

Can Funded Development Projects Be Sustainable? The Case of Limpopo IDC Nguni Cattle Development Project, Limpopo Province, South Africa

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The typical cases of funded development projects are donor-funded. One of the major problems faced by donor-funded projects is that after the withdrawal of donor funding, the projects are not sustainable. Literature has identified some of the factors that cause lack of sustainability including low stakeholder ownership and commitment, lack of understanding of community context, lack of community empowerment, leadership, technology choice, and over-ambitious objectives. I use the social constructivist approach to study the Limpopo IDC Nguni Cattle Development Project in Limpopo Province of South Africa which I got in contact with through student supervision. The project is based on a livestock pass-on system using the indigenous Nguni cattle. The objectives of the project are to reintroduce the Nguni cattle to their original owners, to contribute to livelihoods, to alleviate poverty, and to contribute towards food security. I collected data from three key informants who have been involved with project formation and management and are still involved with it. I collected data through recorded interviews and analyzed them using thematic analysis. I concluded that this project, not only demonstrates the ability of the government to take over projects from donors and run them successfully/sustainably, but it also provides a model of how this can be done. The critical question is: Can the projects for which this model is appropriate be identified *a priori* as this would increase their sustainability.

Keywords: donor, funded projects, development, sustainability, qualitative methods, interview, key informants

Introduction

In Africa, especially Southern Africa, there are many questions related to food security, the availability of resources, their efficient utilization, and the transformation of subsistence smallholder economic actors to commercial levels. Given the high levels of poverty in Africa, and the scarcity of resources for both production and research, the issues are usually addressed using a project approach. Thus, projects, like the Limpopo IDC Nguni Cattle Development Project, which was established in the Limpopo Province of South Africa to transform and develop the emerging smallholder farmers into commercial farmers, are not uncommon. This is a research area of interest to me.

Currently I am a research associate at the University of Pretoria's Gordon Institute of Business Science. I am an agricultural economist, and my research interests include rural, agricultural, and irrigation development. These are areas where the project approach is used extensively, so I am interested in project sustainability issues. My interest in the Limpopo IDC Nguni Cattle Development Project arose from supervising students who were studying this project (Mapiye, 2017; Nkadimeng, 2019). From my supervision field notes, I concluded that

there was a need to evaluate whether the Limpopo IDC Nguni Cattle Development Project is sustainable.

The Donor Funded Project Approach

At independence, many African countries received financial, technical, institutional, and material support from Western countries to assist in development which was undertaken through non-governmental organizations (NGOs) and international development agencies (Muluh et al., 2019). Much of this development effort was done in the form of funded project interventions that were meant to be self-sustaining once the donor or external funding was withdrawn. Aid in African agriculture, which is largely administered by donor agencies, is of particular significance. For example, Hofisi and Chizimba (2013) observe that foreign aid accounts for four percent of Malawi's Gross Domestic Product (GDP) thus the sustainability of these donor-funded projects is of prime interest.

Lack of Project Sustainability

Many argue that although in the past 50 years, Africa has received development-related aid amounting to more than US \$1 trillion, it is actually worse off for it because poverty is on the increase (Kuria & Wanyoike, 2016; Lungo et al., 2017; Moyo, 2009; Mutimba, 2013). The major cause of this could lie in the lack of sustainability of donor-funded development projects. According to many researchers, donor-funded interventions are characterized by a lack of sustainability, especially after the withdrawal of donor funding (AusAID, 2000; Kuria & Wanyoike, 2016; Mutimba, 2013).

Many reasons are proffered for the lack of sustainability of donor-funded projects, including; lack of understanding the community context where a project is implemented and the application of non-participatory project implementation methods (Hofisi & Chizimba, 2013; Kuria & Wanyoike, 2016; Mancini & Marek, 2004; Mosohlo, 2016; Mutimba, 2013), lack of community empowerment during project implementation (Lungo et al., 2017; Mosohlo, 2016; OECD, 2012; Okun, 2009), poor project leadership especially the application of the top-down leadership style in project implementation (Kuria & Wanyoike, 2016; Stevens & Peike, 2006), inappropriate technology choice (AusAID, 2000, Dintrans & Bossert, 2017; Hofisi & Chizimba, 2013; Kuria & Wanyoike, 2016; Muluh et al., 2019), lack of specificity in project objectives resulting in lack of focus (Bartlett, 2016; Hofisi & Chizimba, 2013; Muluh et al., 2019), unsupportive political environments and in-country donor policies, poor governance, lack of monitoring and evaluation (Hofisi & Chizimba, 2013; Hudson, 1991; Kuria & Wanyoike, 2016) and lack of a pre-determined and predefined project exit strategy (Heldgaar, 2008; Hofisi & Chizimba, 2013; Mosohlo, 2016). It is therefore clear that the sustainability of donor funded projects requires studying, however, there is a need to contextualize the concept of sustainability first.

Contextualizing Sustainability

Sepey et al. (2017) mention that many terminologies are used for sustainability including diffusion, permanency, appropriation, durability, integration, routinization, institutionalization, consolidation, maintenance, and perpetuation. I am aware of two basic concepts of sustainable development. One seeks a balance between the environment, society, and the economy and the other seeks to perpetuate the benefits, outcomes, or impacts of development interventions. The subject of this study is the latter concept as defined by Stevens and Peikes (2006), Kuria and Wanyoike (2016) and Muluh et al. (2019), and specifically with

reference to whether donor projects can be weaned from donor funding (Muluh et al., 2019). For the working definition of sustainability, I borrow from Bernet (2013) who, in the measurement of organizational sustainability, makes a distinction between the horizontal approach and the vertical approach; where the horizontal approach is a measurement of the impact across an organization and the vertical approach analyses the supply chain and measures the life cycle impact of a product. Based on this, I will refer to vertical sustainability, which is concerned with whether, in the Limpopo IDC Nguni Cattle Development Project, each individual farm project is thriving and or growing as differentiated from horizontal sustainability, which is concerned with whether the project itself is thriving and or growing by increasing beneficiary farmers.

Objectives

The objective of this study is to respond to the central question: Is the Limpopo IDC Nguni Cattle Development Project sustainable especially after funding withdrawal? There are also very few studies addressing the sustainability of funded developmental projects in Africa (Seppey et al., 2017). This study, therefore, also aims to partially address this gap in the extant literature.

The Limpopo IDC Nguni Cattle Development Project

An estimated 70% of South African land is used by livestock. The production of livestock makes a significant food security contribution. A significant proportion of livelihoods in South Africa depends on livestock. Livestock production in South Africa is characterized by the duality of commercial and smallholder sectors. Livestock production in the smallholder sector faces constraints such as low productivity, lack of productive assets, low skills level, limited market opportunities, and limited market access (Mapiye, 2017). Due to these constraints, the smallholder livestock sector derives low income from livestock-based agricultural activities. Given that smallholder livestock producers comprise over 80% of the total livestock farmers in South Africa, the sector is viewed as a potential source of agricultural growth (Mapiye, 2022). Given this potential, the South African government has intervened with various projects to facilitate smallholder farmers to increase their incomes including through the land reform program (Makombe, 2017).

One of the initiatives which were started to foster the commercialization of previously disadvantaged Black smallholder farmers in the rural areas of Limpopo Province, South Africa is The Limpopo IDC Nguni Cattle Development Project. Broadly, the objectives were to commercialize smallholder farmers, to reintroduce the indigenous cattle back to their historic owners, to alleviate poverty, and to contribute towards livelihoods and food security (Mapiye et al., 2019).

The farmers on the Limpopo IDC Nguni Cattle Development Project are generally referred to as “smallholders” but their landholdings which are usually more than 600 ha do not fall in the range of area holding which characterizes smallholdings all over the world (Lowder et al., 2016). The term “smallholder” certainly raises some controversies in terms of definition (Chikazunga & Paradza, 2013; Cousins, 2011; Republic of South Africa, 2013) but there are some generally agreed ways to categorize smallholder farmers though these also depend on location and context (Chikazunga & Paradza, 2013; Republic of South Africa, 2013). According to Lowder et al. (2016) a less than two ha threshold of land ownership is frequently used to designate farms as small. Based on this threshold, the beneficiaries of the Limpopo IDC Nguni Cattle Development Project cannot be classified as smallholders. However, in this study, the reference to them as smallholders arises, not as a function of their landholding size,

but, because of how project participants are selected, the farmers face similar constraints as those faced by smallholders, besides the land size (Republic of South Africa, 2013).

Methodology

Research Design, Sample Selection, Sample Size, and Data Collection

Being an agricultural economist with a stronger quantitative than qualitative background, when I decided to embark on the study to assess the sustainability of the Limpopo IDC Nguni Cattle Development Project, I immediately started designing a survey employing the quantitative descriptive design. However, I realized that I was using many open-ended questions to capture the processes of formation of the Limpopo IDC Nguni Cattle Development Project as well as to capture the experiences regarding perceptions of the sustainability of the project. This led me to change and adopt the qualitative descriptive design. Koh and Owen (2000), mention that the value of descriptive research rests on the assumption that observation, description, and analysis can be used to solve problems and to improve practices. My change of heart was, therefore, motivated by the fact that qualitative research emphasizes the understanding of phenomena, uses exploratory open-ended research questions, provides for emergent unlimited description options, and applies special strategies for design and analyses credibility (Elliott & Timulak, 2005; Nassaji, 2015). Given these observations, together with my frustrations with the quantitative survey design, using the perceptions gained by key informants through their experiences with the project by applying the qualitative descriptive design (Kamal, 2019) became my choice. During the design of the interview guide (Appendix A) and during the interview data collection process (Castillo-Montoya, 2016; Donalek, 2005), I found the field notes that I had made during my supervision of the students to be very useful to the qualitative descriptive design process. Furthermore, the qualitative descriptive design can ensure credibility, dependability, transferability, and confirmability (Cypress, 2017; Gerard et al., 2004; Shenton, 2004) which are also important for trustworthiness.

I used the semi-structured interview guide as my data collection instrument (Castillo-Montoya, 2016; Donalek, 2005). I designed the interview guide in such a way that it was unambiguous, brief, and focused enough to stimulate a conversation around the subject/s of interest. Through the interview, one can explore experiences (Sakellariou et al., 2013). My sample comprised three respondents, two from the University of Limpopo (UL) and one from the Limpopo Department of Agriculture (LDA). The three were actively involved in the formation, execution, and management of the project. Although given the small sample, data saturation (Mason, 2010) may not have been reached, a significant amount of repetition and overlapping statements did occur in the interviews.

I recorded the interviews myself using a high-quality recorder. During interviews, COVID-19 protocols were observed. Ethical considerations (Surmiak, 2020) were considered. All the participants signed a written consent which explained that they could stop the interview at any time, they could withdraw from the study without consequence, and they could refuse to answer any questions. The concept of confidentiality was also explained to the respondents. In my interview guide, I started with simple questions then advanced to more complex and more sensitive questioning (Donalek, 2005) capturing the areas of direct involvement of the respondents. The respondents were primed because I told them in advance that I would be interviewing them about the sustainability of the Limpopo IDC Nguni Cattle Development Project.

Data Analysis

In my preparation to use NVivo to further analyze the hand-coded data, I made notes in the margins to identify common themes and to take note of initial meanings. This is important because in the social constructivist paradigm both the participant's and researcher's voices are considered alongside each other (Dube et al., 2014). I transcribed and typed the interviews myself because this assists in gaining awareness of some subtle ways you may have led the data collection (Jootun et al., 2009). When I completed the verbatim transcriptions, I paired my notes with the transcriptions. Broadly, the themes which I had identified in my notes were like those from the NVivo thematic analysis (TA). Nassaji (2015) notes that during the inductive exploration of qualitative data, recurring patterns, concepts, and themes are identified which the researcher then describes and interprets. The flexibility of TA means it can be applied to both deductive (theory-driven) and inductive (data-driven) research approaches. TA is useful for identifying, analyzing, and interpreting patterns of meaning in qualitative data (Cassol et al., 2018; Clark & Braun, 2017). After familiarizing myself with the transcripts by reading them several times, I followed the method like that used by Cassol et al. (2018) which includes open coding to generate initial codes which are subsequently grouped into categories and then organized into themes based on similarity. As guided by Elliott and Timulak (2005), I compared my themes with a senior qualitative researcher whom I gave my transcripts to perform the same exercise as I had done. Although some discussions and adjustments were necessary, we came up with similar themes. This exercise was simplified by the fact that some of the structures defining the themes had already been introduced in the interview guide (Elliott & Timulak, 2005).

Through prior contact with the Limpopo IDC Nguni Cattle Development Project, I had some developed preconceived ideas about whether the project is sustainable or not. Woods et al. (2016) state that the researcher's judgment rather than technical decisions can drive qualitative research, so the need for me to employ reflexivity was apparent (Jootun et al., 2009). As much as possible, I gave my respondents the space to share their experiences. This way, I became aware of those enlightening respondents' perceptions about the sustainability of the Limpopo IDC Nguni Cattle Development Project that were outside my initial assumptions. Thus, I used the processes of reflexivity and bracketing to promote rigor in the data collection process (Jootun et al., 2009). I present my results by following a format like that used by Shorten and Ruppel (2017).

Results and Discussion

Thematic Analysis

The following themes were identified:

Theme 1: Project Initiation and Formation

Respondents described the formation of the IDC Nguni Cattle Development Project and why they thought the formation process led to a sustainable project. Respondents mentioned that the Vice-Chancellor of the UL, Prof. Mahlo Mokgalong, while on a visit to the University of Fort Hare, came across a brochure which described how the University of Fort Hare was involved in a partnership for the development of communities in Eastern Cape, a partnership which involved the IDC. Based on the brochure, he inquired from the IDC about the possibility of initiating a similar project in Limpopo Province. Further proceedings led to the formation of a partnership between IDC as the project funding source, the LDA as the institution responsible

for consulting farming communities, staying in contact with the beneficiaries, and responsible for the day-to-day project management, while the UL became the custodian of the project responsible for financial management. Respondents mentioned that additionally, a board of trustees, comprising the IDC, the UL, farmer representatives and the LDA was formed in 2006, the same year that the project was initiated, and based at the UL where it performed its deliberations of the management of the project as an autonomous entity. A technical advisory committee was also formed to advise the board of trustees. It was mentioned that the IDC was more comfortable with the board of trustees being based at the UL than at LDA because, as it was observed, many government-managed projects in South Africa had a high failure rate. Respondents observed that this initial structure, where the day-to-day management of the project was done by the LDA, including infrastructure provision and disease control, while the administration of the project was done at the UL contributes to the sustainability of the project. Respondents observed it was this structure that led to the LDA becoming the project champion so when the project funding was withdrawn in 2010, the LDA continued to provide project funding and management.

It was also mentioned that during the discussions about the formation of the project, the UL sent some scientists to Tanzania to study a similar project to assist with the establishment of the IDC Nguni Cattle Development Project. This, according to the respondents, assisted in the formulation of a robust project formation process that led to the sustainability of the project. Thus the respondents' perceptions indicate that the identification of a relevant development need, the use of a robust process in the formation of the IDC Nguni Cattle Development Project, especially the consultation of farmers during project formation and design, and research done by the UL, the parceling of duties between the project partners, the autonomy of the board of trustees, the formation of a technical advisory committee, the management of the project finances by the UL and not the LDA, and the *de facto* ability of the LDA to become a project champion all contributed to the sustainability of the project.

Theme 2: Farmer Selection

Respondents concurred that the beneficiary selection process assisted in making the project sustainable. They mentioned that the selection criteria included that the farmer had to be South African belonging to the formerly disadvantaged groups, have some experience in farming and have access to a minimum of 600 ha of land either through ownership or a lease agreement. Respondents mentioned that at the beginning of the project, preference was given to land reform project farmers selected through LDA, but that later, the project management realized that land reform projects had many challenges. This led to publicly advertising in outlets like the internet, newspapers, the radio, and at municipality notice boards leading to the shortlisting of potential beneficiaries who would have submitted their applications individually or as groups known as Community Property Associations (CPAs). The respondents mentioned that the selection would be finalised by the technical committee and a task team checked the requisite infrastructure after which the trust chairperson would personally visit the farms, partly to verify the contents of the task team report but most importantly to check if any of the shortlisted farmers were not carrying a lot of debt. After this, a decision would be made on the state of readiness of farmers and beneficiary selection would be finalised. Respondents concurred that the rigorous, meticulous and transparent process by which farmers are selected contributes to the sustainability of the project. However, respondents observed that some of the selection criteria were contradictory to the project objective of alleviating poverty, especially the requirement that farmers should have at least 600 ha of land which left out a lot of the poor from the previously disadvantaged Black communities. In order to meet some of the requirements, poor Black communities could only be included in the projects through the CPA

group model. Even though the respondents did agree that the project selection criteria left behind the poorest in the previously disadvantaged communities, they also observed the challenges that were posed by the CPA group beneficiaries from the poor communities, challenges which negatively affected the sustainability of the project. However, generally, the respondents agreed that the beneficiary selection process contributes towards the sustainability of the project.

Theme 3: Livestock Pass-on System and Management

Respondents agreed that the livestock pass-on system used by the project was ingeniously designed and forms a kingpin to the sustainability of the project. They explained that after being selected, farmers are given one of two packages of animals; on one package, referred to as 30+1, the farmer gets 30 pregnant heifers and a bull while on the 50+2 package the farmer gets 50 pregnant heifers and two bulls depending on the availability of grazing. Farmers are expected to pay the loan back within 5 years by giving the same number and constitution of animals they got in the same condition they received them. The paid back animals are passed on to the next beneficiary. Respondents perceived that the ingenious part of the project design, which made it more sustainable than otherwise, was the fact that the UL farm was used as a collection and distribution point. This was necessary because it is not possible for a farmer to pay back at once all the thirty pregnant cows and a mature bull, so animals are collected and kept at the UL farm until cumulatively, from different farmers, a herd is generated to be passed on to the next beneficiary. Respondents mentioned that this cumulative generation of a herd also avoids inbreeding. The respondents mentioned that as the project grew the farmers providing the animals were located further and further away from the UL farm so in some cases pregnant heifers were collected from farms and delivered directly to the new beneficiary. Respondents perceive that one of the reasons why the project was sustainable, was the excellent management of the livestock pass-on system by the LDA especially the cumulative development of a herd to be passed to the next beneficiary. Besides this, respondents also mentioned that the flexibility of the project management to respond to the changing circumstances of the cumulative construction of a herd is crucial for the sustainability of the project. Even though farmers are generally able to pay back within the stipulated five years, respondents noted problems with CPAs as reflected by one respondent who said that:

We have problems...of loan repayment...here and there in particular not with individual farms but with restitution farms... [CPAs]... where ...you find them changing the executives and then now you were working nicely with the previous executive, the new executive comes in and there are problems...

Respondents noted that to assist the farmer with income, during the five-year payback period, the farmer, on approval by the project manager, can sell the bull calves. Respondents noted that this option assists the sustainability of the project, not only by providing an income source for the farmers but by showing them the potential of future sales.

Theme 4: Vertical Sustainability

For themes 1 to 3, the respondents referred to sustainability based on their global understanding of this concept. The distinction between vertical and horizontal sustainability was then explained to them and they were asked their perception of the two types of sustainability. Respondents mentioned that one of the project objectives was to reintroduce the

Nguni indigenous breeds to their areas of origin, however, in the market, the Nguni did not perform well. For instance, they fetch R3.00 less per kg compared to what the exotic breeds can get. Respondents explained that this is influenced by the fact that the feedlot weight gain performance of the Nguni, which is a function of genetic potential, is not uniform and therefore is unpredictable when compared to exotic breeds. The respondents mentioned that this applies to all Nguni ecotypes, namely the Venda, the Makhathini, the Changana including even the slightly bigger Pedi Nguni ecotype. This negatively affects the vertical sustainability of the project. Respondents mentioned that one aspect that could have positively impacted the vertical sustainability of the project was a plan to sell Nguni skins to Daimler Chrysler which had shown interest in the Nguni skins because of their quality and beauty. However, the plan failed because of the failure to accumulate the numbers of skins demanded.

The respondents mentioned that in another plan to improve the vertical sustainability, the project management hatched out a plan where an agreement was entered into with PicknPay Supermarket, Angus Beef, and Beef Corp. The basis of this agreement was that in South Africa, the demand for Angus beef, the only certified beef in South Africa, is high and the farmers cannot satisfy this demand. Angus Beef and PicknPay were engaged and based on research from the Agricultural Research Council, it was agreed that if farmers could produce an Angus-Nguni cross, the F1 cross could be sold through PicknPay as certified Angus beef thus commanding a premium price and effectively circumventing some of the farmers' marketing problems thus directly positively impacting vertical sustainability. Angus bulls were bought from KwaZulu-Natal Province (another province of South Africa) and brought to Limpopo Province. Farmers sold the F1 crosses to Beef Corp at about eight months (or when they were about to be weaned), through the trust which distributed proceeds to farmers on a *pro rata* basis. Beef Corp fattened the F1 cross for eventual sale to PicknPay. After successfully selling about 100 crosses the program collapsed because the Angus bulls could not survive the high temperatures in Limpopo Province, so they underperformed and eventually died. The perceptions of the respondents were that this plan if it had worked, was the one that would have had the greatest impact on the vertical sustainability of the project. Since the two plans that were made by project management to improve vertical sustainability both failed, vertical sustainability is still a real challenge for the beneficiary farmers.

Theme 5: Horizontal Sustainability

Respondents noted that in terms of horizontal sustainability, the project aims to distribute a target of 210 animals per year. Depending on the packages given to farmers, this works out to roughly 5-6 new beneficiaries farmers per year. Respondents mentioned that the horizontal sustainability of the project is enhanced by the fact that LDA is still able to purchase animals for distribution to beneficiaries. Respondents mentioned that IDC has withdrawn funding and that the last purchase by IDC was made in 2010. It was mentioned that during the 2020/21 financial year, LDA had allocated R2.5 million¹ for the procurement of cattle. However, this allocation was transferred to COVID-19 funds. Respondents mentioned that, currently, the project largely depends on redistributions from loan repayments. As stated by one respondent:

Its more the loan redistribution... and loan repayment and redistribution is way greater than the procured because we don't procure every year. We had at some stage three four years of sustaining development only with the loan repayments.

¹ 1 USD = 15.25 South African Rand (ZAR) as of 14-01-2021.

So, the loan repayments ... dominate the development now in terms of the distribution of genetic resources to the breeding performance.

Thus, the respondents perceive the project as horizontally sustainable largely through loan repayment, even though procurements are still sporadically done.

Theme 6: Other factors That Can Improve Project Sustainability

Respondents mentioned that there are factors that can improve the sustainability of the Limpopo IDC Nguni Cattle Development Project. It was mentioned that some of the market issues faced by the project, for instance, its failure to supply the required volumes of skins, could be ameliorated if the minimum package was increased to 50 plus 2. It was also noted that Daimler Chrysler should be approached again after most of the farmers had repaid their loans. Respondents also perceived the need to develop economic assessment procedures for the project. For instance, respondents noted that currently the way farmers perform both in terms of loan repayment and profitability is not properly documented. The respondents mentioned that project management could start documenting repayment and assessments of the performance of individual projects to make sure that they are financially viable instead of simply targeting project expansion as seems to be the current approach. It was noted that the development of a farm could be represented graphically in stages that farmers could easily understand and follow.

Respondents also mentioned that industry intelligence within the government is low. They noted that the project needs industry analysis to develop strategies for enhancing competitiveness and identifying and taking advantage of the project's comparative advantages. For instance, Nguni meat has health benefits against which competitiveness can be developed. According to the respondents, some of these aspects could be partly addressed by moving the project from LDA to a semi-autonomous government agency like the Limpopo Economic Development Agency (LEDA). The respondents noted that this would allow the agency to dedicate staff like economists and veterinarians to the project, making it more sustainable. The respondents also suggested that sustainability could be improved if the project broadened its focus from the Nguni cattle to include other breeds and other species like the small stock that could be integrated into the government's red meat cluster development in the Limpopo Province.

Respondents, however, noted that the culture of the project beneficiaries sometimes negatively affected its sustainability. As stated by one respondent:

...there were some farmers where instead of the animals belonging to the farmer himself it belonged to the family and that can destroy the business. I remember we had one case where there was a funeral, and the guy slaughtered the animal and explained that he had to slaughter the animal [because of the culture] ...

Respondents noted that increasing the starting herd to 50 plus 2 would increase farmer market participation thus improving sustainability. Respondents also noted that the competitiveness of the project could be developed by identifying and taking advantage of project strengths like the health benefits of Nguni meat. It was also suggested that moving the project from LDA to LEDA could create opportunities for increasing the sustainability of the project which could not be created while it is under LDA. Respondents also noted that increasing the project's ability to acquire and use industry intelligence could positively impact sustainability. However, respondents noted that the culture of beneficiaries, where project animals are owned by a family and not an individual, can negatively impact sustainability.

Discussion

Generally, respondents concurred that the Limpopo IDC Nguni Cattle Development Project is sustainable both vertically and horizontally. The reasons that were perceived to contribute towards sustainability were that the project initiation was well done by identifying a relevant development need in Limpopo Province. The project setup was also implemented in consultation with farmers and therefore the context of the community was well understood.

The community context was also captured through the LDA which has the overall development responsibility in the Limpopo Province, through the involvement of farmers in the project planning process, through Professor Mokgalong, whose institution, the UL is involved in research in the communities in Limpopo Province.

Respondents mentioned that the robust and transparent farmer selection system contributes to the sustainability of the Limpopo IDC Nguni Cattle Development Project. They also mentioned that the very well-designed livestock pass-on system positively contributes to the horizontal sustainability of the project. Respondents mentioned that one of the project objectives, namely, poverty alleviation was not being achieved. For this objective respondent mentioned that the project farmer selection guidelines leave out the poorest of the poor from formerly marginalized communities. This implies that research needs to be carried out as to how the CPAs, which include poor farmers from the formerly marginalized communities, can be sustainable so that the Limpopo IDC Nguni Cattle Development Project can have more impact on poverty. The UL can be at the forefront of such research.

Respondents mentioned that vertical sustainability is negatively affected by the failure of two of the initial strategies for the project, namely, selling beef as Angus branded beef and selling the skins of the Nguni cattle to improve project profitability. Respondents suggested that some of the challenges that led to the strategic failures could be addressed if the project was transferred from LDA to a development agency like LEDA.

Summarized above are some of the aspects and experiences of the Limpopo IDC Nguni Cattle Development Project that make it sustainable. Some of the aspects and experiences can be transferable to other (donor) funded projects design, planning, and execution processes. First, there is a need in the planning of a project to identify a champion who will take over the project when the donor exits. In the case of the Limpopo IDC Nguni Cattle Development Project, the LDA became the *de facto* champion.

Second, in my opinion, a critical and potentially transferable sustainability aspect of the Limpopo IDC Nguni Cattle Development Project is that the management has been willing and able to change the initial assumptions of the project in response to a better understanding of the project conditions. For instance, farmer selection changed from being recommended by LDA to being publicly advertised and transparent and management was willing to consider the 50+2 package instead of only using the 30+1 option. These assumption changes positively impacted horizontal sustainability. Respondents believe that sustainability can be further boosted if, through this flexibility, management could consider including small stock in the project. Small stock multiply faster than cattle and can recover the loan much faster. Furthermore, in my opinion, if the government wanted to catalyze the development impacts of such a project, the assumption changes could go as far as considering subsidizing interest payment, say by matching the farmer's payments. This would provide funding for horizontal growth.

Third, the planning process of a project needs to be perceptive regarding aspects that could negatively impact long-term sustainability. For instance, the animal distribution process of the Limpopo IDC Nguni Cattle Development Project avoided in-breeding. Such planning is transferable to other livestock-based development projects.

Fourth the fact that demand for the project exceeds supply, as indicated by the higher number of applicants who satisfy the selection criteria compared to actual recipients, shows the

popularity of the project and is a good sign of horizontal sustainability. It shows that Prof Mahlo Mokgalong identified a true development need in the Limpopo Province. It's also evidence that a project could be modified from being supply-driven to being demand-driven. The identification of a relevant development need is critical to project sustainability. It is also a transferrable aspect.

Fifth, there are opportunities where the UL could positively impact the sustainability of the Limpopo IDC Nguni Cattle Development Project. For instance, the UL could carry out research to identify which of the Nguni ecotypes, or livestock species in general, are suitable for different purposes in the core program or in the small stock program. The UL could also develop the graphical management tool which was mentioned by the respondents. The tool could show an ideal development path for a farmer and for the whole project and, therefore, can be used for monitoring and evaluation.

Finally, the Limpopo IDC Nguni Cattle Development Project needs to be able to, at appropriate times and for appropriate concerns, outsource some skills through targeted consultancies, which can assist its sustainability. For instance, the potential for the development of small stock projects and the feasibility of the possibility of housing the project under LEDA are examples of consultancies that could be outsourced. Outsourcing necessary skills could also be incorporated into project planning, especially budgeting.

Concluding Remarks

It is important to find out why projects fail after (donor) funding withdrawal. To establish this, it is necessary to study a sample of projects that failed and a sample of projects that are sustainable. We need to ask the question, "Who survived and why?" as suggested by Stevens and Peikes (2006, p. 153), however, we should also ask the question, "Who did not survive and why?" It is also necessary to understand the failure or success of the projects both from the beneficiaries' and donors' perspectives. Such a study needs to be done across donors, project sizes, project objectives, and across countries. Some studies claim to understand the causes of the lack of project sustainability, but I have not come across a comprehensive study that shares these perspectives. Such a study could facilitate the development of feedback mechanisms that can be used in the design of future (donor) funded projects as also observed by Muluh et al. (2019). Sustainability is also mostly studied quantitatively. Hopefully, this study demonstrates that the qualitative approach can also contribute to our understanding of sustainability and how to foster it in (donor) funded projects.

From this case of the Limpopo IDC Nguni Cattle Development Project, there are some key observations that we can make that can assist in making (donor) funded project sustainable; namely:

1. There needs to include a champion who adopts the project when the donor exits.
2. The project management needs to be flexible and willing to change the assumptions made at project establishment as they better understand the project context.
3. The technology used, especially in rural projects needs to be simple and one which the users can easily learn.
4. Stakeholder support is critical for project sustainability. In the case of the Limpopo IDC Nguni Cattle Development Project, support came from the UL and LDA.
5. Even though initially projects can be supply-driven, it is the demand-driven projects that have greater chances of achieving sustainability

6. Funded projects can create spin-off projects that use the core project as a pilot to learn from.
7. The exit strategy of the donor is important and needs to be included in the project design.

Finally, there are some key questions that still need to be asked, namely, is it possible for (donor) funded projects to be sustainable without any external funding (in cash or kind) after the funder has withdrawn? Under what conditions is this possible? The Limpopo IDC Nguni Cattle Development Project still receives funding from LDA. This is an example of a project that could still be sustainable with the livestock pass-on system without external funding for procurement. However, it cannot be sustainable without the technical and administrative management support from LDA. Thus, it cannot be completely devoid of funding (in cash or kind) and still be sustainable. The Limpopo IDC Nguni Cattle Development Project not only demonstrates the ability of government to take over projects from donors and run them successfully/sustainably, but it also provides a model of how this can be done. The critical question is: Can the projects for which this model is appropriate to be identified *a priori* as this would increase their sustainability.

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Appendix A

Interview instrument for the study:

Can funded development projects be sustainable: The case of Limpopo IDC Nguni Cattle Development Project, Limpopo Province, South Africa

SECTION A

1. What is your name?
2. What is your position in the Limpopo IDC Nguni Cattle Development Project?
3. What is your involvement in the Limpopo IDC Nguni Cattle Development Project?

SECTION B

Now we are going to discuss about the Limpopo IDC Nguni Cattle Development Project. With each question I will ask you about the implications to the sustainability of the project, given your understanding of sustainability. Towards the end, I will give you the definition of two sustainability concepts which I will ask you to comment in relation to the project. Throughout the interview I will ask probing questions that are mostly related to the sustainability of the project.

4. When was the Limpopo IDC Nguni Cattle Development Project formed?
5. Please can you describe how the Limpopo IDC Nguni Cattle Development Project was formed? How many organisations were involved (**list all**) and what were their roles? (**For each of the listed**) Please describe the process from the beginning to the point when the first participants were selected. Please describe the role of each organisation that was involved in the formation of the Limpopo IDC Nguni Cattle Development Project.
6. What were the objectives of the formation of the Limpopo IDC Nguni Cattle Development Project?
7. How were participants selected at the beginning of the project? Describe all the criteria for selection. What were the reasons/logic for the criteria? How were the criteria decided upon? Who decided on the criteria? Which organisations are involved in the selection of participants of the Limpopo IDC Nguni Cattle Development Project.
8. Is the selection process and are the criteria still the same for selecting new entrants to the project?
9. Describe in detail how the Limpopo IDC Nguni Cattle Development Project works? How many organisations are involved and what is the role of each organisation in the functioning of the Limpopo IDC Nguni Cattle Development Project.
10. Are the organisations that are currently running the project the same as those that started it?
11. Do you think that the Limpopo IDC Nguni Cattle Development Project is sustainable? Please explain your response in detail.
12. *If the respondent say that they think the project is sustainable:*

- a. Why do you think that the project is sustainable?
- b. The interviewer describes the distinction between horizontal and vertical sustainability the asks**
 - i. Do you think that the project is horizontally sustainable (Explain)?
What are the factors that affect horizontal sustainability?
 - ii. What are the factors that would enhance horizontal sustainability?
 - iii. Do you think that the project is vertically sustainable? (Explain) What are the factors that affect horizontal sustainability?
 - iv. What are the factors that would enhance vertical sustainability?
- c. Are there any changes in the management of the project that need to be made to make the project more sustainable?

13. If the respondent says they think the project is not sustainable.

- a. Please explain why you think it is not sustainable. What changes need to be made to make the project sustainable.
- b. What are the changes in the management of the project that need to be made to make the project sustainable?

Thank you very much.

Author Note

I have more than 20 years of research on development issues in Africa, mainly from the Sub-Saharan African countries. I have worked with academics, international and national institutions in Sub-Saharan Africa. I have field experience in design, implementation, and analysis of large data sets. I have quantitative analysis skills and both the training and experience of working in multidisciplinary teams. Although having a quantitative background, over time I have developed an appreciation of the strength of the complementarity between quantitative and qualitative research. My research interests are in economic development in general but specifically food security, irrigation development, rice development (in Africa) in so far as these have impact rural development in Africa. Correspondence regarding this article can also be addressed directly to: makombeg@yahoo.com

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