# Business Development Services and Financial Performance of Dairy Cooperatives: A Case Study of Selected Dairy Cooperatives in Musanze District

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#### Abstract

**Background:** This study focused on assessing the contribution of Business Development services on the financial performance of dairy cooperatives using a case study of selected dairy Cooperatives from Musanze district. The research questions focused on identification of the level of business development support services in selected dairy cooperatives, on assessing the level of financial performance of selected dairy cooperatives and to establish the relationship between Business Development Services and financial performance of selected dairy cooperatives.

Materials and Methods: The targeted population was 339 members and employees of selected Dairy Cooperatives where a sample of 77 respondents was selected using simple random probability sampling techniques. The study employed a descriptive research design using a case study area and both quantitative and qualitative research methods were used. Sources of data included both primary data which was gathered using self-administered questionnaire and secondary data which were gathered from different text books, journals and existing documents on BDS. The data collected was analyzed using SPSS and statistical tools like numbers, frequencies and tables.

**Results**: The model that was developed was found to be significant at 0.05. The results showed that there exist positive and significant correlations between the study variables. The  $R^2$  0.763 obtained showed that financial performance of the selected dairy cooperative is influenced by input services, training and technical assistance, infrastructure support and market access services provided by BDS at 76.3%. The researcher recommends that there is need to improve milk supply chain from the farmers to the final market to enhance performance.

Keywords: Business Development Services, Performance, Cooperatives, Dairy Cooperatives, Rwanda

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#### I. Introduction

Worldwide, approximately 150 million households are engaged in milk production. In most developing countries, milk is produced by smallholders, and milk production contributes to household livelihoods, food security and nutrition. Milk provides relatively quick returns for small-scale producers and is an important source of cash income. In recent decades, developing countries have increased their share in global dairy production. This growth is mostly the result of an increase in numbers of producing animals rather than a rise in productivity per head (FAO, 2018).

Some countries in the developing world have a long tradition of milk production, and milk or its products have an important role in the diet. Other countries have established significant dairy production only recently. Most of the former countries are located in the Mediterranean and Near East, the Indian subcontinent, the savannah regions of West Africa, the highlands of East Africa and parts of South and Central America. Countries without a long tradition of dairy production are in Southeast Asia (including China) and tropical regions with high ambient temperatures and/or humidity (FAO, 2018).

The government of Rwanda also has recognized the importance of Dairy business and has introduced One Cow per Poor family known as Girinka. This Program was set up in 2006 with the central aim of reducing child malnutrition rates and increasing household incomes of poor farmers. These goals are directly achieved through increased access to, and consumption of milk, by providing poor households with a heifer. The program is crucial to addressing the fundamental needs of those parts of the country that are critically food insecure and has contributed to an increase in agricultural production in Rwanda - especially milk production and products, reduced malnutrition and increased incomes (MINAGRI, 2017).

Girinka has led to a number of significant changes in the lives of the poorest Rwandans. Its implementation has contributed to increased milk production; improved soil fertility; increased crop production; enabled beneficiaries to access loans; improved nutrition; improved access to shelter and different equipment;

strengthened social cohesion; created employment to individuals and created an opportunity to educate family members of program beneficiaries. The program has also contributed to the improvement of the mindset towards cattle with the departure of beneficiaries from looking at cattle as a status symbol (the more cows one had the better) to a source of income and livelihood (MINAGRI, 2017).

According to the 2015 annual report from NAEB, livestock products including beef, milk, live animals, hides and skins were among other new export commodities and generated a total of 63.62 Million USD, cereal & grains exported to regional markets generated 44.53 Million USD while roots & tubers, fish, banana, pulses generated 29.89 million USD. Cattle keeping plays also a very important role in the peasant production system for several reasons, both economic and social (MINAGRI, 2017).

Girinka program was introduced while the country was undergoing reforms in cooperative movement operations with enactment of law n° 50/2007 of 18/09/2007 determining the establishment, organization and functioning of cooperative organizations in Rwanda, as amended to date that offered operation framework of cooperative movement in Rwanda. Girinka Program beneficiaries benefited this law and many had formed cooperatives to aggregate their bargaining power in commercialization of the produce with support in Business developemnt Services from sector players such as trainings on cooperative governance, business planning and financial management (Land O' Lakes International Development: Success stories, 2019).

Business Development Services (BDS) help businesses become more profitable by assisting beneficiaries in developing and producing quality products effectively; accessing higher value markets; managing their business efficiently and generally improving and developing their business (ILO, 2005).

ILO (2005) said that BDS can be directed at micro and small enterprises (MSEs) facing a variety of constraints due to poor levels of education, weak management, competitive markets, low quality products and/or services, lack of marketing skills, inefficient infrastructure and lack of familiarity with the local economic environment.

Dairy cooperatives in Rwanda are mostly formed by dairy farmers with lower level of education, lower level of management skills, lower quality of produce just to mention but a few. Government of Rwanda in partnership with different Non-Governmental organizations has rolled out BDS to dairy cooperatives to help them improve their level of performance in different areas of operations such as marketing, quality improvement, cooperative governance, cooperative financial management etc.

This study will explore the role of Business Development Services on performance of Dairy Cooperatives; using a case study of Selected Dairy Cooperatives as one of many cooperatives that benefited BDS program in light of the above scholarly identified role of Business Development Services on business enterprises.

### Statement of the Problem

The government of Rwanda has developed cooperative development policy that gives general orientation to cooperative development program to ensure that their operations are aligned with their principles through training, education, information and research so that members attain the ability to perform their cooperative business in an autonomous ways but there are still a number of challenges faced by Dairy sector like low number of improved cattle; problems in marketing, feeding, in milk quality which are hindrance for them to become strong cooperative movement able to serve its members efficiently; contribute significantly on economic transformation, human resource development, development and promotion of the private sector and poverty reduction (Newtimes, 2018).

Considering cooperative sector development needs in Rwanda; BDS is almost always needed but its efficacy had not received much attention by policy makers since there have been limited research on impact of BDS on cooperatives' performance. Agiragitereka-Kinigi and Zirakamwa—Muhoza dairy cooperatives are part of many cooperatives that has so long benefited BDS from different sector players but those cooperatives are still facing financial problems due to limited access to market, limited access to finance and membership growth problems just to mention but a few. Therefore; the purpose of this study is to find out the extent to which Business Development Services do contribute to the Financial performance of Cooperatives in Rwanda with special attention to Dairy cooperatives.

## Objectives of the study

The main objective of the study was to assess the impact of Business Development Services on financial performance of Dairy cooperatives, using a case study of selected Dairy Cooperatives in Musanze district. To achieve this, three specific objectives were used:

- i. To assess the level of Business Development Services' support in selected dairy cooperatives in Musanze District
- ii. To determine the level of financial performance of selected dairy cooperatives in Musanze District.
- iii. To establish the relationship between business development services and financial performance of

selected dairy cooperatives in Musanze District.

iv.

#### **II.** Literature Review

#### Theoretical literature

BDS is any non-financial services to business, offered on either a formal or informal basis such as linkages, training, consultancy, computer services, legal services, repair & maintenance, brokering, web-site design and management, telecommunication services, courier delivery, technical information, finance, accountancy or Audit, marketing inspection and testing (Land O' Lakes International Development, 2014)

In 1997, the donor committee for small enterprise development (CDASED) coined the word BDS to get rid of the negative term 'non-financial services'. In a series of conferences, BDS guidelines were developed (first version in 1999, final version in 2001) which promoted a new paradigm, the market development paradigm (Rijneveld, 2006).

The 2001 BDS guide defines BDS as services that improve the performance of the enterprise, its access to markets, and its capacity to compete. The definition of "business development services" includes a wide number of business services, both strategic and operational. BDS are designed to serve individual businesses, as op-posed to the larger business community (Commttee of Donor Agencies for Small Entreprise Development, 2001)

ILO as a pioneer of Business Development Services defines Business development services (BDS) as formal and informal non-financial services that offer entrepreneurs training, consulting, business information, marketing support, access to technology, advocacy, business linkages, infrastructure development and other non-financial services (ILO, 2005)

Oloni (2007) has identified different types of Business Development Services according to the need of Business. Identified business development services include Assistance with Market Access which deals in facilitating the establishment of trading relationships between rural or urban small enterprises with large, urban-based or international ones; facilitating collaborative marketing, and market research; providing market information; facilitating promotion, including trade fairs and exhibitions as well as developing and implementing mass media or targeted promotional campaigns; analyzing value chains and proposing all implementing measures to improve them.

Through BDS, a business can be assisted with input supply by supporting small enterprises to access inputs in a cost effective and affordable manner by provision of information about suppliers and facilitating collaborative or joint procurement and facilitating negotiations with suppliers. Oloni (2007) continues by saying that through BDS, the business can gain support in technology Development and Transfer through assistance in research and development of appropriate technologies; promoting, distribution and installing such technologies, developing distribution channels for the technologies and advising on appropriate technologies.

Training and Technical Assistance is also benefited by the business where business enterprises are assisted in cross cutting areas of cooperative development need such as behavioral change; policy and regulations awareness, and enhanced understanding of gender etc.

Infrastructure such as construction, operation or maintenance of markets, industrial parks or sheds, business incubators, storage and cooling facilities, power, information and communication technology (ICT) infrastructure; specialized services such as legal, financial management and auditing services and policy advocacy services that include influencing policy makers to improve policies, laws, regulations, procedures or administrative practices and processes, hence improving the business environment are also part of services received by Business enterprises (Oloni, 2007).

### Financial Performance

Financial performance is an ability or capacity to operate efficiently; earning profit, survive growth and reaction to environment threats and opportunities available. Also, performance can be measured by how the business is achieving its strategic objectives through efficient use of its resources (Robinson, 2000).

Financial performance refers to the degree to which financial objectives being or has been accomplished. It is the process of measuring the results of a firm's policies and operations in monetary terms. It is used to measure firm's overall financial health over a given period of time and can also be used to compare similar firms across the same industry or to compare industries or sectors in aggregation.

In measurement of Financial perfomance, sales turnover, Returns on Equity and cashflow can be used to measure it. While Sales turnover is the total amount of revenue generated by a business during the calculation period and is useful for tracking sales levels on a trend line through multiple measurement periods, in order to spot meaningful changes in activity levels(Accounting tools , 2018), return on capital employed (ROCE) is a financial ratio that measures a company's profitability and the efficiency with which its capital is used. In other words, the ratio measures how well a company is generating profits from its capital (Kenton, 2019) and cash

inflow does show the measurement of money received by an organization as a result of its operating activities, investment activities, and financing activities (Accounting tools , 2018).

#### Cooperative financial performance

Dairy cooperatives are "people-centered enterprises owned, controlled and run by and for their members who are in dairy business to realize their common economic, social, and cultural needs and aspirations. Generally, cooperatives bring people together in a democratic and equal way. Whether the members are the customers, employees, users or residents, cooperatives are democratically managed by the 'one member, one vote' rule. Members share equal voting rights regardless of the amount of capital they put into the enterprise (ICA, 2018)".

Cooperatives are widely spread in many countries around the world. Many researchers assume that the future of their establishment and development rates, as well as cooperative share within the economic sector will increase even more (Julius, 2011). In their research, Julius (2011) found that there are many challenges faced by cooperatives' performance in Lithuania that include their establishment without an adequate theoretical justification; management democracy; poor organization in funding; lack of operational planning as well as the lack of accounting and accountability methods; lack of qualified managers; mutual distrust and the fear to create common economic entity and lack knowledge about the cooperatives just to mention but a few (Julius, 2011).

According to Ellen Verhofstadt (2014) indicator of agricultural cooperative's performance in Rwanda is characterized amongst others by increased production, access to market achieved after overcoming some of market imperfections. Ellen continued to say that cooperatives are able to ovecome high price of acquiring inputs through joint marketing of their produce and joint purchase of inputs which does contribute positively to their bargaining power. Ellen critinued to say that: "this will result in lower input prices, higher producer prices, and higher farm incomes and profits. In addition, reduced transaction costs contributes to improved market access and to higher marketed surpluses. In turn, cooperatives can ease the sharing of knowledge among the members, and some may offer training and extension. This contributes to new technology adoption and best management practices, which ultimately have a positive effects on agricultural output, productivity, and farm incomes. Some cooperatives may offer financial services, which eases productivity-enhancing investments and leads to higher farm income (Verhofstadt, 2014). Different researcher has discussed performance indicators for cooperatives. In their report, CHF international has demonstrated that the performance of the cooperative can be accessed through its inter-linked Five (5) Dimensions of cooperative which are cooperative's legal status, planning and strategy; cooperative's management structure and accounting systems; Cooperative's production and quality of its output; Cooperative's market linkages and relationships and its recruitment and retention strategy (CHF, 2013).

Land O' Lakes International Development has also identified different performance indicators for cooperative organizations and found that there are six performance areas that are leadership which show how leaders do inspire, prioritize; draw decisions; give directions and bring innovation in cooperative; adaptive capacity which is cooperative ability to assess, monitor and act to those internal and external changes.

#### Empirical literature

The advantages of small business development as one of alternative way of increasing employment and revenues for a lot of poor and low income earners has been prioritized by governments, development agencies and researchers in many countries for several decades now. After introduction of Micro - finance (MF) services, it was proved that services tailor- made SMEs can be economically viable and be one of strategy for poverty reduction though it was found that small businesses still are constrained by several non-financial factors such as lack of education, inadequate technical skills, poor access to markets, lack of information and unreliable infrastructure. According to their findings, James, Peter and Washington found that BDS that does contribute in improved productivity, market access and profitability is one of strategy that can be used to overcome those identified constraints (James, Peter & Washington, 2014).

Nwaizugbo, Aghara and Oparah observed that assistance to cooperative should not be limited to assisting them to get funding but it has to be extended to equipping them whit know how, that is skills in how those fund can be efficiently used. In their research; they found that "BDS; improved knowledge and use of marketing strategy and creating a business friendly environment would help SME operators improve their performance" (Nwaizugbo, Aghara, & Oparah, 2013).

International Labor Organization (ILO) also recognises the role that BDS plays on the business performance troughh different types of Business Development Services offered to SMEs that are helpful in different services such access to market, supply of inputs, technology and product development; infrastructure support; capacity building and technical assistance; advocacy and policy and the last but not the least in financial support.

Business Development Services are helpful in market access because cooperatives/ SMEs are assisted

in identification and establishment of new markets of their products and/ or their services, and/or developing existing ones while input supply services is concerned by improving SMEs' access to those factors of production such as raw materials and other inputs which is achieved through continuous training and technical support in different areas of needs to SMEs. Through BDS, SMEs are able to access new technology and product development program which is achieved through research; identification of new technologies; assessment of existing capacity to enhance sustainable local production, marketing and service of these technologies and development of a new and enhanced products specifically targeted to market demand (ILO, 2005).

One hand, capacity building through training and technical assistance aims to strengthen SMEs capacity and ability to plan and manage their business operations and increase their skills and know-how while at another hand; infrastructure support is concerned by assisting SMEs to set up state of the art infrastructures that respond to the growth need of them and enhance efficiency in their operations.

Advocacy and policy is one of many types of BDS that is concerned with production of sub-sector research; policy's opportunities and constraints' analysis to assist SMEs advance their interest through establishment of well-functioning coalitions and umbrella organizations while financial support is concerned with creating linkages between SMEs, Banks and other financial institutions that allow them access loans and other financial support through formal and alternative channels (ILO, 2005).

ILO suggest that BDS to be effective, it have to be tailored to meet needs and wants of SMEs and has to be market driven and sustainable in such a way that market linkage focus on those markets where SMEs have ability to operate and is interested in (ILO, 2005). Scholars such as Brijlal (2008) contend that through BDS, SMEs are able get needed information to improve their businesses, capacity development and quality improvement programs, technology transfer just to mention but a few that they capitalize on to overcome those market failures.

### Business Development Services and Business Financial performance

Gathenya, Bwisa and Kihoro (2011) are of the view that BDS is one of remedies for challenges faced by SMEs in their journey to achieving, quality improvement, efficiency and effective operations to gain sustainable competitive advantages. In their research on the Effect of Business Development Services on Small Medium Enterprises (SMEs) Performance, Ombi, Nabila Azwa, and Imbarine (2018) found that the 34.6% of the variance in SMEs performance can be explained non-financial and financial support which is Business Development services.

JP Morgan Chase (2013) as quoted by James, Peter and Washington, (2014) argued that in South Africa, BDS has contributed to the business growth, access to financial resources, market access, efficiency in financial management, improved human resource management and leadership which did contribute to increased profitability and number of permanent staff. This effect of BDS results from the combined package of expertise offered to business that enabled them to perform beyond their border.

The Business Development Services equip businesses with strategic skills of the business that is the capacity to analyze and predict the future and to draw a comparison between cause and effect or the capacity to view the complexities of the operations of the organisations as a whole including those factors beyond their control. This is supported by Clement Mwaanga (2014) who found that 37% of those SMEs who received training through BDS has seen their business improved (Mwaanga, 2014).

ILO has found that through BDS, business profit does increase because of change in SMEs' methods of operations where focus is put on quality production, efficiency and effectiveness in business operation and management. ILO continues to say that BDS does help micro and small enterprises (MSEs) which may be facing any of the following constraints such as poor level of education, inefficient management, poor market performance; low quality products and/or services, poor marketing skills, lack of infrastructure and lack of information on the local economic environment lack. The above businesses are under risk of failure because they can't develop to their full potential (ILO, 2005).

Different scholars had different views on the relationship between BDS some holding a view that BDS may enhance better performance of organisations; while others suggest that since BDS are supply driven; they may not have a positive contribution on organisation and its performance. In their research, James, Peter and Washington, (2014) conclude that there is positive relationship between BDS and organizational performance (James, Peter and Washington, 2014).

# Challenges faced by Dairy Cooperative Organisations in Rwanda

In general, Dairy cooperatives share most of challenges with other types cooperatives that hinder their growth strategy. "Many farmer cooperatives in Rwanda face huge challenges including mismanagement and other governance issues like fraud and misuse of property as well as lack of sustainable markets and capacity to

operate efficiently. In addition, some of the members side-sell produce, affecting the performance and cash flow of the cooperatives in the country (Newtimes, 2018)".

The government of Rwanda through MINICOM has identified different challenges being faced by cooperative movement in Rwanda, Dairy cooperatives included. One of the challenges they are facing is resource constraint which is a common constraint but specifically agricultural cooperatives facing severe credit access problems as they are not trusted by credit institutions and are unable to mobilize required resources internally which have adverse impact on their sustainability which does discourage creation of new ones. Another constraint faced by cooperative society in Rwanda is infrastructure constraint as most of cooperatives have poor infrastructures, particularly in area of post-harvest, storage, marketing and processing in addition to lack of basic rural infrastructure support such as roads, electricity and general communications.

Poor cooperative management, lack of human resource development policy are hindering cooperative development as they are facing shortage of experts in cooperative management and employees that could contribute to the effectiveness and efficiency of their operations.

The last but not the least challenge faced by cooperatives in Rwanda is about poor member awareness about their rights and obligations as cooperative members. Cooperatives' members have been increasing greatly in past years but also there have been remarkable dormant members and lack of their active participation in the day to day management of their cooperatives which created a loophole in efficient cooperative operations. A successful cooperative does require enlightened and informed memberships who drive its mission and strategic vision. It was observed that elections and statutory meetings do not take place according to the law provisions which have created lack of interest among members to their management and have adverse impact on the core spirit of democratic nature of cooperatives.

#### Conceptual framework

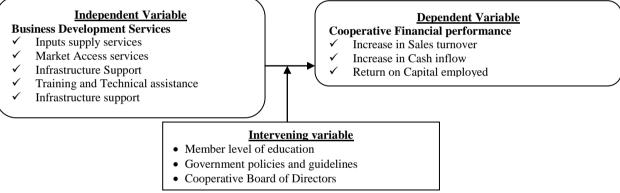


Figure 1: Conceptual framework

Dairy cooperatives are too much helpful in assisting to meet the common Social, economic and cultural needs and aspirations. Apart from this; Dairy cooperatives faces many challenges that requires interventions of sector player. The Figure1 was developed to bring out a clear reflection of services offered in BDS and the cooperative performance indicators along with intervening variables. It is clear that Business Development Services as an independent variable measured by market access services, inputs supply services, technology and product development, training and technical assistance, infrastructure support, policy/advocacy affects Cooperative's performance which is a dependent variable measured by Increase in Sales turnover; increase in Cash inflow and increase in return on Capital employed. However, for cooperative performance to be achieved, cooperatives need to work in line of the government policy and guidelines, continue to educate and train its members to meet the developmental need and there is a full engagement of Cooperative board of directors. The researcher developed the above model in order to have a guide in carrying out the research using the dependent and independent variables.

#### **III. Materials And Methods**

*Study Design:* This research used a descriptive research design where qualitative and quantitative methods were used. Therefore, this design was preferred because of the need to capture a diverse opinion about role played by Business Development Services on performance of Dairy cooperatives in Rwanda.

*Study Location*: This study was carried out at selected Dairy Cooperatives located in Musanze District, Northern Province in Rwanda.

Study Duration: It covered a period of Five (5) years from 2012 to 2016.

Sample Size: The targeted population for this study was all Selected Dairy Cooperatives' members and employees. The total members of Agiragitereka-Kinigi cooperative members are 126 and the cooperative has 6 employees (Agiragitereka-Kinigi Dairy Cooperative, 2019); while Zirakamwa—Muhoza dairy cooperative's members are 203 and the cooperative has 4 employees (Zirakamwa-Muhoza Dairy Cooperative, 2019). From this, the sample size of 77 was arrived at using Slovin's formula at a confidence interval of 90% and margin of error 10%.

$$n = \frac{N}{1 + Ne^2} = \frac{339}{1 + 339 * 0.1^2} \approx 77$$

**Procedure Methodology:** During this research; questionnaires were distributed to the respondents at cooperatives headquarters and at the home of members and employees. Best fits enumerators with knowledge and experience in data collection that assisted the researcher in data collection and to speed up this process to meet the deadline. The questionnaires in English were translated in local language (Kinyarwanda) since the researcher assumed that respondents were more conversant with Kinyarwanda thus helping respondents to respond in language they understand most. The interview was done by the researcher and enumerators to those who are or have been in cooperative leadership using face to face observation and discussion.

Statistical Analysis: After completing data collection, the data was coded and entered into Statistical Package for Social Science (SPSS) computer program for their analysis. Data was analyzed by use of different quantitative and qualitative statistical procedures and methods. Descriptive statistical tools were used while the researcher was analyzing quantitative data. Data was summarized and categorized using table, means, percentages, and frequencies. Qualitative analytical methods have been also used for qualitative data by use of interpretation and explanation of various respondents' opinions, concepts and views through summarizing, categorizing and their presentation in convenient form.

# **IV. Results And Discussions**

#### **Participants**

The majority of the respondents were male at 72.73% while 27.27% of the respondents were female. 29.9% of the respondents were in the age group between 31-40 years as well as in the age group between 51-60 years. The age group of 41-50 years was represented by 28.6% of the respondents while only 6.5 % of the respondents were in the age group of 21-30 years and 5.2% represented the age group of those above 61 years. On their education level, majority of the respondents, that is, 55.84% have gone up to the primary level. This was followed at a distance by 20.78% of the respondents who have gone up to secondary level.15.58% of the respondents indicated that they have none of the education background. Only 7.9% of the respondents contacted have gone up to a university.

# Findings on Objective One

To achieve the first objective, the respondents were provided with different statements assessing the different business development support services and requested to rate them on a five point Likert scale where 5= Very High Level (VHL) 4= High Level (HL) 3=Moderate (M) 2= Low Level (LL) 1= Very Low Level (VLL). The scores obtained on the scale were presented using frequencies and percentages. In addition, the means and the standard deviations for the various scale items were obtained to offer further analysis.

**Table 1: On the Input Supply Services** 

|  | VI  | L   | LI |     | N  | Л    | Н  | IL   | VHL |      |      |       |
|--|-----|-----|----|-----|----|------|----|------|-----|------|------|-------|
|  | N   | %   | N  | %   | N  | %    | N  | %    | N   | %    | Mean | Stdev |
| Adequate inputs to enhance production  | 1   | 1.3 | 1  | 1.3 | 10 | 13.0 | 45 | 58.4 | 20  | 26.0 | 4.06 | .75   |
| Animal feeds are easily available and at low cost                            |     |     | 1  | 1.3 | 19 | 24.7 | 45 | 58.4 | 12  | 15.6 | 3.88 | .67   |
| Farmers are aware of the available inputs that can increase their production |     |     | 4  | 5.2 | 13 | 16.9 | 34 | 44.2 | 26  | 33.8 | 4.06 | .85   |
| Average  | 0.3 | 0.4 | 2  | 2.6 | 14 | 18.2 | 41 | 53.7 | 19  | 25.1 | 4.00 | 0.76  |

VLL= Very Low Level, LL=Low Level, M= Moderate, HL= High Level, VHL= Very High Level, Stdev= Standard deviation

Table 1 shows the responses on the input supply services offered by business development fund to the dairy cooperatives. On the provision of adequate inputs to enhance production, 58.4% of the respondents rated it to be at high levels while 26% rated it at very high level. The total of this gives 84.4% of the respondents rating the provision favourably. On the other hand, 13% rated it as moderate, 1.3% as low level and another 1.3% at

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very low level. The mean score of this was 4.06 with a standard deviation of 0.75 showing that though there were divergence of views, majority of the respondents rated this at high level rating.

In regard to provision of animal feed that are easily available and at low costs, 58.4% of the respondents rated this at high level and 15.6% at very high levels giving a total of 74%. 24.7% of the respondents rated this at moderate levels while only1.3% rated it as low level. This is a clear indication that the majority of the respondents; ratings were on the positive side of the scale. This results are supported by the mean score obtained which is 3.88 (SD=0.67) indicating that the responses are inclined to the high level rating.

On whether farmers are aware of the availability of inputs that can increase their productivity, 44.2% of the respondents indicated that this was at high level of awareness while 33.8% rated it at very high level, a total of 78%. 16.9% of the respondents rated the awareness level as moderate with only 5.2% rating it at low level. These findings tend to show that majority of the respondents rated farmers' awareness of inputs at favourable levels. Similar conclusions can be drawn from the means score of 4.06 and standard deviation of 0.85 that were obtained.

The researcher also computed the overall average of the statements to provide further analysis on the overall rating of input supply services. These are also shown in Table 1 Accordingly, the summarized findings show that the rating for the provision of input supply services has the majority, that is, 53.7% of the respondents rating it at high levels and 25.1% at very high level. This gives a total of 78.8% of the ratings on the positive side of the scale. The overall mean and standard deviation that were obtained also attest to this.

**Table 2: On the Training and Technical Assistance** 

|  |   |      |    |       | 8 *** |       |    |       |     |       |      |       |
|--|---|------|----|-------|-------|-------|----|-------|-----|-------|------|-------|
|  | 1 | VHL  |    | LL    |       | M     |    | HL    | VHL |       |      |       |
|  | N | %    | N  | %     | N     | %     | N  | %     | N   | %     | Mean | Stdev |
| There is adequate training on maintaining animal health                                      |   |      | 7  | 9.1%  | 9     | 11.7% | 39 | 50.6% | 22  | 28.6% | 3.99 | .88   |
| BDS has enhanced livestock<br>management through various<br>support services like veterinary |   |      | 8  | 10.4% | 8     | 10.4% | 53 | 68.8% | 8   | 10.4% | 3.79 | .77   |
| Farmers received training on Milk quality handling   |   |      | 2  | 2.6%  | 15    | 19.5% | 37 | 48.1% | 23  | 29.9% | 4.05 | .78   |
| Marketing skills acquired through<br>training have contributed to access<br>to market        | 1 | 1.3% | 24 | 31.2% | 26    | 33.8% | 22 | 28.6% | 4   | 5.2%  | 3.05 | .93   |
| Average  | 1 | 1.3% | 10 | 13.3% | 15    | 18.6% | 38 | 49.0% | 14  | 18.5% | 3.72 | 0.84  |

VLL= Very Low Level, LL=Low Level, M= Moderate, HL= High Level, VHL= Very High Level, Stdev= Standard deviation

Table 2 shows the results obtained from the field on the training and technical assistance that the cooperative and its members receive from the business development services. The first statement checked on whether there is adequate training on maintaining animal health. To this, 50.6% of the respondents indicated that it is at high level and 28.6% at very high level. In addition to these, 11.7% rated the same statement at low level and 9.1% at moderate. The mean score for this was 3.99 and standard deviation 0.88.

On whether BDS has enhanced livestock management through various support services like veterinary service, majority of the respondents rated this at high level with 68.8% while 10.4% rated the same at very high level. 10.4% of the respondents rated this statement at low level and moderate level for each. This ended up obtaining a mean score of 3.79 and a standard deviation of 0.77.

On whether farmers received training on milk quality handling, 48.1% of the respondents rated it as high level while 29.9% of the respondents rated it as very high level. This gives a total of 89.0% of the respondents rating it positively. 19.5% of the respondents rated this as moderate level and 2.6% rated it at low level. This obtained a mean score of 4.05 and a standard deviation of 0.78. The researcher also sought to find out if marketing skilled acquired through training has facilitated access to the market. To this, 33.8% said at a moderate level, 31.2% at a low level while 1.3% at a very low level. On the other hand, 28.6% rated this at high level and only 5.2% rated it at very high level. The mean score obtained is 3.05 with a standard deviation of 0.93. These results show that there was divergence of views among the respondents with the mean score showing that this was generally rated at moderate level.

Finally, the researcher computed the aggregate average for all the statements measuring training and technical assistance. According to the results displayed in Table 2, on average 49% of the respondents rated training and technical assistance offered by BDS at high level while 18.5% rated it at very high level. This gives a total of 67.5% of the respondents who rated training and technical assistance at favorable levels. Only 14.6% (1.3% very low level and 13.3% at low level) of the respondents rate this on the negative side of the scale. The average mean score obtained was 3.72 with a standard deviation of 0.84 showing that the responses tended to show high level of rating for training and technical assistance offered by BDS.

In addition to these training and technical support services, the researcher established, through the interview with respondents, that they also receive services on farming as a business and for income generation. The farmers also are trained by BDS on fodder handling and feeding techniques to enhance productivity of milk. They also access customer care from the BDS.

**Table 3: On the Infrastructure Support Services** 

|   | 7 | /LL  |   | LL   | _  | M     | _  | HL    | VHL |       | •    | •     |
|---|---|------|---|------|----|-------|----|-------|-----|-------|------|-------|
|   | N | %    | N | %    | N  | %     | N  | %     | N   | %     | Mean | Stdev |
| There is adequate milk transportation equipment that has enhanced milk quality from farmers.              | · |      | 1 | 1.3% | 9  | 11.7% | 41 | 53.2% | 26  | 33.8% | 4.19 | .69   |
| The seasonality of the dairy products does not negatively affect farmers due to efficient storage fodder. | 1 | 1.3% | 4 | 5.2% | 19 | 24.7% | 49 | 63.6% | 4   | 5.2%  | 3.66 | .72   |
| There is adequate milk cooling facilities that has enhanced the quality of dairy products                 |   |      |   |      | 10 | 13.0% | 28 | 36.4% | 39  | 50.6% | 4.38 | .71   |
| Average   | 1 | 1.3% | 2 | 3.2% | 13 | 16.5% | 39 | 51.1% | 23  | 29.9% | 4.08 | .71   |

VLL= Very Low Level, LL=Low Level, M= Moderate, HL= High Level, VHL= Very High Level, Stdev= Standard deviation

In the first objective, the research also sought to find out the level of infrastructure support services offered by BDS and the results are shown in Table 3. On whether there is adequate milk transportation equipment that has enhanced milk quality from farmers, 53.2% of the respondents rated this at high level of support while 33.8% at very high level giving a total of 87% who rated this positively. However, 11.7% rated the same at moderate level while only 1.3% at low level. The mean score obtained was 4.19 and a standard deviation of 0.69. This is a clear indication that the rating is inclined to the high level of service support.

On whether the seasonality of the dairy products does not negatively affect farmers due to efficient storage fodder, 63.6% of the respondents indicated this at high level while 5.2% rated it at very high level. A total of 68.8% representing the majority, indicated a rate that is no the positive side of the scale. 24.7% of the respondents rated the same at moderate level, 5.2% at low level while only 1.3% at very low level. The mean score for this was 3.66 and standard deviation of 0.72.

In addition, the researcher also sought to find out whether there is adequate milk cooling facilities that has enhanced the quality of dairy products. The results shown in Table 3 shows that 50.6% of the respondents rated it at very high level of support while 36.4% of the respondents rated this at high low level. The rest, that is, 13% of the respondents rated at moderate levels. The mean score obtained is 4.38 and standard deviation of 0.71. Further, the overall results were obtained to determine the BDS services support in relation to the infrastructure support. The results show that 51.1% of the respondents rate the infrastructure support services at high level while 29.9% of the respondents rated this at very high level totaling to 81% rating this at positive level. The overall mean score of 4.08 and standard deviation of 0.71 incline to high level of rating supporting this.

**Table 4: On Market Access Services** 

|  |   | /LL  | _  | LL    | _  | M     | _  | HL    | VHL |       |      |       |
|--|---|------|----|-------|----|-------|----|-------|-----|-------|------|-------|
|  | N | %    | N  | %     | N  | %     | N  | %     | N   | %     | Mean | Stdev |
| Dairy products reach the market while still in their fresh quality   |   | •    | 1  | 1.3%  | 8  | 10.4% | 18 | 23.4% | 50  | 64.9% | 4.52 | .74   |
| There is ease of access to the market due to the services rendered by BDS  |   |      | 23 | 29.9% | 10 | 13.0% | 12 | 15.6% | 32  | 41.6% | 3.69 | 1.29  |
| There are various collection or<br>distribution points that have helped<br>farmers in distributing the milk to the<br>market | 3 | 3.9% | 6  | 7.8%  | 34 | 44.2% | 34 | 44.2% |     |       | 3.29 | .78   |
| Buyers have increased because they feel satisfied with the final products that reach to the market.                          |   |      | 1  | 1.3%  | 31 | 40.3% | 39 | 50.6% | 6   | 7.8%  | 3.65 | .64   |
| Average  | 1 | 1%   | 8  | 10.1% | 21 | 27%   | 26 | 33.4% | 22  | 28.6% | 3.79 | 0.86  |

VLL= Very Low Level, LL=Low Level, M= Moderate, HL= High Level, VHL= Very High Level, Stdev= Standard deviation

The last indicator of the business development support services that the researcher was interested with was the market access services. This was also measured on a five point Likert scale from very low level to very high level and the results of the findings are displayed in Table 4. The first statement sought to find out whether

dairy products reach the market while still in their fresh quality thanks to the BDS support. 64.9% of the respondents rated this at very high level of support while 23.4% rated this at high level totaling to 88.3% of the responses on the positive. The rest of the respondents rated the same as moderate level (10.4%) and low level (1.3%). The mean score obtained for this was 4.52 and a standard deviation of 0.74. This shows that despite existence of deviation of responses, the mean score tends to indicate very high level of BDS support.

Further, the research also sought to find out if there is ease of access to the market due to the services rendered by BDS. The result shows that majority of the respondents rated this as very high level with 41.6% of the respondents while 15.6% rated it at high level. The total for these two give 67.2% of positive responses. 13% of the respondents rated it at moderate level and 29.9% at low level. These results gave a mean score of 3.69 and a standard deviation of 1.29 indicating divergence in views. The third statement under this indicator was to find out whether there are various collection or distribution points that have helped farmers in distributing the milk to the market. This showed 44.2% rating this at high level and another 44.2% at moderate level. 7.8% and 3.9% of the respondents rated it at low level and at very high level respectively. The mean score obtained was 3.29 with a standard deviation of 0.78. The mean score show that this is rated at moderate level.

The last statement was interested in finding out whether buyers have increased because they feel satisfied with the final products that reach to the market. 50.6% rated this at high level and 7.8% rated it at very high level giving a total of 58.4%. On the other hand, 40.3% of the respondents rated it at moderate level while 1.3% rated it at low level. The means score of 3.65 (and standard deviation of 0.64) shows that this was rated at high level. The aggregate average to indicate the overall score of market access services showed that 33.4% rated this at high level and 28.6% at very high level giving a total of 62%. The mean score obtained (3.79) and standard deviation (0.86) showed that there are divergent views but the scores tend towards high level of BDS support.

# Findings on Objective Two

To achieve objective two, the respondents were provided with different statements assessing the level of financial performance and requested to rate them on a five point Likert scale where 5= Strongly Agree (SA), 4= Agree (A), 3=Neutral (N), 2= Disagree (D) and 1= Neutral (N). The scores obtained on the scale were presented using frequencies and percentages. In addition, the means and the standard deviations for the various scale items were obtained to provide further analysis.

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|--|-------|---------|--------|---------|-------|---------|-----|---------|----|-------|------|-------|
|  |       | SD      | D      |         |       | N       | A 5 |         | SA |       |      |       |
|  | N     | %       | N      | %       | N     | %       | N   | %       | N  | %     | Mean | Stdev |
| There have been increased milk<br>produce for the last five years<br>Increased production match with |       |         |        |         | 35    | 45.5%   | 41  | 53.2%   | 1  | 1.3%  | 3.56 | .53   |
| increase in sales due to easy access to<br>market  |       |         | 1      | 1.3%    | 34    | 44.2%   | 36  | 46.8%   | 6  | 7.8%  | 3.61 | .65   |
| Farmers can now sell their output at<br>better prices that meet their costs of<br>production         |       |         |        |         | 19    | 24.7%   | 52  | 67.5%   | 6  | 7.8%  | 3.83 | .55   |
| The marketing and sales through<br>cooperatives has increased the<br>quantity of milk sold           | 1     | 1.3%    | 27     | 35.1%   | 11    | 14.3%   | 37  | 48.1%   | 1  | 1.3%  | 3.13 | .96   |
| There are increases and sustainable revenues from milk sales   |       |         |        |         | 62    | 80.5%   | 15  | 19.5%   |    |       | 3.19 | .40   |
| There is sufficient and regular flow of income for the farmers                                       | 3     | 3.9%    | 4      | 5.2%    | 4     | 5.2%    | 25  | 32.5%   | 41 | 53.2% | 4.26 | 1.04  |
| Average  | 1     | 0.9%    | 5      | 7.9%    | 28    | 35.7%   | 34  | 44.6%   | 9  | 11.9% | 3.59 | 0.69  |

**Table 5: On Sales Returns to Measure Performance** 

SD= Strongly Disagree, D=Disagree, N= Neutral, A= Agree, SA= Strongly Agree, Stdev= Standard deviation

The indicator of financial performance of the cooperative was sales returns. This was measured using various statements. The first sought to find whether there have been increased milk produce for the last five years. 53.2% of the respondents disagreed with this while 1.3% of the respondents strongly disagreed and 45.5% of the respondents indicated neutral. The mean score for this was 3.82 and standard deviation of 0.76. On whether increased production match with increase in sales due to easy access to market, 46.8% indicated agreed while 44.2% of the respondents said neutral. The mean score obtained was 3.61 and standard deviation of 0.65 indicating responses incline to agree that there is increased production which matches with sales due to access to market.

Further, on whether farmers can now sell their output at better prices that meet their costs of production, majority of the respondents (65.5%) agreed while only 7.8% strongly agreed. The rest, that is, 24.7% indicated neutral. The mean score for this was 3.83 and standard deviation of 0.55. This show's that there

was not much divergence in the view while mean shows that majority inclined on agree. In addition, on whether the marketing and sales through cooperatives has increased the quantity of milk sold, most of the respondents, that is, 48.1% agreed followed by 35.1% who disagreed. The mean score obtained was 3.13 and a standard deviation of 0.96. This shows that the responses were diverse and the mean is on the neutral.

The results displayed in Table 5 also shows that 80.8% of the respondents were neutral on whether there are increases and sustainable revenues from milk sales. The rest of the respondents, 19.2%, agreed with the statement. This gave a mean score of 3.19 and a standard deviation of 0.4 clearing showing no divergence of views around the neutral. Lastly, the research also used the statement that there is sufficient and regular flow of income for the farmers to determine the sale returns of the farmers. To this, 53.2% of the respondents strongly agreed while 32.5% agreed. This also gave a mean of 4.26 and a standard deviation of 1.04 showing divergence in views. The researcher also computed the overall average in order to find the average scores for sales returns. The results also shown in Table 5 shows that 0.9% of the respondent strongly disagreed, 7.9% disagreed while 35.7% were neutral. On the other hand, 44.6% of the respondents agreed and 11.9% strongly agreed. The mean score obtained was 3.59 and a standard deviation of 0.69.

**Table 6: On Cash Flow to Measure Performance** 

|   |   | SD   |    | D     |    | N     |    | A     | SA |       |      |       |
|---|---|------|----|-------|----|-------|----|-------|----|-------|------|-------|
|   | N | %    | N  | %     | N  | %     | N  | %     | N  | %     | Mean | Stdev |
| There is now increase cash inflow due to milk sales   |   |      | 4  | 5.2%  | 39 | 50.6% | 31 | 40.3% | 3  | 3.9%  | 3.43 | .66   |
| The cash inflow is adequate to meet<br>the daily operation costs for the dairy<br>cooperative | 1 | 1.3% | 12 | 15.6% | 25 | 32.5% | 39 | 50.6% |    |       | 3.32 | .79   |
| The daily working capital is adequate   | 3 | 3.9% | 16 | 20.8% | 37 | 48.1% | 20 | 26.0% | 1  | 1.3%  | 3.00 | .83   |
| There is now efficient financial management   |   |      |    |       | 12 | 15.6% | 24 | 31.2% | 41 | 53.2% | 4.38 | .74   |
| There has been a considerable business improvement  |   |      |    |       | 10 | 13.0% | 40 | 51.9% | 27 | 35.1% | 4.22 | .66   |
| There is efficiency in our daily business operations  |   |      |    |       | 24 | 31.2% | 20 | 26.0% | 33 | 42.9% | 4.12 | .86   |
| The level of access to finance for members and cooperative has increased                      |   |      |    |       | 14 | 18.2% | 30 | 39.0% | 33 | 42.9% | 4.25 | .75   |
| Average   | 1 | 0.7% | 5  | 5.9%  | 23 | 29.9% | 29 | 37.9% | 20 | 25.6% | 3.82 | 0.76  |

SD= Strongly Disagree, D=Disagree, N= Neutral, A= Agree, SA= Strongly Agree, Stdev= Standard deviation

The researcher also sought to find out the performance of the selected dairy cooperative in terms of cash flow. This was also measured on a five point Likert scale. The results are displayed in Table 6. On the first statement, the researcher sought to find out if there is now increase cash inflow due to milk sales. 50.6% of the respondents indicated neutral while 40.3% agreed with the statement. The men score obtained was 3.43 with a standard deviation of 0.66 showing majority were neutral with divergence views.

On whether the cash inflow is adequate to meet the daily operation costs for the dairy cooperative, 50.6% of the respondents agreed while 32.5% neutral. The mean score obtained was 3.32 and standard deviation of 0.79. On whether the daily working capital is adequate, 48.1% of the respondents showed neutral and 26% agreed. The mean score obtained was 3.00 with a standard deviation of 0.83. The results also show that 53.2% of the respondents strongly agreed and 31.2% agreed. This gave a mean of 4.38 and a standard deviation of 0.74. The statement on whether there is now efficient financial management gave 53.2% of the respondent strongly agreed and 31.2% agreed. The mean score was 4.38 with standard deviation of 0.74. On whether there has been a considerable business improvement 51.9% of the respondents agreed while 35.1% strongly agreed. The mean score was 4.22 and 0.66 as standard deviation.

Table 6 also shows that 31.2%, 26% and 42.9% of the respondents were neutral, agreed and strongly agreed respectively on that there is efficiency in our daily business operations. The mean score obtained was 4.22 and standard deviation of 0.86. Lastly, 42.9% of the respondents strongly agreed on the level of access to finance for members and cooperative has increased. To this, 39% of the respondents agreed. This gave the mean score of 4.25 and a standard deviation of 0.75. The overall average for all statements were obtained and this showed that 37.9% of the respondents agreed, 29.9% neutral and 25.6% strongly agreed on the cash flow performance.

**Table 7: On Return on Capital Invested** 

|  |   | SD   |   | D    | _  | N     |    | A     | SA |       |      |       |
|--|---|------|---|------|----|-------|----|-------|----|-------|------|-------|
|  | N | %    | N | %    | N  | %     | N  | %     | N  | %     | Mean | Stdev |
| The capital base for the farmers has increased   |   |      |   |      | 21 | 27.3% | 26 | 33.8% | 30 | 39.0% | 4.12 | .81   |
| Farmers are able to reap benefits sufficient to cover the initial capital invested           |   |      | 3 | 3.9% | 24 | 31.2% | 45 | 58.4% | 5  | 6.5%  | 3.68 | .66   |
| The period within which farmers can recover capital invested has reduced due to BDS services | 2 | 2.6% | 5 | 6.5% | 29 | 37.7% | 37 | 48.1% | 4  | 5.2%  | 3.47 | .80   |
| Average  | 1 | 0.8% | 3 | 3.5% | 25 | 32.1% | 36 | 46.8% | 13 | 16.9% | 3.76 | 0.76  |

SD= Strongly Disagree, D=Disagree, N= Neutral, A= Agree, SA= Strongly Agree, Stdev= Standard deviation

The last indicator of financial performance of the selected dairy cooperative was return on capital invested. The results for this are displayed in Table 7. The first statement investigated whether the capital base for the farmers has increased due to the intervention of BDS. To this, 39% of the respondents strongly agreed and 33.8% agreed. The obtained mean score was 4.12 and standard deviation of 0.81. On whether farmers are able to reap benefits sufficient to cover the initial capital invested, 58.4% of the respondents agreed and 31.2% of the respondents indicated neutral. The mean score obtained was 3.68 and standard deviation of 0.66 showing divergence of views. Lastly, on whether the period within which farmers can recover capital invested has reduced due to BDS services, 48.1% of the respondents agreed while 37.7% neutral. The mean score obtained was 3.47 and standard deviation of 0.8. The aggregate average for the return on capital invested showed that 32.1% neutral, 46.8% agreed and 16.9% strongly agreed. The mean score obtained was 3.76 and standard deviation of 0.76.

#### Findings on Objective Three

The third objective of the study was to establish the relationship between business development services and financial performance of selected dairy cooperatives in Musanze District. To achieve this the Pearson's coefficient of correlations were obtained among the study variables. Further, regression analysis was also conducted.

**Table 8: Correlation Matrix** 

|                |                      | Sales      | Cash flow  | Capital    | Input      | Training   | Infrastructure | Market_Access |
|----------------|----------------------|------------|------------|------------|------------|------------|----------------|---------------|
|                | Pearson Correlation  | 1          | _          | _          |            |            |                | -             |
| Sales          | Sig. (2-tailed)      |            |            |            |            |            |                |               |
|                | N                    | 77         |            |            |            |            |                |               |
|                | Pearson Correlation  | .550**     | 1          |            |            |            |                |               |
| Cash flow      | Sig. (2-tailed)<br>N | .000<br>77 | 77         |            |            |            |                |               |
|                | Pearson Correlation  | .385**     | .779**     | 1          |            |            |                |               |
| Capital        | Sig. (2-tailed)<br>N | .001<br>77 | .000<br>77 | 77         |            |            |                |               |
|                | Pearson Correlation  | .647**     | .643**     | .564**     | 1          |            |                |               |
| Input          | Sig. (2-tailed)<br>N | .000<br>77 | .000<br>77 | .000<br>77 | 77         |            |                |               |
|                | Pearson Correlation  | .674**     | .783**     | .647**     | .649**     | 1          |                |               |
| Training       | Sig. (2-tailed)<br>N | .000<br>77 | .000<br>77 | .000<br>77 | .000<br>77 | 77         |                |               |
|                | Pearson Correlation  | .637**     | .761**     | .580**     | .551**     | .794**     | 1              |               |
| Infrastructure | Sig. (2-tailed)<br>N | .000<br>77 | .000<br>77 | .000<br>77 | .000<br>77 | .000<br>77 | 77             |               |
|                | Pearson Correlation  | .872**     | .555**     | .355**     | .710**     | .717**     | .634**         | 1             |
| Market_Access  | Sig. (2-tailed)      | .000       | .000       | .002       | .000       | .000       | .000           |               |
|                | N                    | 77         | 77         | 77         | 77         | 77         | 77             | 77            |

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

The correlation matrix as shown in Table 8 shows the relationship among the variables. The results show that all the correlations are positive and significant at 0.05 since the level of significant obtained were less than 0.05. The correlations between sales and input supply services, Training and Technical assistance, infrastructure support and market access Services were 0.647, 0.674, 0.637 and 0.872 respectively. The correlation between cash flow and input supply services, Training and Technical assistance, infrastructure support and market access were 0.643, 0.783, 0.761 and 0.555 respectively. Lastly, the correlation between return on capital invested and input supply services, Training and Technical assistance, infrastructure support and market access were 0.564, 0.467, 0.580 and 0.355 respectively.

Table 9: Model Summary on relation between BDS and Sales

|       | Table 9: M | odei Sullillary | on relation between | ii bbs aliu sales             |
|-------|------------|-----------------|---------------------|-------------------------------|
| Model | R          | R Square        | Adjusted R Square   | Std. Error of the<br>Estimate |
| 1     | .879ª      | .772            | .759                | .22871                        |

a. Predictors: (Constant), Market\_Access, Infrastructure, Input, Training

#### ANOVA

| Model |            | Sum of Squares | df | Mean Square | F      | Sig.              |
|-------|------------|----------------|----|-------------|--------|-------------------|
|       | Regression | 12.753         | 4  | 3.188       | 60.950 | .000 <sup>b</sup> |
| 1     | Residual   | 3.766          | 72 | .052        |        |                   |
|       | Total      | 16.519         | 76 |             |        |                   |

a. Dependent Variable: Sales

Table 9 shows that there is a strong relationship between the study variables and the sales. The R squared is 0.772 showing that 77.2% of the changes in the sales are influenced by changes in the business development services. It also shows the analysis of variance (ANOVA) between BDS services, that is, input supply services, market access services, infrastructure support services and training and technical assistance and sales. The model is found to be significant since the p-value is 0.000 which is less than 0.05.

**Table 10: Coefficients between BDS and Sales** 

| Model |                | Unstandardized | Coefficients | Standardized Coefficients | t     | Sig. |
|-------|----------------|----------------|--------------|---------------------------|-------|------|
|       | В              | Std. Error     | Beta         |                           |       |      |
|       | (Constant)     | .905           | .194         | =                         | 4.660 | .000 |
|       | Input          | .020           | .058         | .029                      | .353  | .725 |
| 1     | Training       | 003            | .079         | 004                       | 038   | .970 |
|       | Infrastructure | .106           | .072         | .139                      | 1.479 | .144 |
|       | Market_Access  | .578           | .069         | .766                      | 8.339 | .000 |

a. Dependent Variable: Sales

Though the model was found to be statistically significant, the researcher sought to find out the significance for each of the predictor variables against the sales. The results are as shown in Table 10 which shows that only market access services were found to have a significant relationship with sales. For the other predictor variables, the p-values are greater than 0.05 indicating that they are not significant.

Table 11: Model Summary between BDS and Cash flow

| Model | R     | R Square | Adjusted R Square | Std. Error of the<br>Estimate |
|-------|-------|----------|-------------------|-------------------------------|
| 1     | .842ª | .709     | .692              | .30602                        |
|       |       |          |                   |                               |

a. Predictors: (Constant), Market\_Access, Infrastructure, Input, Training ANOVA

| Model |            | Sum of Squares | df | Mean Square | F      | Sig.       |
|-------|------------|----------------|----|-------------|--------|------------|
|       | Regression | 16.395         | 4  | 4.099       | 43.767 | $.000^{b}$ |
| 1     | Residual   | 6.743          | 72 | .094        |        |            |
|       | Total      | 23.137         | 76 |             |        |            |

a. Dependent Variable: Cash flow

b. Predictors: (Constant), Market\_Access, Infrastructure, Input, Training

b. Predictors: (Constant), Market\_Access, Infrastructure, Input, Training

According to Table 11, the model summary revealed that there is a strong relationship between the study variables and the cash flow. The R squared is 0.709 showing that 70.9% of the changes in the cash flow are influenced by changes in the business development services. It also shows the analysis of variance (ANOVA) between BDS services, that is, input supply services, market access services, infrastructure support services and training and technical assistance and cash flow. The model is found to be significant since the p-value is 0.000 which is less than 0.05.

Table 12: Coefficients between BDS and Cash flow

| Model |                | Unstandardized Coefficients |            | Standardized<br>Coefficients | t      | Sig. |
|-------|----------------|-----------------------------|------------|------------------------------|--------|------|
|       |                | В                           | Std. Error | Beta                         |        |      |
|       | (Constant)     | .705                        | .260       | -                            | 2.714  | .008 |
|       | Input          | .248                        | .078       | .301                         | 3.192  | .002 |
| 1     | Training       | .383                        | .106       | .437                         | 3.623  | .001 |
|       | Infrastructure | .350                        | .096       | .386                         | 3.645  | .001 |
|       | Market_Access  | 194                         | .093       | 217                          | -2.087 | .040 |

a. Dependent Variable: Cash flow

Though the model was found to be statistically significant, the researcher sought to find out the significance for each of the predictor variables against the cash flow. The results are as shown in Table 12. According to the findings, all the predictor variables were found to have significant relationship with cash flow since the p-values were less than 0.05 for all the predictors. However, market access services were found to have a negative coefficient with cash flow. With these findings, it shows that there is significant relationship between the BDS services and cash flow performance for the selected dairy cooperatives.

Table 13: Model Summary between BDS and Return on Capital

| Model | R                 | R Square | Adjusted R Square | Std. Error of the<br>Estimate |
|-------|-------------------|----------|-------------------|-------------------------------|
| 1     | .739 <sup>a</sup> | .547     | .522              | .47071                        |

a. Predictors: (Constant), Market\_Access, Infrastructure, Input, Training

#### ANOVA

| Model |            | Sum of Squares | df | Mean Square | F      | Sig.              |
|-------|------------|----------------|----|-------------|--------|-------------------|
|       | Regression | 19.248         | 4  | 4.812       | 21.718 | .000 <sup>b</sup> |
| 1     | Residual   | 15.953         | 72 | .222        |        |                   |
|       | Total      | 35.201         | 76 |             |        |                   |

a. Dependent Variable: Capital

According to Table 13, the model summary revealed that there exists a relationship between the study variables and the return on capital employed. The R squared is 0.547 showing that 54.7% of the changes in the capital employed are influenced by changes in the business development services. The table also shows the ANOVA between BDS services, that is, input supply services, market access services, infrastructure support services and training and technical assistance and return on capital employed. The model is found to be significant since the p-value is 0.000 which is less than 0.05.

Table 14: Coefficients between BDS and Capital employed

| Model |                | Unstandardized Coefficients |            | Standardized<br>Coefficients | t      | Sig. |
|-------|----------------|-----------------------------|------------|------------------------------|--------|------|
|       |                | В                           | Std. Error | Beta                         |        |      |
|       | (Constant)     | .824                        | .400       | -                            | 2.061  | .043 |
|       | Input          | .441                        | .119       | .434                         | 3.692  | .000 |
| 1     | Training       | .575                        | .163       | .531                         | 3.532  | .001 |
|       | Infrastructure | .244                        | .148       | .218                         | 1.654  | .103 |
|       | Market_Access  | 520                         | .143       | 472                          | -3.645 | .001 |

a. Dependent Variable: Capital

b. Predictors: (Constant), Market\_Access, Infrastructure, Input, Training

Table 14 shows the results for the coefficients between input supply services, training and technical support services, infrastructure support services and market access services as offered by BDF and return on capital employed for the selected dairy cooperatives. According to the results, all the predictor variables are found to be statistically significant with return on capital employed since the p-values are less than 0.05. In addition, they all have positive coefficients except for market access services which is found to have negative coefficient. The results show that the predictor variables have statistical significance with the return on capital employed among the selected dairy cooperatives in Musaze district.

Table 15: Model Summary between BDS and Financial Performance

| Model | R                         | R Square                     | Adjusted R               | Square Std. Er | or of the Estimat | te         |
|-------|---------------------------|------------------------------|--------------------------|----------------|-------------------|------------|
| 1     | .8                        | .763                         |                          | .750           | .2410             | 52         |
| a. P  | Predictors: (Constant), I | Market_Access, Infrastruct A | ture, Input, Tra<br>NOVA | ining          |                   |            |
| Model |                           | Sum of Squares               | df                       | Mean Square    | F                 | Sig.       |
|       | Regression                | 13.509                       | 4                        | 3.377          | 57.852            | $.000^{b}$ |
| 1     | Residual                  | 4.203                        | 72                       | .058           |                   |            |

76

17.713

In regard to determining the contribution that the BDS services, namely input supply services, market access services, infrastructure support services and training and technical assistance, the researcher investigated the combined effect of all the four variables using the regression analysis. According to Table 15, the reported R is 0.873 while the  $R^2$  is 0.763 with an adjusted  $R^2$  of 0.75. This shows that that the correlation was positive and strong with the business development services, that is, market access, infrastructure input and training explaining 76.3% of the changes in performance of the selected dairy cooperatives.

The research went further to determine the significance of the regression analysis by use of the analysis of variance. According to Table 15, the Analysis of Variance (ANOVA) shows that the model is found to be statistically significant because the p-value obtained is less than level of significance 0.05. This implies that the regression analysis conducted between the services offered by BDF are statistically significant in explaining the performance of the selected dairy cooperatives.

Table 16: Coefficients between BDS and Financial Performance

| Model |                | Unstandardized Coefficients |            | Standardized<br>Coefficients | t     | Sig. |
|-------|----------------|-----------------------------|------------|------------------------------|-------|------|
|       |                | В                           | Std. Error | Beta                         |       |      |
|       | (Constant)     | .811                        | .205       |                              | 3.955 | .000 |
|       | Input          | .236                        | .061       | .328                         | 3.857 | .000 |
| 1     | Training       | .318                        | .084       | .414                         | 3.811 | .000 |
|       | Infrastructure | .233                        | .076       | .294                         | 3.079 | .003 |
|       | Market_Access  | 045                         | .073       | 058                          | 617   | .539 |

a. Dependent Variable: Financial Performance

As shown in Table 16, the coefficients of the regression were also determined and were found to be all significant except for the market access whose p-value was greater than 0.05. The multiple regression equation in the form of y=b0+b1x1+b2x2+b3x3+b4x4+e was determined. Since only market access was found not to be statistically significant, the formulated regression equation without market access was given as performance= 3.955+3.857\*Input+3.811\*Training+3.079\*Infrastructure +e. All the three predictors have a positive coefficient implying that they influence the financial performance positively, that is an increase in input, training and infrastructure lead to an increase in financial performance of the selected dairy cooperatives.

Despite these positive performance, farmers, through the interview conducted highlighted different challenges that they face and that they think can be addressed by BDS. Some of these challenges include low quantity of milk production, existence of informal markets, low milk pricing, leadership problems, among others. They highlighted these as challenges that if addressed could improve the milk production. However, the results of the interview showed that the respondent support the need and the work being performed by BDS in enhancing their participation in cooperatives as well as in increasing their outputs.

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Market\_Access, Infrastructure, Input, Training

#### V. Conclusion And Recommendation

Based on the discussions that have been made in the previous sections, the researcher was able to draw up conclusions on the study variables. Business development support services that were under study in this researcher included input supply services, market access services, training and technical services and infrastructure support services. These were found to have positive and significant effect on the financial performance of the selected dairy cooperatives as measured by sales returns, cash inflow and returns in capital employed. This therefore implies that to ensure sustainability of the financial performance of the cooperatives, the support offered by BDS are crucial. This was more so supported by the reported R<sup>2</sup> which showed a high influence that the independent variable indicators have on the financial performance. Moreover, these support services can help the government and its agencies create enabling and competitive markets supporting the low income earners to venture in to agricultural related economic activities.

In light of the findings in this research, the following recommendations were made: BDS should continue supporting dairy cooperatives to ensure there is sustained performance and that farmers are able to increase their production. This should target to lay more emphasis on the marketing access which was found to have the lowest correlations. Further, the market access was also found to have not significant coefficient. It implies that BDS should improve on supporting the dairy cooperatives to assist farmers in reaching to the market more easily and in affordable manner. There is also need to improve milk supply chain from the farmers to the final market to enhance performance. From the findings from the interview with respondents, it was found that BDS is doing well in its support services but there is need for more improvement.

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