

**ANALYSIS OF LEATHER VALUE CHAIN IN TANZANIA: THE CASE
OF MWANZA CITY**

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CERTIFICATION

The undersigned certify that he has read and hereby recommend for acceptance by the Open University of Tanzania a dissertation titled: “*Analysis of Leather Value Chain in Tanzania: The Case of Mwanza City*” in partial fulfillment of the requirements for the degree of Master of Business Administration of the Open University of Tanzania.

.....

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.....

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DECLARATION

I, **Issa Lupakisyo Mwangosi**, hereby declare that, to the best of my knowledge the research work presented in this dissertation titled “*Analysis of Leather Value Chain in Tanzania: The Case of Mwanza City*” is my own original work and that it has not been presented and will not be presented to any other Institution, or University for a similar or any other degree award.

.....

Signature

.....

Date

DEDICATION

This work is dedicated to the **ALMIGHTY GOD**, the giver of life to every living, the source of all wisdom and inspiration. To my beloved late mother Maimuna Mussa Maswali and the late young sister Tumpe Mwangosi who, in this case, as in most others could always see the wood from the trees. May the Almighty God bless and reward them abundantly.

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ABSTRACT

This study was carried out to analyze the value chain of leather in Tanzania taking a case study of Mwanza city. The study intended to achieve the following objectives: to assess leather value chain, to determine performance of key actors within leather value chain, and to identify challenges facing key actors within leather value chain. Data for the study were collected from a sample of 211 respondents (key actors in leather value chain), using combination of data collection methods.

The findings of this study revealed that there are many chains within the study area, the numbers of middlemen might add the costs of production and reduce the quality of product, factors which damage the quality of hides and skins varies from one actor to another, hides and skins traders and leather tanner are the only two actors who are getting higher profit compared to other actors while livestock keepers is the actor who is getting low profit, and the challenges facing key actors in leather value chain also varies from one actor to another.

The study recommends the followings: to strengthen leather value chain which will narrow the information gap between the key actors in leather value chain, to avoid the uses of middlemen for the purpose of quality and price of finished products, to have strictly control of the factors that damage the quality of hides and skins, to encourage in country processing, and to strengthen Leather Association of Tanzania (LAT) so that it can effectively tackle identified challenges.

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LIST OF ABBREVIATIONS AND ACRONYMS

BDS	-	Business Development Services
BET	-	Board of External Trade
DIT	-	Dar es Salaam Institute of Technology
EAC	-	East Africa Community
FAO	-	Food and Agriculture Organization
GDP	-	Gross Domestic Product-
IRDP	-	Institute of Rural Development Planning
LAT	-	Leather Association of Tanzania
LGAs	-	Local Government Authorities
MSMSEs	-	Multilateral Trading System
NGOs	-	Non-Governmental Organizations
NSGRP	-	National Strategy for Growth and Reduction of Poverty
RCD	-	Regional Cooperation for Development
SIDO	-	Small Industries Development Organization
SADC	-	Southern African Development Community (SADC)
SME	-	Small and Medium Enterprises
SPSS	-	Social Package for Social Sciences
LAT	-	Leather Association of Tanzania
TILT	-	Tanzania Institute of Leather Technology
UNIDO	-	United Nations Industrial Development Organization
URT	-	United Republic of Tanzania
WTO	-	World Trade Organization

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information

Tanzania has immense potential to be a major supplier of raw hides and skins, semi processed leather, finished leather, footwear and leather products. In the Southern African Development Community (SADC) region, Tanzania is having the largest number of livestock units followed by South Africa, Zimbabwe, Namibia, Angola, Botswana and Zambia. It ranks third in Africa after Ethiopia and Sudan (Currently it might be the second after the separation of Sudan North and South). Statistics show that Tanzania has about 18.3 million cattle, 13.1 million goats, and 3.5 million sheep (URT, 2007). This provides an important renewable locally available resource base (hides and skins) which in turn are essential raw materials for the tannery industries and footwear and leather goods manufacturing industries.

Despite, this huge hides and skins production potential, in practice, producers of leather goods including shoe makers depend on imported finished leather from Ethiopia, Malawi, and Zambia (Kabuje and Mdoe, 2008). For instance, it is estimated that about 4.0 million pieces of hides and skins are collected and sold annually, but most of hides and skins produced and collected in Tanzania are exported as raw and a small proportion is sold as semi-processed (URT, 2007). Surprisingly, the processing of hides and skins has declined as some of the tanneries are operating at a very low level of their capacity (URT, 2007). In fact, there are 7 tanneries in Tanzania with an installed capacity to process about 40 million squares feet of hides and skins per annum, but most of these industries are operating under

capacity due to capital and technological limitations. These industries are expected to be an instrumental weapon in terms of reducing the export of raw hides and skins, increasing value added products and creating employment opportunities (URT, 2006a).

Disappointingly, leather potential has to large extent not been translated into significant economic benefit because the production processes in the whole value chain are traditional and product quality cannot meet the international standard (Bowonder *et al.*, 2011). In this case, the needs of developing strong leather value chain which must start from the livestock producers (to produce quality animals), slaughter operations (to produce quality hides and skins), hides/skins trade (to properly cure the hides/skins), tanneries (to produce leather - wet blue, crust and finished), leather products producers (to produce footwear and leather products) to wholesalers/retailers who supply the consumers is paramount (Muthee, 2008).

1.2 Research Problem

Tanzania has immense potential for supplying raw hides and skins, semi – processed leather (wet blue and pickle), finished leather and leather goods, footwear and leather garments in Africa and in the world. However, this potential has not been fully exploited. The poor performance of the sector might have been caused by lack of information pertain the economic importance of hides and skins among development practitioners and policy makers in the leather value chain. Consequently, hides and skins are often thought of as intrinsically unclean and end up being discarded or wasted because of ignorance or misinformation and in other places hides and skins are processed improperly which to some extent reduces their potential value.

In response to this, Tanzania ranks third in livestock numbers, but it rank 40th in leather production in Africa (Kabuje and Mdoe, 2008). This situation exists despite of having seven big tanneries with a total installed capacity of processing about 40 million square feet of hides and skins per annum but most of them are operating under capacity (URT, 2006a). Worse enough, producers of leather goods including shoe makers depend on imported finished leather from Kenya, Ethiopia, Uganda, Malawi and Zambia.

Although processing of hides and skins potentially plays an indispensable role in economic development, various research works have been focusing on factors leading to poor performance of the leather industry in Tanzania (Ladha, 2000; Cyprian, 2002; Jabbar *et al.* 2002; UNIDO, 2002; FAO, 2003; ICT, 2003; BET, 2004; FAO, 2005; URT, 2007). However, far less research works exist pertaining analysis of leather value chain in Tanzania, particularly in Mwanza City.

For instance, Jabbar *et al.* (2002) and FAO (2005) examined issues related to production, marketing and quality of hides and skins collected from livestock keepers and slaughter houses, whilst Ladha (2000), FAO (2005), ICT (2004) and UNIDO (2002) explored problems facing processing of hides and skins into finished leather. For that reason, many policy makers, development practitioners and leather key actors in the study area either appreciate very little or do not completely appreciate the economical significance of hides and skins to them. The afore – mentioned facts should not be ignored or else key actors in leather value chain will continue to overlook the economical benefits of hides and skins to their live hood. This study, therefore, intend to contribute towards filling the identified gap.

1.3 Research Objectives

1.3.1 General Objective

The overall objective of this study is to analyse the value chain of leather in Tanzania, a case of Mwanza City.

1.3.2 Specific Objectives

Specifically; the study intends to achieve the following objectives:

- (i) To assess leather value chain and identify factors affecting quality of products at each node.
- (ii) To determine performance of key actors within leather value chain
- (iii) To identify challenges facing key actors within leather value chain.

1.4 Research Questions

The study is guided by the following research questions:

- (i) What is the existing value chain of leather in the study area?
- (ii) What are the performances of key actors in leather value chain?
- (iii) What are the challenges facing key actors in leather value chain?

1.5 Significance of the Study

The findings of the study will be useful to many stakeholders in leather industry. The government may utilize these findings in fine-tuning policies related to leather sector aimed at promoting and strengthening leather sector in Tanzania. Also, the findings emanating from this study will provide information to other development practitioners on issues pertaining to implementation of Millennium Development

Goals (MDGs), National Strategy for Growth and Reduction of Poverty (NSGRP) which is committed to MDGs (URT, 2005a).

1.6 Organization of the Dissertation

The dissertation is organized into five chapters with chapter one being with a comprehensive Introduction. Chapter two reviews both theoretical and empirical literature related leather value chain. Chapter three presents methodological process which generated vital information needed to achieve the study objectives. This is followed by empirical findings and discussion in chapter four. The last chapter gives conclusions and recommendations based on the major findings of the study.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 An Overview

This section reviews existing literature on the issues related to the study. Special attention is directed on reviewing the basic concepts on value chain, methods for analyzing value chain, the performances of livestock industry, the performance of hides and skins processing firm in Tanzania, and the Marketing performance of footwear, leather garments and leather goods in Tanzania. The review of the relevant literature will be the instrumental tool in widening knowledge pertaining to important issues related to the study and identify approaches that could be relevant to study the value chain of leather in Tanzania.

2.2 An Overview of Leather Value Chain

2.2.1 Value Chain Defined

The concept of value chain analysis is described at length by Michael Porter who notes that: ‘Every firm is a collection of activities that are performed to design, produce, and market, deliver and support its products or services. All these activities can be represented using a value chain (Ward and Reppard, 2002). This means that, the value chain shows how a product moves from the raw materials stage to the final customer (Hitt *et al.*, 2011). Schmitz goes further by explaining that value chains are the sequence of activities required to make a product or provide a service (Schmitz, 2005).

Kaplinsky and Morris (2000) defined value chain as the full range of activities which are required to bring a product or service from conception, through the

different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use. In respect to this, Young (2005) added that, a value chain typically consists of inbound distribution or logistics, manufacturing operations, outbound distribution or logistics, marketing and selling, and after-sales service.

On the other hand, Porter defines the value chain specific to an individual company as “the disaggregation of a firm into strategically relevant activities in order to understand the behavior of cost and existing potential sources of differentiations”. This seems to refer more to the process of creating the chain, rather than a definition of the chain itself. This is similar to define as “the intermediate activities involved both directly and indirectly in the transformation of raw materials into the finished products in the domain of the ultimate customer” (Bititci and Carrie, 1998).

In addition to that, Brewer *et al* (2001) explains an industry/company value chain as a physical representation of the various processes that are involved in producing goods (and services), starting with raw materials and ending with the delivered product (also known as the supply chain). The industry organization perspective is based on the concept of value chain which refers to a connected series of links of core and secondary activities, comprising inbound logistics, operations, outbound logistics, marketing and sales, and services that leads to the business outcomes of each enterprise. The assumption underlying the value chain is that each activity either adds or removes value from the products or services at hand (Brewer *et al.*, 2001).

However, in the real world, of course, value chains are much more complex than the above simple value chains. For one thing, there tend to be many more links in the chain. Take, for example, the case of the leather industry. This involves the whole process from the livestock resource, market, rawhide, and skins to the export market. Depending on which market is served, the leather then passes through various intermediary stages until it reaches the final customer, who after use, consigns the leather products for recycling. Each of these stages requires inputs, policies and support systems if the whole chain is to function effectively. In this regard, this study adopted the definition from Kaplinsky and Morris.

2.2.2 Methods for Analyzing Value Chain

As it was explained in previous section, value chains are more complex, in many cases, the input and output chains comprise more than one channel and these channels can also supply more than one final market. So there is no mechanistic way of applying value chain methodology. Each chain will have particular characteristics, whose distinctiveness and wider relevance can only be effectively captured and analyzed through an understanding of the broader issues which are involved (Kaplinsky and Morris, 2000). Consequently, to be useful, let us have a look of some of the methodologies which are used by different researchers for analyzing value chain.

2.2.2.1 Mapping a Value Chain

The first step of a value chain analysis is the so-called mapping. In order to do so, the boundaries to other chains need to be defined. The main idea is initially to identify the actors and then to ‘map’ the traced product flows within the chain including input

supply, production, processing, and marketing activities (Faße *et al.*, 2009). A mapped value chain includes the actors, their relationships, and economic activities at each stage with the related physical and monetary flows. In this regard, mapping a value chain will facilitate a clear understanding of the sequence of activities and the key actors and relationships involved in the value chain. When dealing with value chains where benefits are sought for the poor and the marginalized people, it will also be important to give special consideration to poverty, gender and environmental factors (UNIDO, 2009). There are two different kinds of approaches used for mapping. These include Functional and Institutional Analysis (FIA) and Social Network Analysis (SNA). The detailed explanation of each approach is hereunder:

(a) Functional and Institutional Analysis (FIA)

In this approach mapping is denoted as a functional and institutional analysis (FAO, 2005d) which starts with constructing a ‘preliminary map’ of a particular chain to provide an overview of all chain actors (institutional analysis) and the type of interaction between them (functional analysis). For instance, methodology used by FAO includes three essential aspects for developing a preliminary map (FAO, 2005 d): (i) The principal functions of each stage, (ii) The agents carrying out these functions, and (iii) The principal products in the chain and their various forms into which they are transformed along the entire chain.

Once the flow chart has been drawn, these flows will be quantified, both in physical and monetary terms. The procedure allows assessing the relative importance of the different stages or segments of the chain. This methodology was applied by Rudenko (2008) in identifying and mapping the relevant value chain stages of cotton and

wheat in Uzbekistan. Kaplinsky and Morris (2000) suggest similar procedures for implementing value chain analysis. Their concept consists of two steps in order to map the value chain of interest. The first step includes drawing an 'initial map', which shows the chain boundaries including the main actors, activities, connections and some initial indicators of size and importance. The second step consists of elaborating the refined map by quantifying key variables such as value-added, and by identifying strategic and non-strategic activities. This refined map can be understood as a framework for showing chain statistics (McCormick and Schmitz, 2001).

(b) Social Network Analysis

Another approach for mapping value chains is the social network analysis (SNA) in social sciences. Similar to the FAO concept, it serves as a tool for mapping and analyzing relationships and flows between people, groups, and organizations. The initial flow chart of the chain consists of various nodes and links arranged in form of a matrix. The nodes represent the actors while the links describe the relationships and flows between the nodes (Faße *et al.*, 2009). SNA provides both visual and mathematical analysis of chain relationships, but it is still in the early stages to be used in value chain analysis. So far, only a few studies have applied this approach.

For instance, Clottey *et al.* (2007) used SNA to map the small livestock production system in Northern Ghana for a value network analysis. The objective was to analyze the introduction of animal health care services in the region. Thus, the value-creating linkages were mapped. Afterwards, SNA was employed to determine the pathways of value exchanges and individual relationships among the small farmers and enterprises.

As a result, the authors found out that the input supply is weakly linked with the upstream livestock chain activities. In addition, the knowledge flow among farmers and actors from research and development (R&D) needed to be improved to strengthen the entire livestock production chain. Another example is the study of Kim and Shin (2002).

The authors applied SNA to analyze the development of international and interregional trade flows between 1959 and 1996. Kim and Shin (2002) concluded that the world became increasingly globalized in the sense that the analyzed countries traded significantly more in 1996 than in 1959, both interregional and intraregional (Faße *et al.*, 2009).

In this regard, mapping a value chain will facilitate a clear understanding of the sequence of activities and the key actors and relationships involved in the value chain. When dealing with value chains where benefits are sought for the poor and the marginalized, it will also be important to give special consideration to poverty, gender and environmental factors (UNIDO, 2009).

2.2.2.2 Descriptive Statistics Analysis

Descriptive statistics is concerned with describing data by classifying, summarizing and graphing either population or sample data (Terpening, 2011). Descriptive analysis includes contents of unstructured data, which results in summarizing the data into categories. It also include presenting categories of data in tables or graphs that provide a pictorial descriptive of the sample, the use of descriptive statistics to further describe individual variables, and the use of statistical analysis for the

purpose of looking for relationship among categories or variables (Wood and Ross-Kerr, 2011). Descriptive statistics include measure of central tendency, variables and association present both numerically and visually e.g. in graphs (Goodwin, 2010). Descriptive was used by researcher to analyse the profitability and sales trend of the key actors in leather value chain. Also it was used enable researcher to identify the quality control factors of hides and skins at every node and to identify challenges facing the key actors in the leather value chain.

From afore-discussion, the present study, therefore, employed both mapping technique using Functional and Institutional Analysis (FIA) and Descriptive Analysis. It was observed that, Social Network Analysis (SNA) is used when the value chain is more characterized by a network than a single vertical chain. Also, SNA needs special software to study the structure of chain networks e.g. UCINET or AGNA (Faße *et al.*, 2009), which might course a problem in availability and expertise compared to the other techniques such as FIA and Descriptive analysis.

2.3 Performance of Livestock Industry in Tanzania

Livestock farming is one of the major agricultural activities in the country that is contributing towards achieving development goals of the National Growth and Reduction of Poverty (NSGRP). The livestock industry contribution to the Agricultural Gross Domestic Product (AGDP) is about 13%, and contributed 3.8 % of the National Gross Domestic Product (NGDP) in 2010 compared to 4.0% in 2009. Comparatively, the livestock sector grew by 3.4% in 2010, compared to 2.3% in 2009. This level of growth is much lower than the 9.0% growth envisaged under NSGRP by 2010 (URT, 2010b). These figures of slow development of livestock

industry probably reflect the underdevelopment of the leather sector in Tanzania. This is mainly due to low growth rates, high mortality rates, low reproductive rates and poor quality of the final products from the industry. In respect to this, the modest improvement of these production coefficients coupled with adding value through processing could significantly increase output and income from the livestock industry.

2.4 Performance of Hides and Skin Processing Firms in Tanzania

Tanzania has an off-take rate of 10 – 15% for cattle, 28% for goats and 29% for the sheep the potential annual production of raw materials is estimated at 2.8 million hides, 3.8 goats' skins and 1.0 sheep skins. Despite this huge hides and skins production potential, in practice, only relatively low recovery rates are realized amounting to 58 – 68 percent (URT, 2007a). Most of hides and skins produced and collected are exported as raw, a small proportion is sold as semi-processed.

In order to improve the performance of the industries the government is encouraging in country processing to add value. For that case, raw hides and skins are charged an export levy of 90% (raised in 2012/2013 budget) to encourage in country processing. It is believed that, these industries will be very instrumental in reducing the export of raw hides and skins and increase value added to the products and at the same time create employment (URT, 2006b).

BET (2004) addressed that at present; More than 900,000 hides (or 35% of total off-take) are exported “informally” to Kenya and Uganda and are not, therefore, available for processing into higher value-added forms of leather. These informal

exports also circumvent the levy and therefore of less interest to international buyers. As a consequence of existing animal husbandry (particularly branding) and poor flaying practices, the overall quality of hides is low by international standards and in comparison to some neighboring competitors. Indeed, from the perspective of the herdsman/farmer and rural butcher, there is poor understanding of value chain for leather. However, with the good results of the pressure by the Leather Association of Tanzania for the Government to enhance the total ban of raw hides export at a later stage, the eminent twist will be to strengthen tanning industry (BET, 2004).

Tanning capacity is limited to the production of wet blue hides and skins (the initial stage of tanning). Installed capacity is loosely estimated at 1.1 million hides and 1.4 million skins per year. This capacity remains largely under-utilized despite the theoretical availability of 2.6 million hides and 2.5 million skins. Currently, only 170,000 hides and 720,000 skins are being tanned into wet-blue per year. The majority of existing tanning capacity was not re-activated following privatization despite re commissioning being a condition of sale. While significant investment in modernization will be required in several cases, some of this dormant capacity could immediately be activated (BET, 2004).

It is, however, anticipated, that several tannery owners, who are also exporters of raw hides and skins, will only recommence tanning if existing government regulations and export levy on raw hides and skins are strictly enforced (BET, 2004). Most tanneries were initially established with imported reconditioned equipment and there has been little subsequent investment in modern equipment and technology. This is

particularly important since tanning and finishing operations are capital intensive. UNIDO (2002) reported that, obsolete equipment, low levels of training, a badly organized workflow and a frequent lack of spare parts and chemicals all contribute to low quality products and low levels of productivity (UNIDO, 2002).

2.5 Marketing Performance of Leather Products

The African footwear sub-sector seems isolated from the fast pace of technological innovation taking place globally. Lack of design capabilities, operator, supervisory and manager skills, and lack of knowledge of more appropriate material inputs and marketing techniques, all combine to cause poor productivity and a low level of competitiveness of local made leather products (UNIDO, 2002). Even in the local market, high operation costs and a lack of attention to what the market demands in shoes in terms of quality and price, allow cheap Asian products and second hand shoes to penetrate the market. This is a major loss of opportunity to an industry capable of the small-scale production that can offer the comparative advantages of cheap labour, low capital requirements and relatively simple technology (UNIDO, 2002). There is no real prospect of Tanzania's footwear and leather goods sub-sectors ever becoming internationally competitive. Indeed, the availability of low cost imports, particularly of shoes, and the absence of fully finished tanning capacity severely limits prospects for the re-emergence of even a domestically oriented footwear and leather goods industry. Both sub-sectors will likely remain artisan-based, with the footwear sub-sector oriented exclusively to the domestic market and the leather goods sub-sector focusing on the domestic and, to some extent, tourism markets (BET, 2004).

Although the tanning sector has long been engaged in export market, its products (mainly in low value added form) remaining uncompetitive in international markets. This also applies to the shoe industry. The leather garment and leather goods industry, on the other hand, has been trapped by a multitude of problems mainly rooted in poor performance of the value chain. To date, the industry has made very little or no contribution to export (Magento, 2011).

2.6 Marketing of Hides and Skins, Leather, Footwear and Leather Goods

Hides and skins marketing chain involve a number of middlemen from primary producers in villages, district collecting agents up to the exporter or tanner. These middlemen play the role of collecting hides/skins originating in rural areas especially from the scattered slaughter slabs and village markets. In this business, contracts are made on the basis of availability, price and quality in that order. The current market situation is dominated by export of both hides and skins and of semi-processed leather. Most of the Tanzania's hides and skins are mainly exported as mixed grades to the Asian markets particularly Pakistan, Hongkong, China and India.

Generally, these markets pay good prices for better quality hides and skins; however, Tanzania's hides and skins fetch relatively low prices because they are sold without proper grading. Consequently, exporters pay less to the primary producers which in turn does not motivate them to invest in the production of quality hides and skins. Similarly, most of the locally produced semi processed leather is exported to Asian (Pakistan, Hong Kong, China and India) and European (Zcheck Republic, Italy, Turkey) markets. These products fetch relatively better prices. Apart from these

exports, the remaining small proportion is processed up to finished leather for the local market.

The marketing of footwear and leather products is artisan-based, both focusing mainly the medium income and tourist market segments. The knowledge of what is real leather and artificial leather and purchasing power have been instrumental in the overall marketing of domestically produced footwear and leather products. Women who are slightly more than half of the Tanzania population form a potential market for these products but they are sensitive to quality in terms of design and finishing. The marketing of these locally produced products is constrained by poor workmanship and stiff competition from imported second hand products (BET, 2004).

CHAPTER THREE

3.0 MATERIALS AND METHODS

3.1 An Overview

This chapter presents methodological process which generated vital information needed to achieve the study objectives. The chapter is divided into nine main sections including an overview. The second section provides description of the study area. This is followed by research design, recruitment and training of enumerator, preliminary survey as well as sample size and sampling procedures in sections three, four, five and six respectively. While section seven narrates data sources and data collection methods, the corresponding section provides detailed operationalization of the fieldwork. The chapter winds-up with the discussion pertaining to processing and analysis of empirical data.

3.2 Description of the Study Area

This study was conducted in Mwanza City. The choice of Mwanza as a study area was purposive partly due to availability of the activities of the leather value chain. It was therefore felt that all key actors in leather value chain were easily available and accessible in this area. Figure 3.1 indicates the location of Mwanza city.

Administratively, Mwanza City has two districts namely Ilemela and Nyamagana. Within these there are 21 wards of which 9 wards (43%) are in Ilemela district and the remaining 12 wards (57%) are in Nyamagana District. The selected wards in Nyamagana District included (Buhongwa, Butimba, Igogo, Igoma, Isamilo, Mahina, Mbugani, Mironko, Mkolani, Mkuyuni, Nyamagana, and Pamba) whereas in Ilemela

District included (Bugogwa, Buswelu, Ilemela, Kirumba, Kitangiri, Nyakato, Nyamanoro, Pansiasi and Sangabuye) (www.mwanzacity.go.tz).

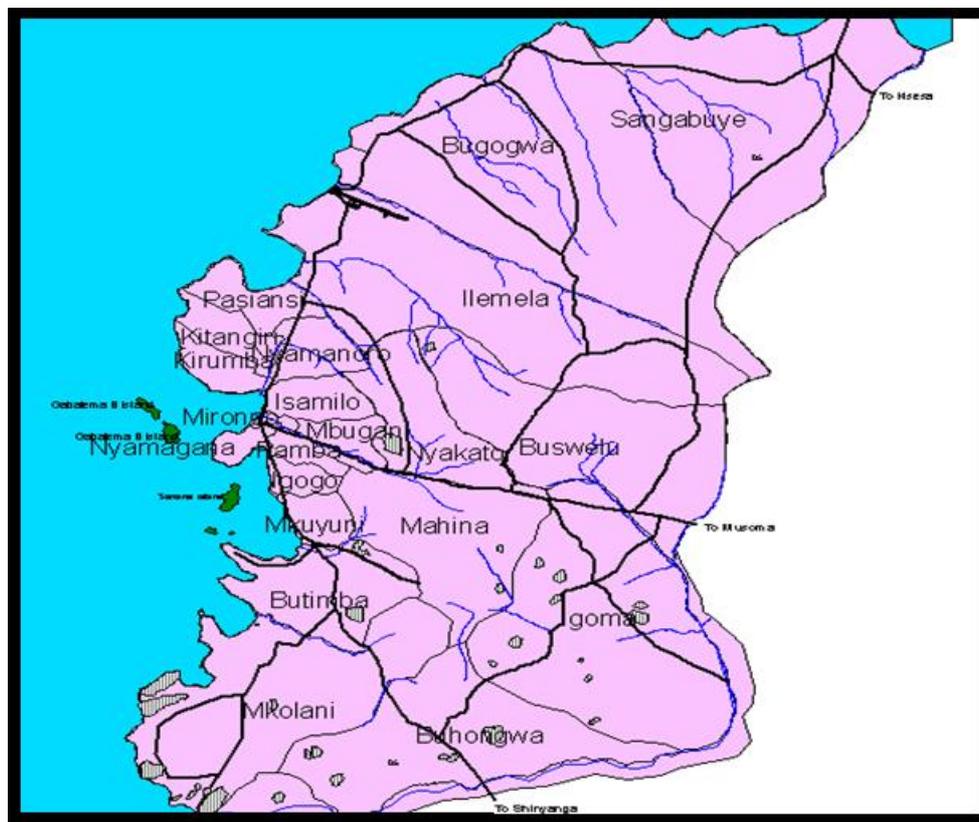


Figure 3.1: Location of Study Area

Source: Proposed Mwanza Regional Socio- Economic Profile, (2010)

With regards to livestock sector, the livestock available in Mwanza City includes; Goats, sheep, cows, pigs, hens' indigenous bread, broilers, jayerns and donkeys. This kind of livestock availability is very crucial for the study of value chain of leather since hides and skins are the byproducts of animals. The livestock facilities available in Nyamagana and Ilemela Districts include 7 cattle dips. These are used to wash and control livestock east -coast fever disease. The location of cattle dips is as follows: there is one cattle dip located at Lwanhima in Buhongwa ward in Nyamagana district and six cattle dips located at Igumamoyo, Sangabuye,

Nyamwilolelwa, Igombe, Nyamongholo and Buswelu villages in Ilemela district. All these cattle dips are under rehabilitation process (www.mwanzacity.go.tz). These washing dips are important tools in leather value chain since they play a big role in controlling the quality of hides and skins when animals are alive by reducing animals diseases related to damage of hides and skins during animal husbandry.

On top of that, there is one big abattoir which located at Igoma wards in Nyamagana District. In addition to that, there are different SMEs dealing with hides and skins, tanneries (processing of hides and skins to semi or finished leather) are available in both Nyamagana and Ilemela districts. Also there is one public owned tannery (DIT Mwanza Campus) which offers services to SMEs in leather sector. Leather goods manufactures, footwear and leather garments are available in both districts of Ilemela and Nyamagana.

3.3 Research Design

This study used a cross-sectional design. This design was selected because data were collected once (photo snapshot). This is partly due to the fact that factors influencing the improvement of leather value chain is complex and are not expected to change within short period of time. This research design was arranged the conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Kothari, 2004).

3.4 Recruitment and Training of Enumerators

Recruitment of enumerators was done on 2nd April, 2013. It involved two enumerators from Mwanza City. The selection of enumerators was guided by factors

such as academic qualification, willingness to work for long period of time in difficult environment, ability to speak fluent English and Kiswahili and familiarity with places where the fieldwork was conducted. Aspects which were emphasized during the training were (i) to record clearly and explicitly units of measure used by respondents and (ii) to use notebooks for recording additional information that could not be recorded in the questionnaire. Lastly, the enumerators were informed that the overall quality of the data collected would entirely depend on how respondents were approached and how the questions were asked.

3.5 Preliminary Survey

Prior to operationalization of main fieldwork, a preliminary survey was conducted between 10th April and 18th April, 2013 in order to (i) solicit background information about the study area, (ii) familiarize with the areas where the main survey was to be conducted, (iii) establish sampling frames and units, (iv) find out the most efficient way of carrying out the main survey and (v) pre-test the questionnaire using a grand total of ten respondents in order to validate the relevance of the questions to the intended respondents.

Following experiences gained from the preliminary survey: (i) it was noted that the interview lasted between 25 and 40 minutes for each respondent. The duration was quite satisfactory because a period longer than this often leads to impatience on the part of the respondent. (ii) It was discovered that questionnaire needed slight amendments. Therefore, some questions had to be reframed and others deleted and added.

Moreover, sensitive questions such as those seeking income-related data were better asked towards the end of the interview partly because by that time a good understanding and rapport between the interviewee and interviewer had already been established. (iii) It was also noted that the most efficient way of carrying out the main survey was to allow respondents who had no time for face-to-face interview to fill the questionnaire at their own convenient time. This was applied in few streets (Buswelu, Pansiasi, Ilemela and Butimba) where some of the respondents were reluctant to be interviewed and others could not be easily interviewed during working hours.

3.6 Sample Size and Sampling Procedures

The target population for the study was all key actors in all stages of leather value chain. In response to this, all key actors (herdsmen, butchery, hides and skin collectors, traders, processors, footwear, leather goods and garments manufactures) in the leather value chain were the main target population of this study. It is from this population a total of 211 respondents were sampled. Out of this 50 respondents from each node in the value chain were targeted except in leather tanners in which they were 11 respondents. Such sample size is adequate because Matata *et al* (2001) contended that between 80 and 120 respondents are adequate for most social – economic studies. Both purposeful and simple random sampling procedures were used as technique for sample selection (Saunders *et al.*, 2006). The selections of sample respondents were done during the main field survey. Purposeful sampling technique was used to select districts and wards because it was convenience for researcher to capture important aspects related to leather value chain from

respondents (Saunders *et al.*, 2006). The selection of sample wards was done during preliminary survey while the selection of sample respondents was done during the main field survey. From Ilemela district Bugogwa, Buswelu, Ilemela, Kirumba, Kitangiri, Nyakato, and Sangabuye wards were selected and from Nyamagana district Buhongwa, Igogo, Igoma, Isamilo, Mahina, Mirongo, and Mkolani, were selected for livestock keeper's as indicated in Figure 3.1 and Table 3.1.

Table 3.1: Sample Wards and Percentage of Herdsmen Respondents

District	Wards	Sampled Wards	Number of respondents	Sampled Respondents as a percentage of Total	Sampled Wards as a percentage of Total
Ilemela	9	7	31	62%	77.78%
Nyamagana	12	7	19	38%	58.33%
Total	21	14	50	100%	80.9%

Source: Survey data

For the case of slaughter house and abattoir operators Buswelu, Ilemela, Kirumba and Nyakato were selected in Ilemela district and Buhongwa, Igoma Isamilo, and Mahina ward were selected in Nyamagana district as shown in Figure 3.1 and Table 3.2.

Table 3.2: Sample Wards and Percentage of Slaughter/Abattoir House Operators

District	Wards	Sampled Wards	Number of respondents	Sampled Respondents as a percentage of Total	Sampled Wards as a percentage of Total
Ilemela	9	4	5	10%	44.4%
Nyamagana	12	4	45	90%	33.3%
Total	21	8	50	100%	38.1%

Source: Survey data

In the category of hides and skins collectors and traders Buswelu, Kirumba and Kitangiri wards were selected for Ilemela district and Igoma ward were selected for Nyamagana district (Figure 3.1 and Table 3.3).

Table 3.3: Sample Wards and Percentage of Hides/Skins Collectors/Traders

District	Wards	Sampled Wards	Number of respondents	Sampled Respondents as a percentage of Total	Sampled Wards as a percentage of Total
Ilemela	9	3	10	20%	33.3%
Nyamagana	12	1	40	80%	8.3%
Total	21	4	50	100%	19.0%

Source: Survey data

Furthermore, Ilemela, Kirumba, Nyakato and Pansiasi wards were selected to analyze leather processors (tanneries) in Ilemela district and Butimba, Igogo, Igoma, Mirongo and Mkuyuni wards were selected to analyze the same in Nyamagana district as shown in Figure 3.1 and Table 3.4.

Table 3.4: Sample Wards and Percentage of Leather Processors (Tanners)

District	Wards	Sampled Wards	Number of respondents	Sampled Respondents as a percentage of Total	Sampled Wards as a percentage of Total
Ilemela	9	4	5	45.5%	44.4%
Nyamagana	12	5	6	54.5%	41.7%
Total	21	9	11	100%	42.9%

Source: Survey data

Lastly, for footwear, leather goods and garments manufacturers the following wards were selected in Ilemela district: Ilemela, Kirumba, Kitangiri, Nyakato, and Pansiasi, while in Nyamagana district, the selected wards were selected as follows: Butimba, Igogo, Igoma, Isamilo, Mahina, Mkolani, Nyamagana and Pamba as demonstrated in Figure 3.1 and Table 3.5.

Table 3.5: Sample Wards and Percentage of Leather Products Manufacturers

District	Wards	Sampled Wards	Number of respondents	Sampled Respondents as a percentage of Total	Sampled Wards as a percentage of Total
Ilemela	9	5	21	42%	55.5%
Nyamagana	12	8	29	58%	66.7%
Total	21	13	50	100%	61.9%

Source: Survey data

The selection of both all actors in the leather value chain was done during the main field survey using the following criteria: (i) involvement on leather activities, and (ii) willingness of the respondents to be interviewed.

3.7 Data Source and Data Collection Methods

3.7.1 Data Sources

Data for the study were obtained from primary sources during a field survey carried out from 20th April to 30th June, 2013. Primary data were collected by single visit interview to target group using different methods of data collection. Interestingly, the exercise of collecting primary data gave an opportunity to researcher to gather information which addresses the study objectives. Specifically, the information

related to leather value chain, performance of key actors and the challenges facing key actors within leather value chain were gathered.

3.7.2 Data Collection Methods

Both qualitative and quantitative data were collected using a combination of methods. These methods included structured questionnaire, Focus Group Discussion (FGD), participant observation; in-depth interviews and documentary evidence. The decision to use a combination of data collection methods was dictated by diversity of information needed to achieve the study objectives. This is because there were some specific data that could not be collected by single method. The explanation for each data collection method is offered below:

3.7.2.1 Structured Questionnaire

Structured questionnaire was designed (Appendices 1 to 5) and administered to key actors such as (herdsmen, slaughter operators, hides and skins traders, tanners and leather products manufactures) in leather value chain by face-to-face conversation approach (Olsen and George, 2004). The questionnaire was chosen as important instrument of collecting data from respondents, partly due to its cost-effective method and strength of capturing empirical data in both informal and formal setting (Kothari, 1990).

The questionnaires were made up of three main parts, in which the first part was designed to obtain background information on characteristics of respondents. The second part dealt with business description and performance and the third part was designed at gathering data related to analysis of leather value chain.

Correspondingly, the questionnaire consisted both open and closed ended questions. On the one hand, open – ended questions were designed to solicit information relating to production, collection, processing and marketing of hides and skins as well as challenges facing leather industry. Closed –ended questions, on the other hand, were prepared intentionally to solicit information pertaining to awareness among herdsmen, abattoirs operators, hides and skins traders, tanners and leather products manufactures on the value of the raw material, flaying practices (and equipment), technology used at butcher slabs and abattoirs, hides, skins collected, equipment and chemicals needed for tanning.

In respect to this, emphasis was placed to collection of information related to trade and investment financing, incentives available to key actors, foreign direct investment in the sector, availability of skilled technicians (required for progressive value-addition), and legislation and regulations governing the sector. To ensure accurate information to be gathered from respondents, the questionnaires were translated into Kiswahili, the national language that is well understood by Tanzanians.

3.7.2.2 Focus Group Discussion (FGD)

Focus Group Discussions were conducted with at least one group in each stage of the leather value chain. Basically, this method is intended to fill in gaps of missing information and help to clarify issues arising from structured questionnaire and interviews. In this case, the group was consisted between 5 to 10 members. Intestinally, FGD was used to collect in-depth information regarding quality of hides

and skins, access to entrepreneurial skills, sales trend from key actors, and the challenges in production and marketing at different nodes of leather value chain.

3.7.2.3 Participant Observation

Direct participant observation was utilized to verify relationship of key actors within leather value chain in the study area. This was used by researcher to observe the issues related to business management, marketing skills, and ability of key actors in leather values chain to meet and market their products. Notebooks and diaries were used to record important information. The information obtained using this technique was used to counter check information obtained through structured questionnaire and Focus Group Discussions. The participant observation was chosen as important data collection methods partly due to its ability of making researchers' being aware of what is going on in particular social situations (Saunders *et al.*, 2006). During the study it was observed that most of the key actors in leather value chain have poor management (traditionally) of the business, lack marketing skills and entrepreneurial behavior at all.

3.7.2.4 In-depth Interview

In-depth interviews guided by checklist and questionnaire were conducted to various actors in leather supply chain. These actors included herdsmen and farmers, flayers and skin removers, hides and skins collectors, tanneries' owners and skilled personnel, middle man in leather business, financial institutions, and leather goods manufactures, marketers, government officials of the respective study area and other stakeholders involved in leather value chain. The information related to performance

of leather goods in the market compared to imported leather products, quality of Tanzania hides and skins and the intervention strategies devoted to promote the quality of our hides and skins as well as challenges facing the users of leather products produced in Tanzania were also gathered. Indeed, an in-depth interview was chosen as important methods of data collection partly due to its flexibility in obtaining information various actors and ability of capturing additional information that will be useful in interpreting results from sample of the study (Kothari, 2004).

3.7.2.5 Documentary Evidence

Documentary review was used to collect secondary data and fine tune literature review section. Various documents related to leather supply chain were reviewed. These documents were including academic literature such as books, journals, manuscripts and research reports. Likewise, non-academic reports such as consultancy reports, commissioned reports, news prints and governmental documents such as policies, legal acts, procedures and guidelines were also reviewed. The information that obtained from this method was helped to refine introduction, literature review and methodology sections of this study.

3.8 Detailed Operationalization of the Fieldwork

The detailed fieldwork survey was involved in depth questionnaire interviews, discussion with focus group members, discussions with key informants and government officials. Prior to the day of starting interviews, the researcher and enumerators were visited districts and relevant offices to inform the relevant authorities about the purpose of the study. Individual actors in the leather sector were interviewed in their business places or selected places after an initial

appointment. Appointment was made at least one day before the interview date. The objective of the study was explained to each respondent prior to interviews in order to create good understanding between interviewer and interviewee. Respondents were interviewed once and their responses were recorded immediately. Likewise, discussions with focus group members was held in their business places or selected places after making proper arrangement with respondents and government officials.

To overcome language barriers, the interviews were conducted in both English and Swahili. English was used for respondents who know the language, whereas Kiswahili was used for the respondents who do not know English. The responses were recorded in English. Beside questionnaire, informal discussions guided by checklist were held with government leaders and other key informants from different organizations and institutions involved in leather value chain activities.

3.9 Data Processing and Analysis

3.9.1 Data Processing

The compilation and processing of data collected through questionnaires started on 12th May, 2013 and ended on 30th June, 2013. The data, after collected, were processed and analyzed in accordance with the outlined laid down for the purpose at the time of developing the research plan. Data processing was involved editing the questionnaires, coding and entering in the computer. The Statistical Package for Social Science (SPSS) for windows version 19 was used to process the data. This analysis referred to the computation of certain measures along with searching for patterns of relationship that exist among data-groups.

3.9.2 Methods of Data Analysis

A substantial part of the analysis of this study was based on descriptive statistics. Frequencies cross – tabulations, means, and, value chain analysis were the main types of descriptive statistics analysis. These statistics were used to assess respondents' characteristics in different stages of leather value chain from animal husbandry to the final leather products. The Statistical Package for Social Sciences (SPSS) was used to analyse empirical data. Apart from SPSS, mapping of value chain and gross margin analysis techniques were used as explained below:

3.9.2.1 Mapping a Value Chain

The functional and Institutional Analysis (FIA) method was employed for mapping the value chain. In this approach mapping was denoted as a functional and institutional analysis (FAO 2005d) which started with constructing a 'preliminary map' of a particular chain to provide an overview of all chain actors (institutional analysis) and the type of interaction between them (functional analysis). Value chain mapping and analysis are the keys to unlocking process gridlock and achieving maximum process effectiveness.

3.9.2.2 Gross Margins Analysis (GMA)

Gross Margin analysis technique was used to evaluate and compare the performance of different key actors in leather value chain. It was based on actual records and each gross margin is essentially a single point of an enterprise production function (Jonathan, 2009). A similar model was used by Malugu (2010) to analyse returns of women food vendors in Ilala municipal council, Dar es Salaam. In this study, GMA was an instrumental tool of establishing whether the key actors in leather value chain

are getting profit or not. The main reasons of choosing this model include: Its ability to draw logical interrelation of economical and technological parameters, its forecasting ability of rational variants for the operational structure of an enterprise, and the model is widely used by researchers. The empirical model that was used to establish the performance of key actors in leather value chain is specified below:

$$GM = TR_i - TVC_i$$

GM = Average Gross Margin in TZS per key actor in leather value chain

TR_i = Average Total Revenue in TZS per key actor in leather value chain

TVC_i = Average Total Variable Costs in TZS per key actor in leather value chain

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION OF FINDING

4.1 An Overview

This chapter presents and discusses the results of the analysis of leather value chain in Tanzania, taking a case study of Mwanza city. Specifically, the results presented rely heavily on the information obtained from sample respondents and examined by using mapping of value chain and descriptive statistics analysis. The chapter is divided into five main sections including an overview. The second section discusses the characteristics of sample respondents. This is followed by analysis of leather value chain in section three. The correspondingly section discuss the performance of key actors in leather value chain in the study area. Finally, the chapter winds-up with the challenges in leather value chain.

4.2 Characteristics of Sample Respondents

The characteristic of sample respondents are summarized and shown in Table 4.2. Eight important socio-economic and demographic characteristics were given due consideration in this study. These included business experience, ownership of the business, decision making, age of respondents, household size, educational level attained by respondents, marital status, and household income from leather activities and non leather activities.

The results in Table 4.2 indicate that the majority of respondent's lies between 16 years to 40 years, a total of 140 respondents out of 211 which is equivalent to 66.4%

of all respondents are in this group. The findings partly suggest that the majority of key actors in leather value chain in the study area were economically active and productive age group. The household size has a great bearing on successfully running of leather activities.

In general, having a larger household size means having more productive family labor force in the household, *ceteris paribus*. The results in the same table indicate that the average household sizes were 4.6 persons. Interestingly, the average household size of 4.6 persons for the key actors in leather value chain is almost the same with the national average household size of 4.9 which was reported by URT (2003c).

The results of the study also show that more than half of sample respondent (55.5%) are married. The fact that most of respondents are married partly reflect that leather activities were an important source of households' income for respondents in the study area and it helps to address basic needs to support themselves and their families.

The overall average monthly household income from leather activities for sampled respondents was TZS 437,975.53 which is equivalent to TZS 14,599 per day. However, the monthly average income received from other activities apart from leather activities was averaged to TZS 24,126.67 per month. These figures are below the national average of per capital income according to BoT it was TZS 869,436.3 in 2011 (<http://www.bot-tz.org/publications/SelectedEconomicandFinancialIndicators.htm>)

Table 4.1: Characteristics of Sample Respondents

Variables	livestock keepers (Herdsman)	Slaughter/ab attoir house operators	butchery and hides/skin collectors/ traders	Leather processors (tanneries)	leather goods, footwear and garments manufactures	Total
Business Experience						
Below 5 years	10(20%)	27(54%)	13(26%)	2(18.18%)	15(30%)	67(31.75%)
Between 5 and 10 years	16(32%)	16(40%)	33(66%)	8(72.72%)	28(56%)	101(47.87%)
Above 10 years	24 (48%)	7(14%)	4(8%)	1(9.09)	7(14%)	43(20.38%)
Total	50(100%)	50(100%)	50(100%)	11(100%)	50(100%)	211(100%)
Ownership of the business						
Public	nil	nil	nil	1(9.1%)	nil	1(0.47%)
Private	50 (100%)	50(100%)	50(100%)	10(90.9)	50(100%)	210(99.53%)
Foreigner	nil	nil	nil	nil	nil	nil
Mixed	nil	nil	nil	nil	nil	nil
Total	50(100%)	50(100%)	50(100%)	11(100%)	50(100%)	211(100%)
Decision maker						
Owner	50(100%)	50(100%)	50(100%)	10(90.9)	50(100%)	210(99.53%)
Management	nil	nil	nil	1(9.1%)	nil	1(0.47%)
Body of directors	nil	nil	nil	nil	nil	nil
Father	nil	nil	nil	nil	nil	nil
Mother	nil	nil	nil	nil	nil	nil
Total	50(100%)	50(100%)	50(100%)	11(100%)	50(100%)	211(100%)
Respondents' Age Distribution						
Below 16 years	1(2%)	2(4%)	0(0%)	1(9.1%)	3(6%)	8 (3.8%)
Between 16 and 40 years	22(44%)	31(62%)	42(84%)	9(81.8%)	30(60%)	140(66.4%)
Between 41 and 60 years	11(22%)	10(20%)	2(4%)	1(9.1%)	8(16%)	29(13.7%)
Above 60 years	16(32%)	7(14%)	6(12%)	0(0%)	9(18%)	34(16.1%)
Total	50(100%)	50(100%)	50(100%)	11(100%)	50(100%)	211(100%)
Average house hold size:						
Minimum	2	2	2	2	2	2
Maximum	9	7	6	9	7	7
Average	4	5	4	5	5	4.6

Education level:						
Informal education	nil	3(6%)	nil	nil	nil	3(1.4%)
Adult education	1(2%)	4(8%)	1(2%)	nil	2(4%)	8(3.8%)
Primary education	32(64%)	36(72%)	41(82%)	5(45.45%)	39(78%)	158(74.9%)
Secondary education	15(30%)	3(6%)	6(12%)	5(45.45%)	9(18%)	31(14.7%)
College	2(4%)	4(8%)	2(4%)	1(9.1%)	0(0%)	11(5.2%)
Total	50(100%)	50(100%)	50(100%)	11(100%)	50(100%)	211(100%)
Marital Status:						
Married	28(56%)	28(56%)	26(52%)	4(36.4%)	29(58%)	117(55.5%)
Single	17(34%)	16(32%)	20(40%)	6(54.5%)	20(40%)	78(37.0%)
Divorced	0(0%)	3(6%)	0(0%)	1(9.1%)	0(0%)	8(3.8%)
Window	0(0%)	2(4%)	3(6%)	0(0%)	0(0%)	5(2.4%)
Separated	5(10%)	1(2%)	1(2%)	0(0%)	1(2%)	3(1.4%)
Total	50(100%)	50(100%)	50(100%)	11(100%)	50(100%)	211(100%)
Monthly income (Leather activity) (TZS):						
Minimum	40,000.00	120,000.00	120,000.00	40,000.00	40,000.00	40,000.00
Maximum	1,300,000.00	300,000.00	3,513,500.00	3,000,000.00	800,000.00	3,513,500.00
Average	287,6000.00	222,200.00	1,015,393.00	421,818.18	247,666.67	437,975.53
Non leather income (TZS)						
Minimum	5,000.00	5,000.00	5,000.00	2,000.00	3,000.00	5,000.00
Maximum	150,000.00	70,000.00	500,000.00	50,000.00	150,000.00	500,000.00
Average	26,700.00	18,700.00	36,333.33	22,300.00	24,500.00	24,126.67

Source: Survey data

4.3 Analysis of Leather Value Chain in the Study Area

Leather value chain is complex system, it includes animal husbandry; slaughter house management; collection, preservation and storage of hides and skins; processing of hides and skins to semi finished or finished leather; manufacturing and marketing of leather goods, footwear and leather garments. One peculiarity of this value chain is its dependence on another value chain, animal production. In order to analyse the existing leather value chain in Mwanza the agents in the leather value chain and their principal functions at each node were examined as explained below:

4.3.1 The Agents and Principal Functions of Key Actor in Leather Value Chain

4.3.1.1 Livestock Keepers (Herdsman)

From Focus Group Discussion it was observed that, animal husbandry (herdsman) is principal source of hides and skins. Animal husbandry is the primary producers of the hides and skins and the main product at this node is live animals. Interestingly, herdsman are performing the following functions in relation to leather value: Buying of animals, transportation of animals, selling of livestock and livestock grading.

In the Table 4.2 it was shown that, 82% of respondents sell their animals while are alive. Furthermore, from focus group discussion it was found that majority of sample respondents sell their animals to middlemen. Lack enough, the selling of animals during auction considers only the weight of animals. No consideration of the quality of hides and skins from the animals. This was also leveled by results in Table 4.2 which shows that 88% of respondents don't have livestock grading skills. The similar results reported by UNIDO (2002) that, this situation has detrimental

negative effect to growth and development of leather sector and hence forcing herdsmen not to pay attention with the care of the hides and skin while animals are alive.

In addition to that, the main method of production of livestock at this node was found to be self-breeding, which is accounted 82% of sample respondents. While, from focus group discussion it was revealed that majority of sample respondents keep their animals in a traditional way such as free grazing. In most cases free grazing resulted to poor quality of hides and skins.

Table 4.2: Proportion of Sample Herdsmen by Functions in Leather Value Chain

Variable	District		Sampled Total
	Nyamagana	Ilemela	
Buying of Animals			
Self breeding	15(78.95%)	26(83.87%)	41(82%)
Buying from centers	nil	2(5.55%)	2(4%)
Buying from other herds	4(21.05%)	3(9.68%)	7(14%)
Total	19(100%)	31(100%)	50(100%)
Transportation of animals			
By vehicles	2(10.5%)	4(12.9%)	6(12%)
By foot/walking	17(89.5%)	27(87.1%)	44 (88%)
Total	19(100%)	31(100%)	50(100%)
Selling of livestock products			
Live animals	15(78.95%)	26(83.87%)	41(82%)
Animals after slaughtering	2(10.5%)	3(9.68%)	5(10%)
Meat, Hides and Skins	2(10.5%)	2(5.55%)	4(8%)
Total	19(100%)	31(100%)	50(100%)
Livestock grading			
Yes	2(10.5%)	4(12.9%)	6(12%)
No	17(89.5%)	27(87.1%)	44 (88%)
Total	19(100%)	31(100%)	50(100%)

Source: Survey data

The same findings reported by URT (2007) that, local zebu breeds, which dominate the traditional herd, do not generally produce very high quality hides. They are small in size and more often yield low sized hides and skins, compared to hides/ skins from improved dairy or meat type animals which have relatively bigger and good quality hides and skins because of their breed type and improved feeding methods, making them ideal for all types of leather including automotive upholstery.

4.3.2.2 Slaughter House Operators

Apart from herdsmen, the second node of leather value chain identified in this study by Focus Group Discussion was slaughter houses. The main functions at this node were found to be: buying of livestock, slaughtering process, skin recovering, and selling of hides and skins and the main product at this junction is green hides and skins.

From Table 4.3 it was shown that 66% of respondents bought the livestock from middlemen. Also it was indicated that, 100% of respondents are selling green hides and skins. Furthermore, discussion with focus group members revealed that the main customer of product at this node is hides and skins traders.

In addition to that, the results presented in Table 4.3 shown that 90% of respondents they are using knife flaying method to recover hides and skins which is the common method taking place at slaughter slabs in most of the areas in Tanzania. However, URT (2007) reported that, pulling and flaying with knife is practiced only in Dodoma and Arusha abattoir.

Table 4.3: Proportion of Sample Slaughter Houses Operators by Functions in Leather Value Chain

Variable	District		Sampled Total
	Nyamagana	Ilemela	
Buying of livestock			
Herdsmen	15(33.33%)	2(40%)	17(34%)
Middlemen	30(66.67%)	3(60%)	33(66%)
Total	45(100%)	5(100%)	50(100%)
Selling			
Green Hide/skin	45(100%)	5(100%)	50(100%)
Salted hides/skin	32(71.11%)	5(100%)	37(74%)
Dried hides/skin	12(26.67%)	1(20%)	13(26%)
Total	45(100%)	5(100%)	50(100%)
Production of hides and skins			
Pulling	nil	nil	nil
Knife flaying	40(88.89%)	5(100%)	45(90%)
Others	5(11.11%)	nil(0%)	5(10%)
Total	45(100%)	5(100%)	50(100%)

Source: Survey data

4.3.2.4 Hides and Skin Traders

Furthermore, hides and skins traders is another node in leather value chain identified in the study area and the main functions of the key actor at this node are to collecting (buying hides and skins), preserving (processing) and store (storage) the hides and skins before selling them. According to Table 4.4, 72% of hides and skins traders bought hides and skins from middlemen and from the same table it was revealed that the main customer of hides and skin are also middlemen (36%). Grading is one of the key functions performed at this node.

However, it appears that majority of respondents (72%) are unaware of the grading techniques used during grading of their hides and skins. This implies that, most of

the time the price of hides and skins are lower compared to the quality of hides or skins sold. The importance of grading hides and skins was also reported by URT (2007) that, hides and skins grading is required to determine quality, thereby facilitating monitoring and auditing hides and skins improvement in the sub sector.

Currently grading is seldomly practiced by hides and skins traders. Consequently hides and skins are bought as if they are of the same grade with the exception of a few tanners who buy by grade in order to avoid losses. URT (2007) adding that, hides and skin sub sector in Tanzania has been experiencing problems in obtaining reliable grading data because extension staff, butchers and hides and skins collectors who are expected to monitor quality through grading do not have sufficient knowledge and skills in grading

Results from Table 4.4 indicated that, 49.5% of sample respondents using salts as storage methods, while ground drying is prohibited by law, still there are number of respondents admit to continue using it, as it was shown in Table 4.4 that 10.8% respondents are using this method. Figure 4.1 shows the storage methods of hides/skins at Nyakato abattoir in Mwanza. Plates 1 and 2 shows better preservation methods in which they use clean and enough salts, while Plates 3 and 4 indicate poor preservation methods in which they use dirt recycled salts from the same abattoir.

Furthermore, discussion with focus group members reported that majority of the people are aware of the effect of time taken before the treatment of hides and skins to the quality of the hides and skin.

Table 4.4: Proportion of Sample of Hides and Skins Traders by Functions in Leather Value Chain

Variable	District		Sampled Total
	Nyamagana	Ilemela	
Buying of Hides/skins			
Middlemen	30(75%)	6(60%)	36(72%)
Slaughter operators	10(25%)	4(40%)	14(28%)
Total	40(100%)	10(100%)	50(100%)
Selling			
Middlemen	40(34.8%)	10(41.7%)	50(36%)
Leather tanning industries	1(0.9%)	nil(0%)	1(0.7%)
Hides and skin exporters	37(32.2%)	7(29.2%)	44(31.7%)
Agents of big company	37(32.2%)	7(29.2%)	44(31.7%)
Total	115(100%)	24(100%)	139(100%)
Grading of hides and skins			
Yes	10(25%)	4(40%)	14(28%)
No	30(75%)	6(60%)	36(72%)
Total	40(100%)	3(100%)	50(100%)
Storage Techniques			
Salt methods	40(50.6%)	6(42.9%)	46(49.5%)
Frame/suspension drying	32(40.5%)	5(35.7%)	37(39.8%)
Ground drying	7(8.8%)	3(21.4%)	10(10.8%)
Total	79(100%)	14(100%)	93(100%)

Source: Survey data



Figure 4.1: Curing and Preservation of Hides and Skins at Nyakato Abattoir

Source: Survey data

4.3.2.5 Leather Processors (Tanneries)

From focus group discussion, it was identified tanners be another junction in the leather value chain. The main functions identified at this junction are buying of hides and skins, tanning (processing) of hides and skins to semi or finished leather, and selling of finished leather. From Table 4.5 the main supplier of hides and skins to the tanneries are middlemen which shows that 100% of the tanneries gets their raw hides and skins from middlemen.

Table 4.5: Activities of Tanners/Tannery by Functions in Leather Value Chain

Variable	District		Sampled Total
	Nyamagana	Ilemela	
Buying of Hides/skins			
Middlemen	5(55.56%)	6(60%)	11(57.89%)
Hides and skins traders	3(33.33%)	2(20%)	5(26.31%)
Slaughter operators	1(11.11%)	2(20%)	3(15.79%)
Total	9(100%)	10(100%)	19(100%)
Production Methods			
Vegetable tanning	5(100%)	4(66.67%)	9(81.82%)
Chrome leather tanning	nil	1(16.67%)	1(9.09%)
Both methods	nil	1(16.67%)	1(9.09%)
Total	5 (100%)	6(100%)	11(100%)
Selling			
Middlemen/retailers/wholesalers	5(83.33%)	6(75%)	11(78.57%)
Footwear and leather goods	1(16.67%)	2(25%)	3(21.43%)
Exporters	nil	nil	nil
Total	6(100%)	8(100%)	14(100%)

Source: Survey data

Furthermore, it was revealed from the same table that majority of tanneries (78.57%) are selling their finished leather to retailers and wholesalers which act as middlemen between tanners and manufactures of leather products. Correspondingly, the majority of tanners (81.82%) use vegetable tanning in processing hides and skins. This is because tanning using chrome is expensive and very sensitive to environmental pollution compared to vegetable tanning which is cheap and environmental friendly.

Likewise, the discussion with focus group members reported that the kinds of technology used in tanneries are very old and outdated. UNIDO (2002) reported similar findings that obsolete equipment, low levels of training, and a frequent lack of chemicals all contribute to low quality products and low levels of productivity in most of African tanneries.

4.3.2.6 Leather Goods, Footwear and Garments Manufactures

Finally, the last node identified through focus group discussion in leather value chain is leather goods, footwear and garments manufactures. These are the consumer of the processed leather for making goods to be sold to the final consumers (customers). The main functions of this actor are buying of finished leather, manufacturing leather products, and selling of leather products.

Results in Table 4.6 show that, leather products manufactures bought their finished leather from middlemen. As it can be seen in the table that 100% of respondents agreed that they bought finished leather from middlemen though it's expensive to buy from this agent as compared to the tanneries. However, it was revealed from the

same table that 78% of respondents at this node have poor equipment and machines for manufacturing leather products.

Table 4.6: Proportion of Sample of Leather Goods, Footwear and Garments by Functions in Leather Value Chain

Variable	District		Sampled Total
	Nyamagana	Ilemela	
Buying of finished leather			
Middlemen	29(76.3%)	21(80.77%)	50(78.12%)
Tanneries	9(23.7%)	5(19.23%)	14(21.88%)
Total	38(100%)	26(100%)	64(100%)
Selling			
Middlemen/retailers/wholesalers	2(6.9%)	3(14.3%)	5(10%)
Individual customers	25(86.20%)	16(76.2%)	41(82%)
Exporters	2(6.9%)	2(9.5%)	4(8%)
Total	29(100%)	21(100%)	50(100%)
Manufacturing			
Heavy sewing machine	2(6.9%)	1(4.8%)	3(6%)
Skiving machine	2(6.9%)	1(4.8%)	3(6%)
Cutting machine	2(6.9%)	1(4.8%)	3(6%)
Sole attaching machine	nil	1(4.8%)	1(2%)
Buffing machine	nil	1(4.8%)	1(2%)
Simple machines	23(79.3%)	16(76.2%)	39(78%)
Total	29(100%)	21(100%)	50(100%)

Source: Survey data

In addition to that, the discussion with focus members revealed that the type of technology used for making leather product is very old, and most of the manufactures lacks designing skills. A similar case reported by UNIDO (2002) that, lack of modern technology and design capabilities all combine to cause poor productivity and a low level of competitiveness of leather products. More importantly, the results from Table 4.6 show that, 82% of sample respondents sold their leather products to individual customers. This implies that the price of leather products is lower if the customer bought directly from the manufacturer.

4.3.2.7 Discussion for Analysis of Leather Value Chain

From the above sub sections it was observed that leather values chain start at animal's husbandry to the final customer of leather products. Figure 4.2 shows the leather value chains in the study area. The following are some of identified chains from Figure 4.2:

The first chain was flow of hides and skins from herdsmen to slaughter houses, hides and skins traders, tanneries, Leather product manufactures and final to the customer of leather products. Second chain was the flow of hides and skins from herdsmen through middlemen, slaughter houses, hides and skins traders, tanneries, leather product manufactures to the customer of leather products.

The third channel was the selling of products from herdsmen through middlemen, slaughter houses, middlemen, hides and skins traders, tanneries, leather product manufactures to the customer of leather products. Fourth channel was the flow of hides and skins through the following nodes herdsmen, middlemen, slaughter houses, middlemen, hides and skins traders, middlemen, tanneries, leather product manufactures, final to the customer of leather products.

The other channel was which started at herdsmen passed through middlemen, slaughter houses, middlemen, hides and skins traders, middlemen, tanneries, middlemen, leather product manufactures, to the customer of leather products. Sixth chain was passed through herdsmen to the following nodes middlemen, slaughter houses, middlemen, hides and skins traders, middlemen, tanneries, middlemen,

leather product manufactures, and reach customer of leather products through middlemen. Seventh chain was the one which passed through the following route herdsmen, slaughter houses: middlemen, hides and skins traders, middlemen, tanneries, middlemen, leather product manufactures, middlemen to the customer of leather products.

Next, the following chains were identified. Eighth chain was the one which passed through herdsmen, slaughter houses, hides and skins traders, middlemen, tanneries, middlemen, leather product manufactures, middlemen, to the customer of leather products. Then followed by the chain which passed through herdsmen, slaughter houses, hides and skins traders, tanneries, middlemen, leather product manufactures, middlemen, to the customer of leather products.

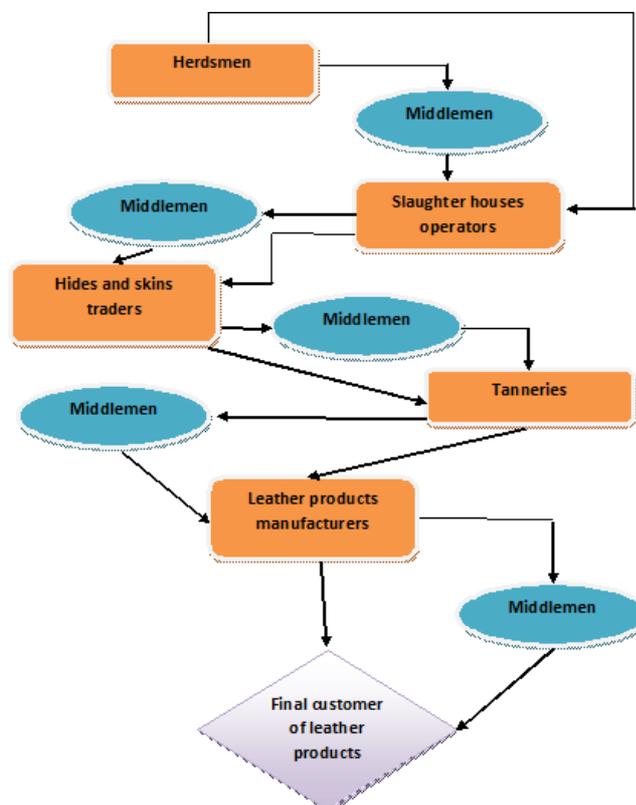


Figure 4.2: The Existing Leather Value Chains from the Study
Source: Field Data

Finally, tenth identified channel passed through herdsmen, slaughter houses, hides and skins traders, tanneries, leather product manufactures, middlemen to the customer of leather products. From the afore – discussion, focus members complained that having the large numbers of middlemen in the leather value chain add the costs of production and reduce the quality of product from one node to another.

4.3.3 Factors Affecting Quality of Hides and Skins, Processed Leather and Final Products

Further analysis was done to examine how the key actors within leather value chain control the quality of hides and skins, processed leather and finished products. From focus groups discussions with key actors in leather value chain it was acknowledged that, the quality of hides and skins, processed leather and finished leather products are generally poor due to poor management at different nodes of leather value chain. Below are the discussions of quality control factors at each node of leather value chain:

4.3.3.1 Quality Control of Hides and Skins by Herdsmen (Livestock Keepers)

Figure 4.3 summarizes quality control factors of hides and skins during animal's husbandry. The results in the figure indicate that, majority of sample herdsmen are not attending frequently dipping of their animals for the purpose of preventing and curing skins and hides diseases.

In the case of branding this was found to be still a problem since majority of respondents have admitted that they are continuing branding their animals. URT

(2007) reported a similar finding that, anything from 10-40% of the value of the hide is lost by the unsightly and irreparable damage caused by branding.

Correspondingly, results from Figure 4.4 show that, very few respondents have stopped to use of sharp objects and also dehorn their animals so that they reduce scratches during grazing. Similar findings reported by CFC/FIGHS (2007) that when damages such as barbed wire, thorn scratches or horn rake, are healing, the collagen fibres re-arrange themselves by packing densely together, leaving scars which are often hard ad raised and without hair follicles. These scarred areas cannot take up tanning chemicals uniformly, and reduce the leathers cutting value considerably.

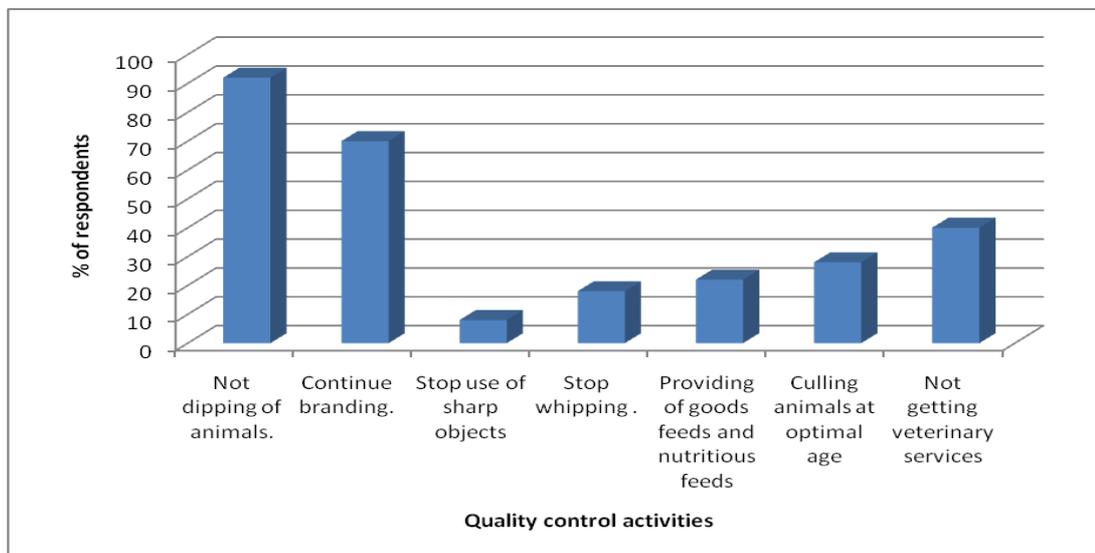


Figure 4.3: Quality Control Factors During Animal Husbandry
Source: Field Data

4.3.3.2 Quality Control at Slaughter Houses

Figure 4.4 presents quality control activities at slaughter houses. From the figure, it was observed that majority of sample respondents are poorly removing hides and causes knives cuts which degrade the hides and skins. But it was found that only 4%

of sample respondents admitted that he/she got formal training on the proper flaying/dressing practices. These supports the findings by URT (2007) that slaughter defects result more often from inadequate flaying skills and motivation, poor illumination as majority of slaughter are carried out at night or early morning hours especially in centralized abattoirs and value attachment to meat rather than the hide or skin itself.

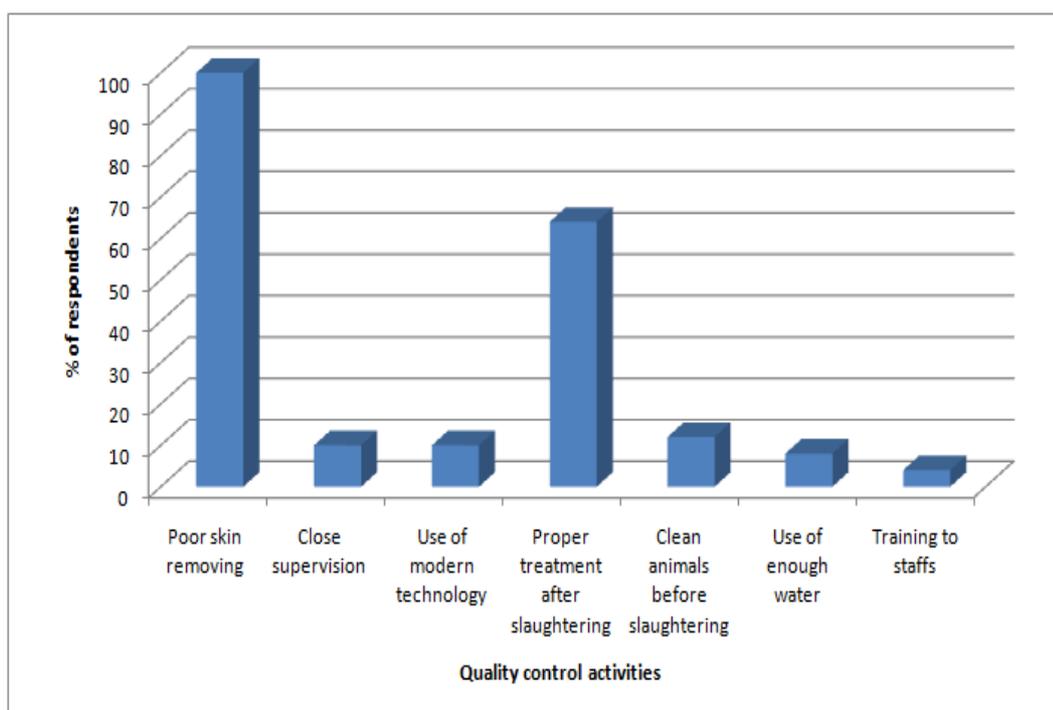


Figure 4.4: Quality Control Measures in Slaughter Houses

Source: Field Data

4.3.3.3 Quality Control in Hides and Skin Collection and Storage

Results from Figure 4.5 show that the most critical obstacle at this node was proper handling and storage of hides and skins. Majority of the respondents admitted that they are not using proper ways of treatment and storage of hides and skins because of costs associated to them like using of clean and enough salts. This support the findings of URT (2007) that, the use of salt method is hindered by unawareness of primary producers on the importance of salt as a preservative; inadequate purchasing

power and little price incentive as a result of using wet salting as a curing method. Apart from the preservation aspects, poor storage techniques affect the quality of hides and skins through putrefaction and damage by pests. Figure 4.6 indicates the quality control of hides and skins during collection, preservation and storage at Nyakato abattoir. Plates 1 and 2 indicate poor quality control of hides and skins during collection. Plate 3 indicates proper ways of controlling quality of hides and skins during preservation and storage at Nyakato abattoir and plate 4 shows an old building at Nyakato abattoir used to store hides and skins which can cause the damage to hides and skins and affect the quality of hide's and skins due to linkages.

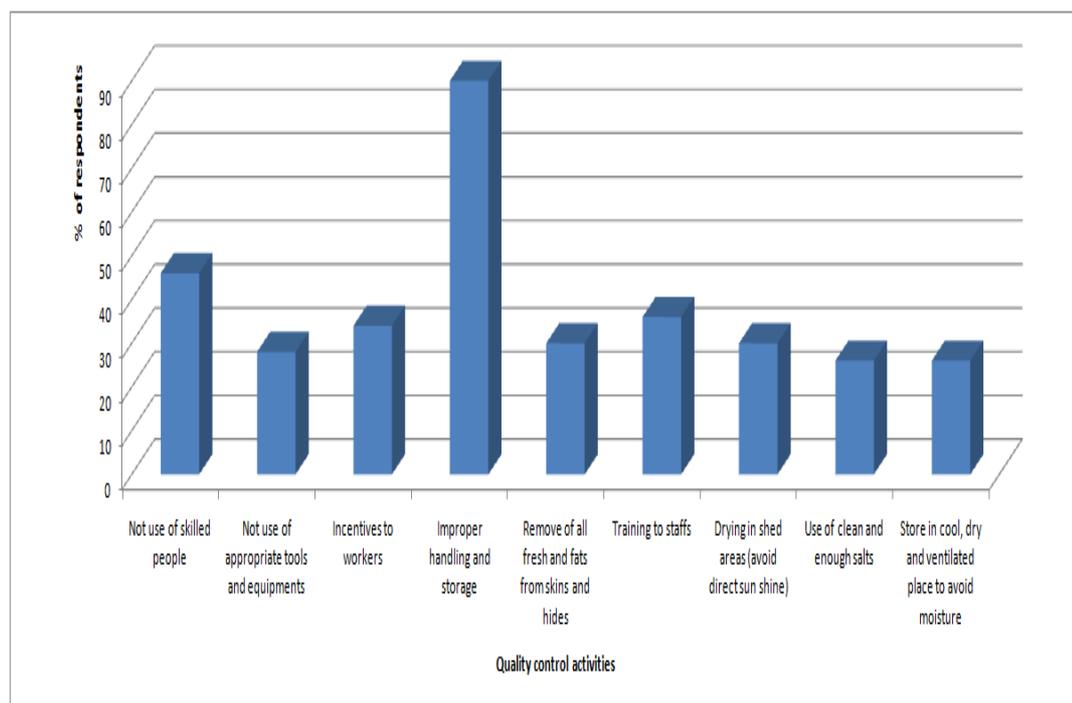


Figure 4.5: Quality Control Measures During Hides/Skins Collection and Storage

Source: Field Data

The results in Figure 4.5 also revealed that very few respondents use appropriate tools and equipment in collection and storage of hides and skins. No incentives were provided to encourage proper collection and storage as few respondents received

these kinds of incentives. From Figure 4.5, it was noted that, few number of sample respondents were trained on the proper collection and storage techniques including removing of remaining fresh and fats before further processing. This resulted to difficulties during the processing of hides and skins into leather.



Figure 4.6: Collection, Preservation and Storage of Hides/Skins at Nyakato Abattoir Mwanza

Source: Survey data

4.3.4.4 Quality Control During Tanning

From Figure 4.7 majority of sample respondents were not aware of the uses of quality chemicals and selection of hides and skins to the quality of finished leather. The results from the same figure show that, very few respondents are doing close supervision to the workers to counter check the quality of products during tanning. Lack enough, small numbers of the sample respondents are accessible to at least

modern technologies of leather tanning. This implies that they use outdated technology which could not produce quality leather. The same result was reported by URT (2007) that capacity utilization of tanneries is generally low. This is attributed to persistent constraints that have not yet been resolved including poor quality raw material, worn out machinery and equipments and outdated technology which have hindered even the process and product development and design.

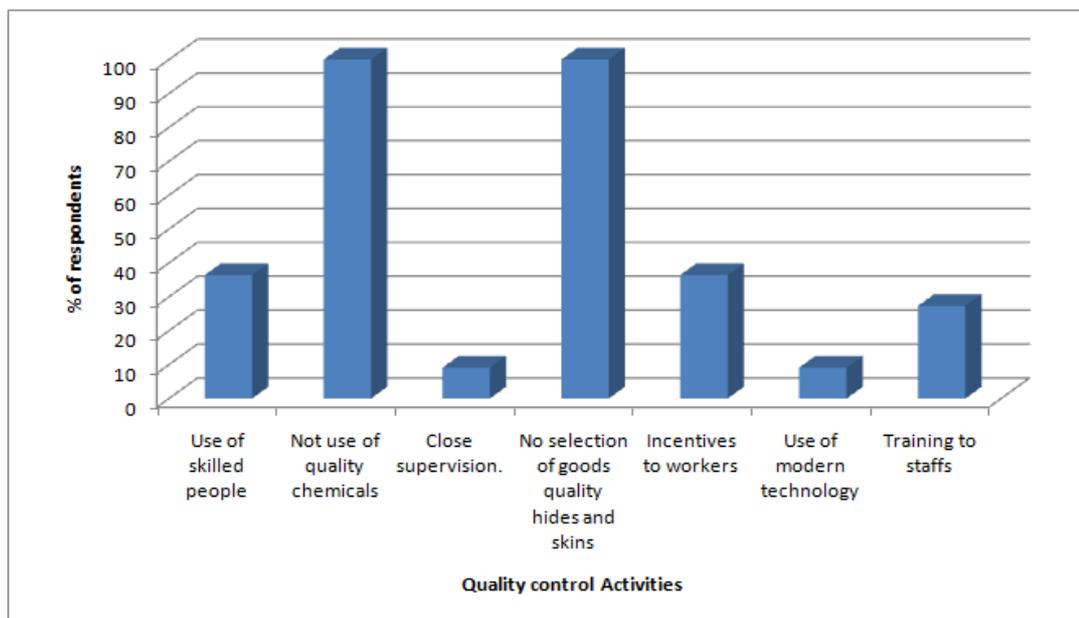


Figure 4.7: Quality Control Measure During Tanning

Source: Survey Data

4.3.3.5 Quality Control During Leather Products Making

Figure 4.8 summarizes the quality control factors during leather products manufacturing. From the same figure it was shown that, majority of sample respondents agreed that it is very difficult to find finished leather for making leather products. This condition directly affects the quality of manufactured leather products because most of them are made from low quality finished leather. The same scenario was reported by URT (2007) that the footwear and leather goods sub sectors are

mainly affected by the problem of poor quality leather supplied by the domestic tanneries. Apart from availability of quality finished leather, it was also found in the same figure that there are no quality chemicals and other raw materials to support the manufacturing of quality leather product. Majority of sample respondents at this node reported that they only get poor quality chemicals and other raw materials used to make leather products and end up making poor quality leather products.

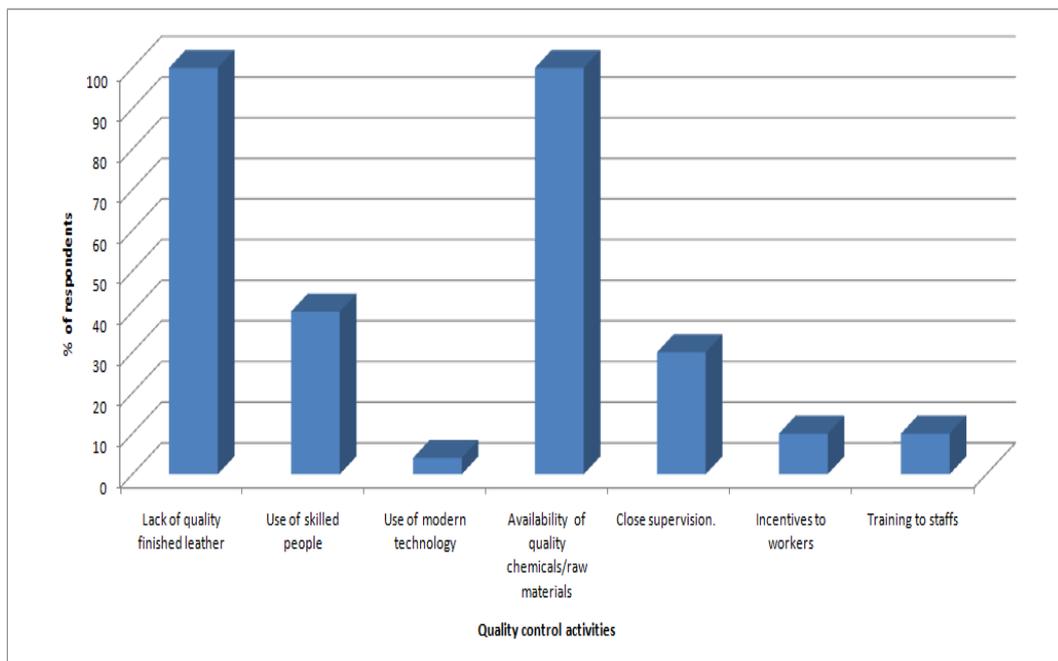


Figure 4.8: Quality Control Measure During Leather Products Making
Source: Field Data

4.3.3.6 Discussion for Quality Control Factors to Key Actors in Leather Value Chain

From afore- discussion it can be noted that, lack of frequent dipping and branding are critical factors affecting quality of hides and skins at herdsmen node. In a similar vein, it was observed that, the main factor detrimental for the quality of hides and skins at abattoirs is poor skin removing, while improper handling and poor storage

techniques was revealed to be the main factors of reducing the quality of hides and skins during collection, preservation and storage by hides and skins traders. The other identified factors which affect the quality of hides and skins at tanneries were lack of tanning chemicals and outdated technologies. Finally, lack of quality finished leather and lack of designing skills were found to affect the quality of finished leather products. These findings partly imply that factors affecting the quality of hides and skins and hence leather products varied across key actors within leather value chain.

4.4 Performance of Key Actors in Leather Value Chain

Gross Margin analysis and sales trend techniques were used to evaluate and compare the performance of different key actors in leather value chain. It was based on actual records and each gross margin is essentially a single point of an enterprise production function. Also the sales trend for the past three years between 2010 and 2012 was used to measure the performances of key actors in the leather value chain as explained below:

4.4.1 Profitability Achieved by Key Actors within Leather Value Chain

Profitability achieved by different key actors in leather value chain was calculated by first finding the total variable cost and total revenue at each node. Then by using the formula of gross margin the profitability at each node was calculated as explained in the subsequent sub-headings:

4.4.1.1 Profitability Achieved by Livestock Keepers (Herdsman)

Table 4.7 presents profit emanating from herds activities. It is interesting to note that the gross margin value was found to be positive. The average monthly profit for the

whole sample herdsmen was TZS 339,404.76. This result implies that livestock keepers are getting profit in average but the amount of profit are not sufficient enough compared to national GDP per capita which is TZS 869,436 in the year 2011 (<http://www.bot-tz.org/Publications/SelectedEconomicandFinancialIndicators.htm>).

Table 4.7: Profitability Accrued at Herdsmen Node Per Month

Item	Amount (TZS)
Cost incurred per item	
Dipping costs	15,000.00
Extension services costs	42,380.00
Training costs	20,000.00
Animal feeds and veterinary services costs	259,000.00
Labour costs	180,000.00
Other costs (miscellaneous)	75,540.00
Total Variable Cost (TVC)	591,220.00
Revenue from Herdsmen Activities (TR)	893478.26
Average Profit/Loss	339,404.76

Source: Survey data

4.4.1.2 Profitability Achieved by Slaughter/Abattoir House Operators

Table 4.8 shows that the slaughter/abattoir house operators also are at the profit side of the business like the case of herdsmen the gross margin value was also found to be positive. The average monthly profit for the whole 50 sample slaughter/abattoir house operators was TZS 823,600.00. This result implies that slaughter operators are getting profit in average which is not bad since it's close to national GDP per capita as explained earlier.

Table 4.8: Profitability Accrued at Slaughter Houses Operation Per Month

Item	Amount(TZS)
Cost incurred per item	
Meat	3,120,000.00
Green Hides and Skins	66,000.00
Salted Hides and Skin	600,000.00
Dried Hides and Skin	500,000.00
Slaughtering	100,000.00
Other costs (miscellaneous)	400,000.00
Total Variable Cost (TVC)	4,786,000.00
Revenue from Slaughter/abattoir house operators	5,609,600.00
Average Profit/Loss	823,600.00

Source: Survey data

4.4.1.3 Profitability Achieved by Hides/Skin Collectors/Traders

The results from the profitability analysis of the butchery and hides/skins collectors collected in a sample study were summarized in Table 4.9. The average monthly gross margin value was found to be TZS 1,168,037.00 which is also found to be positive as in the previous subsectors. As it was the case of other actors, this result implies that hides and skins traders are getting profit in average and their performance is good since their profit is above national GDP per capita.

Table 4.9: Profitability Accrued at Hides and Skin Trader's Node Per Month

Item	Amount (TZS)
Cost incurred per item	
Green Hides and Skins	213,000.00
Salted Hides and Skin	457,500.00
Dried Hides and Skin	378,000.00
Total Variable Cost (TVC)	1,048,500.00
Revenue from Slaughter/abattoir house operators	2,216,537.00
Average Profit/Loss	1,168,037.00

Source: Survey data

4.4.1.4 Profitability Achieved by Leather Processors (Tanneries)

The exploratory data analysis demonstrated in Table 4.10 also shows that the tanners are getting profit in this year. The gross margin value was found to be positive as indicated below. The average monthly profit for the whole 11 sample tanners was TZS 1,187,955.00. In a similar vein, this result implies that tanneries are getting profit in average and their performance is good since their profit is above national GDP per capita.

Table 4.10: Profitability Accrued at Tanner's Node Per Month

Item	Amount (TZS)
Cost incurred per item	
Raw Hides and Skins	158,000.00
Chemicals	275,454.55
Utilities (electricity, water, phone, etc)	90,000.00
Labour	185,909.09
Rent	18,863.64
Other costs (miscellaneous)	53,818.18
Total Variable Cost (TVC)	1,048,500.00
Revenue from Slaughter/abattoir house operators	1,970,000.00
Average Profit/Loss	1,187,955.00

Source: Survey data

4.4.1.5 Profitability Achieved by Leather Goods, Footwear and Garments

Manufactures

Table 4.11 shows that the footwear, leather goods and garments manufactures average profit also were positive. The gross margin value was also found to be

positive as indicated below. The average monthly profit for the whole 30 sample slaughter/abattoir house operators was TZS 587,666.70. This result implies that leather product manufactures are getting profit in average but the amount of profit are not sufficient enough compared to national GDP per capita.

Table 4.11: Profitability Accrued at Leather Products Manufactures Node Per Month

Item	Amount (TZS)
Cost incurred for making:	
Shoe	59,066.67
Bags	20,000.00
Belts	7,000.00
Key holders	500.00
Wallets	10,000.00
Garments	25,000.00
Sandals	10,000.00
Other products	8,000.00
Total Variable Cost (TVC)	139,566.67
Revenue from Slaughter/abattoir house operators	727,233.30
Minimum Profit	257,500.00
Maximum Profit	1,075,500.00
Average Profit/Loss	587,666.70

Source: Survey data

4.4.1.6 Discussion for Profitability Analysis Achieved by Key Actors in Leather Chain

From Figure 4.9 below it was shown that hides and skins collector/traders and leather tanner are the only two actors who are getting higher profit above the national GDP

per capita compared to other actors. As it can be seen in the Figure 4.10 that, the average profit of hides and skin traders was TZS 1,168,037.00 while that of tanners were TZS 1,187,955.00. It was also shown that livestock keepers are the actor who is getting low profit compared to all other actors. Hides and skins traders are higher because the demand of hides and skin is increasing to the export market in the recent years. But for the case of tanners this is because addition of value (processing/tanning) increase the worth of the product compared to those who are selling unprocessed products. A similar comment was reported by URT (2007) that, if value addition up to finished leather, footwear and leather goods are encouraged it will provide backward and forward linkages in the value chain thereby benefiting primary producers, manufacturers and consumers of leather and leather products. This signifies that, exporting raw hides and skins which are the present practice do not have a multiplier effect to stakeholders but rather it amounts to exporting jobs.

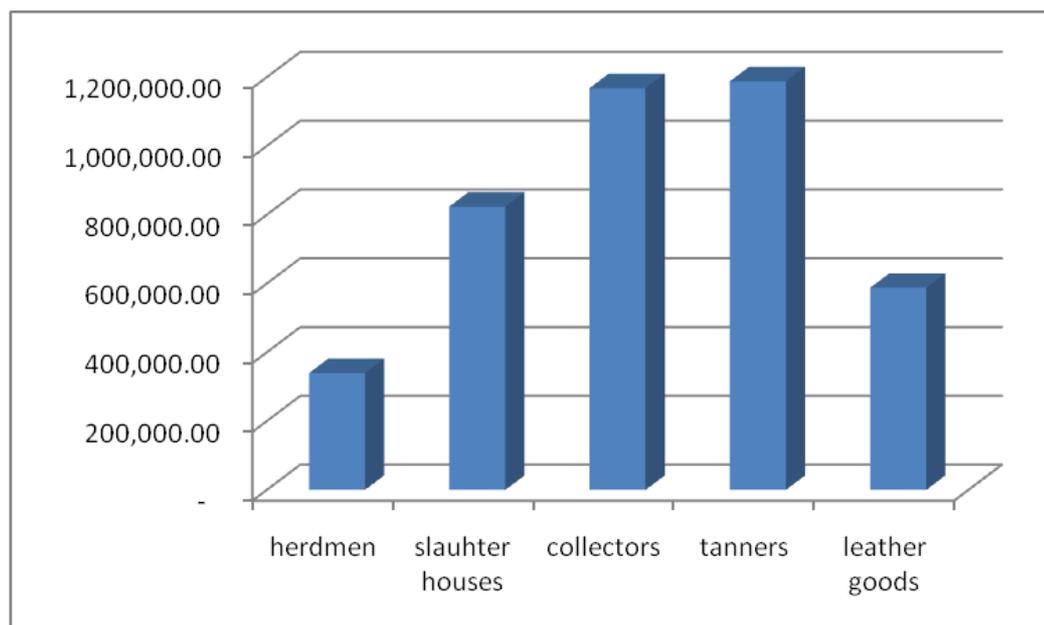


Figure 4.9: Profitability of Key Actors in Leather Value Chain

Source: Survey Data

4.4.2 Sales of the Key Actors in Leather Value Chain for the Past Three Years

There are several reasons for undertaking a time series analysis. Firstly, the analysis of a time series enables us to understand the past behavior or performance of the sector. We know how the data have changed over time and find out the probable reasons for such changes. If the past performance, say, of an industry, has been poor, it can take corrective measure to arrest the poor performance. Secondly, a time series analysis helps directly in a business planning. A firm can know the long term trend in the sales of its products. It can find out what rate sales have been increasing over the years. This may help it in making projections of its sales for the next few years and plan the procurement of raw materials, equipment, and manpower accordingly. Thirdly, a time series analysis enables one to study such movement as cycle that fluctuates around the trend. The knowledge of cyclical pattern in certain series of data will be helpful in making generalization in the concerned business or industry. Finally, a time series analysis enables one to make meaningful comparisons in two or more series regarding the rate or type of growth (Beri, 2010). The above reasons necessitated the researcher to examine the sales trend of the key actors in the leather value chain, by stating that Figure 4.10 shows the volume of sales trend of key actors in leather value chain for three years from 2010 to 2012. From the figure the following information can be made that tanners have big volume (figures) of sales compared to other actors. The maximum sales of tanners in year 2012 were TZS 11,500,000.00. Also it was shown from the same figure that, the growth rate of sales of the hides and skins traders are higher than any other actor, this sector seems to have higher rate of sales increase from year to year because the demand of hides and skin is increasing to the export market in the recent years. This was also reported

by URT (2007) that, most of the Tanzania's hides and skins are mainly exported as mixed grades to the Asian markets particularly Pakistan, Hongkong, China and India. Generally, these markets pay good prices for better quality hides and skins.

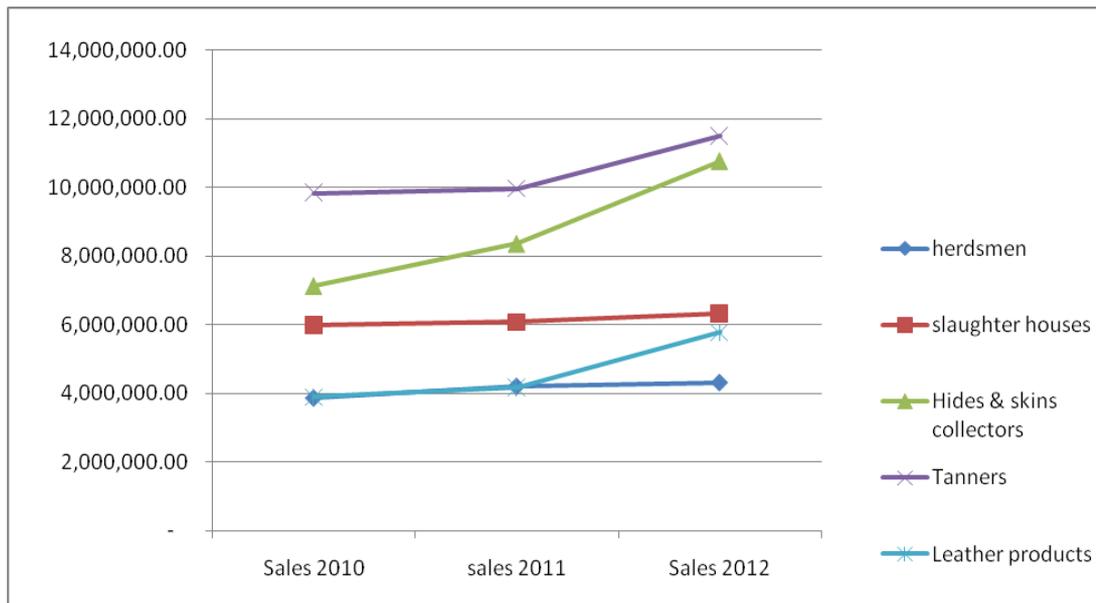


Figure 4.10: Sales Trends of the Key Actors in Leather Value Chain

Source: Sirvey Data

4.5 Challenges Facing Key Actors in Leather Value Chain

In order to have clear understanding of the challenges the researcher divided the challenges into two parts. The first part was the production challenges in which explains the challenges faced in production at every node (key actor) in leather value chain. The second part was concentrated on the marketing challenges of all key actors in leather value chain.

4.5.1 Production Challenges Facing Key Actors in Leather Value Chain

4.5.1.1 Production Challenges Facing Herdsmen

In order to analyse the production challenges facing livestock keepers the following factors was examined. Access to finance and micro credits, livestock laws, awareness

among herdsmen, capital, drought, climate change and animal feed, working premises, quality of other low materials (inputs), costs of animals keeping, Animal diseases, entrepreneurship behavior, manpower, and geographical position were examined. As indicated in Figure 4.11 draught, climate change and animal feeds seems to be major production challenge at this node. Very few respondents reported that they have poor geographic position. This challenge of draught and climate change causes deficit to animals feeds as result reduce production of animals with good health and quality hides and skins. A similar relationship was reported by URT (2007) that, levels of animal nutrition also dictate the quality of hides and skins of the animals.

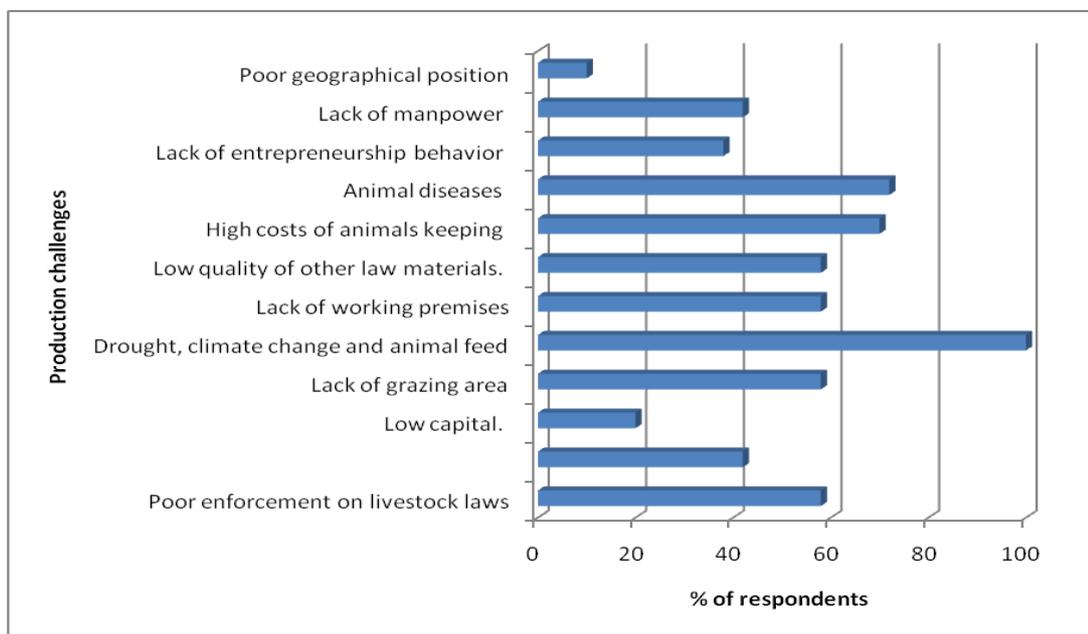


Figure 4.11: Percentage of Sample Herdsmen Reported Production Challenges
Source: Survey Data

4.5.1.2 Production Challenges Facing Slaughter Houses

The results from Figure 4.12 shows that, working premises (abattoirs) to be the major challenge at this junction. Majority of sample respondents are not happy with

their working premises. Furthermore, discussion from focus group members revealed that, most of the abattoirs are very old and not equipped with modern infrastructures as shown in Figure 4.13 inside of Nyakato abattoirs in Mwanza. Results from the same figure show that, very few respondents are using modern technology.

This situation is not promising to the production of quality hides and skins since low technology might result to low quality hides and skins from this node. The same was reported by URT (2007) that, the type of facility used largely determines the quality of the hides and skins produced. The tools are usually rudimentary and cause damage to the hides and skins. In many cases running water is not available and hides and skins are not washed off.

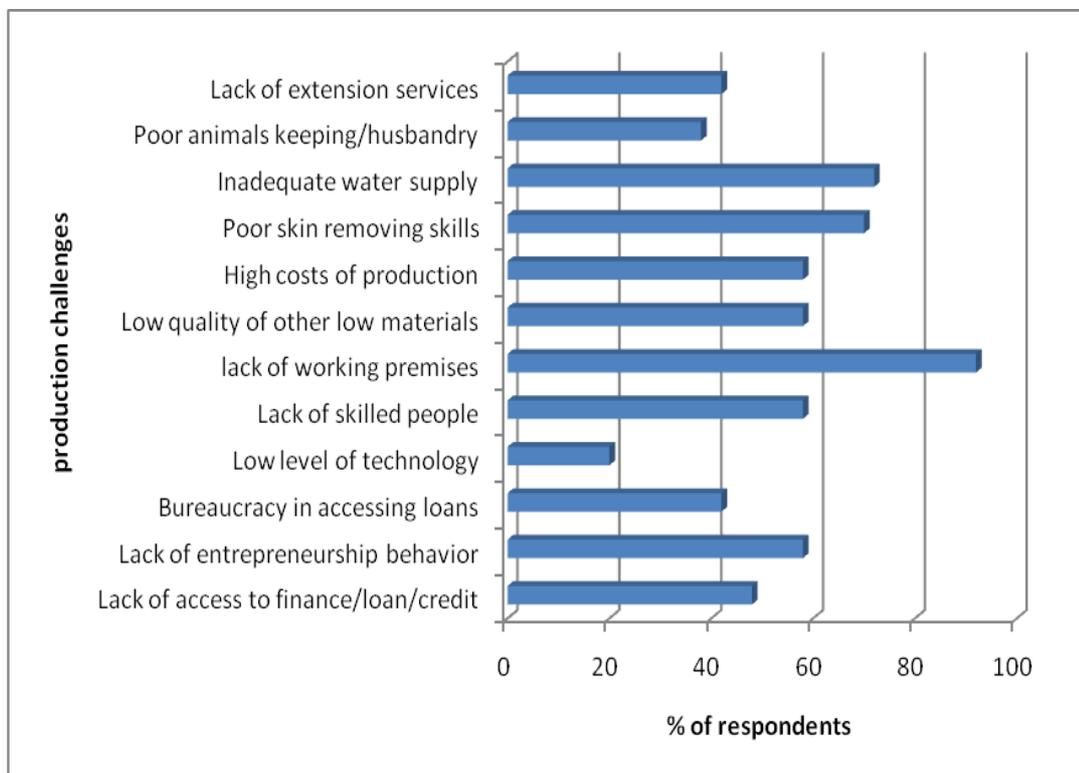


Figure 4.12: Percentage of Abattoirs Operators' Reported Production Challenges

Source: Survey data



Figure 4.13: Inside Nyakato Abattoir in Mwanza

Source: Survey Data

4.5.1.3 Production Challenges Facing Collectors

From Figure 4.14 the critical production challenges during the collection, preservation and storage of hides and skins and are high cost of production and inadequate water supply for washing hides and skins before preserving. The high cost of salts which are above the capacity of purchasing power of hides and skins traders hinder the uses of salts as preservation methods at this node. A similar situation was reported by URT (2007) that, inadequate purchasing power and little price incentive hinders the uses of salts as a curing method. Very few respondents reported that low technology and working premises to be critical challenges to them. This implies that most of hides and skins from this node are generally of poor quality because of the expenses of preservations methods, level of technology and the conditions of working premises.

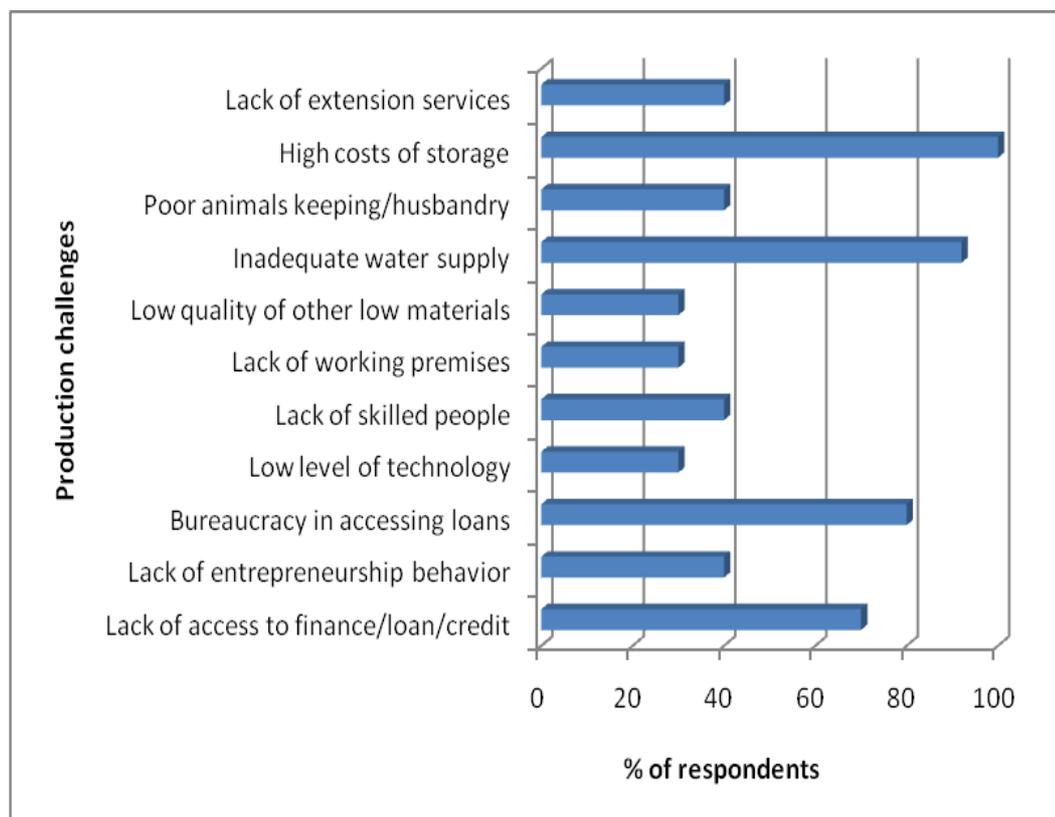


Figure 4.14: Percentage of Hides and Skins Traders Reported Challenges of Hides and Skins Collection and Preservation

Source: Survey Data

4.5.1.4 Production Challenges Facing Tanners

The most observed production challenges facing majority of respondents at this node as shown in Figure 4.15 are follows: Low quality of hides and skins, High price of hides and skins, outdated technology, high costs of production, low availability of tanning chemicals, and Difficulties in Environmental Protection and preservations. A similar finding reported by URT (2007) that, leather industry facing challenges of low quality hides and skins, outdated technology, effluent treatment and environment management, lack of skilled personnel to run the sector and high investment costs. Very few respondents reported that inadequate water supply and working premises to be the production challenges at their tanneries.

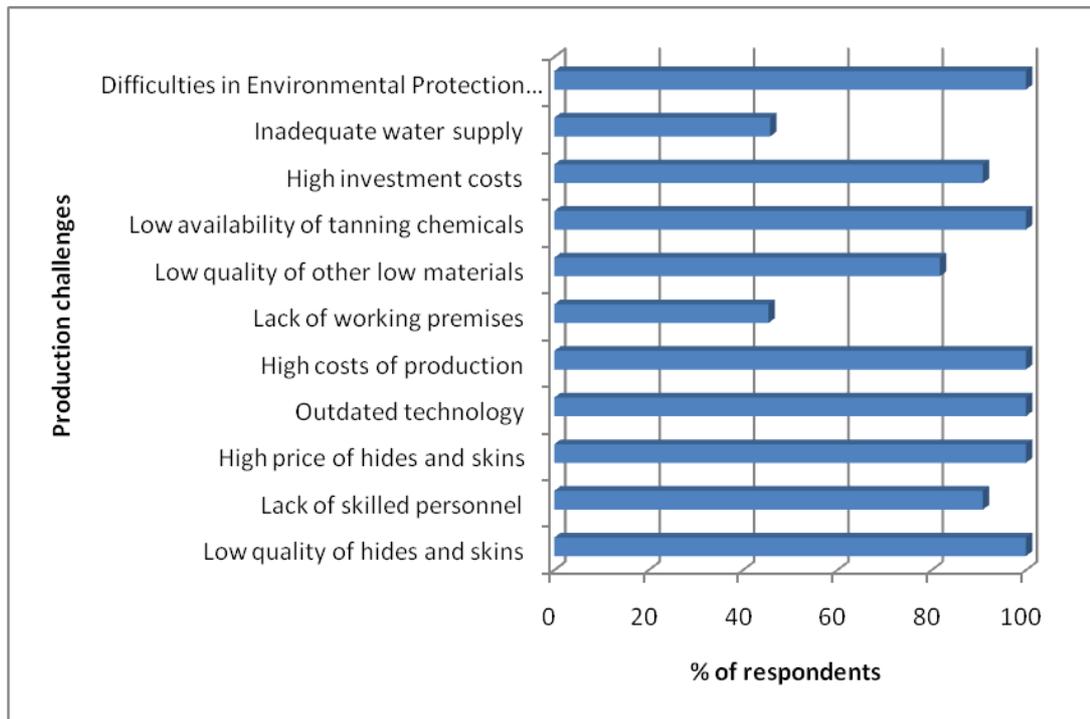


Figure 4.15: Percentage of Tanners Reported Production Challenges

Source: Survey Data

4.5.1.5 Production Challenges Facing Leather Goods Manufacturers

The results in Figure 4.16 summarize the production challenges during making of leather products. From Figure 4.16, it was observed that, low availability of finished leather, high cost of production and low designing skill were critical production challenge to the majority of respondents at this junction. The similar reasons was reported by URT (2007) that, the footwear and leather goods sub sectors are mainly affected by the problems of poor quality leather supplied by the domestic tanneries, other constraints include unfair competition of local products with imported products, poor designs and quality, inadequate working capital, low entrepreneurial skills and low investments. A few number of respondents reported that, they are facing challenges caused by bureaucracy in accessing loans and also they don't have conducive working premises.

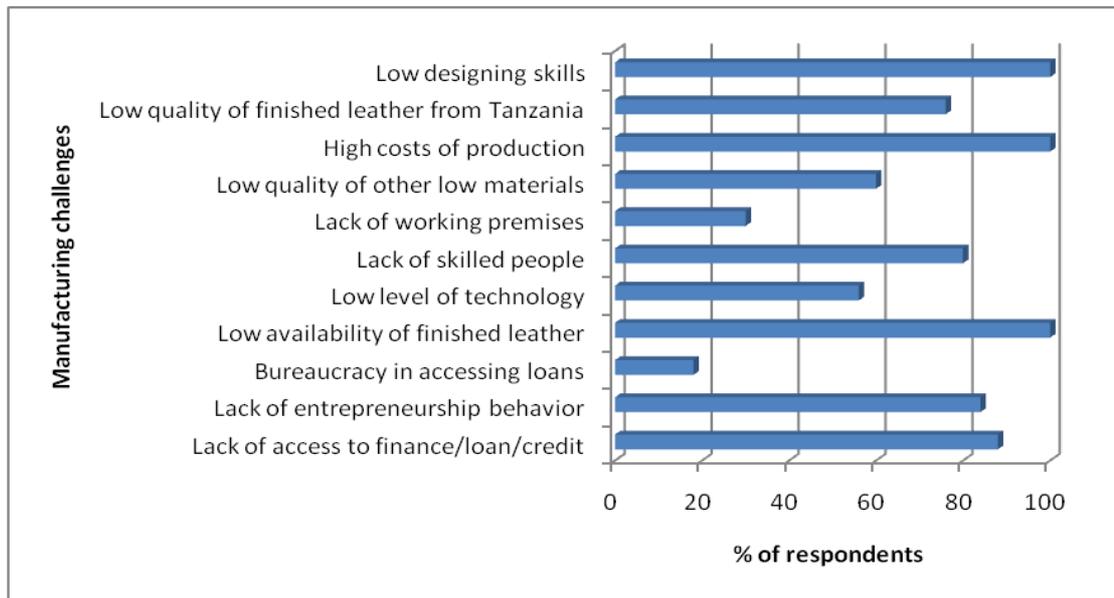


Figure 4.16: Percentage of Leather Products Manufactures Reported Production Challenges

Source: Survey Data

4.5.1.6 Discussion for Production Challenges of Key Actors in Leather Value

Chain

From the afore-discussion, the following are the summary of the critical production challenges at each actor. At herdsmen the production challenges found were draught, climate change and animal feeds. While, at abattoirs the major production challenges were working premises (abattoirs) and modern infrastructure at slaughter houses.

Furthermore, low quality of hides and skins, high price of hides and skins, outdated technology, high costs of production, low availability of tanning chemicals, and difficulties in environmental protection were found to be the major production challenges at tanneries. Lastly, low availability of finished leather, high cost of production and low designing skill were found to be the critical production challenge at leather goods manufacturing. As it was the case of factors affecting quality of

hides and skins as well as finished leather products, it appears that production challenges hindering performance of leather sub sector varies across the key actor within leather value chain.

4.5.2 Marketing Challenges of Key Actors in Leather Value Chain

4.5.2.1 Marketing Challenges Facing Herdsmen

Figure 4.17 shows marketing challenges facing herdsmen in the study area. As it can be seen in the figure that, selling of animals and value attaches to meat and not hides and skin and lack of transparency were mentioned by majority of sample respondents to be the major marketing challenges at this node. The same findings were reported by BET (2004) that, indeed, from the perspective of the herdsman/farmer and rural butcher, there is currently no value chain for leather. Leather remains part of the value chain for meat, where the value obtained from selling an animal with a good quality hide is exactly the same as one with a poor hide – specifically zero. Very few respondents reported stiff competitions.

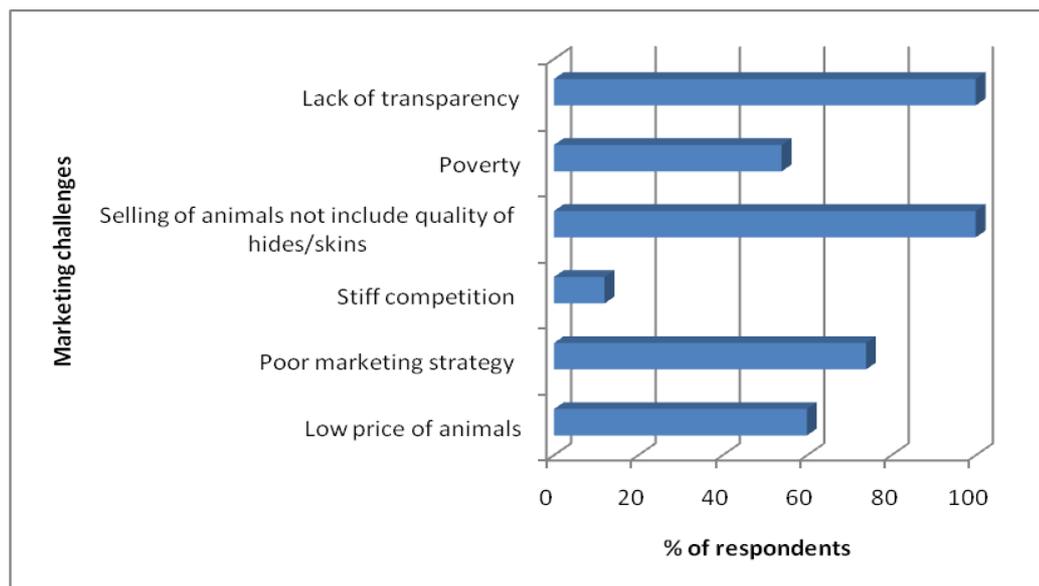


Figure 4.17: Percentage of Herdsmen Reported Marketing Challenges

Source: Survey Data

4.5.2.2 Marketing Challenges Facing Slaughter House

The marketing challenges identified and summarized in Figure 4.18. Majority of respondents mentioned the following marketing challenges: Lack of transparency, bureaucracy in getting permits and poor knowledge of marketing strategies. Very few respondents reported to have difficulties caused by poverty in marketing of hides and skins.

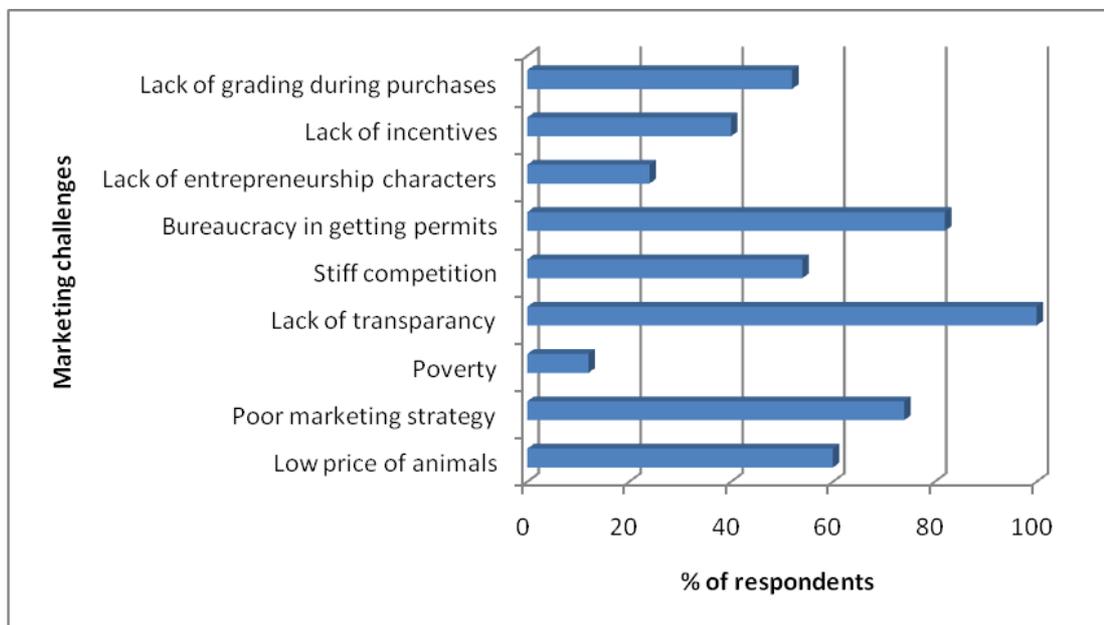


Figure 4.18: Percentage of Abattoirs Operators Reported Marketing Challenges
Source: Survey Data

4.5.2.3 Marketing Challenges Facing Hides And Skins Collectors

From Figure 4.19 the results of the marketing challenges mentioned by majority of sample respondents at hides and skin trader's node are: High price of salts used in preservation of hides and skins leads to high cost of product and as a result the price of hides and skins are higher, lack of grading skills, and lack of transparency. At this node there is no stiff competition since very few respondents mentioned that the demand of hides and skins are very high.

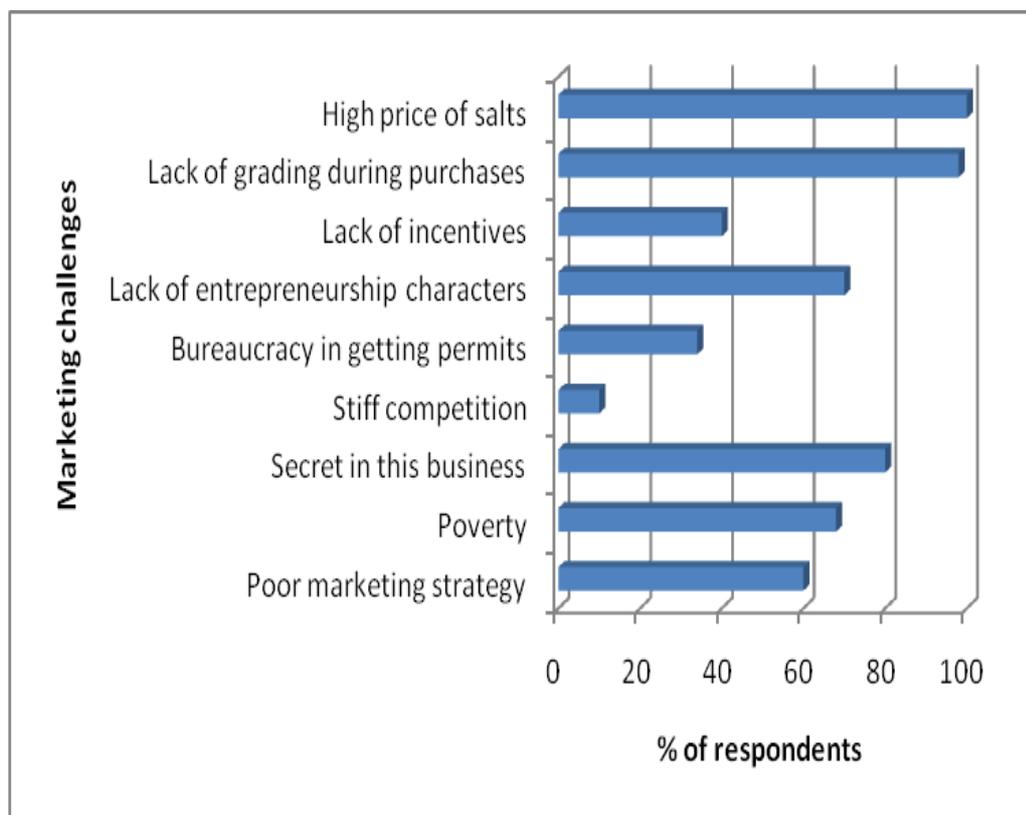


Figure 4.19: Percentage of Hides and Skins Traders Reported Marketing Challenges

Source: Survey Data

4.5.2.4 Marketing Challenges Facing Tanners

Figure 4.20 summarizes the results of mentioned marketing challenges at tanneries. From the same figure majority of respondents reported the critical marketing challenges to be few industries for making leather products, Lack of entrepreneurship characters, poverty of the country and outdated technology.

The same findings were reported by URT (2011) that, the challenges facing the hides and skins processing (tanners) include few industries for making leather products, lack of entrepreneurship characters, poverty of the country and outdated technologies. Very few respondents reported to have problems in starting tanneries.

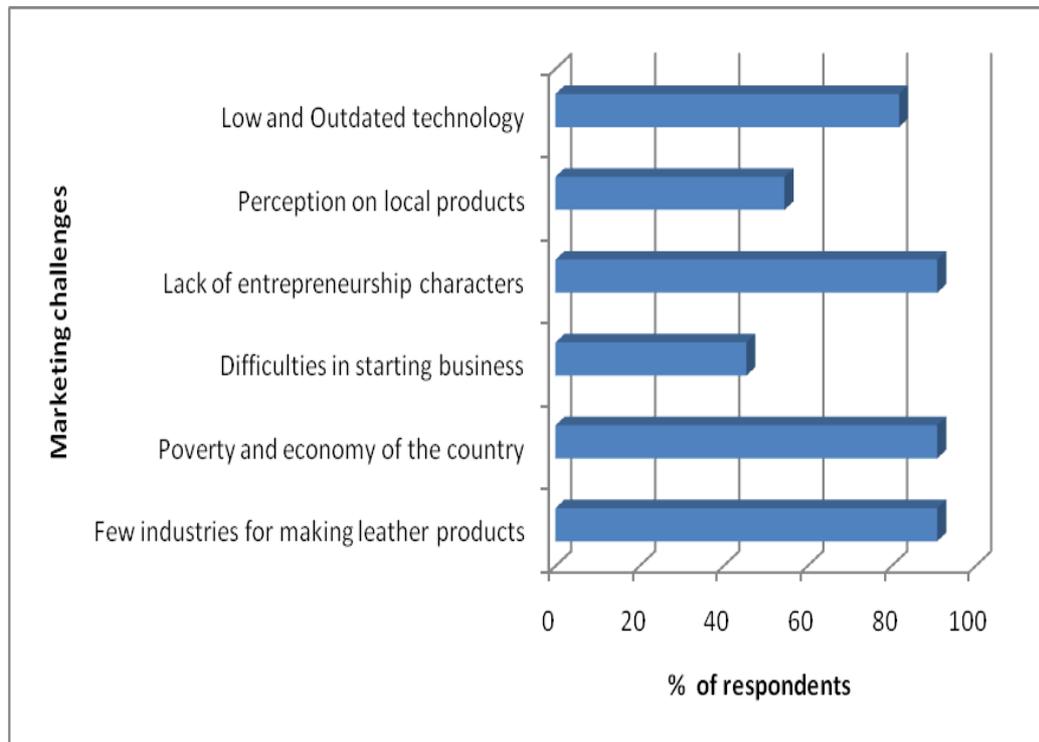


Figure 4.20: Percentage of Tanners Reported Marketing Challenges
Source: Survey Data

4.5.2.5 Marketing Challenges Facing Leather Goods Manufactures

Figure 4.21 summarizes results of marketing challenges facing leather goods manufacturers. The results from the same figure revealed that, stiff competition from cheap exported second hand leather products is the critical marketing challenges for majority of respondents at this node. A similar finding was reported by BET (2004) that, the availability of low cost imports, particularly of shoes, and the absence of fully finished tanning capacity severely limits prospects for the re-emergence of even a domestically oriented footwear and leather goods industry. Also it was identified that, outdated technology and small market share to face majority of the sample respondents. Very few respondents reported to be affected by the poverty of the nation and language barriers.

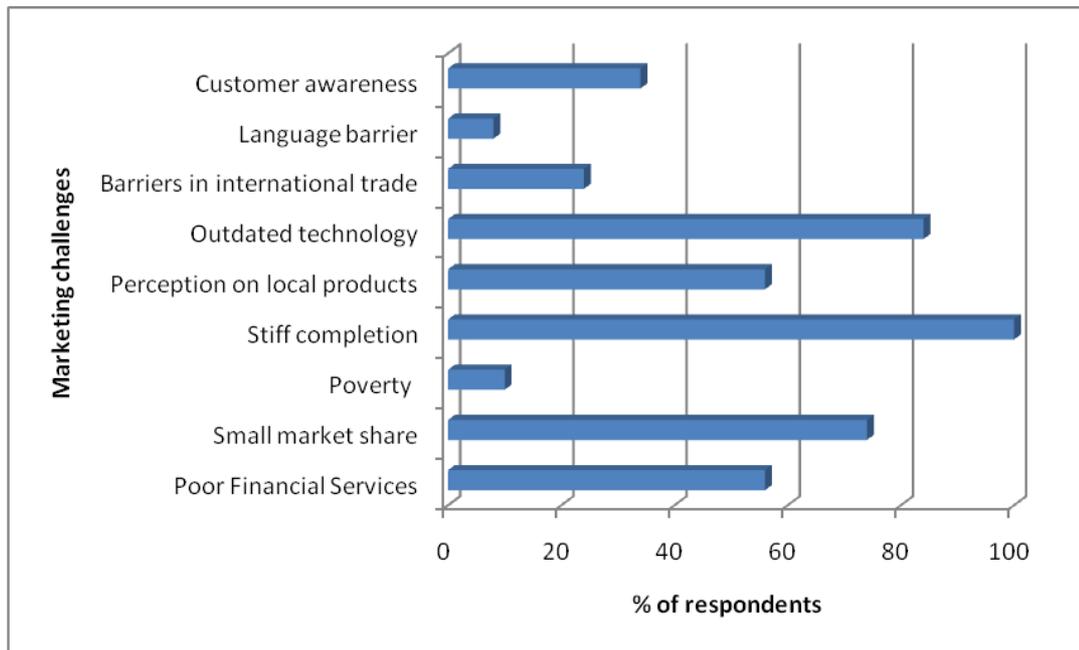


Figure 4.21: Leather Products Marketing Challenges

Source: Survey Data

4.5.2.5 Discussion for Marketing Challenges of Key Actors in Leather Value

Chain

From the afore-subsections the marketing challenges at each node was discussed. It was observed that marketing challenges facing different actors are not the same. The following are the summary of the marketing challenges at each node. At herdsmen node it was found that when selling animals the value attaches to meat and not hides and skin and also there is big secret in performing this business.

At abattoir houses it was found that there is also lack of transparency especially in factors used to grade hides and skins and bureaucracy in getting permits to perform this business at this node. High price of salts used in preservation of hides and skins was found to be a major marketing challenge at hides and skin collectors. Furthermore, few industries for making leather products, lack of entrepreneurship

characters, and poverty of the country was found to be major marketing challenges at tanneries. Finally, cheap exported second hand leather products were found to affect marketing at leather goods manufactures.

CHAPTER FIVE

5.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

The overall objective of this study was to analyse the value chain of leather in Tanzania, a case of Mwanza City prescribe intervention strategies to promote and strengthen value addition to leather value chain so that its benefits to have backward effects to all key actors to the leather value chain. The results of the study can be translated as a real situation in elsewhere of Tanzania. The study therefore intended to achieve the following specific objectives to: (i) to analyse leather value chain, (ii) to determine performance of key actors within leather value chain, and (iii) to identify challenges facing key actors within leather value chain. Data for the study were collected from a sample of 50 herdsmen (livestock keepers), 50 slaughter/abattoirs operators, 50 hides and skin collectors/traders, 11 leather processors, and 50 leather goods, footwear and garments manufactures using combination of data collection methods.

These included questionnaire, Focus Group Discussion, Participant Observation and interviews. Mapping value chain and descriptive statistics methods were used. This chapter therefore provides conclusion and recommendations based on major findings of this study. The result of the study implies that, the existing leather value chain can be improved if the number of middlemen will be avoided as necessary as possible in the whole chain. The improvement of existing leather value chain will also improve the quality of raw materials at each node to the finished product and the performance

of key actors in leather value chain at the same time will minimize the challenges facing the key actors in production and marketing of leather products.

5.2 Conclusion

5.2.1 Analysis of Leather Value Chain

From the analysis of leather value chain, a case study of Mwanza using mapping the value chain method in which the value adding activities from raw hides and skins (livestock basis) to the final output (leather products) the following conclusion can be made: Animal husbandry is a principal source of hides and skins. More than 10 different chains were identified during the study. However, it is concluded that in order to lower the costs of production and maintain the quality of leather at each node in leather value chain, all middlemen should be eliminated from the chain.

Furthermore, it can be concluded that the critical factors damages the quality of hides and skins to the finished leather varies from one actor to another and can be controlled if each actor (node) can play its role as it's supposed to be done in the leather values. It is concludes that, factors damage the quality of hides and skins from different nodes are lack of frequent dipping and branding at herdsmen node, poor skin removing at slaughter houses, while improper handling and poor storage techniques was concluded to be the main factors of reducing the quality of hides and skins during collection, preservation and storage by hides and skins traders. The other factors which concluded to affect the quality of hides and skins at tanneries were lack of tanning chemicals and outdated technologies. Finally, lack of quality finished leather and lack of designing skills were concluded to affect the quality of finished leather products.

5.2.2 Determining the Performance of Key Actor

In order to determine the performance of key actors two variables were used, these are profitability of key actors and the sales trends of the key actors. The average monthly profit from each node was calculated and the sales trend for the past three (2010, 2011 and 2012) years were examined, it can be concludes that: hides and skins collector/traders and leather tanner are the only two actors who are getting higher profit compared to other actors while livestock keepers are the actor who is getting low profit compared to all other actors. Hides and skins traders are higher because the demand of hides and skin is increasing to the export market in the recent years. But for the case of tanners this can be concluded that, addition of value (processing/tanning) increase the worth of the product compared to those who are selling unprocessed products.

5.2.3 Identifying Challenges in Leather Value Chain

In identifying challenges in the leather value chain the researcher divided challenges into production challenges and marketing challenges. From the assessment of challenges facing key actors within leather value chain using descriptive analysis the following conclusion can be made: Production challenge was draught at herdsmen. While, at abattoirs the major production challenges were working premises (abattoirs) and modern infrastructure.

Furthermore, low quality of hides and skins and outdated technology were found to be the major production challenges at tanneries. Lastly, low availability of finished leather and low designing skill were found to be the critical production challenge at leather goods manufacturing. Marketing challenges were selling of animals that

value attaches to meat and not hides and skin and lack of transparency at herdsmen node. At abattoir houses it was found that there was also lack of transparency especially in factors used to grade hides and skins and bureaucracy in getting permits to perform this business at this node. High price of salts used in preservation of hides and skins was a major marketing challenge at hides and skin collectors. Furthermore, few industries for making leather products was major marketing challenge at tanneries. Finally, cheap exported second hand leather products affecting marketing at leather goods manufactures.

5.3 Recommendations

In view of the major findings of the study and the above conclusions, for stakeholders in leather industry, and to take advantage of this in a successful way, farmers, merchants, butchers, entrepreneurs, and hides and skin traders, tanners, footwear and leather goods manufactures, the government in re-formulating policies for promoting and strengthening leather sector in Tanzania, development practitioners on issues pertaining to implementation of Millennium Development Goals (MDGs) which aim at reducing extreme poverty and hunger, the following recommendations can be made:

Strengthen leather value chain: There is a need to strengthen leather value chain which will narrow the information gap between the key actors in leather value chain. All key actors in leather values chain must utilize the information produced from this study (identified leather value chain; factors affecting the quality of hides and skins, processed leather and leather product; challenges in production and marketing in the

leather value chain; and the performance of key actors in leather value chain) so that they should maintain the quality of hides and skin, semi and finished leather and leather products when passing at different stages of leather value chain.

The numbers of middlemen must be avoided to control the quality hides and skins, semi and finished leather, and leather products passing at different stages of leather value chain. Also the removal of middlemen will reduce the production costs at every stage which will results to competitive price of finished leather products. This must be done through intensively trainings to the key actors in leather value chain.

Promoting quality of hides and skins: All factors and measures to control the quality of hides and skins must strictly be considered at every stage. These must include frequent deeping of animals, prohibit branding of animals, improving skin removing at abattoirs, having proper handling and good storage of hides and skins, use of quality tanning chemicals and investing to modern technology for our tanneries. Also the tanneries must produce quality finished leather and finally leather goods manufactures must learn designing skills so that they can produce up to date leather products.

Encouraging in-country processing of hides and skins: For the case of profitability it is recommended that the government should encourage in country processing, and eliminate the secret to all key actors in leather value chain. This will help the profit to have backward effects from leather product manufactures to the herdsmen.

Strengthening Leather Association of Tanzania (LAT): Last but not least it is

recommended that all stakeholders in leather value chain must join hands by strengthening their organization (LAT), which will tackle the identified challenges.

5.4 Limitations of the Study, and Recommendations for Future Research

This section discusses the limitations in the research design and methods of data analysis also discussed the possible limitations of the researchers during the study, and recommendations are made for future research in leather value chain in Tanzania particularly within Mwanza city.

5.4.1 Limitations in the Research Design and Methodology

5.4.1.1 Sample Size

The number of the units of analysis used in the study was dictated by the type of research problem investigated. During this study all units in other actors were 50 except for tanneries which were only 11. This sample size is too small, it would be difficult to find significant relationships from the data in this node, as statistical tests normally require a larger sample size to ensure a representative distribution of the population and to be considered representative of groups of people to whom results will be generalized or transferred.

5.4.1.2 Lack of Available and/or Reliable Data

This was observed during the analysis of the performance of key actors and in analyzing sales trend of the key actors in leather value chain. Lacks of data or of reliable data were limit the scope of analysis, and were also an obstacle in finding a trend and a meaningful relationship. It is recommended for all key actors in leather value chain to keep their business records for the benefit of the future studies.

5.4.1.3 Measure used to Collect the Data

During this study it was very difficult to collect data through questioner since most of the respondents related the study with government projects in the areas. Respondents claimed that government officials were frequently gathered information from them but no outcomes were presented to them. It is recommended in the future study to educate the respondents before starting collecting data from them.

5.4.1.4 Self-reported Data

Since researcher is working at an institute which is dealing with leather trainings it might be at one time or another relying on experience or events that occurred at some point in the past. It is recommended in the future study the researcher to take what people say whether in interviews, focus groups, or on questionnaires, at face value.

5.4.2 Possible Limitations of the Researcher

5.4.2.1 Longitudinal Effects

This study need more time and other resources like financial and human resources so that it can be conducted effectively. The time available to investigate a research problem and to measure change or stability within a sample is constrained by the due date of submission. It is recommended in the future study to choose a topic that does not require an excessive amount of time to complete the literature review, apply the methodology, and gather and interpret the results.

5.4.2.2 Fluency in a Language

Tools used to collect data from respondents were translated into Swahili but it was found that in other places, especially rural areas the Swahili language were also a

problem to some of respondents. It is recommended in further studies to recruit enumerators who understand the native language of the study area.

5.4.3 Recommendation for Future Research

It is recommended that further research to take notes of the following issues:

- (i) *Longitudinal Effects:* It is recommended in the future study to choose a topic that does not require an excessive amount of time to complete the literature review, apply the methodology, and gather and interpret the results.
- (ii) *In the case of language barrier:* It is recommended in further studies to recruit enumerators who understand the native language of the study area so that we can simplify the communication and understanding of the questioners.
- (iii) *The case of reluctant of respondents:* It is recommended in the future study to educate the respondents before starting collecting data from them so that they must have clearly understanding of the purpose of the research.

REFERENCES

- Beri, G. C (2010). *Business Statistics*: Tata McGraw-Hill Publishing Company Limited, 7 west Patel Nagar – New Delhi.
- BET (August 2004). *The Tanzania Leather Sector Export Development Strategy*: Strategy Design Team and Board of External Trade.
- Bititci, U.S and Allan S.C (1998). *Strategic Management of the Manufacturing Value Chain*: International Journal of Physical Distribution and Logistics Management. Vol 34(3-4), 2004, pp.251-268
- Brewer, A.M; Button K.J and Hensher, D.A (2001). *Handbook of logistics and Supply Chain Management*. 1st Edition: Amsterdam, New York: Pergamon Press.
- Bowonder, B.S; Sadhulla G and Akshay J (2011). *Evolving an ICT Platform for a Traditional Industry*: Transforming Artisans into Entrepreneurs.
- CFC/FIGHS (2007). *A Guide to Hides and skins Improvement Programme in Tanzania*: Training Manual, Tanzania component.
- Clottey, V.A; Gyasi , K.O; Yeboah, R.N. , Addo-Kwafo A. and Avornyo F. (2007): *The Small Ruminant Production System in Northern Ghana*: A Value Network Analysis. Livestock Research for Rural Development. Volume 19, Article #167. Download: <http://www.cipav.org.co/lrrd/lrrd19/11/clot19167.htm> (assessed: March 2013).
- FaBe, A.U; Grote. P; and Winter E. (2009). *Value chain Analysis: Methodologies in the context of environment and trade research* (Discussion paper no 429)
- FAO (2005a): *EASY Pol. On-line resource materials for policy making. Analytical tools*. Module 043. Commodity Chain Analysis. Constructing the Commodity

- Chain, Functional Analysis and Flow Charts www.fao.org/docs/up/easypol/330/cca_043EN.pdf (accessed: March 2013).
- Goodwin, C.J., (2010). *Research in Psychology Methods and Design*. (6th Edition): John Wiley & Sons Inc. USA.
- Gruning, R; Richard K; and Antony C (2011). *Process – based strategic planning*.
- Hellin, J and Meijer, M., (2006). *Guidelines for value chain analysis*
- Hitt, M.A; Ireland, R and Duane R.E (2011). *Strategic Management: Competitiveness & Globalization concepts*. (10th Edition): Thomson Higher Education 5191 Natorp Boulevard Mason, OH 45040, USA.
- Hubert, S., (2005). *Value chain analysis for policy makers and practitioners: International labour Organization*. ILO Publication Bureau, International Labour Office, CH-1211, Geneva 22, Switzerland.
- <http://www.ids.ac.uk/ids/global/pdfs/wiegomanualendnov01.pdf> (accessed: 10th July, 2013).
- <http://www.bottz.org/publications/SelectedEconomicandFinancialIndicators.htm>
(Accessed: 17th June, 2013)
- <http://www.mwanzacity.go.tz> (accessed: 25th June, 2013)
- Ian L. and Wilson, R., (2009). *Higher Value Addition Through Hides and Skin: Rural Infrastructure and Agro – Industries Division, Food and Agriculture Organization of the United Nations, Rome: Booklet number 8*
- Kabuje, (2008). *Analysis of value chain for Hides and Skin in Arusha and Dodoma, Tanzania* Dissertation for MSc. Degree of Sokoine University of Agricultural. Morogoro Tanzania.
- Kaplinsky R. and Morris M, (September 2000). *A Handbook For Value Chain Research: Ottawa International Development Research Center, CANADA*

- Kim S. and Shin E.-U. (2002). *A Longitudinal Analysis of Globalization and Regionalization in International Trade: A Social Network Approach*. Social Forces, Vol. 81, No. 2
- Kothari, C.R. (2004). *Research Methodology: Methods & Techniques*: New Age International (P) Ltd, Delhi – India.
- Magento, T. L. (2011). *Inter – Firm Relationships and Governance structures: A study of the Ethiopian leather and leather products Industry value Chain*.
- Malugu, D. S. (October, 2010). *Analysis Of Risk Attitude And Returns Of Women Food Vendors In Ilala Municipality, Dar es Salaam*.
- McCormick D. and Schmitz H. (2001): *Manual for Value Chain Research on Home workers in the Garment Industry*: Institute for Development Studies University of Nairobi Kenya and Institute of Development Studies University of Sussex, Brighton BN19RE, England.
- Rudenko (2008): *Value Chains for Rural and Regional Development: The Case of Cotton, Wheat, Fruit and Vegetable Value Chains in the Lower Reaches of the Amu Darya River, Uzbekistan*. Dissertation, University of Hanover
- Saunders, M; Lewis, Philip; and Trornhil, A (2003). *Research Methods for Business Students*
- Selvi, A M (2010). *Financial and Operating Performance of Indian Automobile*.
- Sessa, V.I. and Manuel L (2008). *Work Group Learning: Understanding, Improving & Assessing How Groups Learn in Organizations*
- Terpening, W.D (2011). *Statistical Analysis for Business using JMP: A student's Guide*: Cary N.C: SAS Institute, USA.
- UNIDO, (2002). *A Blueprint for the African Leather Industry: A Development, Investment and Trade Guide for the Leather Industry in Africa*.

- UNIDO, (2009). *Agro – Value Chain Analysis and Development: The UNIDO Approach*, A staff working paper.
- URT (2007). *The Integrated Hides, Skins and Leather Sector Development Strategy for Tanzania*: Government of Tanzania (URT) Publications.
- URT (2006b). *Investment Opportunities In The Livestock Industry*: Ministry of Livestock Development : Government of Tanzania (URT) Publications.
- URT (2006a). *National Livestock Policy*: Ministry of Livestock Development: Government of Tanzania (URT) Publications.
- URT (2010). *Livestock Development Strategy*: Ministry of Livestock and fisheries Development: Government of Tanzania (URT) Publications.
- URT (2011). *Livestock Development Programme*: Ministry of Livestock and Fisheries Development: Government of Tanzania (URT) Publications.
- Vogt, W; Dianne P.C; Gardner, L; and Haeffele M. (2002). *When to Use What Research Design*: The Guilford Publication, Inc. 72 Spring Streets, New York, NY 10012, USA.
- Ward, J and Reppard, J (2002): *Strategic Planning for information systems*: Cranfield School of Management, Cranfield, Bedfordshire, UK, John Wiley & Sons Ltd, Baffins Lane, Chichester, West Sussex P0191UD, England.
- Wood, M.J and Ross-Kerr, J.C (2011). *Basic steps in Planning Nursing, from question to proposal*: Jones and Bartlett Publisher.
- Young, L (2005): *Marketing the professional services firm: Applying the principles of the science of marketing to the professions*: John Wiley & Sons Ltd.

APPENDICES

APPENDIX I: Questionnaire for Analysis of Leather Value Chain in Tanzania – Herdsmen (Livestock Keepers)

Dear respondent, I am requesting you to participate in this study by answering questions from the interviewer. I assure you that **ANSWERS YOU WILL PROVIDE WILL BE TREATED STRICTLY CONFIDENTIALLY** and only be used for purposes of this study. It should be noted that the findings of this study will be an important tool for key stakeholders in **LEATHER VALUE CHAIN** in promoting sustainability of **LEATHER INDUSTRY** in Tanzania.

Thank you very much for your kind attention and proactive participation.

PART I: RESPONDENT'S INFORMATION

[Tick the appropriate answer (s)]

1. Date of interview.....
2. Name of Respondent.....
3. What is your age:
.....Years
4. Street.....
5. Ward
6. Division
7. What is your level of education? (*Years of schooling plus training of any kind*)

(i)	No formal education	[]
(ii)	Adult education	[]
(iii)	Primary education	[]
(iv)	Secondary education	[]
(v)	Diploma level of education	[]
(vi)	Training of any kind (Specify).....	

8. Marital status.

- (i) Single []
- (ii) Married []
- (iii) Divorced []
- (iv) Widowed []
- (v) Separated []

9. What is the size of your household members including dependants?

Age group	Male	Female
Below 16 years		
Between 16 – 40 years		
Between 41 and 60 years		
Above 60 years		

10. How many people from your family can actively participate into contributing the household income?

Age group	Male	Female
Below 16 years		
Between 16 – 40 years		
Between 41 and 60 years		
Above 60 years		

11. Indicate your main sources of income (from all actors) and estimate average monthly income obtained from each source?

Source	Response (1= YES; 2= NO)	Amount of Income Received in TZS
Leather activities		
Non leather activities , specify		

12. Are you a resident of this city or municipal?

(i) Yes []

(ii) No []

13. If yes, for how long? Explain

PART II: BUSINESS DESCRIPTION AND PERFORMANCE

1. What is the goal(s) of your business/company?

(i) Increase Sales []

(ii) Increase customer retention []

(iii) Improve market share []

(iv) Penetrate a new market segment []

(v) Reduce customer complaints []

2. Production performance

(i) What is your experience in livestock keeping?

• 1 - 5 years []

• 5 – 10 years []

• More than 10 years []

(ii) Who is the decision maker in your business?

• Father []

• Mother []

• Children []

(iii) How do you keep your animals

• Zero grazing []

• Unlimited grazing []

• Mixing of the above []

• Other methods, (Specify)

- (iv) How many animals do you keep?
- Cow
 - Goat
 - Sheep
- (v) How many animals do you sell per month?
- Cow
 - Goat
 - Sheep
- (vi) Which of the following livestock inputs are available at your area?
- Dip tanks []
 - Extension/ veterinary services []
 - Training of stakeholders (knowledge) []
 - Good weather []
 - Animal feeds and forages []
 - Workers []
 - Animal genetic resource []
 - Vaccines []
 - Machinery and Utensils []
- (vii) Do you cull your animals at an optimal age?
- Yes []
 - No []
- (viii) Do you brand your animals?
- Yes []
 - No []
- (ix) If yes to above question, in which part?

- On back []
- On hump []
- On bell []
- On shoulders []
- Head []
- Legs or []
- Ear parts. []

- (x) What are the costs of the following activities associated with animal keeping per month?

Activity	Costs per Month
Dip tanking	
Extension/ veterinary services	
Training	
Animal feeds and forages	
Labour Charge	
TOTAL	

- (xi) What are challenges associated with the keeping of animals?

- Difficult to access to finance and hard loan conditions []
- Not supporting Policy / laws/ rules and regulations []
- Low knowledge to keep animals in modern ways []
- Low Capital to start and to keep animals []
- Insufficient grazing land []
- Low supply water and pasture for animals []
- Poor availability of livestock inputs []
- Poor quality of livestock inputs []
- High price of livestock inputs []
- Animals diseases []
- Poor entrepreneurship behavior and skills []
- Insufficient workforce to keep animals []

- Poor geographical conditions []

3. Market performance

- (i) What is the volume of sales for the past 3 years?

YEAR	2010	2011	2012
SALES (TZS)			
QUANTITY			

- (ii) Which distribution methods are you using to sell your animals?

- Direct methods []
- Indirect methods (middlemen) []

- (iii) What is the price of the following animals?

- Cow
- Goat
- Sheep

- (iv) Which of the following challenges associated with the marketing of animals?

- Low price of animals in market []
- Poor marketing strategy []
- Competition in the market []
- Value of animals is attached to meat only and not skin and hides []
- Poverty / economy of the national []
- Privacy and information security []

PART III: ESTABLISHMENT OF LEATHER VALUE CHAIN

1. Which of the following do you produce at your firm?

- (i) Live animals []
- (ii) Green hides/skins []
- (iii) Salted hides/skins []

- (iv) Dries hides/skins []
- (v) Wet blue []
- (vi) Finished leather []
- (vii) Leather goods []
- (viii) Footwear []

2. To whom are you selling your Animals?

- (i) Herdsmen []
- (ii) Collectors/preservers []
- (iii) Leather tanners []
- (iv) Footwear and leather goods manufactures []
- (v) Middle men []
- (vi) Importers []
- (vii) Wholesalers/ retailers []
- (viii) Exporters []

3. Who is selling to you other raw materials apart from live animals?

- (i) Veterinaries []
- (ii) Agro vet shops []
- (iii) Middle men []
- (iv) Importers []
- (v) Wholesalers/ retailers []
- (vi) Exporters []

4. Which of the following activities are you doing to ensure the quality of skins from the animals?

- (i) Frequent dipping of animals to free animals from ticks and other pests that are healthy risk to animals and that distort the quality of animal hide / skin []
- (ii) Prohibits branding, except in permitted areas like head, leg or ear parts. []

- (iii) Prohibits use of sharp objects e.g. barbed wire to fence kraals upon which animals may scratch and in the process impose indelible marks on animal skins / hides. []
- (iv) Dehorn animal to reduce chances of scratching each other []
- (v) Prohibits whipping or beating animals to minimize inflicting indelible marks on the skins. []

Appendix II: Questionnaire for Analysis of Leather Value Chain in Tanzania – Slaughter Houses (Abattoirs)

Dear respondent, I am requesting you to participate in this study by answering questions from the interviewer. I assure you that **ANSWERS YOU WILL PROVIDE WILL BE TREATED STRICTLY CONFIDENTIALLY** and only be used for purposes of this study. It should be noted that the findings of this study will be an important tool for key stakeholders in **LEATHER VALUE CHAIN** in promoting sustainability of **LEATHER INDUSTRY** in Tanzania.

Thank you very much for your kind attention and proactive participation.

PART I: RESPONDENT'S INFORMATION

[Tick the appropriate answer (s)]

1. Date of interview.....
2. Name of Respondent.....
3. What is your age: Years.....
4. Street.....
5. Ward
6. Division

7. What is your level of education? (*Years of schooling plus training of any kind*)
 - (i) No formal education []
 - (ii) Adult education []
 - (iii) Primary education []
 - (iv) Secondary education []
 - (v) Diploma level of education []
 - (vi) Training of any kind (Specify).....

8. Marital status.
 - (i) Single []

- (ii) Married []
- (iii) Divorced []
- (iv) Widowed []
- (v) Separated []

9. What is the size of your household members including dependants?

Age group	Male	Female
Below 16 years		
Between 16 – 40 years		
Between 41 and 60 years		
Above 60 years		

10. How many people from your family can actively participate into contributing the household income?

Age group	Male	Female
Below 16 years		
Between 16 – 40 years		
Between 41 and 60 years		
Above 60 years		

11. Indicate your main sources of income (from all actors) and estimate average monthly income obtained from each source?

Source	Response (1= YES; 2= NO)	Amount of Income Received in TZS
Leather activities		
Non leather activities , specify		
(i)		
(ii)		

PART II: BUSINESS DESCRIPTION AND PERFORMANCE

- (v) What is the goal(s) of your business/company?
- Increase Sales []
 - Increase customer retention []
 - Improve market share []
 - Penetrate a new market segment []
 - Reduce customer complaints []
- (vi) Production performance
- (vii) What is your experience in livestock keeping?
- 1 - 5 years []
 - 5 – 10 years []
 - More than 10 years []
- (viii) Who is the decision maker in your business?
- Father []
 - Mother []
 - Children []
- (ix) What is your monthly production capacity?
- Cow hides.....
 - Goat skins
 - Sheep skins
- (x) Where do you use to slaughter the animals?
- Slaughter slabs []
 - Mechanized abattoirs/slaughter houses []
 - Non specific places []
- (xi) Does the slaughter houses equipped with the following?
- Running water systems []

- Lifting blocks for raising carcasses []
- Special flying knives []

(xii) What are you producing?

- Green hides/skins []
- Salted hides/skins []
- Dried hides/skins []

(xiii) What are the costs of the following activities associated with flying and preservation of hides and skins?

Activity	Costs per Month
Flying costs	
Flying charges (City council)	
Trade licence	
Perseveration costs (salts, and labour)	
Rent	
Other costs	
TOTAL	

(xiv) What are challenges associated with the flying and preservation of skins/hides?

- Difficult to access to finance and hard loan conditions []
- Not supporting Policy / laws/ rules and regulations []
- Low knowledge to flying and preservations []
- Low Capital to start and to run this business []
- Low supply water []
- Poor animals husbandry which resulted to low quality of hides and skins []
- Poor veterinary extension services and other legislation that govern the operation of the facilities []

- Insufficient skilled workforce []
- High price of salts []
- Unnecessary flying cuts []

12 Market performance

(i) What is the volume of sales in the past 3 years?

YEAR	2010	2011	2012
SALES (TZS) /UNITS			
QUANTITY			

(ii) Which distribution methods are you using to hides and skins?

- Direct methods []
- Indirect methods (middlemen) []

(iii) Who is selling to you live animals?

- Herdsmen []
- Middle men []

(iv) To whom are you selling your products?

- Collectors/preservers []
- Leather tanners []
- Middle men []
- Importers []
- Wholesalers/ retailers []
- Exporters []

(v) What is the price per kilogram of the following products?

- Cow Hide
- Goat Skin
- Sheep skin

(vi) Who is selling to you other raw materials apart from live animals?

- Herdsmen []
- Collectors/preservers []
- Leather tanners []
- Footwear and leather goods manufactures []
- Middle men []
- Importers []
- Wholesalers/ retailers []
- Exporters []

(v) Which of the following challenges associated with the marketing of hides and skins?

- Low price of hides and skins in market []
- Poor marketing strategy []
- Competition in the market []
- Poverty / economy of the national []
- Privacy and information security []
- Bureaucracy in getting business licenses []
- Entrepreneurship behavior and Skills []
- Perceptions of customers towards local products []
- Barriers to trade with other nations []
- Inadequate purchasing power and little price incentive as a result of using wet salting as a curing method. []
- Poor storage techniques []
- non-use of grades during hides and skins marketing []

PART III: ESTABLISHMENT OF LEATHER VALUE CHAIN

1. Which of the following methods are you using to ensure the quality of skins/hides?

- (i) Avoiding poor flyng []

- (ii) Use of skilled personnel []
- (iii) Use of puller in abattoirs []
- (iv) Good post slaughter handling []
- (v) Ensure skin / hide is not littered by blood []
- (vi) All blood must drip from the slaughtered animal []
- (vii) Washing the animal before slaughter []
- (viii) Using sufficient water to reduce the skin / hide temperature to reduce petrification []

2. Which methods are you using to recover skins/hides in abattoirs?

- (i) Pulling []
- (ii) Flying with knives []
- (iii) Flying with machines []

3. Which methods are you using to preserve hides and skins?

- (i) Salted techniques []
- (ii) Hanging drying []
- (iii) Ground drying []

**Appendix III: Questionnaire for Analysis of Leather Value Chain in Tanzania
– Middle Men/Collectors/Preservers**

Dear respondent, I am requesting you to participate in this study by answering questions from the interviewer. I assure you that **ANSWERS YOU WILL PROVIDE WILL BE TREATED STRICTLY CONFIDENTIALLY** and only be used for purposes of this study. It should be noted that the findings of this study will be an important tool for key stakeholders in **LEATHER VALUE CHAIN** in promoting sustainability of **LEATHER INDUSTRY** in Tanzania.

Thank you very much for your kind attention and proactive participation.

PART I: RESPONDENT'S INFORMATION

[Tick the appropriate answer (s)]

1. Date of interview.....
2. Name of Respondent.....
3. What is your age: Years
4. Street.....
5. Ward
6. Division

7. What is your level of education? (*Years of schooling plus training of any kind*)
 - (i) No formal education []
 - (ii) Adult education []
 - (iii) Primary education []

- (iv) Secondary education []
- (v) Diploma level of education []
- (vi) Training of any kind (Specify).....

8. Marital status

- (i) Single []
- (ii) Married []
- (iii) Divorced []
- (iv) Widowed []
- (v) Separated []

9. What is the size of your household members including dependants?

Age group	Male	Female
Below 16 years		
Between 16 – 40 years		
Between 41 and 60 years		
Above 60 years		

10. How many people from your family can actively participate into contributing the household income?

Age group	Male	Female
Below 16 years		
Between 16 – 40 years		
Between 41 and 60 years		
Above 60 years		

11. Indicate your main sources of income (from all actors) and estimate average monthly income obtained from each source?

Source	Response (1= YES; 2= NO)	Amount of Income Received in TZS

Leather activities		
Non leather activities		

PART II: BUSINESS DESCRIPTION AND PERFORMANCE

12. What is the goal(s) of your business/company?
- (i) Increase Sales []
- (ii) Increase customer retention []
- (iii) Improve market share []
- (iv) Penetrate a new market segment []
- (v) Reduce customer complaints []
13. Production performance
14. What is your experience in this business?
- (i) 1 - 5 years []
- (ii) 5 – 10 years []
- (iii) More than 10 years []
15. Who is the decision maker in your business?
- (i) Father []
- (ii) Mother []
- (iii) Children []
16. When do you buy hides and skins
- (i) Before slaughtering []
- (ii) During slaughtering []
- (iii) After slaughtering []
17. How long did you take to prepare skins/hides after slaughtering?
- (i) 1 – 6 hours []
- (ii) 6 – 24 hours []
- (iii) More than 24 hours []

18. What is your monthly inventory capacity?
- (i) Cow hides.....
- (ii) Goat skins
- (iii) Sheep skins
19. Do you have hides and skins grading skills?
- (i) Yes []
- (ii) No []
20. What are you trading?
- (i) Green hides/skins []
- (iii) Salted hides/skins []
- (iv) Dried (suspense) hides/skins []
21. What are the costs of the following activities associated with collecting, preservation and selling of hides and skins?

Activity	Costs per Month
Flying costs	
Flying charges (City council)	
Trade licence	
Perseveration costs (salts, and labour)	
Rent	
Other costs	
TOTAL	

22. What are challenges associated with the collecting, preservation and selling of hides and skins?
- (i) Awareness about laws and regulations concerning ground drying []
- (ii) Difficult to access to finance and hard loan conditions []
- (iii) Not supporting Policy / laws/ rules and regulations []
- (iv) Low knowledge to flying and preservations []
- (v) Low Capital to start and to run this business []

- (vi) Low supply water []
- (vii) Poor animals husbandry which resulted to low quality of hides and skins
[]
- (viii) Poor veterinary extension services and other legislation that govern the
operation of the facilities []
- (ix) Insufficient skilled workforce []
- (x) High price of salts []
- (xi) Unnecessary flying cuts []

23. Market performance

- (i) What is the volume of sales in the past 3 years?

YEAR	2010	2011	2012
SALES (TZS) /UNITS			
QUANTITY			

- (ii) Which distribution methods are you using to hides and skins?

- Direct methods []
- Indirect methods (middlemen) []

- (iii) Who is selling to you Hides and Skins?

- Herdsmen []
- Middle men []
- Butcher []
- Skin removers []

- (iv) To whom are you selling your hides and skin?

- Herdsmen []
- Collectors/preservers []
- Leather tanners []
- Footwear and leather goods manufactures []
- Middle men []

- Importers []
 - Wholesalers/ retailers []
 - Exporters []
- (v) Who is selling to you other raw materials apart from skins and hides?
- Herdsmen []
 - Collectors/preservers []
 - Leather tanners []
 - Footwear and leather goods manufactures []
 - Middle men []
 - Importers []
 - Wholesalers/ retailers []
 - Exporters []
- (vi) What is the selling price per kilogram of the following products?
- Cow Hide
 - Goat Skin
 - Sheep skin
- (vii) Which of the following challenges associated with the marketing of hides and skins?
- Low price of hides and skins in market []
 - Poor marketing strategy []
 - Competition in the market []
 - Poverty / economy of the national []
 - Privacy and information security []
 - Bureaucracy in getting business licenses []
 - Entrepreneurship behavior and Skills []
 - Perceptions of customers towards local products []
 - Barriers to trade with other nations []

- Inadequate purchasing power and little price incentive as a result of using wet salting as a curing method. []
- Poor storage techniques []
- Non-use of grades during hides and skins marketing []

PART III: ESTABLISHMENT OF LEATHER VALUE CHAIN

1. Are you aware that ground drying is prohibited by laws?
 - (i) Yes []
 - (ii) No []
2. Which of the following methods are you using to ensure the quality of skins/hides?
 - (i) Avoiding poor flying []
 - (ii) Use of skilled personnel []
 - (iii) Use of puller in abattoirs []
 - (iv) Good post slaughter handling []
 - (v) Ensure skin / hide is not littered by blood []
 - (vi) All blood must drips from the slaughtered animal []
 - (vii) Washing the animal before slaughter []
 - (viii) Using sufficient water to reduce the skin / hide temperature to reduce petrification []
 - (ix) Removing all flesh and fats on the skin/hides []
 - (x) Drying on the drying shed to avoid excessive sunshine and rain []
 - (xi) Use of enough and clean slats to ensure smooth drying []
 - (xii) Store in a properly ventilated store which does not expose skins or hides to sunshine or moisture []

**Appendix IV: Questionnaire for Analysis of Leather Value Chain in Tanzania
– Leather Tanners**

Dear respondent, I am requesting you to participate in this study by answering questions from the interviewer. I assure you that **ANSWERS YOU WILL PROVIDE WILL BE TREATED STRICTLY CONFIDENTIALLY** and only be used for purposes of this study. It should be noted that the findings of this study will be an important tool for key stakeholders in **LEATHER VALUE CHAIN** in promoting sustainability of **LEATHER INDUSTRY** in Tanzania.

Thank you very much for your kind attention and proactive participation.

PART I: RESPONDENT'S INFORMATION

[Tick the appropriate answer (s)]

1. Date of interview.....
2. Name of Respondent.....
3. What is your age: Years.....
4. Street.....
5. Ward
6. Division
7. What is your level of education? (*Years of schooling plus training of any kind*)
 - (i) No formal education []
 - (ii) Adult education []
 - (iii) Primary education []
 - (iv) Secondary education []

- (v) Diploma level of education []
- (vi) Training of any kind (Specify).....

Question 8 to 10 is specific for individual owner/entrepreneurs

8. Marital status.

- (i) Single []
- (ii) Married []
- (iii) Divorced []
- (iv) Widowed []
- (v) Separated []

9. What is the size of your household members including dependants?

Age group	Male	Female
Below 16 years		
Between 16 – 40 years		
Between 41 and 60 years		
Above 60 years		

10. How many people from your family can actively participate into contributing the household income?

Age group	Male	Female
Below 16 years		
Between 16 – 40 years		
Between 41 and 60 years		
Above 60 years		

11. Indicate your main sources of income (from all actors) and estimate average monthly income obtained from each source?

Source	Response (1= YES; 2= NO)	Amount of Income Received in TZS

Leather activities		
Non leather activities		

12. Are you a resident of this city or municipal?

- (i) Yes []
- (ii) No []
- (iii) If yes, for how long? Explain

PART II: BUSINESS DESCRIPTION AND PERFORMANCE

13. What is the goal(s) of your business/company?

- (i) Increase Sales []
- (ii) Increase customer retention []
- (iii) Improve market share []
- (iv) Penetrate a new market segment []
- (v) Reduce customer complaints []

14. Who is the owner of the tannery?

- (i) Government []
- (ii) Private []
- (iii) Foreign investor []
- (iv) Share owned (foreigner and Tanzanian) []

15. Production performance

(i) What is your production capacity per month?

- Hides.....
- Skins.....

(ii) Does the tannery equipped with the following?

- Drums []
- Fleshing machine []
- Shaving machine []
- Dryer []

- Pressing Machine []
- Spraying Machine []
- Splitting []
- Buffing machine []

(iii) What is the age of equipment/ type of technology?

- New equipment/technology []
- Outdated equipment/ technology []

(iv) Which methods are you using to process hides and skins

- VegeTable tanning []
- Chrome tanning []

(v) What are the costs for tanning hides and skins?

Activity	Costs per Month
Raw materials (Hides and skins)	
Tanning chemicals	
Utilities	
Labour costs	
Rent	
Other costs	
TOTAL	

(vi) What are challenges associated with the tanning of hides and skins?

- (vii) Poor quality of hides and skins []
- (viii) Insufficient skilled workforce []
- (ix) High price of hides and skins []
- (x) Availability of tanning chemicals []
- (xi) High investment costs []
- (xii) Outdated equipment []
- (xiii) Availability of raw materials []

- (xiv) Quality of raw materials []
- (xv) Effluent treatment problems and non-adherence to environmental management standards []

16. Market performance

- (i) What is the volume of sales in the past 3 years?

YEAR	2010	2011	2012
SALES (TZS) /UNITS			
QUANTITY			

- (i) Which distribution methods are you using to hides and skins?

- Direct methods []
- Indirect methods (middlemen) []

- (ii) What is the market of your products?

- Local market []
- Export market []
- Mixed of the above []

- (iii) Who is selling to you Hides and skins?

- Herdsmen []
- Middle men []
- Importers []
- Wholesalers/ retailers []

- (i) To whom are you selling your products?

- (ii) Herdsmen []
- (iii) Collectors/preservers []
- (iv) Leather tanners []
- (v) Footwear and leather goods manufactures []
- (vi) Middle men []

- (vii) Importers []
- (viii) Wholesalers/ retailers []
- (ix) Exporters []
- (i) Who is selling to you other raw materials (tanning chemicals)?
- Herdsmen []
 - Collectors/preservers []
 - Leather tanners []
 - Footwear and leather goods manufactures []
 - Middle men []
 - Importers []
 - Wholesalers/ retailers []
 - Exporters []
- (ii) What is the price per square feet of the following products?
- Cow leather
 - Goat leather.....
- (iii) Which of the following challenges associated with the marketing of leather?
- Low market of leather products making firms []
 - Poverty / economy of the national []
 - Bureaucracy in getting business licenses []
 - Entrepreneurship behavior and Skills []
 - Perceptions of customers towards local products[]

PART III: ESTABLISHMENT OF LEATHER VALUE CHAIN

- (i) Who is the decision maker in your business?
- Owner []
 - Management []
 - Board of directors []

- (ii) How do you control the quality of processed leather?
- Avoiding low quality hides and skins []
 - Use of skilled personnel []
 - Selection of quality raw materials (chemicals) []
 - Close supervision []
- (iii) In what stages of value addition your tanneries produce?
- Pickled leather []
 - Wet blue []
 - Finished leather []

Appendix V: Questionnaire for Analysis of Leather Value Chain in Tanzania – Footwear and Leather Goods Manufacturers

Dear respondent, I am requesting you to participate in this study by answering questions from the interviewer. I assure you that **ANSWERS YOU WILL PROVIDE WILL BE TREATED STRICTLY CONFIDENTIALLY** and only be used for purposes of this study. It should be noted that the findings of this study will be an important tool for key stakeholders in **LEATHER VALUE CHAIN** in promoting sustainability of **LEATHER INDUSTRY** in Tanzania.

Thank you very much for your kind attention and proactive participation.

PART I: RESPONDENT'S INFORMATION

[Tick the appropriate answer (s)]

1. Date of interview.....
2. Name of Respondent.....
3. What is your age: Years.....
4. Street.....
5. Ward
6. Division
7. What is your level of education? (*Years of schooling plus training of any kind*)

- (i) No formal education []
- (ii) Adult education []
- (iii) Primary education []
- (iv) Secondary education []
- (v) Diploma level of education []
- (vi) Training of any kind (Specify).....

Question 8 to 10 is specific for individual owner/entrepreneurs

8. Marital status.

- (i) Single []
- (ii) Married []
- (iii) Divorced []
- (iv) Widowed []
- (v) Separated []

9. What is the size of your household members including dependants?

Age group	Male	Female
Below 16 years		
Between 16 – 40 years		
Between 41 and 60 years		
Above 60 years		

10. How many people from your family can actively participate into contributing the household income?

Age group	Male	Female
Below 16 years		
Between 16 – 40 years		
Between 41 and 60 years		
Above 60 years		

11. Indicate your main sources of income (from all actors) and estimate average monthly income obtained from each source?

Source	Response (1= YES; 2= NO)	Amount of Income Received in TZS
Leather activities		
Non leather activities		

PART II: BUSINESS DESCRIPTION AND PERFORMANCE

12. What is the goal(s) of your business/company?

- (i) Increase Sales []
- (ii) Increase customer retention []
- (iii) Improve market share []
- (iv) Penetrate a new market segment []
- (v) Reduce customer complaints []

13. Who is the owner of the factory?

- (i) Government []
- (ii) Private []
- (iii) Foreign investor []
- (iv) Share owned (foreigner and Tanzanian) []

14. Production performance

- (i) What is your experience in livestock keeping?

- 1 - 5 years []
- 5 – 10 years []
- More than 10 years []

- (ii) Who is the decision maker in your business?

- Father []
- Mother []
- Children []

(iii) What is kind of technology does your firm use?

- New equipment/technology []
- Outdated equipment/ technology []

(iv) Does the factory equipped with the following?

- Heavy duty sewing machines []
- Skiving machines []
- pressing machines []
- sole attaching machines []
- Buffing machines []
- Others, explain

(v) What is your monthly production capacity?

	Product (Units)	Unit price	Total
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

(vi) What are the costs for making your products?

Activity	Costs per Month
Finished leather	
Other raw materials	
Utilities	

Labour costs	
Rent	
Other costs	
TOTAL	

(vii) What are challenges associated with the making of leather products?

- Difficult to access to finance and hard loan conditions []
- Bureaucracy in getting business licence []
- Poor entrepreneurship behavior and skills []
- Availability of finished leather []
- Low level of technology []
- Availability of skilled personnel []
- Inadequate Working premises []
- Lack of technical knowledge to run this business []
- Low Quality of raw materials []
- High running costs []
- Availability of skilled personnel []
- Poor quality leather supplied by the domestic tanneries []
- poor designs and quality []

15. Market performance

(i) What is the volume of sales in the past 3 years?

YEAR	2010	2011	2012
SALES (TZS) /UNITS			
QUANTITY			

(ii) Which distribution methods are you using to sell your animals?

- Direct methods []
- Indirect methods (middlemen) []

(iii) Which of the following challenges associated with the marketing leather products?

- Poor access to finance/ loan/ credit []
- Low market of the products []
- Poverty / economy of the national []
- Competition from second hand imported products []
- Perceptions of customers towards local products []
- Outdated technology []
- Barriers to trade with other nations []
- Language barriers []
- Unfair competition of local products with imported products []
- Customers have the knowledge on leather products []

PART III: ESTABLISHMENT OF LEATHER VALUE CHAIN

1. What are products of your factory?

- (i) Footwear []
- (ii) Leather garments []
- (iii) Other leather goods []

2. To whom are you selling your products?

- (i) Individual []
- (ii) Middle men []
- (iii) Importers []
- (iv) Wholesalers/ retailers []
- (v) Exporters []

3. Where do you buy finished leather?

- (i) Leather tanners []
- (ii) Middle men []
- (iii) Importers []
- (iv) Wholesalers/ retailers []

4. Who is selling to you other raw materials finished leather?
- (i) Middle men []
 - (ii) Importers []
 - (iii) Wholesalers/ retailers []
5. Which of the following activities are you doing to ensure the quality of your products?
- (i) Avoiding low quality leather []
 - (ii) Use of skilled personnel []
 - (iii) Selection of quality raw materials []
 - (iv) Regular trainings of staffs []
 - (v) Close supervision []
 - (vi) Providing incentives to staffs []