The revolving fund system in sustainable community development

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ABSTRACT: Revolving funds have been used as a means of providing a sustainable source of capital investment for many decades. There are many examples of their use at a regional, national and global scale. Revolving funds have also been implemented at a community and individual scale as a means of driving rural development in many countries. Perhaps the best known examples of these are the thriving micro-credit schemes that operate in many developing countries. Despite their many successes there have been some criticisms of micro-credit schemes, particularly in relation to their strict regulatory and bureaucratic nature and the fact that in many cases the poorest members of many societies are excluded from the cash economy. For these reasons the Ørskov Foundation, a rural development charity based in Scotland, has built on and utilised an adaptation of the revolving fund paradigm so that any initial capital investment it makes in community development projects takes the form of tangible investments, such as livestock, that rural people are familiar with. The return on the initial investment takes the form of offspring from the original livestock provided and these in turn help the benefits to spread to other people in a system that can potentially "revolve" indefinitely. Examples of projects from a number of countries where revolving funds have been used in this way are described.

INTRODUCTION

In its strictest economic definition, a revolving fund is often established with capital that does not need to be repaid, but can be replenished through charges made for the goods and services produced as a result of the initial capital.

Historically, there are examples of revolving funds having been used as early as 1910 by the Oklahoma State Legislature (Franklin and Douglas, 2003). The distinguished English Economist John Maynard Keynes also discussed the use of revolving funds in arguing that a constant stream of investment can be financed by a fixed pool of money, which turns over continuously (Keynes 1937).

"If investment is proceeding at a steady rate, the finance (or the commitments to finance) required can be supplied from a revolving fund of a more or less constant amount, one entrepreneur having his finance replenished for the purpose of a projected investment as another exhausts his on paying for his completed investment."

Revolving funds, as instruments of capital investment, have been used at a range of scales. Globally, the United Nations set up a revolving fund in 1973 to provide financial assistance to support the production and discovery of mineral deposits and geothermal energy resources in developing nations. The scale of this fund was commensurate with its aims, with a reported US$62million invested from the fund (Tomita and Nichol, 1988). Regionally, the Pan American Health Organisation (part of the WHO) established a revolving fund for vaccine procurement in 1979 and more recently, in 2000, set up a strategic fund to deal with HIV/AIDS, TB and malaria (PAHO, 2003). Nationally, the US Federal Government introduced Revolving Loan Funds in the 1970s to offset reductions in direct government support for rural businesses, particularly those involved in agriculture (USDA, 1996).

Revolving Funds as Used by the Ørskov Foundation

The first experience in setting up a community project based on a revolving fund system was in Indonesia, in the village of Kwarasan. It was carried out in 2001 in collaboration with Gadjah Mada University and funded by the Rotary Club. The village women's group were given 50 female goats and 2 males. Each family was given two pregnant goats and undertook to "repay" half of the first 2 pregnancies back to the group who together decided whether to increase group membership or set up another village group on the same principle. By 2006 the initial 52 goats had increased to 477. Since

then, 4 more similar projects with goats, funded mainly by rotary clubs have been set up around Yogyakarta with similar success.

In 2002, based on the success in Indonesia, two community projects in Vietnam near to the city of Hue, were set up again with University staff participating in the projects funded by the Rotary Club. In Vietnam the projects were set up with local pigs (Mangkai) instead of goats. The system was similar, with a number of piglets given back to the Village Women's Union to distribute to other members.

In 2004 2 projects were set up in Kenya, near to Nakuru in the Rift Valley, in collaboration with Egerton University. This project was based on lactating goats. The village collaborate in selecting goats for high milk production but the revolving fund system is generating. In Kenya there is a high demand for goat milk as it is believed to be beneficial for HIV/AIDS patients.

Following the success of these community projects funded by the Rotary Club, the Ørskov Foundation was set up, with the specific aim of building on these successes by providing a dedicated source of funding to enable revolving-fund projects to be set up to help in the alleviation of poverty amongst rural communities in developing countries.

Ørskov Foundation Case Studies

Indonesia (2007/2008)

In September 2007 the Ørskov Foundation established seven projects in collaboration with Gadjah Mada University (GMU), Yogyakarta in Central Java, the Faculty of Agriculture Technology - University of Jember (UNEJ), East Java and with the Development Unit of the Mataram local government (DUM) on Lombok Island.

Each project had a livestock focus. Each of the livestock species provided by the projects were location-specific and driven by the needs and wishes of the communities involved. Four of the projects focused on goat production, two involved the production of eggs, meat and breeding stock from ducks and one project supported the production of fresh water fish.

The projects placed an emphasis on community income generation and self-sufficiency as one of their key outcomes. Through links between the Ørskov Foundation and the three partner organisations in Indonesia, there were also extensive opportunities for the integration and exchange of knowledge and expertise between university students studying agricultural sciences and community members, leading to enhanced long-term environmental protection and sustainable development and a greater understanding between students and small farmers.

The following is a list of planned outcomes envisaged for the projects:

- Improved livelihood opportunities amongst community participants.
- Providing communities with a means to meet their immediate needs but also allowing them to invest accrued benefits from the sale of excess livestock in a community managed fund as a sustainable way to mitigate against future environmental shocks and vulnerability.
- The project provides communities with access to an affordable form of credit to purchase items deemed essential for improved livelihoods.
- The revolving-fund principle empowers community groups to take control of decision making processes related to their own livelihood needs.
- The community fund derived from revolving-fund repayments can also if decided by the community provide scope for non-agricultural income generation to be derived from micro-credit loans provided by the community for the benefit of community members.
- Improved education and training in knowledge of animal feed, health and husbandry amongst participating community group members.

In total, across all seven projects funded, an initial 158 households benefited. The initial number of goats provided to the four projects was 241 and at the end July 2008 that number had risen to 310. A second group of beneficiary households in Banyu Soca Village were identified and a further 30 households benefited from the offspring of the initial project in this village before the end of 2008.

Eight households from Girikerto Village, Sukorejo also received financial assistance to build staged goat pens as the existing housing they had for their goats was not deemed suitable at the time when the animals were being provided to the families.

From the initial 810 ducks provided to the 27 households in Rowosari and Barat Sawah the total number of adult ducks more than doubled to August 2008 to 1,840. In addition, the ducks also produced a total of 12,462 eggs to August 2008. At a sale price of 600 Rupiah the value of these eggs to the households was 7,477,200 Rupiah, or approximately $700 (2008 prices). At the end of July 2008 a further 15 households received 30 ducks each, passed on from the Bintang Tani farmer group from Rowosari village. This exemplifies the benefits of the revolving-fund system, with initial seed-funding providing sustainable opportunities for livelihoods development.

The fish cage project in Lombok was initiated in April 2008. The first harvest of adult fish was expected to take place in October 2008 with an estimated 400 – 450 kg of adult fish produced from each of the cages provided to the initial 15 household recipients.

Malawi (2007 – 2010)

The Ørskov Foundation has been actively funding community projects in Malawi since 2007. The first project was the Lilongwe District Goat project. This project targeted smallholder farmers from Nsundwe and Nkhoma areas that were interested in goat production but have limited resources. Vulnerable households with malnourished under-five aged children and those looking after orphans and/or people living with HIV and AIDS were given special consideration in this project.

The project promoted sustainable goat production through supplying households with an initial stock of local female goats and improved exotic bucks. Farmers were organised into groups of 15 members, assisted to construct appropriate housing and supplied with local does and either a dairy or meat breed buck depending on preference. The buck was jointly managed by each group whilst the does were allocated to individual household members, who were required to pass on two female offspring to members of new groups.

Group members were provided with training in goat management by staff from Bunda College, University of Malawi. Research carried out from 1992 to 2004 by the University of Malawi showed that goat milk is ideal for combating malnutrition and supplementing the diets of those with HIV and AIDS, which are prevalent in Nsundwe and Nkhoma. Dairy goat crosses are also in high demand locally, selling at double the price of local meat goats.

The project aims to directly benefit up to 60 households initially, through:

- Increased goat ownership
- Newly acquired goat management and marketing skills
- Improved nutritional status as a direct result of access to meat and milk, or indirectly from sales enabling households to purchase other food items
- Reduced exploitation from traders following training in marketing techniques
- Nutrient cycling through the use of goat manure for crop production
- Reduction in crop damage and environmental degradation through improved housing and husbandry

During evaluation of this project in 2009 a number of issues of concern were raised as to the effectiveness of the implementation and perceived lack of ownership of the project by the community participants.

In particular, some of the beneficiary households were not aware that they owned the goats and were, therefore, able to derive benefits from that ownership. There seemed to be conflicting information being given to the households by local Agricultural Extension Officers that was often in conflict with the initial capacity building undertaken at the start of the project. This led to confusion and a lack of understanding over ownership amongst the community which resulted in the revolving fund aspect of the project was not able to be implemented.

These issues have subsequently been addressed, but they highlight the potential pitfalls in the use of revolving funds when used in a rural development context (see Milligan, 1987).

Since 2009, M-Livestock Consultants have been conducting a pilot phase of Malawi's Responsive Village Egg Model at Geni Village, Mchinji District, Malawi. This is a community revolving system of poultry rearing that initially provided 10 households each as an effective means of providing income and food security. The model has since been scaled up to improve accessibility of fertile eggs of the 'Tombi Village Layer 2010' breed to all villagers. It is envisaged that in 3 years the number of beneficiaries will have grown to around 750 households.

Currently, the model beneficiaries are passing on the gift of fertile eggs to 72 Households of people living with HIV/AIDS in Gumulira Millennium Village. These are eggs from crossing Black Australorp and Hyline Commercial Layer. The breeding program is carried out by village breeders. Each pass-on beneficiary household receives a gift of 14 fertile eggs for hatching with local hens to produce Tombi Village Layer 2010 Chicks.

Another project funded the purchase and manufacture of solar drying cabinets for villagers in Nyanggu in Chikwawa District. Entech, an environmental technology company that is working with the Macaulay Institute on the JANEEMO project in Malawi, received funding to manufacture solar drying cabinets. These will be owned by a community association group and used to dry the leaves of the Moringa tree (*Moringa oleifera*), which has exceptional nutritional qualities and will be used to supplement the diets of communities in the Lower Shire District. Payment for the use of the solar driers will be made "in-kind" by villagers supplying an excess of leaves for drying. This excess powder will be sold in local markets and the profits passed to the community association to re-invest in other micro-enterprise activities linked to the JANEEMO project. A total of 2,000 people are expected to benefit directly from this project.

In 2010 we funded a second project in Chikwawa District that will provide appropriate solar energy technology in the form of photovoltaic solar panels to members of the Chikwawa Cotton Growers Association in collaboration with Seeds of Opportunity, a Malawian NGO.

Rural life in Malawi is characterized by a narrow economic base, over-dependency on rain-fed agriculture and biomass for household energy. This situation is exacerbated by increasing poverty among communities, increasing population pressure on a limited land resource base, land degradation arising from agricultural expansion and the cultivation of marginal lands, and increasing deforestation to meet the increasing demands for energy, food and construction purposes.

This project seeks to abate deforestation, soil erosion and a loss of habitat/biodiversity by promoting the use of solar photovoltaic systems that will reduce dependence on firewood and kerosene for energy. Seeds Of Opportunity will be working in collaboration with Chikwawa Cotton Growers Association to increase the livelihood opportunities of people in Chikwawa by improving the accessibility of solar photovoltaic systems in order to reduce deforestation and land degradation arising from domestic energy demands. Chikwawa Cotton Growers Association is a local farmer organisation aiming at developing cotton production in Chikwawa.

The association aims at assisting farmers in the procurement of inputs and marketing of cotton. The project will assist in increasing forest conservation efforts in the area and raise an awareness of issues of protecting the environment in order to reduce poverty arising from an unsustainable use of the available forest resources.

The project will initially benefit 30 households (about 180 people). The implementation strategy will be to organise the beneficiaries and assist them to form a committee that will establish and manage a fund where they will make monthly contributions. In due course money from the fund will be used to procure more solar photovoltaic systems to be distributed to other people in the community so as to increase the scope of the project.

The direct beneficiaries will assist other people in their communities by providing energy services from solar photovoltaic products/systems- e.g. charging mobile phones to facilitate communication and information dissemination. It is anticipated that farm productivity and incomes for the poor will be boosted whilst safeguarding the natural environment as this project will facilitate improved access to ICT, access information on markets and contact with far off suppliers/buyers for the communities produce.

Cameroon (2008)

Recent transformation in Cameroon's economy has profoundly changed the parameters of social development. One significant trend has been the increased burden of poverty on women, which accounts for the feminisation of poverty in the country, both in qualitative and quantitative terms.

The goal of a project funded by the the Ørskov Foundation was to assist vulnerable women's groups from Bokwaongo village in the Southwest Province of Cameroon to generate significant household income and improve their socio-economic status and living conditions. The project identified four women's self-help and common initiative groups and trained them in pig rearing and on strategies to boost their household incomes through marketing.

Sri Lanka (2008)

Small-scale fisheries in reservoirs have played an important role in the subsistence economy in Sri Lanka, but some reservoirs have been declared as sanctuaries for the protection of biodiversity. However, the need to provide livelihoods for the people living in these areas has risen in order to alleviate poverty and to gain their support for conservation.

In a project funded by the Ørskov Foundation the Annaiwilundawa sanctuary, a seasonal dry zone wetland, was stocked with suitable fish species by local communities who will be given technical support from staff at Wayamba University. A revolving-fund was established from which an agreed proportion of the income from the sale of fish re-invested in order to purchase fingerlings, nets, etc. and extend the benefits to more community group members. This community-based fishery management system was developed to enable sustainable utilisation of fish whilst at the same time safeguarding the avian biodiversity of a one of only three recognised RAMSAR wetland sites of international importance in Sri Lanka.

Kenya (2009-2010)

The Chyulu Hills Bee Keeping Mothers project seeks to create alternative and environmentally friendly sources of income for women living on the slopes of Chyulu Hills. The project is managed by the Sikizana Trust who work with 9 self-help groups spread along the hills. The Trust also runs a rescue centre for abandoned and vulnerable children in the same area. The project will supply each of the groups and the rescue centre with modern beehives, fencing and training on bee keeping and marketing skills. Savings from the sales will be utilised to give members income and to increase the number of beehives available.

In the Uholo West revolving commercial farming project the University of Nairobi provided a package of assistance to 450 farmers through the provision of a mixed commercial farming system comprising dairy goats, fish ponds, beekeeping and bananas. The funding provided by the Ørskov Foundation helped to support the dairy goat beekeeping elements of the proposed system.

The Kisumu Initiative for Positive Empowerment in Kisumi initiated a project to enhance food security for vulnerable people living with HIV/AIDS in Nyanza Province, through community-based dairy goat and local poultry farming. Following implementation of this project it is anticipated that the initial beneficiaries from this project could number up to 800 people.

Vietnam (2007)

In cooperation with the local Women's Union of Dau Kenh Village, Quangtri province, central Vietnam a project with local cattle was established. The project will also provide farmers with knowledge on the improvement and use of underutilised crops such as rice straw, groundnut vines and other locally available plant material, through the active participation in the project by staff from Hue University of Agriculture and Forestry.

This project builds on existing, successfully implemented, revolving fund projects that provided community members with local pig breeds. Members of the Women's Union expressed an interest in expanding their livestock enterprises into cattle and sought the funding for this project to achieve this.

Nepal (2008)

This project aims to support resource-poor tribal Kumal women in the Gaikhur and Chyangli Village Development Committees of Gorkha District by providing knowledge, skills and seed funding for goat farming that ultimately helps in improving their livelihoods by ensuring sustainable income opportunities. The specific objectives of the project were to:

- train the tribal Kumal women groups on conservation farming methods, sustainable agroforestry management, fodder and forage management, goat farming and effective marketing so that they can sustain their livelihoods using locally available resources
- develop an effective microenterprise model based on goat farming and agroforestry using the revolving-fund approach for its implementation amongst the community groups
- create employment opportunities at a local level and develop linkages with markets to raise incomes

Uganda (2007 – 2010)

The Ørskov Foundation has supported three groups; Mon-Bunyu, Oryang Ojuma Women project and Giligili Women beekeepers. These groups with over 80 members have over 150 local and wooden beehives. They have been collaborating with different institutions and organisations and as a result they have demonstrated great success in terms of increased honey production, knowledge acquisition and overall poverty alleviation. Since inceptions, the 3 groups have earned over 3.5 million Ugandan Shillings (approximately £1,100) from the sale of honey and other bee products. As a result, poverty amongst rural beekeepers has reduced and their living conditions and livelihood status improved.

More importantly, members of these 3 project groups came together and founded the Acholi Beekeepers Cooperative Society. This will help them and other beekeepers work together, enhance their capacity, improve the marketing of honey and other bee products and assist in certifying their bee products with fair trade organisations. This Cooperative is registered and plans are underway to affiliate it to the national Beekeepers body. Beekeepers in other villages are also being mobilised to access membership.

During January 2010, these groups pulled their resources and with funding support from another donor conducted 3 days residential training for over 178 beekeepers from the whole Kitgum region. Among the topics conducted were; cost benefit analysis, book keeping, honey bees, the colony, bee behaviour, apiary management, hive colonization methods, the enemies of bees and pest management, how to construct protective equipment, using locally available materials, honey harvesting and hive inspection, honey processing and marketing.

Community managed revolving fund/micro-credit schemes were established from honey sales and these are providing micro-credit loans to the farmers to expand on their entrepreneurial activities. This revolving fund will adopt effective micro-finance facilities for the beekeepers in 2010.

Democratic Republic of Congo (2008)

Annual production of meat (domestic and wild meat) in the Democratic Republic of Congo (DRC) covers only 11% of protein food needs of the population. Many people in towns as well as in rural areas can rarely afford to buy meat. This situation induces malnutrition, precarious health, reduced endurance for working, poor resistance to diseases and shortened longevity.

Farming *Cricetomys* (giant pouched rats of sub-Saharan Africa) on a large scale could be a quick and cheap way to enhance the production of meat in the country. The project funded by the Ørskov Foundation aimed to improve the established Cricetoma farming methods and techniques, to adapt that husbandry in different places to improve productivity and to disseminate *Cricetomys* as a viable alternative minilivestock species in Kinshasa and elsewhere in the DRC. Grant you need to explain more what is Cricitomis

Ten Cricetoma farmers, who were members of the Association of Wild Animal Farmers (AWAF) group, along with another 10 Cricetoma farmers in Kinshasa and 3 provinces of DRC at Butembo

(Province of Nord-Kivu), Lubumbashi (Province of Katanga) and Luki(Boma) (Province of Bas-Congo) each received 200 breeding animals and appropriate cages. This first group of 20 farmers will serve as model systems to disseminate the husbandry practices required for *Cricetomys* production.

Ghana (2007 & 2009)

In 2007 a project funded by the Ørskov Foundation sought to empower local communities with skills and resources to domesticate Grasscutter rats (*Thryonomys swinderianus*) and increase the production of their meat for local markets. This has dual significance in that it serves both as a source of income for local people but also as a conservation strategy for wild Grasscutter populations.

Grasscutters are the most preferred bushmeat species in Ghana and the most important throughout West Africa in terms of volume of trade and preference. This project promoted the production of Grasscutters by rural communities through husbandry training by staff from the Kwame Nkrumah University of Science and Technology and by providing them with the initial stock of animals to begin their own farming enterprises.

The project was expected to provide employment and supplementary income, reduce pressure on wild Grasscutter populations and directly reduce the incidence of wildfires - the most common mode of capture for wild animals.

In 2009 the Animal Research Institute in Accra, in association with the Ghana Society of Animal Production and the Canadian Society of Animal Production (GSAP-CSAS), received funding for a revolving goat project as economic support to rural women involved in the Shea nut industry in northern Ghana. The project provided breeding herds of goats to women groups in 10 communities in northern Ghana, helping to support the livelihoods of 340 women in the first year.

CONCLUSIONS

The conclusion from the projects funded so far is that they have had a very positive impact on poverty alleviation where they projects have been implemented with a fully operational revolving fund structure. We believe that the secret of the success was to let the village groups participate in how they were going to manage the revolving fund system. This provided early ownership of the project and its outcomes amongst the beneficiaries. Involving university departments/NGOs in the implementation and management at the initial stages of project implementation have also had unexpected advantages in that their students/staff have gained an insight into their client's needs. Several research programmes and other initiatives have been initiated and carried out in conjunction with the community projects with participation of the village groups, good for the students and the villages. Where some problems occurred, as described in Malawi, the reason was simply lack of participation by the community to set up the project which ensures commitment to a successful project.

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