

Full Length Research Paper

The role of rural producer organizations in enhancing market participation of smallholder farmers in Uganda: Enabling and disabling factors

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The study investigates the factors influencing the effectiveness of second-tier rural producer organizations (RPOs) in linking their members to output markets in Uganda. The percentage of farmers who sold some of their produce through the RPO was used as a proxy for effectiveness. Ordinary least squares (OLS) regression analysis indicated that RPO effectiveness was positively related to the size of a RPO and democratic leadership. On the other hand, the proportion of RPO leaders with leadership training, enforcement of internal control practices, bulking distance and size of executive committee had a significant negative effect on the effectiveness of such organizations. It was concluded that improving the effectiveness of RPOs required the (i) use of numerous sub-committee instead of many all-member meetings and smaller executive committees; (ii) dedication, respect and commitment by leaders of RPOs when imparting skills learnt in order to boost members' morale; (iii) devising reward systems for leaders or putting in place stringent rules, such as leadership codes, to guide leader behaviour so as to prevent conflict of interest and possible elite capture; and (iv) policies guiding Savings and Credit Cooperatives (SACCOs) lending conditions be reviewed to match rural producers' economic status and seasonality of enterprises.

Key words: Marketing rural producer organizations (RPOs), RPO effectiveness, smallholder farmers, market participation, Uganda.

INTRODUCTION

Government agencies, the donor community, and non-governmental organizations (NGOs) have rediscovered the important role that rural producer organizations (RPOs) can play in rural development, especially in strengthening the capacity of smallholder farmers to access markets (Bijman and Wolini, 2008; DFID, 2005;

Mercoiret et al., 2006; Shepherd, 2007). The renewed interest has been driven by changes in the global agricultural economy stemming from trade liberalization and globalization. Under such circumstances, improving smallholder competitiveness becomes essential (Onumah et al., 2007; World Bank, 2007). However,

because of the many constraints limiting the ability of smallholder farmers to individually compete in agricultural markets, collective action in the form of RPOs is seen as important in enabling farmers to achieve competitiveness in the markets.

In Uganda, marketing RPOs were re-initiated in the 1990s following identification of a 'marketing gap' that had resulted from the collapse of an earlier cooperative system and the implementation of structural adjustment programs (Bigirwa, 2005; Opio-Odongo, 1980; Najjingo and Sseguya, 2004). In reviving cooperatives, the government withdrew from marketing activities, which included price regulation, quality assurance and provision of trade finance and production credit (Mwesigye, 2006). Since the cash crop market had been built around marketing boards, with cooperatives acting as collection agents (Flygare, 2006; Mwesigye, 2006), the withdrawal of government created a vacuum in agricultural marketing that was expected to be filled by the private sector, NGOs and producer organizations.

In an effort to close the marketing gap, the government of Uganda stressed the importance of forming a hierarchy of farmer associations. This was regarded as a framework for the commercialization of smallholder agricultural production through the plan for modernisation of agriculture (Diaz, 2004). Similarly, Uganda Cooperative Alliance (UCA), the apex body for all registered cooperatives in the country, has been facilitating a new model of secondary cooperatives, the Area Cooperative Enterprises (ACEs). In addition, many private sector firms implemented similar structures with different names, such as companies limited by guarantee, depot committees, networks and clusters, for purposes of enhancing smallholder market access. Thus, the establishment of second-tier RPOs has been widely adopted in the country and is facilitated by different development stakeholders, including government, NGOs, private sector and the donor community.

To date, there are about 70 secondary cooperatives and 34 secondary unions in Uganda (MTTI, 2011; UCA, 2010). By 2007, a total of 39,684 farmer groups were registered with the National Agricultural Advisory Services (NAADS) (MFPED, 2008). The number of second-tier RPOs facilitated by NAADS, the private sector and NGOs cannot be substantiated as they have no regulatory framework and tend to be registered by local authorities (Kyazze, 2010). However, it is generally known that they outnumber secondary cooperatives. Nonetheless, little is known about the effectiveness of RPOs in linking their members to markets and how their effectiveness can be improved. Effectiveness has mainly been measured for non-profit organizations (Cameron, 1986; Kim, 2005; Rodsutti and Swierczek, 2002). The limited research on RPOs has concentrated on cooperatives in the developed world (Burt and Wirth, 1990; Katchova and Woods, 2011; Newton, 2006). Therefore, there is insufficient empirical evidence on effectiveness of agricultural marketing RPOs (Shiferaw et al., 2009),

particularly in developing countries. With specific reference to Uganda, studies that have attempted to measure effectiveness of larger RPOs in linking producers to markets are rare. This study sought to identify the factors that influence effectiveness of second-tier marketing RPOs in linking their members to output markets. It is hoped that findings from this study will inform policy, while the practice on how the effectiveness of the widely promoted marketing RPOs in linking smallholder farmers to markets as well as ways of improving their effectiveness will be established.

MATERIALS AND METHODS

Organization of marketing RPOs in Uganda

Second-tier marketing RPOs in Uganda can be broadly categorized into two major types, namely, ACEs and associations. ACEs are constituted by a membership of primary cooperative societies, while associations comprise of individual farmers only or groups only or a mixture of both groups and individuals. In both ACEs and associations, farmers have to pay some form of fees or purchase shares to become members. Most marketing RPOs have an additional structure, a Savings and Credit Cooperative (SACCO), where all monetary transactions for the RPO are handled. To facilitate all financial transactions, group members open savings accounts in the SACCO to which the RPO is affiliated. All RPOs undertake multiple activities, including provision of or mobilising access to agricultural extension services, provision of market information, and the processing and transportation of produce, although the magnitude of involvement in each activity varies between RPOs. In terms of the organization of produce marketing, members (either groups or individuals) deliver their produce to the second-tier RPOs, which sell the produce on their behalf and deduct a commission on the sale to finance their operations. Thus, the RPOs primarily function as brokers.

Study area

The study was conducted in the four regions of rural Uganda—central, east, west and north. A total of 62 second-tier RPOs were purposively selected from 19 districts in the four regions. Sixteen (16) RPOs were selected from 7 districts in the central region, 30 RPOs from 6 districts in the east, 2 RPOs from 1 district in the north and 14 RPOs from 5 districts in the west.

Sampling procedures

The sample was purposively selected to include RPOs that were involved in collective marketing of coffee, bananas and maize. The three crops were selected due to their importance in Uganda's agricultural sector, particularly among smallholder farmers. Coffee is a traditional cash crop and is produced by most households. Cooking bananas are traditionally a staple crop, but are increasingly marketed in the region for income, while maize has, in the recent past, become a non-traditional export in the region (Matthews et al., 2007), mainly to Kenya, Southern Sudan and Rwanda (Coulter, 2007). In terms of output marketing, the majority of producers included in the sample were participating in the sale of one or more of the three crops.

A multi-stage sampling technique was adopted. The selection of participating districts depended on the number of RPOs and existence of the target enterprises. That is, a district with a larger

Table 1. Description of variables hypothesized to influence RPO effectiveness (n=62).

Variable name	Description
ESTMODE	Mode of RPO establishment. RPO establishment was either initiated by members (=1) or externally induced by agencies (=0).
RPOAGE	Number of years RPO has existed.
RPOSIZE	Size of RPO. Total number of members in RPO.
DEMGOV	Democratic governance. RPO holds at least two all-member meetings a year and has at least two additional committees (=1) or 0, otherwise.
EXCOSIZE	Size of Executive Committee. Number of members on the top RPO executive committee.
INTRPRACT	Internal practices. Matrix combining (1) use of record books; (2) accounting books; (3) presence of a written code of conduct; and (4) enforcement of rewards for defaulting.
TRAINLEAD	Trained leadership. Percentage of key leaders with leadership training (chairperson, deputy chairperson, secretary, treasurer and business manager).
LINKMOD	Model of market linkage. Process through which RPO is linked to output markets (0 = producer driven, 1 = intermediated, 2 = mix of both).
COMDIST	Commercial distance. Distance from RPO office or meeting place to nearest commercial centre (Km).
BULKDIST	Bulking distance. Distance from the household to collection centre; aggregated from sampled households per RPO.

number of RPOs participating in the target enterprises was preferred to a district with fewer RPOs and enterprises. This was adopted for purposes of managing a limited budget. Within the districts, RPOs were purposively selected, based on the predetermined criteria, from lists of registered second-tier marketing RPOs obtained from service providers. In addition to ensuring that RPOs met the selection criteria, it was also necessary to confirm the willingness of RPO leaders to participate in the study. At RPO level, individual respondents were randomly selected from lists of member groups. A minimum of three groups were sampled per second-tier RPO, from which a minimum of 30 individual respondents were selected.

Data and data sources

RPO level interviews were conducted through focus group discussion with leaders to establish RPO history, activities, mode of establishment, membership, models of linking farmers to markets, markets supplied, sales, management capacity, governance structures, physical assets and access to other market support institutions. A household survey, which utilized a structured questionnaire, gathered data on basic characteristics of members, such as gender, age, education level, size of land holding, distance from residence to the RPO and bulking centre, commodities traded, non-farm sources of income, housing structure, physical assets owned, production and sales of the target enterprises, participation in decision-making processes and access to benefits from RPOs. Since the sampling and data collection were simultaneous and households were randomly selected from the sampled RPO, the two data sets were matched in the analysis.

Data analysis

Descriptive statistics were used to explore data and describe the

sample. An ordinary least squares (OLS) regression was used to determine relationships between variables, which was preceded by checking the assumptions of normality, multicollinearity, homoscedasticity and independence of residuals. A histogram for standardized residuals, normal probability plot of the regression standardized residual and a scatter plot showed that the dependent variable was normally distributed. Collinearity diagnostics (Pallant, 2011) revealed that tolerance values ranged from 0.62 to 0.94 (multicollinearity is evidenced for value of less than 0.10). The variance inflation factor (VIF) ranged between 1.06 and 1.18 (values above 10 show multicollinearity) and partial regression plots across all explanatory variables did not show evidence of violating any of the assumptions.

For the regression analysis, effectiveness was defined as the percentage of farmer members who sold some of their produce through the RPO. Selected attributes of the RPOs (variables) were hypothesized to potentially influence RPO effectiveness and their description is presented in Table 1.

RESULTS AND DISCUSSION

Characteristics of sampled RPOs

Out of 62 RPOs sampled, 35% were secondary cooperatives, while the rest comprised of farmer associations and companies limited by guarantee. Fifteen percent (15%) of the RPOs owned storage facilities, while 55% added value to products through primary processing and grading. Regarding service provision to members, 94% provided market information (mainly prices), 76% provided extension services and 43% provided access to inputs. In addition, 56% transported members' produce,

Table 2. Summary statistics of variables hypothesized to influence RPO effectiveness (n = 62).

Variable name	Yes (%)	No (%)	Min	Max	Mean	SD
PROPSELL	43.61	56.39	-	-	-	-
ESTMODE	29.03	70.97	-	-	-	-
RPOAGE	-	-	1	15	5.18	2.87
RPOSIZE	-	-	36	5016	778.53	1017.06
DEMGOV	27.42	72.58	-	-	-	-
EXCOSIZE	-	-	5	20	9.29	2.58
INTPRACT	80.98	19.02	-	-	-	-
TRAINLEAD	85.16	14.84	-	-	-	-
LINKMOD	0(48.39)	-	-	-	-	-
	1(37.10)	-	-	-	-	-
	2(14.51)	-	-	-	-	-
COMDIST	-	-	0.1	47	11.95	11.16
BULKDIST	-	-	0	6.9	2.21	1.72

Table 3. Results from regression on how various explanatory variables affect the proportion of members selling produce through the RPO.

Variable	Coefficients
Mode of RPO establishment	0.04 (0.07)
Democratic governance	0.26 (0.08)***
Size of executive committee	-0.08 (0.04)*
Size of RPO	0.0000809 (.0000342)**
Trained leadership	-0.62 (0.17)***
Internal practices	-0.09 (0.04)**
Number of years RPO has existed	0.05 (0.05)
Bulking distance	-0.12 (0.05)**
Model of market linkage	-0.07 (0.04)
Commercial distance	0.03 (0.03)
Constant	1.29 (0.22)***
Model performance (R-squared)	0.39***
Number of observations	62

***Significant at 1%; **significant at 5%; *significant at 10%; Values in parentheses () is standard errors.

61% operated member savings accounts, while 31% were involved in provision of credit. Furthermore, Table 2 presents summary statistics of factors that influence RPO effectiveness.

Results indicate that although a lot of smallholder farmers belonged to marketing RPOs, the latter have only been able to link a minority of their members (44%) to output markets (Table 2). In general, RPOs were relatively young, as evidenced by an average age of 5 years and, majority of the sampled RPOs (71%) were established by external agencies. On the other hand, only 27% of the RPOs used democratic structures (for example, meetings and sub-committees) for power sharing. However, more than 80% used internal practices to direct behaviour of members. The results also indicate that at least 85% of the key leaders had participated in capacity enhancement training programs (Table 2).

Factors influencing RPO effectiveness

Results from regression (Table 3) highlight factors that influence RPO effectiveness, the discussion of which is presented in the following sub-sections.

Democratic governance

Results indicated that democratic governance was positively related to RPO effectiveness, that is, the number of members that sell their produce through the RPOs. Democratic structures offer members opportunities to participate in decision-making processes, which makes them feel that they own the organization (Grossman and Baldassari, 2012; Spear, 2004) and, therefore, need to support it by selling their produce through the RPO. This

is possible considering the nature of democratic structures in this case. Rather than having numerous member meetings that may drag decision-making, majority of RPOs (79%) had democratically elected sub-committees that undertook specific roles, including marketing. These committees offered opportunities for power sharing across a broader membership, which enhances responsibility and commitment (Coulter et al., 1999; Shiferaw et al., 2011). Thus, the executive committee and sub-committees could meet as regularly as necessary while all-member meetings are kept to a minimum, significantly reducing the likely decision costs. Further analysis confirms this argument, for example, 69% of RPOs held only one all-member meeting per year.

Size of executive committee

The size of the executive committee was related to democratic strategies of governance. When RPOs are constituted by many primary groups, the executive tends to become larger for purposes of representativeness. Results indicated that larger committees significantly reduced the number of members that sold their produce through their respective RPOs. This could probably have been due to the fact that: (i) large committees often lead to drudgery in decision-making due to dispersion of leaders (Bernard and Spielman, 2009), and this often negatively affects the pace at which outputs are accomplished; (ii) dispersed leaders are unable to follow-up on key issues in the RPO and in turn cannot keep their members updated on what is happening, which then leads to low morale and lack of trust (Green et al., 1996; Österberg and Nilsson, 2009); and (iii) due to reduced follow-up and accountability, leaders are likely to pursue interests of their own as opposed to the organization's interests (Cechin and Bijman, 2009). For example, in this study, some leaders were involved in private buying and selling of produce, dealing in enterprises similar to what their RPOs were involved in. Thus, leaders had become commercial competitors of their RPOs, transacting businesses with the very members they led; using the contacts and credibility they had gained from the RPO to enhance their own businesses (Ampaire and Machethe, 2012). This behaviour does not only result in RPOs' activities primarily benefitting its elite members, but it may also result in conflicts of interest within the management of RPOs. The results agree with earlier studies regarding issues of leadership accountability in large groups (Cechin and Bijman, 2009; Stockbridge et al., 2003).

Size of RPO

The positive relation between RPO size and increased effectiveness can be explained by the advantages of

economies of scale. A large membership is likely to enable pooling of bigger quantities of produce, which capacitates RPOs to negotiate for better marketing terms, in addition to reduced transaction costs (Markelova and Mwangi, 2010; Paumgarten et al., 2012). The higher price margins would attract more members to sell through the RPOs. In addition, the democratic governance mechanisms above seem to solve problems associated with large size. In practice, the sub-committees were constituted by members of the primary groups, including those that may not have been represented at executive level due to limiting numbers. This way, constraints that would arise due to a large size, such as reduced member communication and participation (Stoel, 2002) and free-riding tendencies were neutralized by the decentralized responsibility and power sharing structures. These structures were also regularly used for information dissemination to members whom they represent such that the general meeting held once a year serves for review and general planning, among others, rather than day-to-day decisions.

Training in leadership and internal practices

Results indicated that increasing the number of leaders trained in leadership is likely to reduce RPO effectiveness. Although there is no clear theoretical explanation to such an observation, additional notes from the field provide plausible insights. The leadership training conducted for leaders covered mainly group leadership, financial management and book keeping. In practice, the three lead to institutionalizing rules and regulations that might reduce member motivation to market their produce through the RPO, while serving to place the RPO on a sustainable footing. Therefore, the effect of leadership training on RPO effectiveness hinges on how the acquired skills are implemented in the management of RPOs, which is mainly through enforcement of internal practices intended to structure member behaviour.

Key internal practices to this study included professional management (use of record books and accounting books) and control measures (presence of a written code of conduct and punishing defaulters). Results indicated that implementing more of these practices could significantly reduce the percentage of members selling their products through the organization. This is possible, particularly, if some of the practices such as controls, are enforced in an inflexible manner. For example, some of the contents of the written code of conduct included attending meetings and participating in RPO activities, full payment of shares, membership and subscription fees, and requirement to sell products through the RPO, among other things. Failure to abide by specified practices would either attract penalties (such as fines) or exclusion from certain benefits, which would, in

turn, lead to reduced member commitment. These results are in line with findings by Bernard et al. (2008), who find that controls such as presence of a control committee or a written code of conduct, had a negative effect on performance of marketing organizations in Burkina Faso.

With respect to professional management, an additional disincentive was related to how the trained leaders enforced financial management procedures. Majority of RPOs monetary transactions were handled through SACCOs in which RPO members were required to open and operate saving accounts. Opening accounts demanded that farmers had financial resources that they could commit for the initial deposit, purchase of application forms, passbooks and the first share. This was in addition to the hassle of having to go to a SACCO to withdraw cash when payment for produce was finally made. To avoid such 'inconveniences', some RPO members would rather not sell their produce through their RPOs (Ampaire and Machethe, 2012). In agreement, Grossman and Hanlon (2011) find that "...more and better monitoring institutions do not necessarily lead to better outcomes". They conclude that rather than apply standards that exist in different economic settings, farmer groups should be structured in ways that take into account how the structures will affect the outcomes.

Collective action literature indicates that selective incentives, such as rules and norms, can be used to reduce costs and social dilemma problems common in large groups (Olson, 1965, 2007; Ostrom, 1990). However, the process through which such norms are developed and implemented determines whether they will be useful or not. It therefore seems that in trying to formulate and enforce internal practices, RPOs must take care to adopt the most beneficial options and implement them in a manner that does not demoralize members.

Bulking distance

Results indicated that bulking distance, that is, distance in kilometres from the farmers' residence to the bulking centre, was negatively associated with percentage of members who sold their products through the RPO. A bulking centre may be a RPO store or a central location where members in that locality collect produce that is picked by RPO leaders or buyers. This implies that when distance to a collection centre increases, the chances of members bringing their produce to the RPO is likely to reduce (Alene et al., 2008; Fafchamps and Hill, 2005). This may be particularly true considering that, in rural Uganda, 70% of marketed produce is carried on the head and only 10% by bicycle (Government of Uganda, 2000). The finding is consistent with literature regarding geographical dispersion (Iliopolous and Cook, 1999) and constraints to agricultural commercialization (Chamberlin and Jayne, 2011; Jaleta et al., 2009; Nivievskiy et al., 2010).

The motivation to bulk when distances are long is further reduced by the availability of traders at farm gate who pay cash on delivery (Fafchamps and Hill, 2008) without any quality requirements. On the contrary, RPOs demand certain quality standards and pay a little later after bulking and identifying good buyers. Unless the RPO offers outstanding incentives above other business competitors, farmers may not see the benefit of bulking and selling through them. The problem of distance to the bulking centres was compounded by lack of transportation as revealed by 29% of the households, and poor roads.

CONCLUSIONS AND POLICY IMPLICATIONS

With specific reference to second-tier collective, marketing producer organizations democratic governance structures and size of organizations are important in enabling effectiveness. On the other hand, factors that are known to enhance effectiveness in primary/smaller groups may have a disabling effect on effectiveness in second-tier level organizations unless deliberate efforts are made to address likely constraints. Specific implications for policy and practice are highlighted below.

The importance of democratic structures in the management of second-tier RPOs is apparent. The use of many sub-committees may be a better strategy to power sharing and enhancing commitment of members compared to numerous all-member meetings that may drag decision-making processes. Smaller executive committees may also be important for instilling accountability and transparency among leaders as opposed to large, representative but ineffective committees.

Capacity building is still important for enhancing management skills of majority of RPO leaders, which are largely inadequate. However, care must be taken such that the way the newly-learned management procedures are enforced does not hinder member participation.

Having leaders on the RPO executive committee trading in the same sorts of enterprises promoted by an RPO is a disadvantage. Conflicts of interest are inevitable, considering that the executive leaders provide voluntary service. Either RPOs should devise reward systems for leaders or put in place stringent rules guiding leader behaviour, such as a leadership code that requires leaders to declare any conflicts of interest that they may face in performing their RPO leadership duties.

Promoting SACCOs as rural financial institutions to support rural smallholder producers is a timely and necessary solution to the current lack of credit. However, policies guiding their establishment and loaning conditions should be reviewed to match rural producers' economic status. In addition, since the SACCO initiative is relatively new and few farmers are using the service, there may be need to put in place rules and regulations that can attract more members to make use of the

SACCOs. For example, requirements for entrance could be set to a minimum, bureaucracy in loaning procedures could be reduced and manageable collateral options and interest rates could be adopted. In addition, loan repayment schedules could be tailored to seasons to enable farmers pay after harvest.

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