THE ROLE OF CREATIVITY AND INNOVATION IN COMMERCILIZING THE DAIRY SECTOR: A CASE STUDY OF SHAM DIARIES OF MOROGORO

THE ROLE OF CREATIVITY AND INNOVATION IN COMMERCILIZING THE DAIRY SECTOR: A CASE STUDY OF SHAM DIARIES OF MOROGORO

BY

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A research report to be submitted for in partial fulfillment of the requirements for the Masters degree in Entrepreneurship (Msc. Entrepreneurship) of Mzumbe University.

2014

CERTIFICATION

We, the under designed, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled **"The role of creativity and innovation in commercializing the dairy sector: A case study of SHAM Diaries of Morogoro"**in partial fulfillment of the requirements for award of the degree of Masters of Science in Entrepreneurship of Mzumbe University.

Candidate

Signature

……

Full Name…….

Date……..

Supervisor

Signature.....

Full name…….

Date……

Internal examiner

Signature…….

Full name…….

Date…….

DECLARATION

I declare that this work is mine and it has not been presented in any other institution for any award. It is going to be presented at MZUMBE UNIVERSITY for the first time for the award of the Master of Science degree in Entrepreneurship for SAMIJI ENEA MHANDO.

Name ;Samiji Enea Mhando

Signature

Date

ACKNWOLEDGEMENT

First of all, I would like to thank Almighty God for giving me a chance to live and share life with other people since through living we learn a lot from others. Also I would like to thank my supervisor, Mr. Nicholas Tutuba, who has been very encouraging to me in investigating much about entrepreneurship as field of study and at the same time as a means to sustain life in the competitive world.

My parents Mr.&Mrs Enea Mhando have been very supportive in terms of moral and material support while undertaking this course. Not only that, but they also became my my role models in each my pursuit for knowledge. They always told me: "*It is only through hard work that one can realize the meaning of life.*" Therefore, I always thank them for being good to me all the times.

Lastly, I would like to thank my brothers Steve and Simeon Enea Mhando and my young sister Sara Mhando (my good friends) for their company all the time before and after school. It won't be fair if I will forget my class mates, Good lucky Mlau, Glory Mtei, Anjela Chakabanga and Esther Chuma, for their spirit of free and fair sharing of ideas and all life matters.

DEDICATION

This Research work is dedicated to my brother and at the same time a business partner.

SIMEONE ENEA MHANDO

“MUNGU yupo kazini”

MEANING OF ABBREVIATIONS

AI	–	Artificial Insemination
TAMPRODA	–	Tanzania Milk Producers Association
TAMPA	–	Tanzania Milk Processors Association
RLDC	–	Rural Livelihood Development Company
URT	–	United Republic Of Tanzania.

ABSTRACT

This research study has focused on examine the role of creativity and innovation in commercializing the dairy sector, SHAM dairies of Morogoro has been selected as case study in assessing creativity and innovation to dairy products processors. Basically the study has take a look on three major objectives which are: Consciousness of stakeholders on creativity and innovation towards growth of the dairy sector, investigation of the creative and innovative processes involved in dairy processing, and lastly to describe the marketing structures on how they can foster creativity and innovation in dairy sector.

The study is qualitative research but it also have some statistics which present the datas from the respondents on different key issues that needed some mathematical presentations, the sample size of the respondents was fifty respondents who participated in the study and they were selected by the researcher through judgmental sampling where by a researcher picks only a person who he or she thinks that might come up with the good answers of the question to be asked.

In analyzing the data the statistical package for social sciences (SPSS) through regression method was applied in analyzing the information so as to build facts when it comes to discussion of the data collected and makes the positive arguments due to the relation of perceptions and statistical background of the actual experience in the field.

Conclusion and recommendation which is the last chapter based on what has been observed concerning the research objectives which generated the research questions, challenges facing creativity and innovation in dairy sector and lastly the way forward for improvement.

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CHAPTER ONE

1.0 INTRODUCTION AND BACKGROUND INFORMATION

Dairy field is among the biggest in the Agriculture sector, especially in animal husbandry. This is because there are pastoral societies who keep a big number of cows and also other people who just keep cows as a means for second income earning. Though the dairy sector have a biggest contribution to the country but still its annual growth is very slow.

Tanzania government and other stakeholders have been taking initiatives to boost the agriculture sector whereby livestock is also a part and parcel of the agriculture sector. Improvements have been seen in animal husbandry, e.g. the piggery and poultry industries have grown fast within a short period compared to the dairy industry, and therefore the focus of this study is to examine how creativity and innovation can transform the dairy industry from being a subsistence activity to a commercial production activity.

A number of dairy processing industries is still very low and their capacity of production is still very low compared to the quantity of raw milk produced by the farmers, that is to say most of the farmers target the market for the customers who are the final consumers of the raw milk, such as selling to the households, hotels, etc. whereby there is no any initiative/process that can be taken to add value to the raw milk and produce other dairy products, and therefore the challenge of marketing the raw milk is among the biggest challenges faced by the farmers since the market is not structured.

It is the purpose of this research to assess the contribution of creativity and innovation in developing the dairy sector in terms of market growth so that the milk producers, processors and other stakeholders can know exactly what should be done so as to increase the market and stabilize it so that market of raw milk can no longer remain to be the biggest challenge facing the herders.

1.1 Background of the problem

Creativity and innovation in the dairy sector worldwide seems to differ from one continent to another, also from country to country, but generally in the western countries the problem is not very big since there are already well established production systems, market structures, also good policies and country regulations which protect the producers and processors of dairy products and therefore encourage creativity and innovation in their systems, for example to the countries like America and United Nations approximation 93% to 97% of the raw milk is taken to industries for further processes.(Land O Lake 2009)

Africa in particular, creativity and innovation is very low in dairy sector except to very few countries like South Africa, and probably this is because African countries have very low technologies in raising cows and therefore even the raw milk produced by the herders is very low in terms of amount, also governments and private sector have not take interest to develop the dairy sector like the way they deal with the cash crops that's why the level of creativity and innovation is very poor in dairy sector.(ibid)

Dairy sector in Tanzania is extremely poor in terms of creativity and innovation, this is due to different underlying reasons such as the perception that keeping cows is only second opportunity for income generation therefore it is not given priority by both the urban and rural residents, the concept that keeping cows is only for certain tribes or traditions, and also the illusion that the good quality milk or dairy products are those which are fresh(raw)which have not pass through industrial systems, this acts like resisting factor towards creativity and innovation to dairy products manufactures since the market seems to be very limited and therefore the selling of products probably could not compensate the costs to be incurred for research and development programs which will lead to creativity and innovation. TAMPRODA (2010).

By looking to different factors from worldwide to Tanzania in particular, you can easily see how the dairy sector is perceived and that's why it becomes difficult to bring creativity and innovation in the sector, and this is what made the sector to become static without growth for a number of years compared to other sectors like poultry keeping.

1.2 Statement of the problem

Though there are a number of agro institutions which train technicians already informed by theories about livestock and dairy sector in particular, but still creativity and innovation is very poor in dairy sector which also leads to very low consumption of dairy products like butter, yoghurts ,creams, ghee, etc which leads to poor development of dairy sector.

1.3 Objective

This study focus to examine the role of creativity and innovation in commercializing the dairy sector, and this can be seen through the general objective and specific objectives such as follows:

1.3.1 General Objective

To investigate how creativity and innovation can increase the possibilities of improving dairy sector in Tanzania.

1.3.2 Specific Objective

i/ To explore the consciousness of stakeholders on creativity and innovation towards growth of the dairy sector.

*ii/*To investigate the creative and innovative process involved in dairy industry and asses their sustainability.

*iii/*To describe the marketing structures on how they can foster creativity and innovation.

1.4 Research Questions

*I /W*hat is the level of awareness of stakeholders concerning creativity and innovation in relation to the growth of the dairy sector?

ii/ What modes of dairy processing exist and how do they support creativity and innovation in dairy sector?

*Iii/*What are the existing market structures and how do they support the improvement of creativity and innovation in dairy sector?

1.5 Significance of the study

The study is expected to come up with the knowledge that will contribute the following:

Influencing the policy: The research is expected to come up with the knowledge that can help the policy makers to know what is exactly happening in the dairy industry and therefore they can make policies that address properly the dairy issue.

Modifying the marketing structures: that the study will come up with knowledge that will help milk processors to know what is exactly needed by the population, where and when and probably how they can deal with the situation so as to enlarge and sustain the production.

Contributing knowledge to institutions (i.e learners and teachers) like LITI,MART and SUA on how the dairy sector can be transformed from subsistence level to commercial production through creativity and innovation.

1.6 Research Design

This study has use a form of a case study to examine on how creativity and innovation can contribute towards the transformation of the dairy sector into a commercial activity just like any other commercial activity, SHAM diaries of Morogoro town has been used as a case study for this research work. Busha C.H and Harter S.P (2002) argues that using a case study in research design has an a advantage of making a researcher to get consistent information and within a reasonable time frame.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

Creativity is the act of turning new and imaginative ideas into reality. Creativity involves two processes: thinking, then producing. Innovation is the production or implementation of an idea. If you have ideas, but don't act on them, you are imaginative but not creative." — Linda Naiman(2009)

Creativity is the act of bringing something new into being, creativity requires passion and commitment, out of the creative act is born symbols and myths. It bring to awareness what was previous hidden and points of new life. Rollo May(2007)

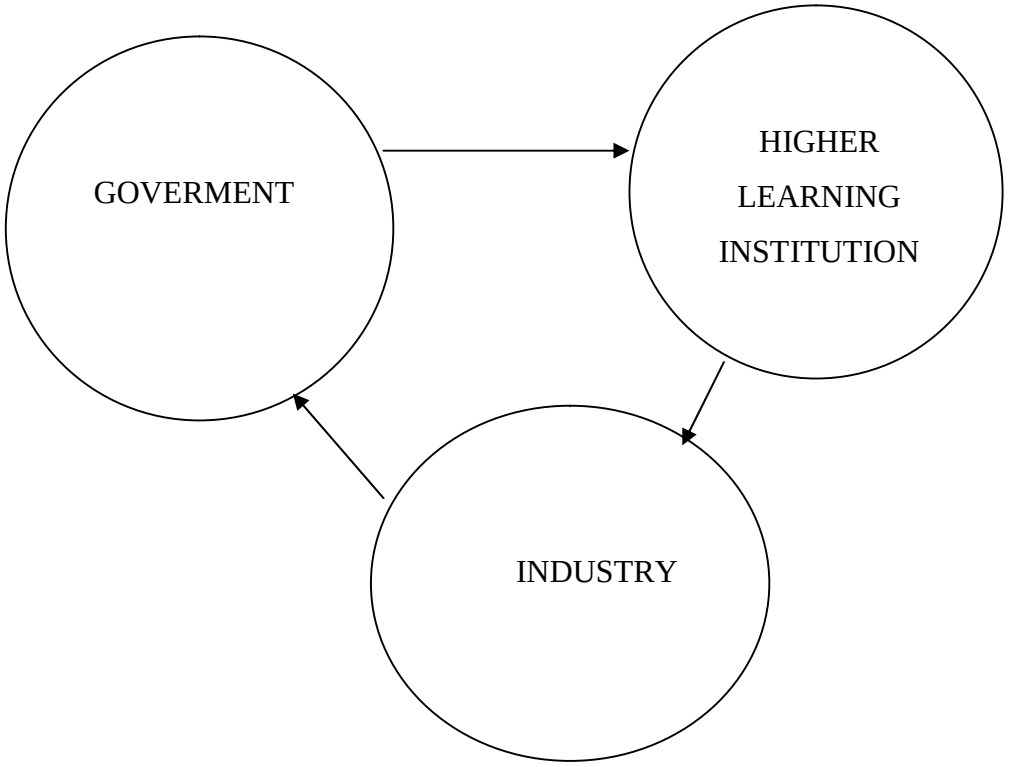
A product is creative when it is (a) novel (b) appropriate. A novel product is original not predictable, the bigger the concept and the more the product stimulates further work and ideas, the more the product is creative. Sternberg and Lubart (2007)

Creativity and innovation are quit two different things but closely related, this is due to the fact that creativity is much more about ideas generation concerning generation of a certain unique product, service, etc so as to utilize the existing opportunity while innovation refers to the process of bringing into existence the creative ideas.

Innovation is simply the implementation of creative ideas, innovation refers to the process of coming up with an output that reflects the ideas behind the product were creative that's why the products seems to be different to other products which are uniform and do not appear to be innovative.

There are different models for boosting creativity and innovation, but TRIPPLE HELIX MODAL seems to be more efficient compared to other modals. The following diagram gives more illustrations about this modal.

Triple helix modal focus on the role played by three organs which are Government, Universities and industries.



Ref, Triple Helix Conference in Madrid (2010)

Government Role

There role of government here is to prepare supporting policies for encouraging creativity and innovation, also providing resources such as funds for research projects so as to boost creativity and innovation.

University Role

The role of university here is to do researches about creativity and innovation and also train the students on how to apply creativity and innovation in their field by using the experience of the conducted researches.

Industry Role

The role of industries here is to give a chance for students to make practice of what they have learn in classes so that they can be good in both theories and practices concerning creativity and innovation.

Therefore ,if Tanzania will adopt the use of Tripple helix modal probably it will help to boost creativity and innovation in different sectors and dairy sector being one of them due to the fact that we have dairy industries and agro-institution(colleges) therefore it it the duty of the government to come up with policies for coordination.

Commercialization means transformation from none business to business oriented where by profit making is a major issue, therefore the concept of commercialization in this study is used as the term to explain the change of dairy sector from being a subsistence activity to a serious economic production activity. Lipsey R.G (2005)

2.2 Theoretical background

This study has take two theories which are “Public good or property right theory” and “The role of economics theory” which they explain the relationship between creativity and innovation towards market competition.

Public goods or property right theory: is one approach of intellectual property rights theory, which states that the intellectual property protection is a pre-requisite for creativity and innovation, A public property is non –exclusive so without intellectual property protection an innovation can be utilized by competitors as soon as it becomes available. (Research Perspectives of the Max Planck Society 2010)

Under the public goods theory system without intellectual property protection will have too little innovation, as businesses will hesitate to make an investment if they have to share the results with their competitors. However, this theory fails to determine exactly where the optimal border is between protection and free use. (ibid).

By using the above theory you can direct see that for a country like Tanzania it is very difficult to increase creativity and innovation in different sectors and dairy sector being one of them, the major issue here is the use of creativity and innovation by the competitor who did not incur any cost of discovery and then share the benefits with the discoverers , so whenever there is poor property right protection obvious creative changes will either not occur or delay to happen.(ibid)

The role of economics theory: The correlation between markets and innovation is thus an important component of innovation research. The two competing and strongly disputed schools of thoughts dominate in this area. One side was championed by **Joseph Schumpeter**, who saw innovation coming from a monopoly position, according to his idea of creative destruction, is the prospects of monopoly profits in particular that will drive firms to invest in innovation and throw incumbents from their thrones by bringing even better products to the market. (Research Perspectives of the Max Planck Society 2010)

Another alternative view point is by **Kenneth Arrow**, is that only pressure from free competition will induce innovation, as the monopolist will not be able to generate any higher revenues by investing in better products for consumers.(ibid)

More modern thoughts focuses on the impact that transaction costs and information have on an economy .Specifically, new institutional economics examines the limited rationality and self interest of market participants, the existence of transaction costs and the influence of information on behavior. Within this paradigm, transaction cost economics focuses on the need for rules to have lower transaction costs, where as information economics looks at solutions to the problem of asymmetric distribution of information to market participants.(ibid)

Simply the theory focuses on explaining that creativity and innovation is determined by the market pressure, therefore if the consumers or customers themselves do not run for creativity and innovation since there is not competition, and even if they take trouble to do so the is no chance for them to maximize their profit.

Empirical Literature review

2.3 Dairy sector in Tanzania

Tanzania has abundant natural resources which include land and a large livestock resource base. It covers an area of 94.5 million ha of which 88.6 million ha is a land mass and 6.2 million ha is covered by water. Out of the 88.6 million ha of land, 60 million ha are rangeland with a capacity to carry up to 20 million livestock units and provide over 90% of the feed resource to the livestock. However, due to some constraints such as tsetse fly infestation and other uses only 40% of the rangeland is utilized for grazing 21.3 million cattle, 15.2 goats and 6.4 sheep . Other major livestock species kept in the country include 1.6 million pigs and 43 million chickens. More than 90% of the livestock population in the country is of indigenous types, kept in the tradition sector, known for their ability to survive and produce even under harsh environment with poor feed resources and disease challenge. Rollo May, (2007).

Livestock is among the major agricultural sub-sector in Tanzania .Out of the 4.9 million agricultural households about 36% are keeping livestock of whom 35% are engaged in both crop and livestock production. The sector grew at 3.4% and contributed about 3.8% to the cross Domestic Product (GDP) (Economic Survey, 2010) of which 40% came from beef, 30% from dairy and the remaining 30% from other livestock commodities. Similarly, the dairy industry is among the important components of the livestock sector. It is source of animal protein, income and employment.

The sector has a great potential for improving the living standards of the people and contributing toward reduction of poverty through improved nutrition , arising from consumption of milk and incomes raised from sale milk and milk products. (Economic Survey 2010).

The main dairy animal in Tanzania is cattle which are classified as dairy for those that average about 2000 liters per lactation and dual purpose indigenous cattle producing around 300-500 liters and are mostly used for beef which are the majority. The dairy cattle are kept by smallholder farmers and few medium and large scale farms. The indigenous cattle are kept by traditional livestock keepers in the pastoral and agro-pastoral system. (ibid)

The performance of the dairy industry has been influenced by changes in economic policies and regulations which have affected harnessing of resources. Currently strategies and programs have been formulated in order to modernize the industry. Development of the dairy industry has concentrated mainly on increasing the number of improved animal for milk production, improving production, processing and marketing systems.

2.4 Experiences in Developing the Dairy Industry.

The dairy industry in Tanzania has gone through various stages of development. Pre and after independence , dairy was practiced mainly in areas which had a conducive climes to enable production of sufficient milk and that had a potential market for milk such as Kilimanjaro , Arusha and Dar es salaam . In the rest of the country milk produced was consumed within the rural areas. TAMPA (2009)

In areas with surplus milk to warrant establishment of a dairy plant, Zonal Dairy Boards were established to regulation and develop the industry. After independence regulation of the industry was done through a Dairy Industry Ordinance No .61 (Cap 456) which was the replaced by a Dairy Act of 1965 that established a Government Controlled National Dairy Board (NDB).

The board became moribund in 1973 as the then Minster of Agriculture did not appoint new members to the Board. TAMPRODA, (2010).

In 1975 the government embarked on a programme to boost dairy development where by efforts were made to increase milk production .Main concentration was on improving the indigenous cattle through crossbreeding and upgrading programmes with the objective of increasing the number of improved dairy cattle . Other programmes to improve productivity include disease control and animal nutrition. Alongside these programmes were investments in the establishment of parastatal medium and large scale dairy farm, livestock multiplication units, milk processing plants and milk marketing infrastructures.(ibid)

These initiatives resulted in the establishment of 8 dairy farms under the Dairy Farming Company (DAFCO), 7 milk processing plants under the Tanzania Dairies Limited producing reconstituted milk using powered skimmed milk and butter oil which were supplied by the World Food Programme. Proceeds from sale of the reconstituted milk were used for development of the Dairy Industry. From mid 1980s the approach for development of the dairy industry shifted from establishment of medium and large scale farm towards small holder dairy development. Economic survey (2010)

This shift was prompted by the underperformance of parastatal dairy enterprises associated with management problem as they proved to be more efficient and as a strategy for poverty reduction. The change in strategy toward dairy development coincided with economic reforms which include government withdrawal from performing production, marketing and processing and other business related functions and agencies joined the industry as milk producers, processors, marketing agents and facilitating agencies performing various function such as promotion of improved dairy breed, milk processing and marketing but without a proper primary regulator.

This led to inadequate control of the industry. To rectify this anomaly the government enacted a Dairy Industry Act No. 8 of 2004 providing for the establishment of the Tanzania Dairy Board, which was inaugurated in 2006 with a mandate to develop and regulate the industry. The Board draws its membership from the Government and stakeholder organization such as milk producers, Milk processors, milk traders, input suppliers and consumers.(ibid)

2.5 Status of the Dairy Industry

The Dairy industry in Tanzania is still young but developing. Current Development strategies aim at modernizing it commercializing the industry and making it competitive. Production of milk is mainly from indigenous cattle followed by improved dairy cattle and dairy goats and the production is mostly for the domestic market, which mainly prefers it to be in raw and only little amount in processed from.

No	Zone	Indigenous Cattle	Improved Dairy Cattle
1	Northen (Arusha, Manyara, Kilimanjaro	3,686,085	252,554
2	Central(Singida and Dodoma)	2,754,364	7,098
3	Lake(Mwanza, Shinyanga, Kagera)	8,103,232	35.007
4	Southern Highland(Rukwa, Mbeya, Iringa and Ruvuma)	2,109,09	103,306
5	Eastern(Tanga,Morogoro,Coast and Dar)	1,547,807	103,306
6	Western(Tabora and Lindi)	2,277.645	5,447
7	Southern(Lindi and Mtwara)	43,865	4,593
TOTAL		20,522,607	511,937

Austro Project Association,2009

2.6 Milk Production

Out of the 21.3 million cattle in Tanzania, about 680,000 are dairy cattle mainly crossbred of Frisian, Jersey, Ayrshire breed with the Tanzania Shorthorn Zebu (TSHZ). Total annual milk production has increased from 814 million liters in 2000/01 to 1.65 billion liters in 2009/10 (Table No. 2). Most of the milk produced in the country comes from the traditional sector (indigenous cattle, about 70%) kept in rural areas, and the remaining come from improved cattle mainly kept by smallholder

producers. The increase in milk production from both indigenous and improved dairy cattle is due to increase in herd size rather than in productivity per head (milking cow). Currently, only a small proportion (10%) of marketable surplus of milk produced annually is filtering through, into the urban markets and processing plants. A large proportion of milk is consumed at home or wasted in the rural, milk producing areas. Dairy development report (2010)

The potential for increased milk supply from rural areas still exists. To exploit it requires improved infrastructures such as milk collection centers, power supply, road networks and transport facilities. Milk production in Tanzania is carried out under two major production system. These are the traditional and the dairy production system. Within the traditional system milk is mainly produced by indigenous cattle which are kept for multipurpose objective. The indigenous cattle which constitute the traditional herd are mainly kept in the Central, Northern and Western part of the country (Table No. 1). The traditional system is characterized by low productivity. (ibid)

In addition production costs are relatively low. Due to the remoteness and poor infrastructure, collection of milk and marketing constitute the largest bottlenecks. Hence, the milk produced is mostly consumed locally and quite often a significant amount is left for the calves because of the lack of markets. However, some producers who depend on milk for their cash income are willing to exploit the available opportunity in marketing their products, for example, some traditional producers residing mainly in peri-urban areas near towns or urban centers such as those in the Coast region, transport milk by bicycles over long distances, for sale either at some collection centers located along the major road highway eg. Morogoro road. In these system cattle owners bring lactating cattle from the rangeland (in remote areas) to areas closer to the roads side. Livestock Report (2007).

Within the dairy system, improved dairy cattle which are mainly crosses of Friesian, Jersey and Ayrshire to the Tanzania Shorthorn Zebu (TSHZ) are the main dairy cattle breeds in use. These systems are further subdivided into smallholder dairy system integrated with crops, urban/ peri-urban dairy system and specialized medium and large- scale dairy system.(ibid)

2.7 Milk Collection, Processing and Marketing

Milk collection is practiced in areas with surplus milk above the local market requirement which are connected to markets in peri and urban areas. Existing collection centers are operated through farmers groups, processors or few traders who collect and sell to processors or consumers. Seasonal availability of milk is acute in the traditional sector discourage establishment of collection centers and processing plants. Milk collection for processing will only be feasible if there is surplus production and a well-established collection system which entails bulking and transportation. As it has been indicated earlier in this paper, milk is mainly produced by indigenous cattle which are widely distributed in different areas including remote villages whereby the road infrastructure is poor and having inadequate provision of utilities, such as electricity. These problem contribute to inefficiency in milk collection and addition of cost for milk collection and processing. Livestock report(2007)

A few dairy producer societies exist in Tanzania they are mainly found in Tanga region (where 13 societies with 3,004 members exist). Non existence of producer societies not only makes collection and marketing of raw milk difficult but also discourage introduction of innovations. All these challenges results into limited domestic and export marketing of milk and milk products. Establishment of a well coordinated milk collection network could be a kick-start towards successful milk processing and marketing. (ibid)

2.8 Milk Processing

Milk processing in the country is mainly undertaken by small and medium scale plants of capacities ranging between 500 and 30,000 liters per day . The current national milk processing capacity is 410,500 liters per day ,but the capacity utilization is about 30%.TAMPA (2008)

The low capacity utilization is partly due to inadequate raw milk production as results of seasonality in milk production due to inadequate feeding. Milk is being produced in small quantities and milk producers widely spread in remote areas . Thus , there is increasing milk collection and transportation costs. High cost of milk processing are due to high cost of equipment, machinery, packaging materials and utilities. In addition to the poor infrastructure, high cost of doing business and low milk consumption levels also constrain milk processing. (ibid)

Products processed from these plants include pasteurized milk, fermented milk, cheese, yoghurt, ghee and butter. Among the efforts to create a condusive environment for development of the dairy industry, the government has exempted import duties for milk packaging materials, some equipment used in the collection, transportation and processing of milk products. Furthermore, the local Government Authorities are sensitizing the stakeholders to form groups, association and cooperative societies in order to enhance milk collection, handling and processing. (ibid)

2.9 Milk Marketing and Consumption

Surplus milk produced is marketed in different ways depending on the system of production, location and amount. Dairy value chain studies have revealed that generally 10% of raw milk produced reaches both formal and informal market; of this only 2% is formally traded. In the commercial sector in which 30% of milk is produced, the milk market share is apportioned as: neighbors (86.11%) , local market (5.3%) , traders at farm(4.6%) and processing factories (1.4%) (An Overviews of the

Dairy Industry in Tanzania Situation, Challenges and Expectations. Milk is mainly marketed in urban and peri- urban areas where consumption is relatively higher. A study conducted by Austro Project Association , (Assessment of Fresh Milk and milk Products Market and Consumption in Dar es salaam , Kurwijila et al (1995) show that 79.2 % of milk customers purchase raw milk and 40% of consumers prefer fermented milk. Only a small (3.3%) proportion of consumers buy pasteurized milk. The main reason could be the high price after processing. Kurwijila, (2010)

It is estimated that 41 million liters of milk is annually processed in the country into pasteurized milk, UHT, cultured, ghee, butter, cheese and cream and sold in the domestic market. Milk is also imported in the country whereby reports indicate in the year 2008 about 26.14 million liters of milk equivalent which accounted for 48% of processed milk products were imported in the country, thus posing competition between local and imported milk products .There is therefore a challenge to produce milk products of high quality bearing in mind cost effectiveness so as to increase competitiveness of the dairy industry in Tanzania in the region.(ibid)

Milk produced in the country is consumed among urban population but is mainly consumed in the livestock keeping communities where a person can consume more than 100 liters per annum (Milk Production and Processing in Center Regions of Tanzania. It is acknowledged that the domestic market is relatively narrow compared to the existing human population. There has been initiative to expand and develop a sustainable domestic market for milk and milk products and (thereby encourage investment in milk processing). Such initiatives include conducting of generic milk promotion campaigns through Milk Consumption Promotion week which is conducted every end of May and beginning of June since 1998. In addition to that, schools Milk Feeding Programs are implemented in 91 schools in four districts which involve 62,900 school children. Through such initiatives per capital milk consumption has increased from 25 liters in 2000 to 43 liters in 2010. RLDC, (2009).

2.10 Opportunities and Prospects

A cattle herd and size of grazing land and pasture resources; as stated earlier in this paper the country has a large number of cattle, grazing and pasture resources. This provides a great opportunity for increasing milk production; therefore it is the duty of the interested parties, e.g. government, private sector and other stakeholders to take an advantage of using this opportunity.

2.11 Potential domestic and export markets;

Tanzania has a big potential domestic market. It has an estimated human population of over 42.8 million people, a growing economy and emerging middle class with relatively high disposable income. With these potentials the country provide a big domestic market, added to this is the regional market. Currently, these potentials are not fully utilized. Expansion of the internal market for milk and milk products is very important. This is because a reliable market is the driving force for the dairy industry growth. TAMPA (2008)

This could be achieved through establishing and deploying quality assurance system along the value chain. Other strategies to expand the domestic milk market include conducting of rigorous marketing and promotion campaigns through milk promotion week which is currently done as well as expansion of the school milk programmes. (ibid)

2.12 Milk Processing;

Expansion of milk processing capacity and range of dairy products produced in Tanzania as a strategy is also important. Expansion of products of UHT and other milk products can cut down importation of the same and reduce substantially annual import bill spent on such products. It is also important to increase milk processing capacity from the current 30% to at least 75% in order to increase profitability of the milk processing plants.(TAMPRODA 2010)

2.13 Dairy Stakeholder Organization

Strengthening of the Tanzania Dairy Board is important in order to organize and promote the development of dairy stakeholders organization at all levels and the industry at large. Strengthening of stakeholder's organization could be achieved through registration, formalization of informal dairy, training and skills enhancement. The expected benefits from the well organized and managed grassroots organization would improve their access to production, marketing and financial services among others.(ibid)

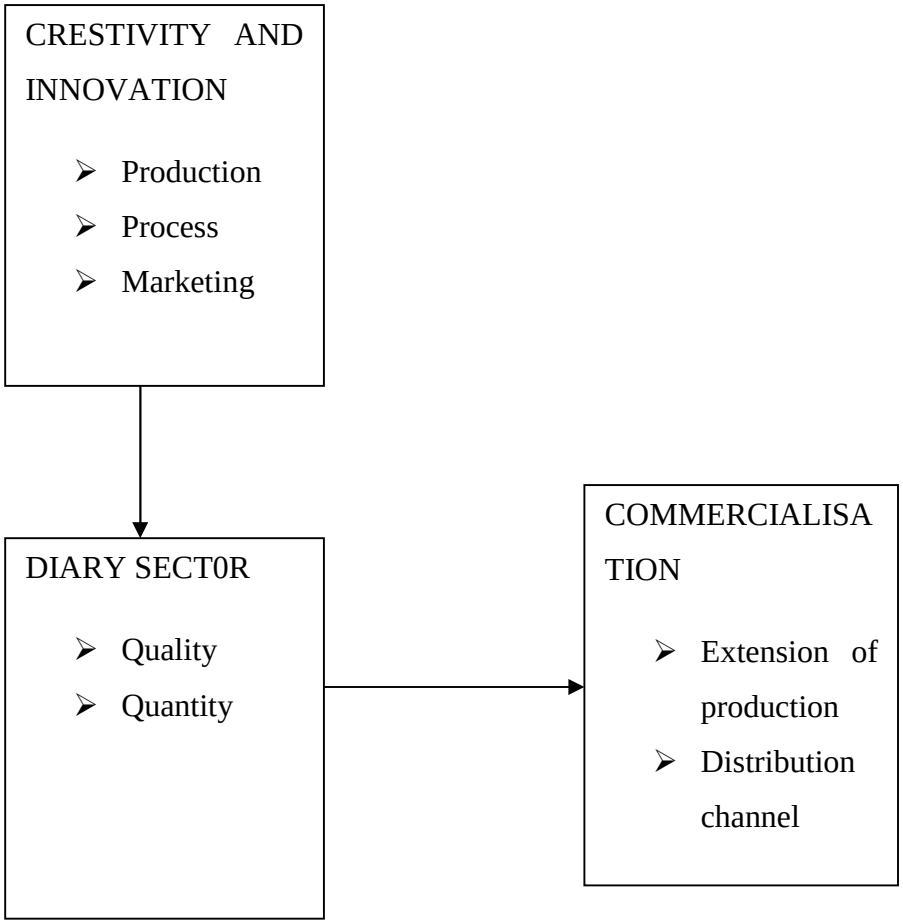
2.14 Conclusion

The dairy industry in Tanzania is developing with prospects for expansions making a bigger contribution to the Gross Domestic Product and improving the welfare of the people. Milk production is low due to the small number of dairy animals, underdeveloped system of production and low effective demand of dairy products, These can be overcome by harnessing the great potential by upgrading the indigenous stock, developing large scale farms and having an effective extension system from smallholder farmers. Coupled with this is investment in processing and creating effective demand by promoting consumption. Current Development strategies that aim at modernizing the dairy sector should be geared toward setting a process that will move the sector from subsist stance to commercialization thereby making it competitive.

Future development of the dairy industry should stress on production system of high productivity conducted on commercial basis in order to improve the livelihoods, employment, and availability of raw materials and contribute more significantly to the national income and conservation of the environment.

2.15 Conceptual Framework

There must be coordination between creativity and innovation in relation to dairy sector so as to make commercialization of the dairy sector, and of course in order to make commercialization in any other sector there must application of creativity and innovation in different stages.



CHAPTER THREE

METHODOLOGY

3.1 Research Design

This study has use a form of a case study to examine on how creativity and innovation can contribute towards the transformation of the dairy sector into a commercial activity just like any other commercial activity, SHAM diaries of Morogoro town has been used as a case study for this research work. Busha C.H and Harter S.P (2002) argues that using a case study in research design has an a advantage of making a researcher to get consistent information and within a reasonable time frame.

3.2 Study area

Morogoro is a city with a population of 315,866 (2012 census) in the southern highlands of Tanzania, 169 kilometres (105 mi) west of Dar es Salaam, the country's largest city and commercial centre, and 223 kilometres (139 mi) east of Dodoma, the country's capital city. Morogoro town is the capital of the Morogoro Region. It is also known informally as "Mji kasoro bahari", which translates as "city short of an ocean/port".(Wikipedia)

Why Morogoro

The researcher had different reasons to choose Morogoro as the study area for creativity and innovation as a means to commercialize dairy industry**.**

1. Morogoro is a region with a number of milk producers (urban residents and pastoralists) who keep cows in different districts and division of the region but still the number of consumers is very low.
2. The number of dairy industries producing milk products in Morogoro is very low, there are only two industries which are SHAM DIARIES and SHAMBANI MILK

where by both industries cannot produce more than one thousand litters per day while there is a lot of raw milk around.,

3.3 Case study (SHAM DIARIES)

SHAM DIARIES is a formally registered company as a private owned milk processing unit which purchase the milk from the herders and process fresh milk, yoghurts, Ghee, and other dairy products. The study opted for SHAM DIARIES as a case study just because through SHAM itself as a growing venture you can assess the contribution of creativity and innovation in transforming a dairy sector and also through them it becomes easy to get connection to the herders and veterinary officers for more information about the transformation of the dairy sector.

3.4 Population size of the study

The population size of the study is 50 respondents where by the number was divided into categories of respondents such as follows,

S/NO	CATEGORY OF RESPONDENTS	NUMBEROFRESPONDENTS
1	Participants from SHAM DIARIES	5
2	Herders	10
3	Veterinary Officers	5
4	Dairy products distributors	10
5	Consumers	20

3.5 Sample and sampling techniques

The study has use judgmental sampling to collect information from the respondents. Judgmental sampling is used in qualitative research. This means that the inquirer select the individuals and sites for the study because they can purposefully inform an understanding of the research problem and central phenomenon in the study. Decisions need to be made about who or what should be sampled, what form of sampling will take, and how many people or sites need to be sampled. Cress J (2007).

3.5.1 Reasons for using judgmental sampling

Makes the researcher to work straight to the intended group, no probability.
It is consistent since the researcher needs to have prior information about the group, site, etc in which he/she is interested to work with.

Reliability, that since the researcher needs to know a lot before applying this sampling technique therefore automatically the data to be obtained will have a high degree of reliability.

3.5.2 Data collection

The study will demand both the primary data and secondary data so as to come up with the results which are very realistic and consistent.

3.5.3 Primary Data

Primary data was collected through semi structured interviews, questionnaires, and researchers observation on site, therefore the questions in interview guides and questionnaires were directed to respondents in respect to their categories weather they are herders, veterinary officers, dairy product distributors or participants from the milk processing unit. Interview was used since it allowed more discussion between the researcher and the respondent and also it is more flexible way of gathering information while questionnaire and observation are were used to obtain the information that the respondent can straightly answer and probably not need follow up questions..

The rationale for using different methods of data collection is to widen the chances of getting as much information as possible but also at the same time to ensure accuracy of the collected data since some of the questions do depend on each other though they are asked in different modes such as interview Vs Questionnaire, also the use of

instruments has differ from one group to another due to the nature of the data that was needed from a particular group.

3.5.4 Secondary Data

Secondary was collected through document review such as the prior research reports , livestock(dairy) program /project reports, journals and articles, etc.

3.6 Data Analysis and Presentation

All the data were analyzed and presented qualitatively so as to get the results of the research as discussed in the themes that the study intended to come up with, but also Statistical Program for Social Sciences (SPSS) through *regression package* has been used to analyze data which appeared to be more quantitative, the reasons to use a mixed methodology was:

- To ensure more reliability and assurance of the analyzed data.
- To be more consistent.

CHAPTER FOUR

DATA PRESENTATION

4.0 Introduction

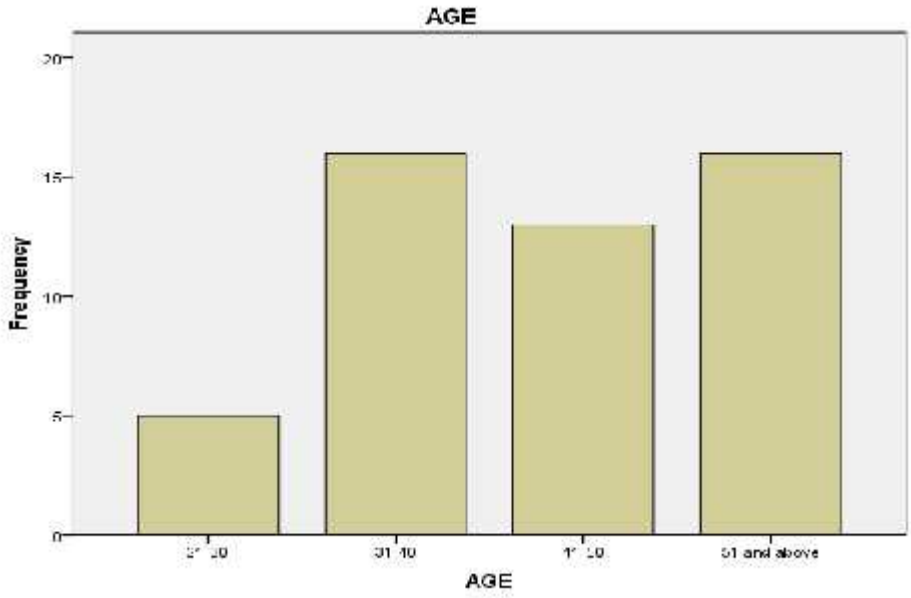
This chapter presents the age of respondents who have been asked different questions by the researcher so as to get the right information's for the study, age was among the essential component to be considered so that the study cannot be misleaded by interviewing people who are below the age of majority (i.e 18 years old) and get the wrong information.

4.1 Age of respondents and category

The following charts and table shows the age and category of respondents who were interviewed in this study.

Table 4.1 Age of respondents and occupation.

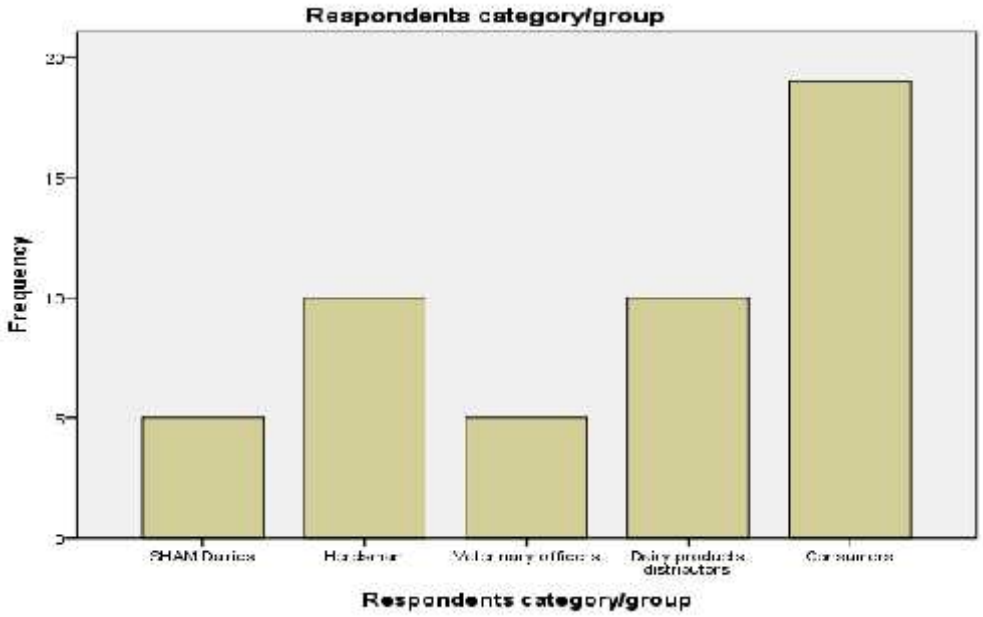
AGE	**FREQUENCY**	**PERCENT**
21-30	5	10.0
31-40	15	30.0
41-50	12	24.0
51- 60	16	32.0
60 and above	2	4.0
Total	50	100.0
RESPONDENT CATEGORY	**FREQUENCY**	**PERCENT**
SHAM diaries	5	10.0
Herdsman	10	20.0
Veterinary officers	5	10.0
Dairy Products Distributors	11	20.0
Consumers	19	40
Total	50	100.0



4.1.1 Age of Respondents

The results shown by the chart and table above shows that 10 percent of respondent are between the age of 21 to 30 years, and 30 percent for respondents who have age that range between 31 to 40 years, while 24 percent is covered by respondents whose age range from 41 to 50 years, and finally respondents who have the age above 51 years covers 32 percent of respondents of the study.

RESPONDENTS CATEGORY/GROUP: The following table and graph shows the respondents category or group in terms of researches interested groups.



4.1.2 Respondents Category/Group

The respondents of the study were selected from different categories or groups according to the roles that they play in dairy industry/field as shown by the table and charts below.

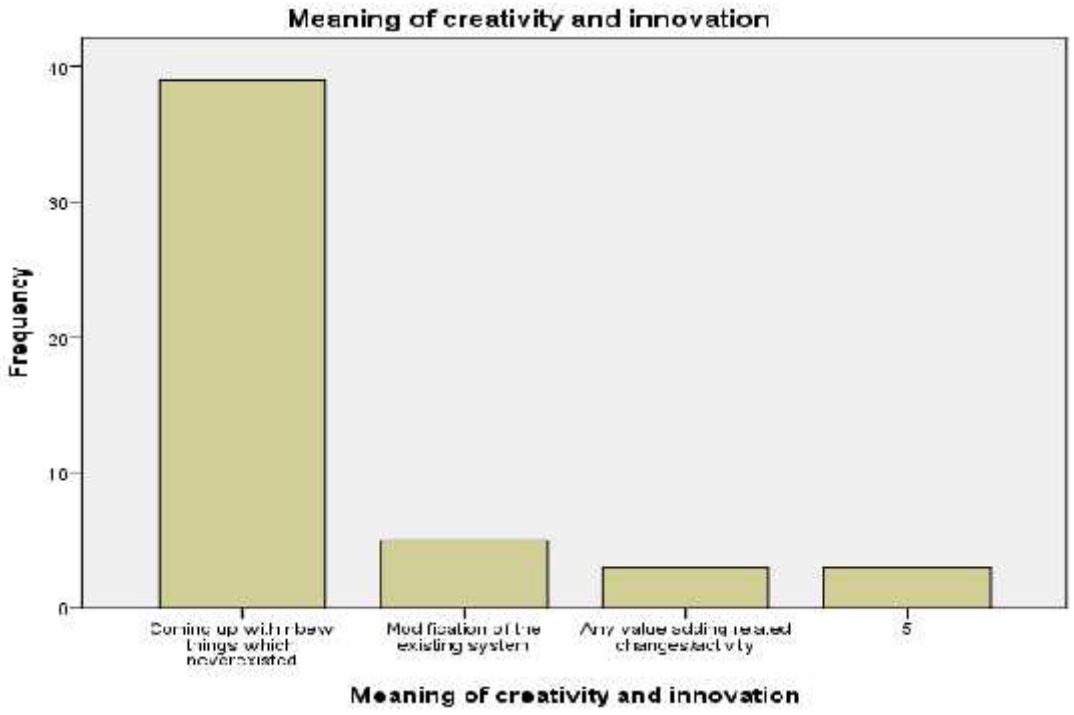
The results shows that 10 percent of the respondents are from sham diaries, which is a small milking processing industry owned by a sole proprietor,20 percent of the respondents are herdsmen who keep cows and sell milk, also another 10 percent of the respondents is covered by the respondents who are veterinary officers and have the duty to visit the herdsmen to treat cows and provide advice to them ,dairy products distributors also covers 38 percent of the respondents of the study and make the total of 98 percent of respondent while the missing percentage 2.

4.2 Meaning of creativity and innovation

The following table and charts provide the meaning of creativity and innovation according to the view of respondents.

Table 4 .2 Meaning of creativity and innovation

	Frequency	Percent
Coming up with new things which never existed	38	76.0
Modification of the existing system	5	10.0
Positive new changes	3	6.0
Any value adding related changes/activity	4	8.0
Total	50	100.0



4.3 Meaning of creativity and innovation

The results of the study shows that respondents have different meanings towards the the word creativity and innovation where by 76 percent of the respondents understand creativity as “coming up with new things that never existed”,10 percent of respondents understand creativity as “Modification of the existing systems” while 6 percent understand creativity as “any new positive changes” and finally the remaining 8 percent understand it as “any value adding related changes/activity”.

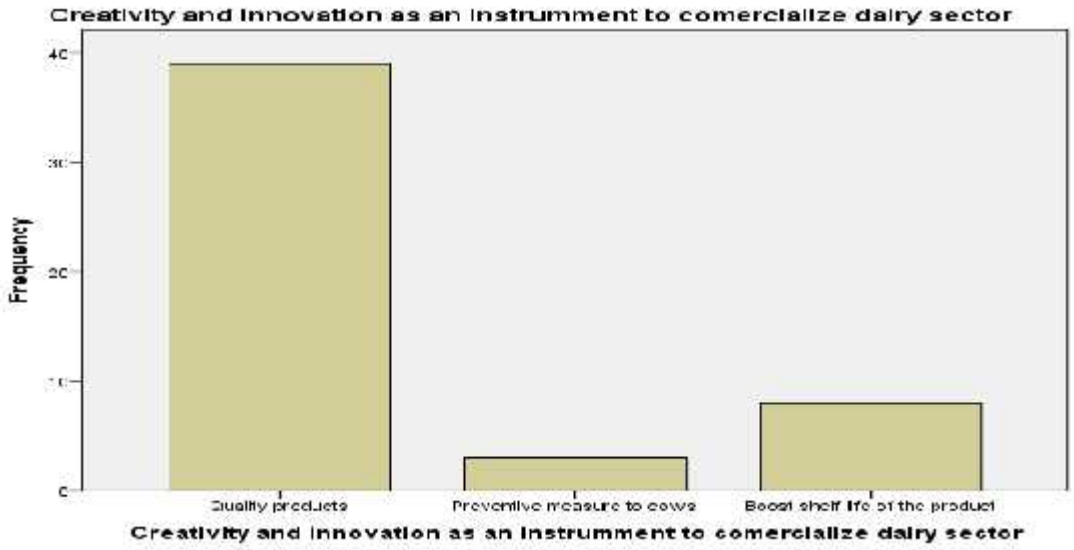
4.4 Creativity and innovation an instrument to commercialize dairy sector

The following table and chart is explaining the role of creativity and innovation (instrument) in commercializing the dairy.

Creativity and innovation as an instrument to commercialize diary sector: Respondents of the study had different ideas concerning the role of creativity and innovation in transforming the dairy sector into a pure commercial activity.

Table 4.3 Creativity and innovation as an instrument to commercialize dairy sector

	Frequency	Percent
Quality products	39	78.0
Preventive measure to cows	3	6.0
Boost shelf life of the product	8	16.0
Total	50	100.0



Creativity and innovation as an instrument to commercialize diary sector

Respondents of the study have different views concerning the contribution of creativity and innovation in commercializing diary sector, where by 78 of the respondents have commented that creativity and innovation leads to production of high quality products,6 percent commented that creativity can lead to improvement of preventive measures to cows so that they can not be attached by diseases and hence produce large quantity of milk, while 16 percent of the respondents have commented that it leads to increase of shelf life of the product after production.

4.5 Modes of dairy processing that exist

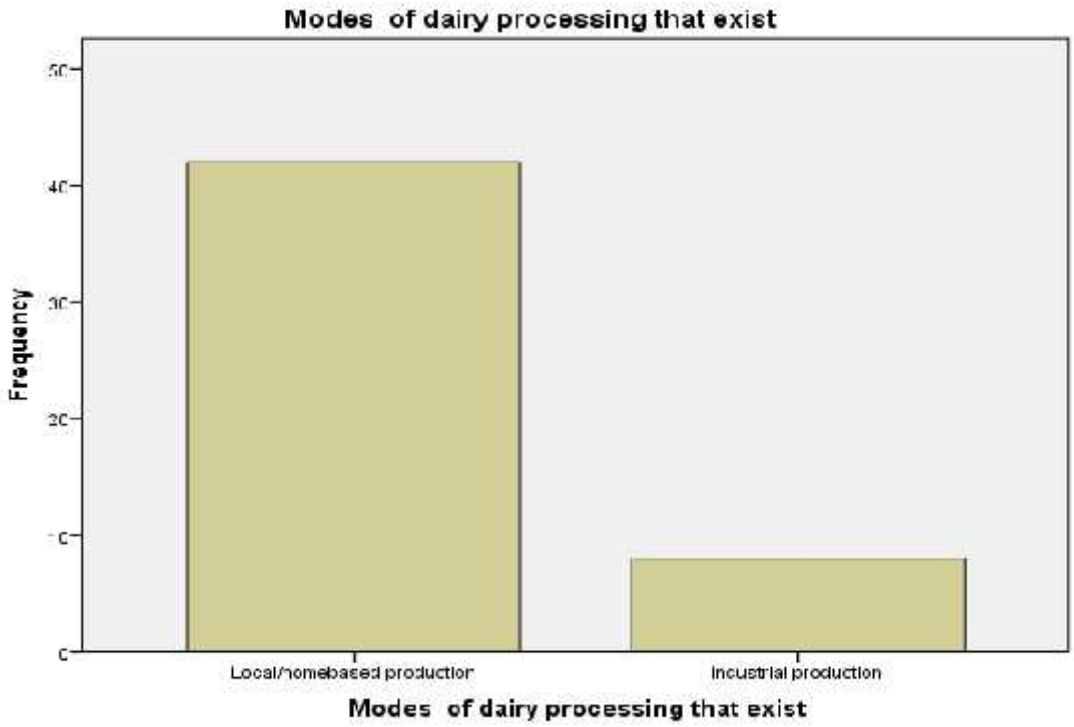
Respondents of the study proposed mainly four modes of dairy processing as they are shown below.

Table 4.4 Modes of dairy processing that exist

	Frequency	Percent
Local/home based production	42	84.0
Industrial production	8	16.0
Total	50	100.0

4.5 Modes of dairy processing

Respondents of the study proposed only two major modes of dairy processing as the can be seen in the following table and chart**.**



4.6 Modes of dairy processing that exist

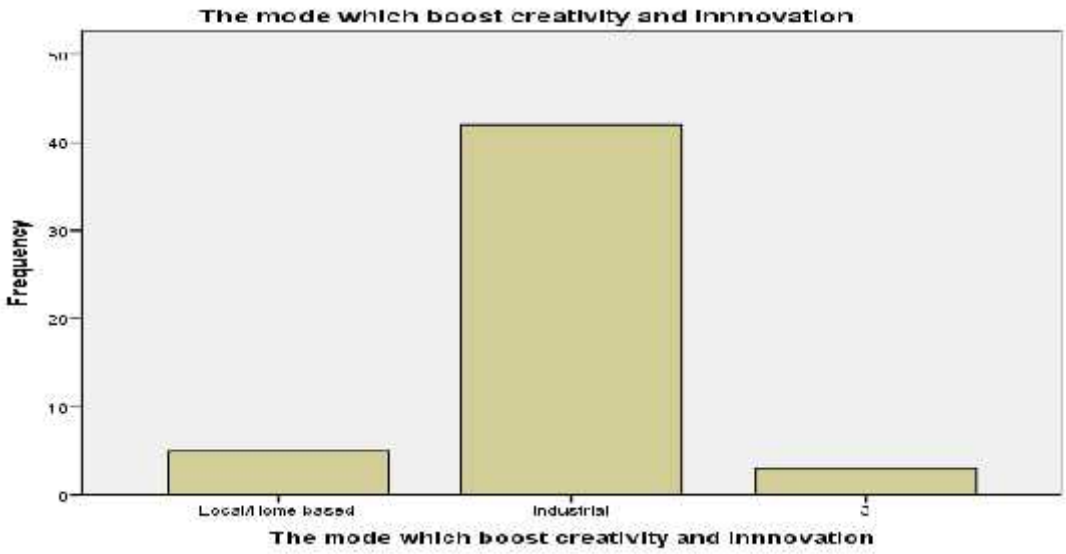
The results shows that there are only two modes of dairy processing that exist, where by 84 percent of the respondents commented that they are aware of home based mode of milk processing and the remaining 16 percent commented that they are aware of the local/home based milk production.

4.7 The mode that boost creativity and innovation

Here is the comparison between two modes (i.e. industrial and homemade) on which is more likely to boost creativity and innovation.

Table 4.5 The Mode that boost creativity and innovation

	Frequency	Percent
Local/Home based	7	14.0
Industrial	43	86.0
Total	50	100.0



4.7 The mode that boost creativity and innovation

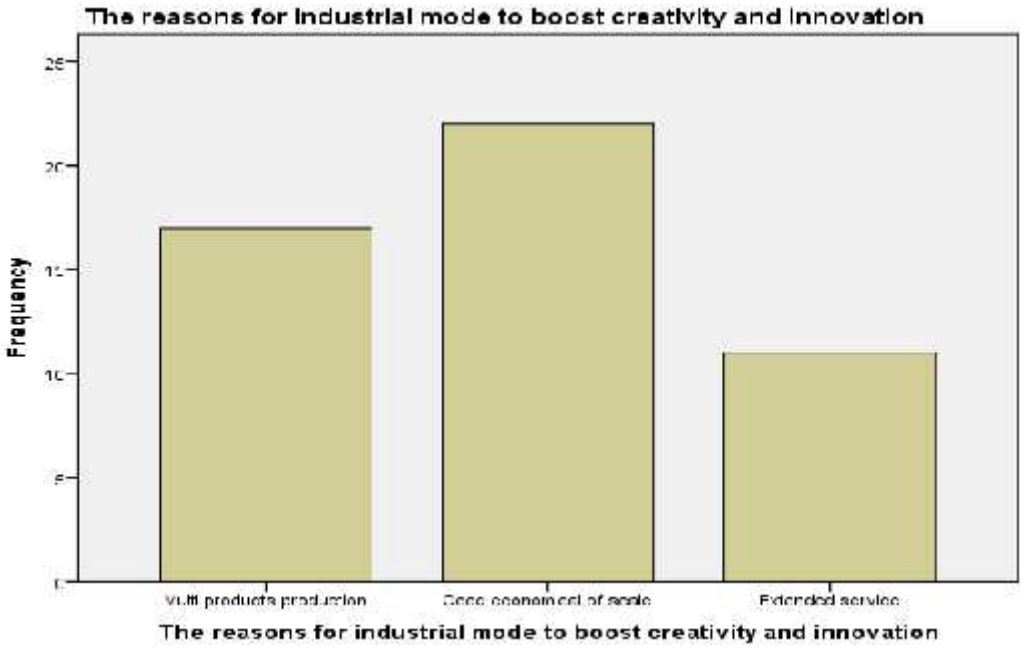
Respondents of the study had different views concerning which mode bosst creativity and innovation than the other where by 14 percent of the respondents have commented that home based mode is the one which boost creativity while the remain 86 percent have commented that industrial mode is the one which boost creativity.

4.8 The reasons for industrial mode to boost creativity and innovation

Industrial mode is considered to bring creativity and innovation than the other mode, and there were some of the factors provided by the respondents to support that argument.

Table 4.6 The reasons for industrial mode to boost creativity and innovation

	Frequency	Percent
Multi products production	17	34.0
Good economical of scale	22	44.0
Extended service	11	22.0
Total	50	100.0



4.8 Reasons for the industrial mode to boost creativity and innovation

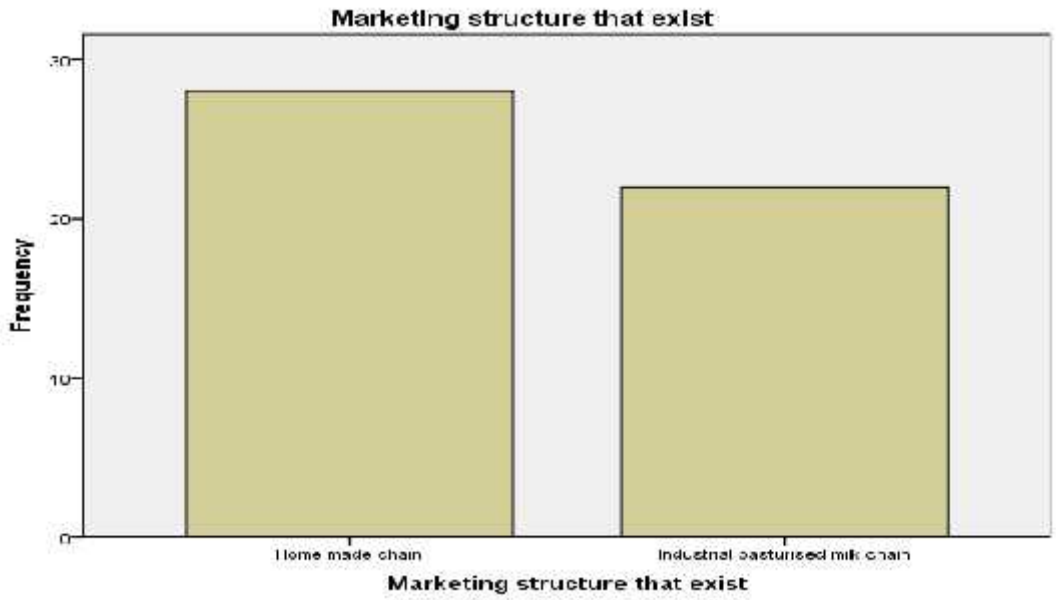
Findings of the study shows that respondents had different views concerning the reasons as to why the industrial mode boost creativity and innovation, where by 34 percent commented that it is because of multi products production,44 thought that it is just because of good economies of scale and the remained 22 commented on the extended services.

4.9 Marketing structures that exist

Comments from the field showed that there only two major marketing structures that exist, and these structures do differ as shown below.

Table 4.7 Marketing structure that exist

	Frequency	Percent
Homemade chain	28	56.0
Industrial pasteurized milk chain	22	44.0
Total	50	100.0



4.9 Marketing structure

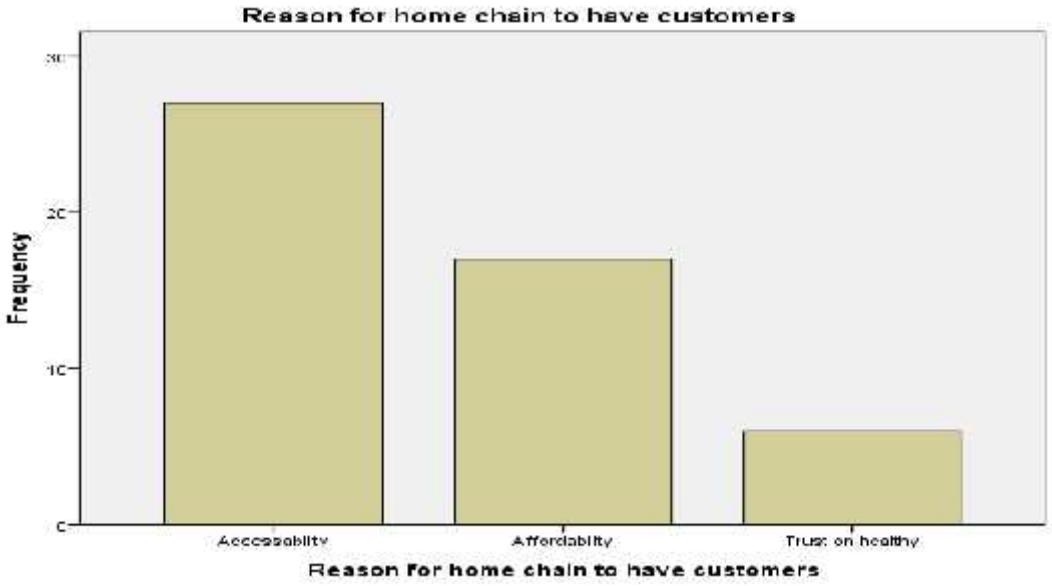
Results of the study shows that 56 % appreciate local market and the remain 44% base on the industrial pasteurized milk as as table market.

4.10 Reasons for the home made chain to have customers

Despite of the forces of competition caused by the industrial mode, but still the home made chain has it customers, and the reasons for this are as follows.

4.8 Reasons for home made chain to have customers

	Frequency	Percent
Accessibility	27	54.0
Affordability	17	34.0
Trust on healthy	6	12.0
Total	50	100.0



4.10 Reasons for home maid chain to have customers

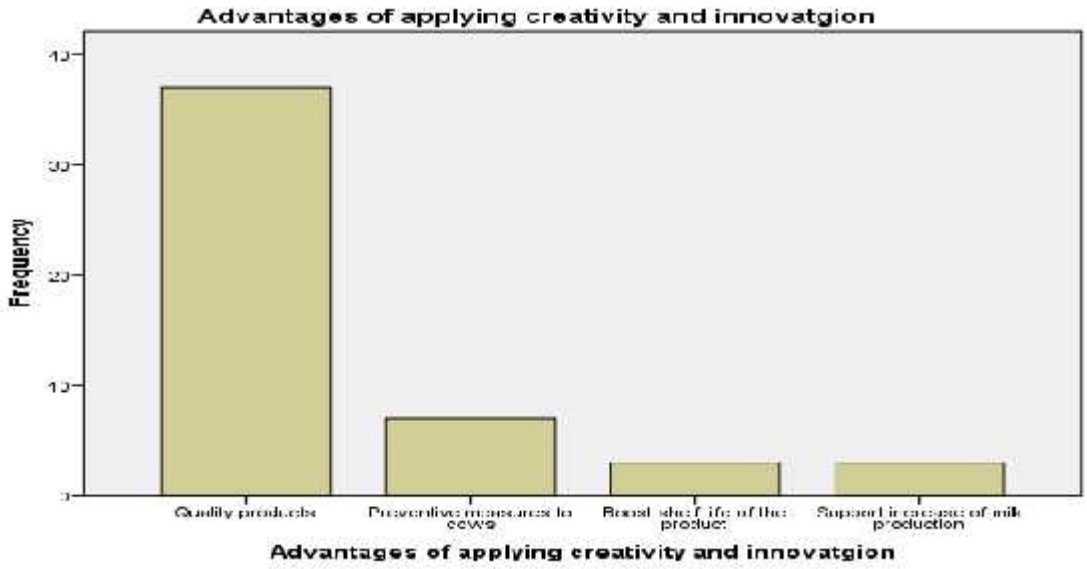
Respondents of the study had different views towards the reasons as to why the home maid chain still has customers,54 percent thought that it is just because of accessibility ,that you can buy milk just from a neighbor,34 percent though that it just because of affordability that the processed milk is very expensive rather than the home maid milk which do not involves a lot of production costs and the remained 12 percent think that it is just because of their trust on health that they are sure that the milk is not mixed with anything.

4.11 Advantages of applying creativity and innovation

A number of advantages have been observed as a result of applying creativity and innovation in dairy sector, and these are as follows.

Table 4.9Advantages of applying creativity and innovation

	Frequency	Percent
Quality products	37	74.0
Preventive measures to cows	7	14.0
Boost shelf life of the product	3	6.0
Support increase of milk production	3	6.0
Total	50	100.0



4.11 Advantages of applying creativity and innovation

Findings of the study shows that there are many advantages of applying creativity and innovation in the dairy sector, 74 percent of the respondent commented that creativity and innovation leads to production of high quality products,14 percent commented that they lead to improvement of preventive measures to cows,6 percent thought that it boost the shelf life of the product and the last 6 percent commented that it support increase of milk production.

4.12 Major roles that stake holder plays in improving dairy sector

Different stakeholders plays different roles in improving dairy sector, and these roles do differ according to their areas of interest, some of them are as follows.

Table 4.10 Major roles that stake holder plays in improving dairy sector

	Frequency	Percent
Providing advice and education to producers	37	74.0
Doing researches	2	4.0
Organising exhibition for knowledge sharing	5	10.0
Forming/organizing co-operation	3	6.0
Production of milk	3	6.0
Total	50	100.0

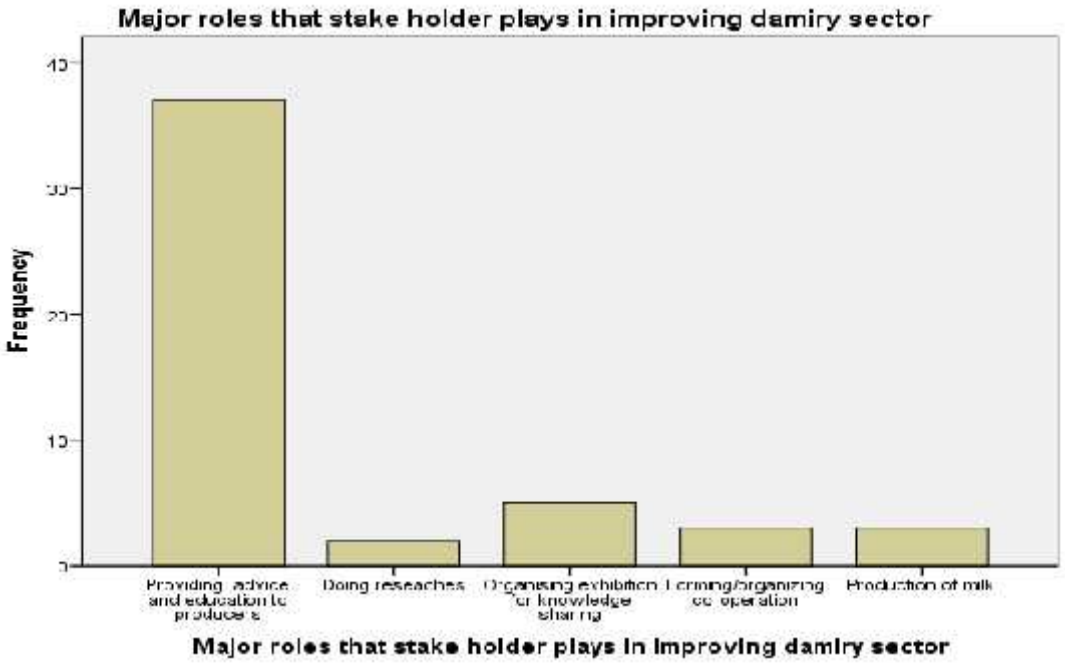
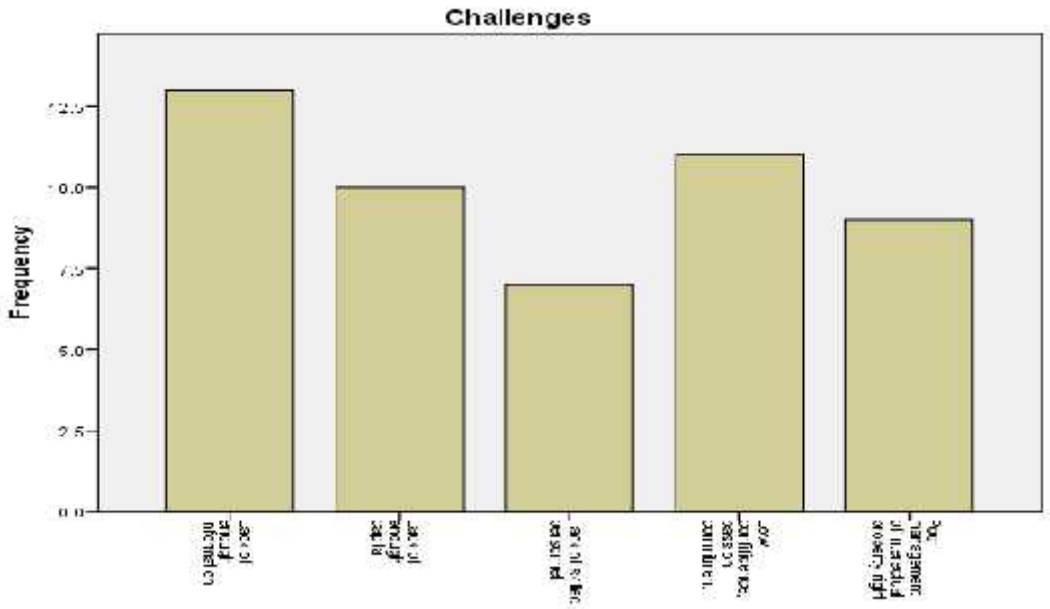


Table 4.11 Challenges facing creativity and innovation.

	Frequency	Percent
Lack of enough information	13	26.0
Lack of enough capital	11	22.0
Lack of skilled personnel	6	12.0
Low confidence, passion, commitment	11	22.0
Poor management of intellectual property right	9	18.0
Total	50	100.0



4.13 Challenges facing creativity and innovation.

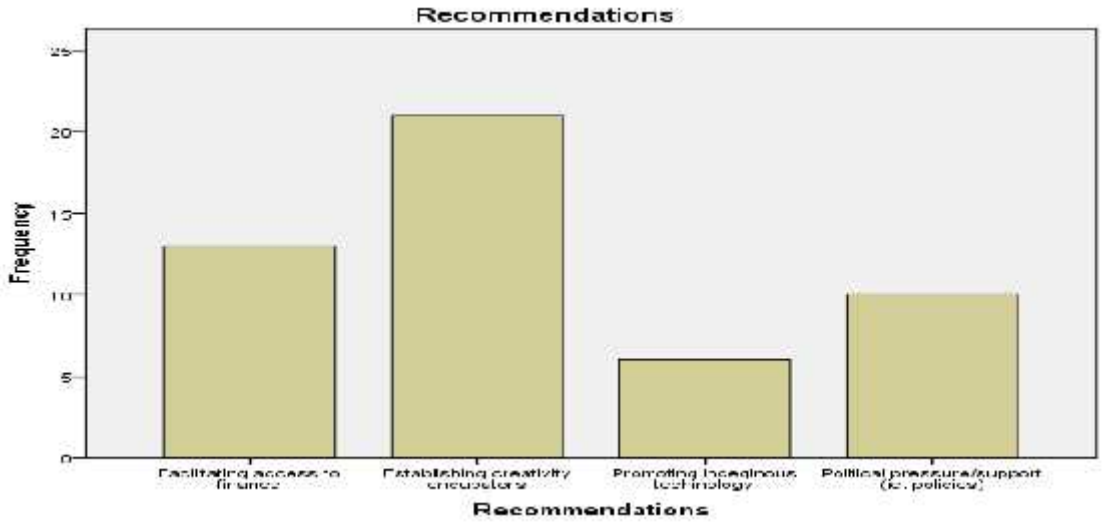
Creativity and innovation seems to face a lot of challenges as it has been stated by the respondents, 26 percent of the respondents commented that the biggest challenge is lack of enough information,22 percent thought that the problem is lack of enough capital,12 percent is lack of skilled people,22 percent commented on lack of commitment and passion, and the remained 18 percent commented on poor management of intellectual property right.

4.14 Recommendations for improvement

Respondents of the study have suggested a number of solutions for the challenges facing development of creativity and innovation in dairy sector, and these are shown below

Table 4.12 Recommendations for improvement

	Frequency	Percent
Facilitating access to finance	13	26.0
Establishing creativity incubators	21	42.0
Promoting indigenous technology	6	12.0
Political pressure/support (ie. policies)	10	20.0
Total	50	100.0



4.14 Recommendations for improvement

The respondents of the study had different recommendations concerning what should be done so as to solve the existing challenges; facilitating access to finance was 26 percent,42 percent thought that establishing creativity incubators will be a solution to challenges, other 12 percent thought promoting indigenous technology can also improve creativity and innovation while the remain 20 percent commented that policy or political pressure can be the only solution to create the way forward for solution of the existing challenge

CHAPTER FIVE

DISCUSSION OF THE RESULTS

5.0 Introduction

This chapter focuses on discussing the findings/results of the study, therefore the chapter will base on explaining the key issues such as the concept of creativity and innovation according to the understanding of the majority, the modes of diary processing that exist, the mode which seems to boost more creativity, challenges that people, are facing in bringing creativity, the advantages of creativity, major roles that stakeholders play in dairy sector, etc.

Table 5.1 Meaning of Creativity according to Respondents

	Frequency	Percent
Coming up with new things which never existed	38	76.0
Modification of the existing system	5	10.0
Positive new changes	3	6.0
Any value adding related changes/activity	4	8.0
Total	50	100.0

5.1 Meaning of creativity

Results found that people have different concepts concerning the meaning of creativity, the findings shows that 76 percent of the respondents they understand creativity as the process of coming up with new things which never existed before,10 percent of respondent understand creativity as the modification of the existing systems, that means there must be something already existing and its modification is the so called creativity,8 percent of the respondents understand creativity as any value adding changes in whatever you do and the remaining 6 percent think that creativity refers to any new changes, after looking to the ideas of the respondents the researcher

concluded that briefly creativity refers to the act of coming up with something novel which has a kind of contribution towards a certain field, and therefore the word *contribution* means positivity.

Table 5.2 Creativity and Innovation as an Instrument to commercialize dairy sector

	Frequency	Percent
Quality products	39	78.0
Preventive measure to cows	3	6.0
Boost shelf life of the product	8	16.0
Total	50	100.0

5.2 Creativity and Innovation as an Instrument to commercialize dairy sector

Respondents of the study had different ideas concerning the role of creativity and innovation as an instrument to commercialize the dairy sector,78 percent respondents thought that creativity and innovation will lead into production of high quality dairy products,16 percent of the respondents thought that creativity and innovation can boost shelf life of the dairy production after production, for example storage of the dairy products when they are on sell so that they can last longer, and the remain six percent thought that creativity and innovation creativity and innovation can play a role of developing preventive measures to the diseases that attack cows and therefore these can lead to the sustainability of milk production since the rate of cow suffering from diseases will be reduced. The researcher conquer with those who think that creativity and innovation leads to production of high quality product and at the same time boosting shelf life of the dairy products such as production of UHT(long life Milk) since the objectives of this study is to examine the role of creativity and innovation on the commercial context of the dairy sector.

5.3 Modes of dairy processing that exist

The respondents showed the there two major modes of dairy processing that exist which are shown in the following table and explanations.

Table 5.3 Modes of dairy processing that exist

	Frequency	Percent
Local/home based production	42	84.0
Industrial production	8	16.0
Total	50	100.0

5.3.1 Modes of dairy processing that exist

The results of the study shows that there are basic two modes of production that exist, and these are home based production where by normal residents produce dairy products like yoghurts, and this has been justified by the response of respondents where by 84 percent of the respondents commented that they are more aware about this mode while the remain 16 percent commented that they are aware of industrial production mode.

5.4 Major roles that stakeholders play

Results of the research shows that 74 percent of the respondents play a role of giving advice,4 doing researches,10 organizing exhibition for knowledge sharing,6 percent mobile formation of cooperatives, and the remain 6 involved directly in milk prod

Table 5.4 Major roles that stake holders plays in improving dairy sector uction.

	Frequency	Percent
Providing advice and education to producers	37	74.0
Doing researches	2	4.0
Organising exhibition for knowledge sharing	5	10.0
Forming/organizing co-operation	3	6.0
Production of milk	3	6.0
Total	50	100.0

Argumentation: According to the results of the research it is only 2 percent of people who play a role of doing researches, and 74 percent plays a role of advising therefore it is not easy for the sector to develop since the number of participants engaged in

research is very low and at the same time we are not very sure that the majority who play a role of advising that they give advice from the researched information's, and if there are those who give advice from un researched information's this might mislead other stake holders who are direct involved in organizing exhibitions and milk production, also the number of milk producers is only 6 percent therefore also the sector will not grow rapidly since the number of advisers is more than ten times of the number of producers.

5.5 Reasons for the industrial Mode to boost creativity and innovation

There are many reasons which were provided by respondents towards why the industrial mode boosts creativity and innovation.

Table 5.5 Reasons for the industrial Mode to boost creativity and innovation Discussion

	Frequency	Percent
Multi products production	17	34.0
Good economical of scale	22	44.0
Extended service	11	22.0
Total	50	100.0

Multi Products Production; Industries produce a number of products from the raw milk, for example they separate cream from the raw milk and make ghee while the remain liquid that has a lot of water can be used to make flavored yoghurts, ice creams, etc. Therefore industries are oriented to a number of production processes since they produce multi products therefore it become easier for them to adopt creative ideas and new innovation since the industries always focus on extending the number of products and at the same time letting those products to lead the market.

Good Economies of scale: Most of the dairy industries have a long chain of production, for example you may find that a industry has its own dairy farm which produces raw milk for industrial production, for that matter it becomes easier for an

industry to opt for new creativity and innovation no matter the expenses since the owner of the industry knows where he/she can compensate the incurred expenses of creativity and new innovations unlike to the small dairy farms holders who are also home based dairy products producers who cannot play that game of trial and error since every unnecessary expenses to them is calculated as a loss.

Extended Services: Industries have extended services such as researches, for example a industry can do a research of its own production and sells of its products in the market, also can have analysis of competition with other producers, therefore it becomes easier for them to discover they weakness which might also be taken by their competitors as advantages, by doing so the industry can start to think on an alternative way which is more creative so as to stay at the peak, therefore they indirectly boost creativity and innovation.

holders to develop preventive measures towards the diseases which are facing cows, or developing an alternative measures to work health related challenges, for example use of local herbs to solve menstruation challenges for the cows which do not get heat on time.

5.6 Advantages of applying creativity and innovation in dairy sector

There are many advantages of applying creativity and innovation in dairy sector as they were provided by the respondents and these are as follows.

Table 5.6 Advantages of applying creativity and innovation

	Frequency	Percent
Quality products	37	74.0
Preventive measures to cows	7	14.0
Boost shelf life of the product	3	6.0
Support increase of milk production	3	6.0
Total	50	100.0

5.6.1Advantages of applying creativity and innovation in dairy sector

Respondents of the study had different views towards the advantages of creativity and innovation in the dairy sector, 74 percent of the respondents emphasized that creativity leads to production of quality products,14 percent commented that it helps to develop preventive measures towards diseases that faces cows,6 percent commented that it boost the shelf life of the product,6 percent on boosting shelf life of the product, and the last 6 percent commented on supporting milk production

Quality products: Creativity and innovation helps in production of quality products since the products which were produced creatively and innovative always will have unique features that will attract more customers and hence help the industry to capture large market.

Preventive measures to cows: Creativity and innovation also helps small dairy farm to come up with the first aid or treatments that might be indigenous for protecting cows from the diseases and other health related challenges.

Boost shelf life of the product: that creativity and innovation can make a product to sustain for a long time when well preserved, for example for the industries add some preservatives to the processed milk so that they can stay longer in the market under a certain constant temperature, or production UHT milk that can stay out of refrigerators for even six months without getting rotten, for the case of local small dairy farm holders especially the pastoral societies they use certain grasses called “msisiro” whereby they burn the grasses and let the smoke spread to the milk and make a certain smell which makes the milk last longer.

Support increase of milk production: creativity and innovation support growth of the production of milk since it makes the industries to enlarge its productions and therefore attract farmers to produce more, also even to the farmers themselves if they

are creative enough they can discover some kind of feeds that can increase the production of milk per cow and boosts production of milk.

5.7 Marketing structures that exist

Respondents of the study commented that basically there are two marketing structures of dairy products as shown below.

Marketing Structures that exist

Findings of the study shows that there are mainly two structures of dairy products marketing, these two structures are Homemade chain which was conquered by 56 percent of the respondents and industrial pasteurized milk chain which was supported by 44 respondents.

Homemade chain: This structure involves local reproducers who produce milk at home and make some dairy products like local yoghurts where by people come to buy the milk at a home place or sometimes milk is sold at certain nearby shop whereby people go to buy some other products, most of the times you may find that this kind of milk is not packed and it is sold in terms of number of glasses, cups or litters as a way of measuring the quantify of the milk to be sold or bought.

Industrial pasteurized milk: This refers to the dairy products which are processed, and packed in the industry, after production the product is taken to either the distribution agents or to the retailers ready for selling to consumers, these products are very common in urban places since the market of these products is the urban areas.

5.8 The most practiced structure

There are two marketing structures of dairy products , here is a comparison between the two existing marketing structures.

Table 5.7 The most practiced structure

	Frequency	Percent
Homemade chain	10	20.0
Industrial	40	80.0
Total	50	100.0

The most practiced structure

Statistics from the findings shows that industrial chain market structure is the most practiced structure than the home made chain; this is because the industrial chain market structure deals with mass production and large coverage therefore the number of customers/consumers is slightly bigger compared to the home based chain. Also the industrial chain deals with a number of products (multi products) therefore customers have wide chances of making choice of what to buy, for example industries produce yoghurts with strawberry test, vanilla taste, plane yoghurts, etc.

5.9 Reasons for some people to buy from home made chain

There a number of reasons which were provided by the respondents towards why some people buy milk from the home made chain instead of the industrial one.

Table 5.8 Reason for some people to buy from home made chain

	Frequency	Percent
Accessibility	27	54.0
Affordability	17	34.0
Trust on healthy	6	12.0
Total	50	100.0

5.9.1 Reasons for some people to buy from home based chain

There are a number of factors which makes some people to buy /rely on the home made chain, findings of the study shows that 54 percent of the respondents buy from

home made chain because of accessability,34 think that it is because of affordability, and they remain 6 percent think that it is because of trust on health.

5.9.2 Discussion.

Accessibility: That some customers goes for home made chain just because of accessibility, that they are sure that they can reach easily to a person who sells the milk or they can be supplied the milk in home delivery system by the producers of the milk and therefore they don't see the reason for them to go far eg to the supermarkets, retail shops, etc to buy milk of which they also not even sure that they will be assured of getting it daily.

Affordability: That some people go for home made chain just because the prices are affordable/cheap, for example currently the half liter of industrial pasteurized milk ranges from 800 to 1000 tsh while to the home made chain they sell half liter by tsh 500.

Trust on health: that there are customers who buy from home based chain just because of an assumption that the home produced milk might have enough nutrients compared to the industrial skimmed milk, also afraid of the preservatives that might be in the products, therefore this factors makes people to hesitate to join to industrial dairy products especially for those who have an alternative of getting raw milk from small dairy farms holders, a good example for this case is the scandal of nestle milk which had some health effects to the children who were consuming.

5.10 Challenges that affect the increase of creativity and innovation

Challenges facing creativity and innovation in dairy sector are many, but the respondents of the study proposed the basic four challenges.

Table 5.9 Challenges that affect the increase of creativity and innovation

	Frequency	Percent
Lack of enough information	13	26.0
Lack of enough capital	11	22.0
Lack of skilled personnel	6	12.0
Low confidence, passion, commitment	11	22.0
Poor management of interectual property right	9	18.0
Total	50	100.0

5.10.1 Challenges that affect the increase of creativity and innovation

Findings of the study shows that there are many challenges that faces creativity and innovation that's why it does not grow fast, 26 percent commented that the biggest challenge is lack of enough information, 22 percent said that it is because of lack of capital, 12 percent commented on lack of skilled people, 22 low confidence, passion and commitment seems to be the biggest challenge to them, and the remain 18 percent commented on the poor management of intellectual property right as the biggest challenge towards the development of creativity and innovation.

5.10.2 Discussion.

Lack of enough information: Creativity and innovation needs a lot information concerning what has been done by others or what or information concerning what you want to do, information about materials availability and other resources for example, but for the case of Tanzania there are no enough chances to access information's easily from other stakeholders since there no common information pools where people post their creativity acts and their achievements, therefore whenever you want to start a new thing you find yourself that you spend a lot of time for searching information's unnecessarily and that's why some people become discouraged while they are in the process.

Lack of enough capital: Most of the entrepreneurs, especially small dairy farm holders have very limited resources therefore it becomes difficult for them to take the risk of their few resources to develop and test new creative and innovative ideas since any failure of the test marks the loss to the business, and sometimes might even lead to the collapse of the business.

Lack of enough skilled personnel: That the number of skilled people who are well competent in different fields is very low, especially in Agribusiness since most of the graduates are not well oriented to the context of small dairy farms holders, while if there would be the presence of skilled and well competent personnel they would act as mentors to livestock keepers on new creativity and innovations.

Low confidence, passion, commitment, etc: That most of the challenges that limits people to be creative and innovative are ***intrinsic,*** that means if you are not well committed by yourself of course you will not take any initiatives to start bringing new changes and therefore even if there are ***extrinsic*** challenges that means they will not be challenges to you since you won't face them as far as you have not try to initiate anything.

5.11 Recommended solutions by respondents

Recommendation were provided by the respondents for improvement of creativity and innovation in dairy sector, and these recommendations are as follows.

5.11 Recommended solutions by respondents

Findings of the study shows that respondents had different views concerning what should be done so as to reduce the challenges that faces the growth of creativity and innovation in the dairy sector,26 percent of the respondent commented on facilitating access to finance,42 emphasized on establishment of creativity incubators,12 percent wanted the promotion of indigenous technology and the remain 20 percent wanted the

political pressure/support(i.e. policies) to be the solution for the challenges facing creativity.

5.11.1 Discussion

Facilitating access to finance: Findings of the study shows that a big number of entrepreneurs especially in dairy sector do fear to try and invest in creativity and innovation so as to become as an instrument to commercialize the dairy sector just because of the limited resources, therefore they recommended that it will be good for them to be granted different resources money being one of them so as to facilitate creativity and innovation trials when it is already proved that the idea can contribute towards the growth of creativity and innovation.

Establishing creativity incubators: Respondents of the study were very much concerned with the establishment of incubators, the argument behind this fact is that incubators are the only strategy where mentor can meet with new creative ideas and starting reshaping them to be creative, also it becomes easier for the incubators to attract resources from different institutions which can be used to make their new creative and innovative ideas sustainable.

Promoting indigenous technology: Findings from the study shows that there respondents who were very much focused with the issue of indigenous technology, the assumption here is that it quite impossible to cope with the developed countries creativity and innovation if the medium of measurement is the foreigners technology, therefore we have to look back to our own domestic technologies and innovations and starting from there to think and discover things that might be helpful according to our context.

Political pressure/support(i.e. policies): Findings from the study shows that creativity and innovation growth needs a political pressure/support so as to grow, without good and clear policies that might lead to recognition of creative and

innovative people obvious creativity and innovation will not grow since the creators themselves will not realize the benefits of being creative, also policy will facilitate sharing of creativity and innovation ideas between those who knows and those who do not know but they are in need though different mediums such as incubators themselves.

CHAPTER SIX

SUMMARY, RECOMMENDATION, AND CONCLUSION

6.1 Introduction

This chapter focuses to summarize, conclude and recommend on what should be done according to the findings of the study, therefore the discussion will base on the research objectives, areas, etc. Also the research methodology and findings will be briefly discussed. The main research questions where, What is the level of awareness of stakeholders concerning creativity and innovation in relation to the growth of the dairy sector What modes of dairy processing exist and how do they support creativity and innovation in dairy sector? What are the existing market structures and how do they support the improvement of creativity and innovation in dairy sector.

6.2 Summary

Objective one: To explore the consciousness of stakeholders on creativity and innovation towards *growth* of the dairy sector, the focus of this objective was to see on how stake holders understand creativity and innovation and how they value it as an instrument to commercialize the dairy sector, findings of the study showed that people do understand the concept of creativity and innovation and they have provided the variety of meanings of creativity and innovation and its importance in transforming the dairy sector into a commercial activity .

Objective two: To investigate the creative and innovative process involved in dairy industry and asses their sustainability, the focus of this objective was to see the modes of dairy processing and their sustainability in commercial trends, this was made clearly by the findings of the study which showed that there are basic two dairy processing modes ,also showed on how they capture the market and operate therefore it becomes easier for us to assess their sustainability.

Objective two: To describe the marketing structures on how they can foster creativity and innovation, the focus of this objective was to look on the existing marketing structure of dairy products, their coverage, and influence to creativity and innovation, also findings of the study showed that Industrial pasteurized milk has an added advantage in terms of creativity and innovation as apressure from its market structure and competition forces.

6.3 Methodology

This study used a case study which was SHAM diaries of Morogoro, the respondents were from different categories such as SHAM diaries itself, veterinary officers, herdsmen and dairy product distributors. judgmental sampling was used to select respondents and the findings of the study were analyzed both qualitatively and quantitatively by using Statistical Package for Social Sciences using regression method.

6.4 Recommendation

According to the findings of the study which shows the challenges and the proposed recommendations for solution, the researcher also proposes the following to be the factor to be putted in consideration so as to pave the way for the creation of solution to treat the existing challenges.

Establishment of Entrepreneurship incubators: this will help entrepreneurs to meet with mentors who can shape their creative and innovative ideas ,also it is easier for incubators to associate with the financial institution so that they can mobilize funds from them and grant them to entrepreneurs who have creative and innovative ideas but unfortunately they don’t have enough resources to bring their ideas into reality.

6.6 Conclusion

Conclusively, the research found that there are a number of roles that creativity and innovation plays in commercializing the dairy sector, therefore different stake holders have to make sure that they increase creativity and innovation within the sector since it is the only instrument that can transform the dairy sector for subsistence level into a pure commercial activity.

REFERENCES

Austro Project Association (2009)

Busha C.H and Harter S.P(2002)Creativity and Innovation Application.

John W.C, Qualitative inquiry and research design, by sage publications, Inc

Kwijila(2010) Agriculture Transformation, Mkuki na Nyota ,Dar es salaam.

Land O Lake (2009) Dairy Report

Linda Naiman (2009) Entrepreneurial changes, Oslo University Press.

Lipsey,R.G(2005)Economic Transformation: General purpose technologies and long term Economic Growth. Oxford: Oxford University Press

Neude,W.A(2010) "Promoting entrepreneurship in developing countries:policy challenges."

Research Perspectives of the Max Planck Society (2010)

Rollo May(2007) The courage to create

Rural Livelihood Development Company, RLDC;Milk production survey(2009)

Sternberg and Lubart Defying the crowd (2007) Creativity Principles

Tanzania Milk Processors Association, Livestock Development report(20090)

Tanzania Milk Producers Association, Dairy Development Report(2010)

Tripple Helix Conference in Madrid,20-22 October 2010

United Republic Tanzania, Economic Survey (2010)

APPENDEX

INTERVIEW GUIDE

DEAR RESPONDENT; This questions appearing in the paper are for the data collection concerning the study titled **"THE ROLE OF CREATIVITY AND INNOVATION IN COMMERCILIZING DAIRY SECTOR"** which is the research study of **MR SAMIJI MHANDO** for partial fulfillment of a masters degree in entrepreneurship (MSc. Entrepreneurship) of **MZUMBE UNIVERSITY.**

NAME OF RESPONDENT……..
SEX…….
AGE ……
GROUP/CATEGORY……..

Objective one: Consciousness of stake holders concerning creativity and innovation in dairy sector.

Questions.

1.How do you understand creativity and innovation?

2.How can creativity and innovation be an instrument to commercialize the dairy sector?

3.What role do you play to ensure creativity and innovation in dairy sector?

4.What are the results/advantages of applying creativity and innovation in commercializing the dairy sector?

Objective two: Creative and innovative process involved in dairy sector.

Questions.

1.What modes of dairy processing do exist?

2.Which modes/process boost creativity and innovation?

3.Why do you think the above process is more likely to boost creativity and innovation than other modes of processing?

4.What kind of creativity and innovation is more likely to appear/be carried in that particular process?

Objective three; Describing the marketing structures on how they can foster creativity and innovation.

Questions.

1.What marketing structures do you know in dairy sector?

2.Which marketing structure is more practiced and why?

3.How can a market structure create pressure for creativity and innovation in dairy sector?

RECOMMENDATIONS

What are the challenges facing growth of creativity and innovation in dairy sector?
What are your recommendations?