'We used to fear leadership roles. Now I feel I can lead and get involved in committee work (female poultry farmer of the group, 15th August, 2015).

This was authenticated in a KII by one NAADS official:

'Farmers participated in choosing their leaders to various positions. At the lowest level was the committee for village farmer forum created by all farmers implementing NAADS activities at the village level... All the committees were farmer led which helped them own the decisions reached (NAADS official).

Interviews with FG members (Table 4) showed that good and effective leadership was a result of presence and sticking to the law. Farmer Group leaders offered oversight functions over collective actions and transparent inputs provisions. Farmers affirmed that group leadership controlled elite capture and intra group dynamics. It created incentives for collective innovativeness and participation in group activities and encouraged farmers to develop their entrepreneurial skills.

'Aga-Awa' FG members observed that mutual trust was a key factor to their success. Trust enabled

the group to be chosen to represent the country outside;

"Members sit down with the chairman regularly and decide on how group activities are to be conducted.... the chairman is elected from amongst us, he is accountable to the group and its members making us execute our work together" ('Aga-Awa' group member during an FGD on 8th August 2015).

Similar sentiments were made by 'Kuteesa' and 'Abagumikiriza' poultry FGs in Kasanje Sub-county. Responses show that FGs that had rules and/or constitutions and adhered to them had a great probability of advancing group discipline, trust, cohesion and collective focus. For instance as remarked by a member;

"By members abiding to the group constitutional provisions enabled us work as a team...there are punishments for those who don't follow group laws." (Remarked by the member of 'Abagumikiriza' farmer group in Kasanje Sub-County).

Table 2. Marital status of the respondents

Marital status of the respondents	Freq.	Percent	Cum.
Married	37	69.81	69.81
Divorced	03	05.66	75.47
Widow(er)	07	13.46	88.93
Single	06	11.32	100
Total	53	100	

Source: Field data from Wakiso district

Table 3. Poultry rearing and other occupations poultry farmers in a group indulged in

Main occupation of most farmers in FG	Frequency, n	Percentage	Cum. %
Poultry only	30	59.18	59.18
Business person	08	32.08	77.55
Employee in private enterprise	03	06.12	83.67
Public service employee	03	07.14	90.80
Others	09	09.18	100
Total	53	100	

Source: Field data from Wakiso district

Table 4. Farmer Group Discussions and discourses on institutional dimensions and innovativeness among poultry farmers

Farmer Group and location	Knowledge	Regulatory dimension	Resources	Innovations	Marketing
1) 'Abagumikiriza group' Nakawuka village, Katabi sub-county.	New FG; member selection fine; FG organized and trained; common farming interest; had set goals; poultry mainly layers.	FG registered; had constitution; had structures with roles spelt out; adherence to FG rules; democratic elections held; Trust built; leadership strong; mobilized inputs; fair incentive system in place.	Needs assessment done; enterprise selected (poultry); decision-making process established; inputs sourced by Private service providers (PSPs); inputs supply delay/scarce; weak resource support system; FG pooled own resources and built incentives; kept enterprise and FG records; fair local government support.	Innovated using newly acquired knowledge/ skills to access and buy quality birds Buy / mix quality feed; vaccinate and follow dates; keep hygiene; have good brooders and chicken/ houses; good spacing and use clean water; sorting, grading eggs done; .at times keep input /sales records; group meetings and meetings recorded; failed to monitor sufficiently.	Collective marketing some times; most sell individually; no bulking centre; no marketing centers; Many markets; free riders problems and selfishness force some to sell alone; market/ price fluctuation leads to poor prices.
2) 'Abesiga MukamaWomens' group', Kakiri sub county.	FG old /existed; diverse activities /income; enticed by the training and inputs offered; capacity built; we developed action plans; poultry major activity and layers mainly.	FG registered; had constitution; members followed FG rules; leadership elected democratically and was trusted; good resource mobilization; presence of cash sharing and good information flow.	Needs assessment done; chose poultry but few benefitted; poor quality inputs is our challenge; Private Service Providers were given to us; limited monitoring; inputs expensive /rarely come in time and we received little; use our own resources; have team work and share the little resources.	Built and use good/safe poultry houses; know how to buy/mix and use quality feeds; use local herbs to feed/ treat our birds; choose and buy most of our birds; vaccinated our birds and observe hygiene.	Most members sell products individually; members have varied problems; distance hinders some members; democratically we allow members to solve problems; diverse activities allow for other products in the market; prices for eggs poor yet inputs highly priced.

3) 'AGA-AWA poultry group', Kira Municipality.	FG old/existed; FG with structures; involve diverse activities; trained and own inputs; have layers and improved locals; periodically reviewed set goals; chosen as one of the most successful in the country.	FG registered; have constitution and members follow FG rules; leadership elected democratically; elect leaders every 2 years; incentive system in place; built relationship among individual members especially across political color, gender, and ethnic boundary	Participated in choosing enterprise; involved in committee work as a team; no funds to monitor; poor feedback from officials; share the little we have; have money and resource problem; good group records; fair local government support	Pooled resources; meet frequently; vaccinate on time; mix our feeds; meet other farmer groups; we have performed well and recognized for this; we keep records.	Sell most times as a group but also individually; buyers cheat us; market unstable; sell eggs, chicken, and waste; supplement with other products from our other small businesses; no bulking or market centre.
4) 'Nangabo farmers' group'; Nangabo Sub-county	New FG; members attracted because of benefits and training, i.e., in group dynamics, poultry management, and book/ records keeping; we wanted to tackle poverty; group with aged members and pensioners; focused on improved local chicken	FG has its rules; good leadership but face resource scarcity/ mobilization problem; members shared responsibilities in tasks performance; leader communicates to group members; developed self monitoring mechanisms and reward system.	Participated in choosing enterprise; involved in some committee work; work as a team; beneficiaries selected according to capability (premises, money etc); 'poor' left out; limited resources especially money; weak farm records keeping; good group records; local government support fair.	Good housing; trained brooder preparation; buy/mix feeds; we have local initiatives to treat diseases and pests; engaged in diversification; keep group records but not so much with members.	Low egg prices; not helped to get better markets; taught about bulk marketing but bulking failed; varied problems of members; sell individually; no collection centers; manage through diverse businesses; self-help through pooled funds
5) 'Kuteesa group' Ndejje, Makindye Ssabagabo	FG old/ existed; diversified; joined to receive training and inputs; fight poverty/ unemployment; we chose layers	FG has its rules but rarely followed; leaders originally good but then turned political and selfish; and subsequently failed to schedule meetings; leaders became selective; colluded with Private Service Provides and officials; political influence in election of leaders; created our own incentive system.	Beneficiaries selectively chosen (e.g. leaders, elders first); committee powers eroded by officials; politics in inputs access; most members tried to keep records; poor local government support	Good housing and brooder; timely vaccination; we buy/mix feeds and use local feeds to supplement expensive feeds; sell waste product; keep records; alternative income keep us moving.	Market available but prices low; sell individually; egg price low; indulge in other business activities to survive and stay in poultry.

<p>6) 'Nabweru poultry farmers group,' Nansana Sub-county</p>	<p>Old; existed; diversified; received training; wanted to use knowledge to fight poverty/ unemployment; keep layers and improved locals</p>	<p>Leaders good but staying long in power; funding problem; members listen to each other and valued different views; leaders built actor motivation; cash rounds/ build incentives.</p>	<p>Chose enterprise; have committees; used to chose beneficiaries but inputs little; did not monitor; no funds for monitoring; poor feedback from officials; shared the little we had; have money problems; not recorded all activities; farm records kept by few members; poor local government support</p>	<p>Put up good housing, brooders; used to receive birds but were few and we bought ours; carried out timely vaccination; mixed our feeds; used local feeds to supplement poultry waste products but resources failed us; we could not manage to continue.</p>	<p>Poultry products were sold individually; product quality was not so bad but distances between farmers affected group; production time differed due to allocations; unable to market much; no money to buy feeds given; mobilized funds through group effort.</p>
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Additionally, the constitution of one farmer group had provisions which stipulated that: *‘..No rumor mongering in the group and any member who deviate from the constitution shall be fined: Membership is UGX 10,000 (USD 3.0, 2014; no reimbursement once member leaves; Activities must be agreed upon by all members’ (Reads part of the AGA-AWA group constitutional provisions, Buwate, Kira sub-county, Wakiso district).*

The constitution of the Naziba Women and Men’s group, Sseguku parish Makiindy-Ssabagabo, Wakiso district in its article 10, clause (b) and (c) read in part; *‘Every member shall be bound to further interest and objectives of the group and shall observe all the rules governing the group. Missing meetings for more than two times lead to dismissal’ (The constitution of the Naziba Women and Men’s group).*

Group sanctions and pressure from peers controlled free-riding practices like failing to pay group subscription or occasionally selling their poultry products unscrupulously to outsiders without group involvement. As remarked below;

“Some farmers and group members used to get chicken but instead of raising them they would sell them off. When members learn of it you are either suspended from the group, told to pay or be expelled from our group.” (‘Aga-Awa’ group member during an FGD on 8th August 2015).

Regarding the issue of disseminated knowledge from NAADS (Table 4) this exposed farmers to new poultry rearing techniques that motivated and influenced their entrepreneurial orientation. As explained by some youths in a FG;

“... When we joined this group and assigned responsibility we have benefitted a lot. We mix and make our chicken feeds and we procure and get the ingredients” (Abagumikiriza group, 15th, August, 2015).

Information and knowledge acquisition, sharing and utilization was one other mechanism that drove FG members to collectively mobilize and pool funds, identify

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and buy quality poultry inputs. As one of the farmers in a group remarked;

'We know the capacity the chicken house can hold and the numbers that can make us break-even; We know the amount of food to give the birds and identify those that are not laying. We keep records as a group ('Abagumikiriza group', 15th August, 2015).

Responses in Table 4 further show that FG success depended on group collective effort to mobilize, pool resources and their rotational and transparent allocation. NAADS resources were little and their procurement and allocation was often done with limited farmer involvement.

'A lot of politics, unfair distribution by corrupt procurement and distribution by NAADS officials. It affected timely access to the much needed resources.' (member 'Abagumikiriza' farmer group in Kasanje Sub-County).

Table 4 shows that old FGs fared well in poultry rearing compared to new groups. Staying together for a long time for social security, created a firm foundation for sustainable group management. It enhanced collective effort to overcome challenges. Members of one FG said;

"For long we've met twice a month to discuss group matters ... we visit each other, share and learn. Commitment and trust helps our resilience especially in our cash round activities from which members are assisted. ...we mobilize money and save to avoid bank loans and money lenders." (Members, Abesiga Mukama Women's Group).

Similar to NAADS' guideline documents and training manual, such groups had surpassed the four stages or processes of group formation/dynamics characterized by full maturity, stability and maximum productivity (formation, disintegration, norming and take off). The excerpt below reveals that;

'Farmers are empowered when they have access to and control over structures and processes that transform their natural resource assets into outcomes they desire. It is very difficult to achieve this in the delivery of services to

individuals. One prerequisites for empowerment of farmers was to enable them create institutions through which they can act collectively and get their voices heard in the decision-making process.' (NAADS Training Manual, 2013).

The presence of markets for poultry products enabled organized FGs to exploit it and survive. Despite mixed farmer responses in Table 4 with some selling their products individually, those that received services and inputs in time tried to sell as a group. Farmers that sold individually, according to district officials, did so due to inconsistencies in input supplies by NAADS. Farmers noted that; *'Sometimes we sell individually because farmers may get few birds of different breeds and not even of the same age... birds are received in turns and most farmers do not stay near each other which may force some in the group to sell individually at time rather than in their group (Member, Aga-Awa poultry group Buwaate, Kira sub-county, Wakiso district).*

DISCUSSION

Factors influencing collective action and innovativeness in successful poultry FGs.

Despite working under very poor performing systems, findings indicate that poultry FGs especially old ones, survived. The explanation for this is based on group trust, constitutions and processes that were in place for a long time, like indulging in diverse income generating activities. These enabled team work that overcame constraints from poor NAADS service delivery. Since most new FGs were yet to build trust, and had limited social incentives and sanctions, this basically set up these groups to fail.

For successful FGs, collective action, innovativeness and resilience were achieved based on internal group arrangements, i.e., resource mobilization and access to it, with member adherence to institutional regulatory arrangements. Together with influence and interactions from Social Demographics Attributes (SDAs), this was important in promoting incentives towards intended objectives. Similar to highlights by the

institutional theoretical framework (Beer and Lester, 2015), organized FGs with functioning structures and trusted leadership enabled poultry farmers address effectively production and innovation constraints.

A number of authors (Inguaggiato *et al.*, 2014; Chagwiza *et al.*, 2016) also note that organizational success is a product of presence of effective institutional structures. This according to Rica *et al.* (2014) and Baynes *et al.* (2015), is strengthened by social factors like *inter alia* educational level, skill, experience and leadership.

Influence of Group age/experience and diverse activities on poultry FG success. According to the findings, length of existence of a group, i.e., “age” and/or experience, enhanced collective action and strengthened entrepreneurial stances of the FGs. The long history of actor association created a strong sense of social trust and cohesion among members. This lessened the fear for risk, and checked elite capture. Despite arguments (Karlsson and Hovelsrud, 2015) that strong social bonding is for survival rather than group development, in this study, similar to findings by Baynes *et al.* (2015), both aspects featured in the poultry FGs. This enabled achieving food security, value addition and marketing of products to improve livelihoods.

Furthermore, the study showed that while FGs adopted NAADS innovative technologies, they devised other means to survive like diversification. Diversification as a coping mechanism offered alternatives to increased FG income base from enterprises they have been indulging in for a very long time to stem poverty. Engaging in secondary occupation, *inter alia*; vending or crop husbandry, reduced resource scarcity and increased FG survival. Similar observations were made by Iwasaki (2014).

Resources scarcity in rural areas forces actors particularly women, to revert to tontines (traditional forms of saving and credit) to fill the gap (Ashta and Salimata, 2012). This increases their potential and survival chances for advancement through

creative/expressive capabilities which promotes participation, development and help free farmers’ mindset (dependency syndrome). Consequently, it is important for policy makers to note that new programmes are not introduced in a vacuum they should build on what is on the ground. Hence harnessing these activities and lived experiences that for long have evolved with communities they intend to serve, alongside new enterprises, could promote successful farmer development. Farmer innovations explain the firm foundation old FGs had leading to members’ belief that survival depends on team work, trust and accountability. This agrees with the findings by Prager and Creaney (2017). It bound farmers to obey rules and share resources on a rotational basis, which ensures equal opportunities to limited resources at group level (Hounkonnou *et al.*, 2012; Beer and Lester, 2015).

Influence of Leadership and structures on poultry FGs. Results show that farmer participation in electing trusted leadership, contributed greatly to FG success. This is because good leadership motivates and promotes proper functioning of organizational structures (Kantarama, 2016). Thus when actors observe group rules, business costs due to untrustworthiness are reduced (Steffens *et al.*, 2016). The FGs like ‘Aga-Awa’ succeeded due to authentic leadership that advanced group interests and this inspired followership. Authentic leadership is transparent, balanced and guided by moral standards and values (Steffens *et al.*, 2016). Authentic leader actions allowed for e.g. periodic group meetings that motivated farmers; and the essence of authentic leadership is to know, accept and remain true to one’s self (Avolio and Gardner, 2005). Successful poultry FGs became characterized by self-awareness, relational transparency, balanced processing and internalized moral perspective which complemented influences from institutional dimensions.

Influence from Institutional knowledge, resource and regulatory dimensions. The findings showed that three explanatory institutional dimensions: knowledge, resources and regulatory

domains, influenced resilience and success of poultry FGs. The study found that accessing knowledge and training in poultry management and group dynamics increased FG survival potential. The explanation is based on FGs using acquired resources collectively to improve chicken quality, housing, breeds, feeds and drugs during production. Knowledge empowered farmers also to reduce on socio-economic disparities which encouraged equity, participation and collective action. This, according to Spencer and Gomez (2004) is important for developing self-efficacy, capability, creativity and a shared vision for group survival and success.

Results further shows that collective action is compromised in absence of strong social regulations promoting social solidarity; it operates well in presence of strong institutional rules and peer pressure. Adherence to written rules enabled regulation of members' behavior beliefs to achieve FG goals because legal regimes or institutions provide constraining and enabling contexts for groups (Geels, 2004; Gomez-Haro *et al.*, 2011).

The findings also indicated that institutional resources were neither easily accessible nor adequate. Old FGs overcame this through experience and use of pooled group resources. Additionally, income from diverse activities increased FG income base and this enabled survival where NAADS resources were scarce. Ingauaggiato *et al.* (2014) noted that such alternative resources are important in expansion of economic activity, welfare and in triggering innovativeness. The reported collapse of most FGs (UDN, 2010) was due to inability to save, weak capacity for surplus creation and lack of crucial inputs critical for production. Similarly, available resources should be transparently accessed by members on a rotational basis. This adds to group motivation and success (Tuna, 2014).

Market influence. The availability of markets was an impediment to group collective marketing. While there could be some gains when FGs bulk and market products together (Liverpool-Tarsie,

2014), presence of many markets drove some individuals to sell at will. However, collective marketing was not possible largely because of NAADS inconsistencies in timely services and input deliveries which affects uniform production and marketing. This disrupted FG planning and collective action.

CONCLUSION AND RECOMMENDATIONS

Poultry FGs devised alternative means to complement and cope with inadequate and poor performing advisory systems. The cope up mechanisms depended on group experience and leadership that enhanced proper resources management, and adherence to the law. Farmer diversification in other income generating activities was important as it widened group income base. These multi-income sources (MIS), act as buffers against economic shocks or resources scarcity. Policy makers should also consider groups that have existed for some time. These have had time to build MIS and the trust that make them resilient to economic adversity. The argument is about knowing how and what the local people have been doing and tap into this alongside the proposed new initiative. Furthermore, policy intervention is needed in Uganda regarding re-instating cooperatives with strong marketing systems to address challenges farmers face in marketing their produce.

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STATEMENT OF NO CONFLICT OF INTEREST

We the authors of this paper hereby declare that there are no competing interests in this publication.

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