THE FEASIBILITY OF DONKEY SKIN TRADE IN ZIMBABWE AS A STRATEGY TO TAP INTO THE EMERGING DONKEY EXPORT MARKET

BY ERICK MUTIZHE

B1645436

SUPERVISOR: DR J. MWENJE

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JUNE, 2018
The undersigned certify that they have read and recommend to the Bindura University of Science Education for acceptance: a dissertation with title, “The feasibility of donkey skin trade in Zimbabwe as a strategy to tap into the emerging donkey export market”, by Erick Mutizhe in partial fulfilment of the requirements for the Degree of Masters in Business Leadership (MBL).

Erick Mutizhe

________________________
SIGNATURE

________________________
DATE

Dr Judith Mwenje

________________________
SIGNATURE

________________________
DATE

________________________
SIGNATURE

PROGRAMME COORDINATOR

________________________
DATE

________________________
SIGNATURE

FACULTY CHAIRPERSON

________________________
DATE

________________________
SIGNATURE

EXTERNAL EXAMINER

________________________
DATE
BINDURA UNIVERSITY OF SCIENCE EDUCATION

RELEASE FORM

NAME OF AUTHOR : ERICK MUTIZHE

TITLE OF DISSERTATION: The feasibility of donkey skin trade in Zimbabwe as a strategy to tap into the emerging donkey export market.

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SIGNED: ________________________

PERMANENT ADDRESS: 52 Dacomb Drive, Chisipite, Harare

DATE: JUNE 2018
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I declare that “The feasibility of donkey skin trade in Zimbabwe as a strategy to tap into the emerging donkey export market.” is my own work; that it has not been submitted before any Degree or examination in any other university; and that all the sources used or quoted in this document have been indicated and acknowledged as complete references.

Erick Mutizhe ____________________ ____________________

SIGNATURE DATE
DEDICATION

This research is dedicated to my loving wife, Nancy whose support throughout my studies was very pivotal. To my sons, Anotidaishhe and Tinodiwanashe, thank you for being my everyday inspiration. To my mom, Nikiwe, thank you for the encouragement. May the good Lord bless you abundantly.
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Writing this dissertation has been a great opportunity for me to learn a lot and make contributions to knowledge in the area donkey skin trade. The successful completion of this dissertation would not have been realised without the immense support and contribution that I received from the following people:

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My sincere gratitude goes Dr Keith Dutlow, Dr Andrew Garura, Dr Eugene Mabika, Mr Timothy Phiri and Mr Yusufu Chitesi who assisted me with logistics. Their support was indispensable and consistent.
This study investigated the feasibility of donkey skin trade in Zimbabwe as a strategy to tap into the emerging donkey export market. The demand for donkey skins in the production of traditional Chinese medicines has resulted in donkeys being sourced from all over the world. A donkey abattoir in Zimbabwe seeking to export donkey skins and meat to China could not be licensed and was banned following the petition against its operations by concerned animal welfare organisations. The objectives of the study were: to evaluate the perceptions of stakeholders on the donkey skins trade; to investigate the effects of donkey skins trade on the livelihoods of rural donkey owners in Zimbabwe; to identify the factors that affect the sustainability of the donkey skins trade in the Zimbabwean context; and to identify the factors associated with the increasing demand for donkey skins trade in the emerging export market. The perceptions of donkey owners, animal welfare organisations and a prospective abattoir owner were gathered and analysed. The study was a mixed methods research and followed a pragmatic philosophy and the abductive approach. Randomly selected 140 donkey owners from 5 districts with highest donkey populations responded to a semi-structured questionnaire. Semi-structured interviews were done with a senior manager from each of the 5 animal welfare organisations. The study revealed that there were possibilities of donkey welfare violations, increased donkey thefts, potential decimation of donkey numbers and reduction in quality of livelihoods of rural people if donkey skin trade happened. There was lack of consideration for donkeys in national animal health programmes which may impact on accountability and traceability of donkeys if donkey skin trade is embarked on. It was revealed that donkey meat was not consumed in Zimbabwe and the practice was regarded as taboo. However, there were few communities that consumed milk as medicine to cure whooping cough. There were variations in the valuation attached to donkeys across different communities. The majority of donkey owners expressed willingness to sell donkeys to donkey skins market if they exceeded the maximum number of donkeys they needed at their households. Regression analysis revealed that donkey skin trade increased income of rural donkey owners in the short-term. The total number of donkeys owned had an effect on the willingness to trade. There was no relationship between location of donkey owners and willingness to sell donkeys. The study concluded that donkey skin trade carried some risks and required that enough assessment be done first to ensure that the country does not embark on a trade that may dispossess families of livelihoods created by owning donkeys as animal assets. It was also concluded that trading in sick or injured donkeys was not acceptable. Donkey owner education, advocacy for legislation on donkey skin trade as well as inclusion of donkeys on the national animal health programmes were recommended. Further research on donkey population dynamics in Zimbabwe was proposed.
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CHAPTER 1: INTRODUCTION

1.1 Introduction
This chapter presents the background of the study, statement of the research problem, research objectives and questions, statement of hypothesis and research assumptions. The justification of the research, significance of the study and purpose of the study will also be covered. The chapter will end with definition of major terms.

1.2 Background of the study
Following the media reports that there was an abattoir that had been set up in Bulawayo to slaughter donkeys for meat and skins with the aim to satisfy an emerging market in China there were mixed reactions across different groups of people. An increasing demand for donkey skins had opened in China for the production of ejiao which is a traditional Chinese remedy. Some sections of the business community were ready to embrace and exploit the business as they believed it could add value to donkeys and enhance the livelihoods of donkey owners. As quoted in The Sunday News of October 1 2017, a businessman based in Bulawayo who had set up a $150 000 worth of donkey abattoir said,

“We have already started buying (donkeys) around the country as far as Gokwe, Plumtree, Gwanda and in between Gweru. Our target market is the Asian market of which I have even employed some Asian people, Chinese people in particular. We have already procured the market for that product”.

From the business perspective, the donkey skins trade would take advantage of the closure of the donkey abattoir in Botswana and tap into the growing export market to create employment, raise revenue, and enable donkey owners to realise some income through the sale of some of their unproductive donkeys. Botswana had suspended export licenses for the donkey products in July 2017 (Pinio, 2017).

Despite the prospective Zimbabwean abattoir ownership acknowledging that the country’s donkey population was low, it remained optimistic that donkey skins export business would be viable (Nsingo, 2017). On the other hand, the animal welfare pressure groups felt that if
the abattoir was to be allowed to operate in Zimbabwe, the donkey welfare was going to be compromised and donkey populations would be decimated thereby negatively affecting livelihoods. Lupane Youth for Development (LUYD), an organisation which promotes the welfare of livestock especially donkeys, argued that the licensing of the donkey abattoir was likely to give rise to theft cases (Nsingo, 2017). Culturally, donkey meat is generally not consumed across communities in Zimbabwe. Thus, sentiments were also that donkey meat was going to find its way into the food chain. Some farmers felt the trade was going to fuel donkey theft as there are no movement restrictions by way of veterinary permits unlike for cattle. There are reports that similar facilities had to be closed down in Botswana and other countries such as Burkina Faso due to sustainability issues. According to Nsingo (2017) the donkey slaughter for skin trade may lead to the drastic decimation of the donkey population in Zimbabwe. The situation in Kenya was cited as an example by Chebet (2017) who stated that in 2009 Kenya had 1.8 million donkeys but this has been reduced significantly owing to the donkey trade as 100 000 donkeys are being slaughtered annually. The absence of donkey breeding programmes and low reproduction levels present a mismatch between supply and the rising demand while raising the issue of sustainability the trade.

Following the lobbying by animal welfare pressure groups who claimed that donkey skins trade was brutal to donkeys and would leave donkey owners distressed and without means to earn a living, the government through the Ministry of Agriculture, Mechanisation and Irrigation Development prohibited the donkey skins trade by refusing to issue to the abattoir the license export donkey skins and meat. Nkala (2018) acknowledges that the Director of Veterinary Services wrote a circular on 9 October 2017 stating the following:

“I am sure you are all aware of the anxiety, acrimony, havoc and mayhem that has been generated among the Zimbabwean public by the construction of a donkey abattoir in Bulawayo. You are hereby advised that the said abattoir, or any for that matter, will not be registered to operate in Zimbabwe, and that no donkey will ever be slaughtered at any abattoir. Officers who have been involved, directly or indirectly, in the construction of the said abattoir are hereby ordered to stop their participation forthwith, and the said abattoir should be closed immediately. Provincial veterinary
The business environmental factors are critical in the donkey skins trade and these are the political, economical, social, legal and environmental factors. From a political point of view, Zimbabwe’s relationship with China dates back from the days of Zimbabwe’s liberation struggle where China was instrumental in the arming and training of Zimbabwe’s liberation war fighters. The relationship grew stronger culminating into Zimbabwe’s Look East Policy in 2003 (Chun, 2014). To date, a number Chinese owned business ventures in mining, energy and agriculture are existing. Donkey skin trade could therefore be an extension to the existing business partnership in agriculture between the two countries. However, the Zimbabwean government conceded to the demands by animal welfare organisations to ban the donkey skin trade. The ban on the trade presented can be an opportunity for the Zimbabwean government to objectively look into the feasibility of the skins trade and come up with a consultation based position. From an environmental perspective, the donkey skin trade is set in a background where there is need to investigate sustainability focusing on the household and national donkey population as well as the rate of replenishment through reproduction. According to FAOSTAT (2016), Zimbabwe’s donkey population is Zimbabwe has population of 589 621. The proposed abattoir intended to slaughter 70 donkeys per day (Nkala, 2017). The economic landscape in Zimbabwe is such that jobs are scarce and any opportunities for immediate economic gain can be embraced in spite of the potential negative long term effects. Thus, many donkey owners may sell their donkeys in order to attend to pressing economic needs. The social aspect in the donkey skin trade can be viewed in line with livelihoods. The level at which communities depend on donkeys is critical as it may dictate their willingness to trade their donkeys given that donkeys are considered key draught power animal assets. The social element also accounts for the taboos and cultural norms that prevail which may make the trade acceptable or not. The legal element surrounding the donkey skin trade relate to animals welfare as prescribed by the Prevention of Cruelty to Animals Act well as the provisions for animal slaughter as dictated by the Public Health Regulations (1995). The ban on donkey skins has not yet been substantiated by necessary legislative framework which makes it contestable.
The appropriateness of the ban needs to be evaluated as no previous studies have been done in Zimbabwe to investigate the feasibility of donkey skins trade as a strategy to tap into the donkey export markets and this forms the aim of this study so that it inform the policy makers on whether to embrace the trade or not in Zimbabwe.

1.3 Statement of the research problem
The ban on donkey skins trade in Zimbabwe was done without wide stakeholder consultations. Despite the fact that donkey skins trade had the potential to earn the country foreign currency and create employment, the government banned the donkey slaughter and exports of skins following a petition from concerned animal welfare organisations who perceived the trade as having negative effects on the livelihoods of donkey owners. Donkey skin trade is a new phenomenon in Zimbabwe. The growing export market for donkey skins has influenced a growing demand for the skins. There has not been an empirical study to investigate if donkey skin trade can be feasible in Zimbabwe. There was need to ascertain if donkeys skin trade was feasible in the Zimbabwean context. This study therefore aims at investigating the feasibility of donkey skin trade as a strategy to tap into the emerging donkey export market focusing on Zimbabwe.

1.4 Research objectives
The general objective of the study was to investigate the feasibility of donkey skin trade in Zimbabwe as a strategy to tap into the emerging donkey export market.

Specific objectives

a) To evaluate the perceptions of stakeholders on the donkey skins trade.
b) To investigate the effects of donkey skins trade on the livelihoods of rural donkey owners in Zimbabwe.
c) To identify the factors that affect the sustainability of the donkey skins trade in the Zimbabwean context.
d) To identify the factors associated with the increasing demand for donkey skins trade in the emerging export market.
1.5 Research questions
This study seeks to address the following research questions which are derived from the above research objectives

a. What perspectives regarding the donkey skins trade do donkey owners, animal welfare pressure groups and donkey abattoir owner have?
b. Does donkey skins trade enhance the livelihoods of rural donkey owners in Zimbabwe?
c. What factors determine the sustainability of donkey skins trade in the Zimbabwean context?
d. What are the factors influencing the increasing demand for donkey skins trade in the emerging export market?

1.6 Statement of hypothesis
Based on the objectives, the following hypotheses will be tested using logistic regression. These are:

**Hypothesis 1:**

\( H_0 \): Donkey skin trade does not increase the income of rural donkey owners in Zimbabwe.

\( H_1 \): Donkey skin trade increases the income of rural donkey owners in Zimbabwe.

**Hypothesis 2:**

\( H_0 \): There is no connection between the total number of donkeys owned and the willingness to trade

\( H_1 \): There is a connection between the total number of donkeys owned and the willingness to trade.

**Hypothesis 3:**

\( H_0 \): There is no association between location of donkey owner and the willingness to trade

\( H_1 \): There is association between location of donkey owner and the willingness to trade
1.6 Research assumptions

In pursuing this study, the researcher assumes the following:

a) The inclusion criteria of the sample are appropriate such that they assure that the participants have all encountered the same or similar phenomenon of the study.

b) That all respondents would be cooperative and provide reliable responses.

c) Those enough resources for literature review will be accessed.

d) That there are no major differences between the perceptions of donkey owners in different geographical locations that would make the results found ungeneralisable.

1.7 Justification of the research

According to International Organization for Animal Protection (OIPA) donkey slaughter for skins has drastically reduced the donkey population in China from an estimated 11 million in 1990 to an estimated 6 million in 2014 (OIPA, 2017). This has led to China targeting African countries for donkey skin trade. The growing cooperation between African governments and China has increased all trade to about 25% in 2016 from the Sub-Saharan African countries compared to just 2.3% in 1985 (OIPA, 2017). Donkey trade for skins and meat destined for the export market has been approved in some African countries like Kenya and yet it was banned in many others such as Niger, Burkina Faso and Botswana (The Donkey Sanctuary, 2017). While the creation of jobs, revenue generation from donkey skin exports and value addition to donkeys have been cited as major benefits from the trade, opposing sentiments consider the trade as having ripple effects on the livelihoods of people and animal welfare (Nsingo, 2017). The Department of Veterinary Services in Zimbabwe moved in to ban the exports of donkey skins guided by the pressure from the animal welfare pressure groups who lobbied against the trade. Thus, an abattoir that had been set up in Bulawayo was denied the license to slaughter donkeys. However, no real study has been cited which informed policy makers on the real threats or opportunities that would be faced by tapping into the donkey skins trade as strategy. This justifies the study as it will gather and evaluate the perceptions of various stakeholders with regards to donkey skin trade and offer a new insight into the issue
and evaluate whether the export would be beneficial to the owners or it would be mere unsustainable exploitation of animal resources and particularly donkeys.

1.8 Purpose of the study
The purpose of this study is to investigate the feasibility of donkey skin trade as a strategy to tap into the emerging donkey export market in the Zimbabwean context.

1.9 Significance of the study
a) To the donkey owner: The study will avail information which will guide donkey owners whether or not they should sell their donkeys in the donkey skins trade. The study will explore how livelihoods will be affected if donkeys were to be traded in the donkey skins market.

b) To the government: The results of this study will objectively inform the government on the feasibility of donkey trade and craft policies guided accordingly. Given that the denial of the license for the abattoir has not been based on previous studies, this study will seek to bring important contribution in decision making by relevant government ministries on whether to permanently ban the trade or to embrace the donkey skins export market.

c) To animal welfare pressure groups: The results of the study will present to the welfare groups an unbiased compliment of facts that will help them to mobilise their efforts towards a guided position for the benefits and interests of society. It will expose the various animal welfare concerns that may need to be addressed if donkey skins trade is to be accepted.

d) To the business community: The results of the study will inform the business community whether there is economic viability and sustainability in participating in the export market for donkey skins. The study will inform the business community interested in the trade about the issues to do with sustainability and viability or lack of these.
1.10 Definition of major terms

**Animal welfare:** According to the American Veterinary Medical Association (AVMA), animal welfare means how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behavior, and if it is not suffering from unpleasant states such as pain, fear, and distress. Good animal welfare requires disease prevention and veterinary treatment, appropriate shelter, management, nutrition, humane handling and humane slaughter (www.avma.org).

**Ban:** According to www.freedictionary.com it refers to the public proclamation or edict; a public order or notice, mandatory or prohibitory or a summon by public proclamation.

**Ejiao:** Ejiao is a hard gel made from donkey skins and can be dissolved in hot water or alcohol to be used in food or drink or it is used in beauty products such as face creams. Ejiao is believed to improve blood circulation so is used as a blood tonic by people with anaemia, low blood cell counts or reproductive problems (The Donkey Sanctuary, 2017).

**Sustainability:** relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged (www.merriam-webster.com/dictionary).

**Trade:** the business of buying and selling or bartering commodities (www.merriam-webster.com/dictionary)

1.14 Summary

This chapter revealed that donkey skin trade is a contentious issue as two opposing schools of thought perceive it differently. The critiques of the trade highlight issues to do with sustainability, animal welfare threats and negative impact on livelihoods. On the other had the protagonists claim that the donkey skins trade can present an opportunity to add value to donkeys, earn revenue and create job opportunities. The ensuing chapter will focus on the detailed literature review on how feasible tapping into the donkey skins export trade is for
Zimbabwe and will review literature relating to this. Case studies from other countries will also be explored.

The organisation of the research will be such that the next chapter will look at literature review and will be followed by Chapter 3 that will focus on the methodology. Chapter 4 on data presentation and discussion will follow and Chapter 5 which will be the final chapter that will focus on the conclusions and recommendations.
CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The growing demand for donkey skins for the production of ejiao, a Chinese health product, has stimulated interest in countries to tap into the export market. However, a number of government bans have been pronounced in certain African countries including Zimbabwe. This chapter will attempt to review literature surrounding the opportunities and threats that the trade poses. Some theories and models will be explored that will guide the research.

2.2 Livelihoods and donkey trade

A study by Swai and Bwanga (2008) revealed that donkeys are very important in both agro-pastoral and pastoral societies therefore practices that can improve the lives of donkeys enable better performance of donkeys. However, at times people tend to sell their livestock when markets are presented to them. The main reasons why people sell livestock as documented by Pavanello (2010) and summarized by Mwanyumba (2014) include growing financial pressures, food insecurity and frequent droughts. However, the trade in livestock may become indiscriminate causing owners to sell more animals regardless of productivity, age or sex and may impact on their drought power source and livelihoods in the long run.

Dorward et al. (2005) as summarized by Valette (2014) highlighted that livestock functions can broadly be categorized into six groups namely financial, buffering, savings, insurance, consumption and social integration. The financial function is based on the contributions of livestock to production or income. The financial contributions of working equids such as donkeys can both be direct and indirect. The direct contributions may come from transporting goods and people for a charge as well as agricultural work (Valette, 2014). According to the same classification by Dorward et al. (2015) indirect financial contributions are obtained through the transport of goods such as homemade goods and agricultural produce such as crops, grains, milk to markets. In terms of buffering, households may decide to invest in a new or additional working equine animal as an investment when income is available or production exceeds consumption (Valette, 2014).
Donkeys are important in cushioning communities against life threatening shortages such as water unavailability. In sub-Saharan Africa, the United Nations (UN) (2012), records that 783 million people do not have proper access to drinking water and water is unavailable to over 40% of the population. The role of donkeys in assisting communities to access water cannot be underestimated. George et al. (2015) cites a study of Indian slum settlements by Parikh et al. (2015) who concluded that the provision of water services increased education by 62% and income by 36% due to the emancipation of women from troubles associated with getting water. The authors claim that there is a link between basic resource availability, social development and the labor market. Thus, for donkey skin trade to happen it should not threaten the crucial role played by donkeys in helping communities in their daily lives.

However, previous studies by Harrison (2006) oppose this preservationist stance by the trade opponents as it revealed that increasing export activity can increase fall in poverty. This implies that a country that can unlock many export opportunities may create better lives for its people. In supporting this, Harrison (2006) further clarifies that poor farmers benefit from greater access to export markets if there are policies that can promote access to credit, technical know-how, and other complementary inputs.

2.3 Income generation through donkey use
Donkeys are used as drought power source. In rural communities people either hire their donkeys in return for money. Most people without donkeys find themselves seeking to pay for them to access donkey draught power (Fernando & Starkey, 2018). Valette (2014) and Nkala (2017) posit that over its lifetime, a donkey is able to earn the owner considerable amount of income if used and kept well. Donkeys are often used to transport water, firewood and maize to the grinding mills and through provision of transport services can generate income (Fernando & Starkey, 2018). Considering that most rural areas have poor road network, many people often find themselves requiring donkeys to transport people and goods thus creating opportunities for those owning donkeys to earn money (ibid). Valette (2014) indicates that a healthy and well-nourished equid has the potential of providing additional productivity which can augment income for its owners. This makes animal welfare considerations important since good animal welfare can unlock the full potential in a donkey.
for the benefit of the owners. Good animal welfare practices therefore become an economic necessity and humane treatment of the donkeys is important (Valette, 2014).

However, it has also been noted that not always do donkey owners earn income at every time that they use donkeys. Fernando and Starkey (2018) acknowledges that the use of donkeys in communities is a part of social network such that one who does not own a donkey can borrow from a neighbour and it is not possible to charge a neighbour for something as basic as fetching water. They further highlight that one who owns the donkey has the advantage of using the animals optimally.

2.4 Disagreeing perspectives on the donkey skin trade
The conflicting perspectives regarding the trade in donkey skins are similar to those identified by Forbes (2013) which related to the banning of ivory trade by the Convention on International Trade in Endangered Species of Flora and Fauna (CITES). These perspectives are preservationist and utilitarian. While preservationists do not approve trade in elephant ivory, and support the ban, those of the utilitarian viewpoint support sustainable trade in ivory and claim the ban is actually doing more harm than good (Forbes, 2013). These two viewpoints hold true in the donkeys’ skins trade. The preservationists can be identified as belonging to animal welfare pressure groups who maintains donkey skins trade can cause undesirable effects. On the other hand, the utilitarian viewpoint can be linked to the Chinese export market and the donkey abattoir owners who support the trade in donkey skins and regard the banning in Zimbabwe as a blow to the livelihoods of donkey farmers who were going to benefit from the trade.

2.4.1 Preservationist viewpoint
Supporters of the ban in donkey skin trade posit that the trade would fuel donkey thefts in communities (The Donkey Sanctuary, 2017). There are no movement permits that regulate the movement of donkeys in Zimbabwe unlike for other livestock such as cattle. The identification of donkeys is also not regulated by the anti-stock theft measures as no donkey brands are registered. Thus, it makes thefts of donkeys easy. The other concern is population decimation owing to the limited number of donkeys. For example in Zimbabwe the donkey population is 589 621 according to the FAOSTAT (2016). The preservationists also consider
the donkey skins trade as a direct threat to livelihoods as people are enticed to dispose of donkeys for a small price at the expense of the income earned from using the donkeys (Valette, 2014). Another concern that strongly comes from the supporters of the ban is that the donkey skins trade may lead to compromised animal welfare (The Donkey Sanctuary, 2017). Forbes (2013) cites Kaempfer and Lowenberg (1999) who identifies animal rights activists as people who see the killing of any animal as problematic thus often they become strong lobbyists for such bans. Sigauqwe (2017) and NSPCA (2016) report that some donkeys were brutally slaughtered including being bludgeoned with hammers in South Africa and the perpetrators who apparently were involved in illegal donkey skins trading were prosecuted as this had raised high concerns for the donkeys. Furthermore, some donkeys were being starved and with no water and some owners justified this ill-treatment saying they were only interested in the skins to export to China. This cruelty to animals promotes the anti-donkey skins trade campaign as animal welfare pressure groups perceive it as a huge threat.

2.4.2 The Utilitarian viewpoint and Economic Theory
The theory that helps to explain the phenomenon of trade bans is the Economic Theory which according to Kaempfer and Lowenberg (1999) predicts that when the sale of a valued commodity is prohibited, its price inevitably increases. They further cite Simmons and Kreuter (1989: pp 48) who illustrate that when a ban is effected, illegal trade happens which may lead to the shrinkage in the quantity of resources and eventually its disappearance. Based on that concept it would be expected that the ban in the donkey skins trade would lead to increased donkey prices and illegal donkey slaughter and skins trade in Zimbabwe.

On the contrary, the proponents of the donkey skins trade ban argued that it would cause prices of donkeys to drop thus becoming affordable for community members to replace a donkey cheaply when they lose one either through death or theft. This is supported by the observation that in Kenya, for example, donkey prices actually skyrocketed from $40 to between $90 and $130 in less than two years after trade in donkey skins had been effected (Nsingo, 2017). It would be expected that the donkey prices would reduce should the trade be banned.
From a utilitarian viewpoint, trade in a resource happens because people want to consume it and not just because the resource is available. It is the economic value of donkey skins that give rise to its trade rather than the availability of donkeys for the skins (Kaempfer and Lowenberg, 1999). There are many reasons put forward for promoting the donkey skins export market. Firstly, it is claimed that it will be a way through which the farmers would realise value from their old, unproductive donkeys or those that are blind and fractured whose contribution in terms of draught power is no longer existent. Instead of watching them to die, a farmer may find a market for such a donkey and get money for other pressing needs (The Standard, 2017). In embracing the emerging market for donkey skins trade, a donkey abattoir owner who was denied the license to slaughter donkeys in Zimbabwe was quoted in The Standard of 29 October as claiming that the trade will have more economic value as several government departments will generate revenue from it including the veterinary and health inspectors, Zimbabwe Revenue Authority and local councils. He also stated that the business would create jobs and other opportunities in terms of downstream socio-economic spinoffs that will result from the new nationwide breeding of donkeys. He further supported the trade by claiming that it will give donkey owners the incentive to look after their donkeys as they will now value them more. Since other forms of livestock such as cattle can also be slaughtered and often their hides are sold to tanners, he found no reason why animal welfare can be cited as a threat when it related to donkeys. Under a licensed abattoir, donkeys are slaughtered the same way as cattle. However, the issues of sustainability due to donkey numbers remain a major threat according to The Donkey Sanctuary (2017).

2.5 Trade ban and illegal trade
The banning of donkey skins trade by the many African government owing to pressure from animal welfare stakeholders agrees to the view by Hiatt and Sangchan (2013) who describes regulators actions as influenced by powerful stakeholders and peer agencies regarding the issues at hand and in this case the feasibility of the donkey skin trade. However, it is imperative that such trade bans be carefully considered so that they cannot deny communities of opportunities to freely exploit their animal resources as issues to do with sustainability should be considered.
Cole (2012) cites Cooney and Jepson (2006) who showed that imposing blanket bans on a species does not necessarily eliminate demand for that species in the international market (Cooney and Jepson 2006, 19). The assertion is premised on the fact that banning species trade consequently encourages illegal trade that results in higher prices of the desired species. There are cases which have revealed the impact of trade bans on the price and demand of the resource. The banning of ivory trade, rhino horn trade and the Wild Bird declaration are some of the bans that have been effected and whose impacts have been studied by previous researchers. Cole (2012) cites Rivalan (2007) whose study based on rhino horn trade ban showed the price increase of rhino horn by more than 400% within 2 years. Another case relates to the Wild Bird Declaration which according to Cole (2012) was an international blanket ban that actually led to the increase in the number of exports of the parrot Agapornis fischeri from Tanzania from around 11,000 in 1991 to about 95,000. There is a tendency that if trade is restricted in one country, it may lead to a substitution effect in a neighboring country. For example, the banning of donkey skin export by Botswana government may have created a business opportunity for Zimbabwe. According to Nsingo (2017), the donkey abattoir owner in Zimbabwe actually confirmed that he wanted to take advantage of the banning of donkey skins trade in Botswana to tap into the export market. According to Cole (2012) the fact that trade bans are not implemented in an equal fashion, neighboring countries with weaker governments and enforcement infrastructures are often the next port of call when a trade ban is imposed by a neighboring country.

From a utilitarian point of view, any attempt at eradicating the donkey skins trade from the world emerging market entirely cannot prosper in eliminating illegal slaughter and sell of donkey skins because according to Kaempfer and Lowenberg (1999), the supply will be met through illegal means. In the utilitarian thinking, it may be better to have a controlled, legal market in which trading can be monitored and financial gains can be used as a tangible benefit for community participation in conservation. Although Kaempfer and Lowenberg (1999) sentiments were focused on ivory trade, the underpinning economic theory and utilitarian thinking seem to apply in donkey skins trade based on what the proponents of the donkey skin trade advocate for.
Kaempfer and Lowenberg (1999) view consumptive utilization as both a rural development strategy as well as a commercial strategy for development in Africa. The human treatment of donkeys as well as respecting the right of people to control their own natural resources is fundamental. Santiapillai (2009), justifies the utilization of animal resources and describes African citizens as very poor thus their needs have to be satisfied first instead of placing animal welfare above that of humans. It can be construed in that context that those against the donkey skins trade ban feel that they is more that communities can accrue to support their livelihoods from the trade. According to these views, banning the donkey skin trade therefore becomes inconsiderate and inconsistent with poverty reduction efforts.

2.6 The welfare concerns surrounding the donkey skin trade

Bough (2011) claims that despite donkeys having been the beasts of burden for over 10,000 years of domestication, they have enjoyed a low status in human cultures. Thus, the welfare and treatment of donkeys has been found wanting in many circumstances. The situation is further compounded by the inferior status and ridicule given to donkeys when compared to other domestic animals and has worsened the situation (Bough, 2011; Gregory and Grandin, 2007).

It is important that the welfare of any donkey both during and at the end of its life is prioritised just like any other food-producing animal (Gregory and Grandin, 2007). According to Knowles and Gallagher (2016), the welfare of donkeys used to produce skins and meat is frequently compromised during sourcing, transportation and slaughter. There are numerous ways through which donkeys destined for China are sourced. According to The Donkey Sanctuary (2017), one of such ways is through thefts from legitimate owners who having understood the social and economic value of donkeys take care of their donkeys properly. In other instances, middlemen can buy donkeys from communities and then sell for illegal or legal slaughter. In so doing they make huge profits. Animal welfare is compromised as donkeys are stressed following separation from others whom they would have bonded with and gathered in unhabituated groups. This is against animal welfare hallmarks. According to the Farm Animal Welfare Council (1992) animals should enjoy five freedoms namely, freedom from hunger and thirst; freedom from discomfort, freedom from pain, injury and disease; freedom to express normal behavior; and freedom from fear and distress. Donkeys
will need to be handled, loaded, transported and unloaded in a manner that minimises risks to welfare and in accordance with the welfare standards (Northern Territory Government, 2016).

The manner in which donkeys are slaughtered is one area of concern for animal welfare organisations. The concerns raised by the organisations that object to donkey slaughter are similar to those sentiments expressed by many opponents of anthropocentrism. Wolf (2008) cites (Singer 1975; Fox 1978; Regan 1979; Routley & Routley 1979) who also raise dissatisfaction towards the inferior moral standing of other species and anthropocentrism. They argue that the value and morality of other species should not be the prerogative of human beings alone. The interests of human beings should not be supreme to the extent of excluding the interests of other species from moral consideration. The involvement of animal welfare pressure groups in enunciating the welfare concerns surrounding donkey skins trade may be an appreciation of this concept. Wolf (2008) goes further to cite (Naess 1973; Devall & Sessions 1985) who also criticize anthropocentrism for failing to recognize the intrinsic value of non-human life.

There are concerns regarding the sourcing of unfit donkeys. While the abattoir operators and those involved in the donkey trade believe that buying the old, blind fractured and unproductive donkeys is a way of value addition, welfare organisations perceive this as leading to increased suffering and delayed death. According to the Donkey Sanctuary (2017), such practices become a disincentive to owners and dealers. They cease to maintain donkeys with good health and welfare because there will be little positive economic reward in keeping donkeys in good body condition and free of disease. According to NSPCA SA (2016), there were reports of donkeys that were left to starve before slaughter as their skins were all that was perceived as valuable and the skin is available whatever the underlying condition of the donkey.

The NSPCA SA (2016) also argues that in South Africa transportation of donkeys destined for slaughter can be an area of welfare concern. This has been largely to the large number of donkeys that have been seen dying whilst on board with little or no consideration given to
their welfare and conditions during transport. Often, donkeys were not given the opportunity to rest, feed or drink (The Donkey Sanctuary, 2017).

Not all trade in animal can be concluded as detrimental. For instance, Mwanyumba (2014) cited that opportunities for sustainable production can arise through marketing of livestock and went further to postulate that marketing can serve as a stimulating factor to increase production as well as conserving indigenous species. Mwanyumba (2014) however, also conceded that the reasons for selling livestock are critical and if not well chosen it can be detrimental. For example he highlights that the selling of productive assets such as breeding or milking cows is likely to be detrimental to sustainability, production and productivity of the herd. Similarly, the disposal of donkeys may also be a blow to the livelihoods of rural communities who rely on them. The main reasons why people sell livestock have been reported by Pavanello (2010) and summarized by Mwanyumba (2014) as growing financial pressures, food insecurity and frequent droughts. Often, the trade in livestock becomes indiscriminate under these conditions pushing owners to sell more animals than before and regardless of productivity, age or sex.

Legislature in Zimbabwe regarding animal welfare is governed by the Prevention of Cruelty to Animals Act [Chapter 19:09]. Under this Act, it is an offence to cruelly beat, overload, or torture any animal. It is also an offence to do anything that causes unnecessary suffering to any animal. According to this Act, it is also an offence to use any animal which is so diseased or injured in such a physical condition that is unfit to do any work. However, the extent to which this Act is enforced need to be improved especially regarding donkey welfare. There seems to be a failure by the police and inspectors to enforce this law despite it being clear on the penalties to be levied against offenders which stipulates that:

“Anyone found guilty of such offences is liable to a fine not exceeding level five or to imprisonment for a period not exceeding six months or both such fine and imprisonment”. [Prevention of Cruelty to Animals Act [Chapter 19:09]

Regarding this issue of legislation, Tunisia has enacted laws to protect animals and show respect for their lives and as such decrees and decisions have been produced such as those
that stipulates some living conditions of the donkeys. According to Pearson et al. (1999), Tunisia has Article 94 of the penal code of decree of April 13th 1943 stipulating that, “He must keep and nurse the ploughing and draught animal”.

In Zimbabwe the Prevention to Cruelty Act does not emphasise on keeping and nursing working animals such as donkeys hence the reason why donkey owners think that certain fundamentals such as shelter are not necessary when it comes to donkeys. Legislation is therefore critical in donkey skins trade as issues such as transportation, handling and humane slaughter of donkeys become pertinent especially when dealing with such huge numbers of donkeys on a daily basis.

2.7 Traditional medicine and conservation

The World Health Organization (WHO) estimates that the majority of the world’s population depends primarily on animal and plant based medicines (Vats and Thomas, 2015). Wild plants and animals are a source of ingredients for traditional medicines as well as raw materials for the preparation of modern medicines and herbal concoctions (Alves & Rosa, 2005). Alves and Rosa (2005) further cites examples of animal components used in Chinese medicine to include macaque bezoar, seal penis, seahorse, deer musk, worms, snakes, caterpillar fungus, and cockroach. Others include rhino horn, pangolin and tiger bone although the sale and use of these products is illegal. As cited by Vats and Thomas (2015), China National Corporation of Traditional and Herbal Medicine in 1995 recognised more than 1500 animal species to be sources of traditional Chinese medicines. The increasing popularity of Chinese medicine is causing a reduction in the resources that it relies upon. Thus, sustainable use of plant and animal sources of medicine is key if the practice of using Chinese medicines is to be continued on an increasing scale (Butt, 2013). Costa-Neto (2005) posits that the appropriateness of traditional medicine based on animals cannot be denied as there is overwhelming evidence from pharmaceutical companies that they are indeed potent. There are a number of medicinal properties sourced from different animal products. Fresh manure of a dromedary (Camelus dromedaries) is used to ease arthritis while the fats of the lion (Panthera leo) and hyena (Crocuta crocuta) are used treat abdominal pains in Sudan. In Nigeria the tusks of hippo (Hippopotamus amphibious) are used for aphrodisiacs and ornamentals (Costa-Neto, 2005).
Over-exploitation of many animal species as sources of medicines for the traditional trade has led to depletion or endangering of animal populations hence the need to factor in sustainability as the guiding principle for biological conservation (Costa-Neto, 2005).

2.7.1 Ejiao Product
The phenomenon of using donkey skins as a source of medicinal products has become a growing business in China and has increased the demand for donkeys worldwide as China cannot sustain the industry without outsourcing. Donkey skins produce Ejiao or Donkey Hide gelatin. This product has a long history in China having been initially listed and classified as top grade herbs in China’s first Materia Medica compiled about 2,500 years ago (Chinese Herbs Healing, 2016). The main processing steps include boiling and concentrating the donkey hide. The hydrolysis of gelatin gets a variety of amino acids, including lysine, arginine, histidine, cystine, tryptophan, hydroxyproline, aspartic acid, threonine acid, serine, glutamic acid, proline, glycine and alanine (Chinese Herbs Healing, 2016). Ejiao is claimed to have desirable life prolonging effects, causing increased sex drive and maintaining beauty (Knowles, 2016). Chinese Herbs Healing (2016) also claim that ejiao enriches blood and is indicated in hemopenia, consumptive hemoptysis, hematemesis, hematuria, bleeding during pregnancy as well as sleeplessness.

2.7.2 Donkey meat and milk
A lot of communities consider the consumption of donkey meat and milk as taboo. However, studies have actually revealed that both the donkey meat and milk have certain characteristics that make them better options. Donkey meat has been documented to be a good alternative in red meat consumption because of its low fat, low cholesterol content, a favourable fatty acid profile and good iron content making donkeys a good source of meat (Polidori and Vincenzetti, 2016). Polidori and Vincenzetti (2016) also observe that in Lesotho donkey meat is consumed. Literature also revealed that donkey milk had peculiar medical properties. The belief that donkey milk was not safe for human consumption is regarded as not true by Giribaldi et al. (2017) and El-Agamy (2007) who observe that the consumption of donkey milk is recommended for feeding children who are allergic to cow milk because of the peculiar biochemical composition. They indicated that there was increasing demand for donkey milk
in Italy and systems were put in place to ensure advanced and reliable processing from donkey milk. According to Jirillo and Magrone (2014) donkey milk is also claimed to have immunomodulatory, anti-inflammatory and ant-hypertensive qualities. The revelation from these highlighted studies indicates that donkey milk and meat is actually safe to consume despite the taboo tagged on these products in Zimbabwean culture.

Dai et al. (2016) affirms that across Europe there is a constant change in the purpose of keeping donkeys in Europe this has shifted from donkeys being kept only as working animals to them also being considered as sources of milk and meat. They further note that elsewhere donkeys are kept as pets, or used for leisure activities, therapy programs, or milk and meat production.

2.8 Donkey breeding as a way of replenishing donkey population

Animal breeding can be one way of increasing the numbers of a particular species. Breeding has been done successfully in domestic production animals such as cattle. The explosion in demand for meat and skins has been argued that it can lead to decimation of donkey populations within a few decades according to Donkeys for Africa (2011). The implications, as identified by Valette (2015), are that communities which rely on these hardworking animals for survival will suffer following the dwindling in donkey numbers. The fear for decimation of donkey population brings in the consideration to attempt at breeding donkeys commercially in order to replenish the donkey numbers. However, this has been challenged by other authors who highlighted that breeding of donkeys will do more harm than good. According to a study by Perez-Marin (2010), the average gestation length of a donkey was found to be between 347 to 378 days. Pugh (2002) cites Ferlding (1988) who gave a more or less gestation length of 372–374 days. Pugh (2002) indicates that the puberty in donkeys usually attained in 1 to 2 years.

Donkeys for Africa (2017) cites Mayers (2017) who pointed out that trying to grow the donkey population had the potential of inducing stress factors such as food or water scarcity and creating unhabituated groups of donkeys. He further adds that these stressors may cause donkeys to stop eating resulting in a condition called hyperlipemia which may lead to high
mortality rates of 60-90%. Stress induced abortion was also identified as a drawback under intensive donkey breeding.

Burden et al. (2011) also acknowledge that hyperlipemia, being complex metabolic disturbance, can result from many stressors that make a donkey become dull and they recommend that lessening stress and maintenance of appetite is important. A donkey with no appetite needs to be assisted by nasogastric tubing, intravenous fluid administration, or total parenteral nutrition so that a positive energy balance is maintained until the donkey can feed voluntarily (Durman & Thiemann, 2015).

2.9 Sustainable exploitation of donkeys

The exploitation of donkeys for their skins should also consider sustainability so that efforts can be put to avoid the depletion of their populations. Glowka et al. (1994), summarises the International Union for Conservation of Nature (IUCN) draft Guidelines which considers a species to be sustainable if it does not reduce the potential for future use or impair its long-term viability. It also highlights that sustainability is the compatibility with maintenance of the long-term viability of supporting and dependent ecosystems

Knowles (2016) describes the Ejiao business in China as a multibillion-dollar industry which slaughters around four million donkeys annually of which 2.2 million of these are imported into China from various parts of the world. The increasing demand for Ejiao has been influenced by an affluent new middle class in China. As Knowles (2016) observes, the value of a donkey within China has increased from 500 Yuan (USD$ 78.70) a decade ago to 2,600 Yuan (US$ 409.30), as customers pay up to 2,000 Yuan (US$314.84) a month for a preparation of Ejiao The business is perceived as having a devastating effect on donkey numbers worldwide (Knowles, 2016).

Thus, from the IUCN guidelines above, it can be inferred that the population of donkeys and its dynamics become key in sustaining the donkey skin trade. For such a trade to be feasible there has to be an understanding of current donkey populations and a satisfactory projected increase in donkey numbers in Zimbabwe.
Costa-Neto (2005) cites Johannes (1993) who posits that zootherapy should be viewed within its cultural dimension by factoring in the way people perceive, use, allocate, transfer, and manage their natural resources. He argues that the fact that people have been using animals for a long time will make efforts to suppress their use fail to save the animals from extinction hence the need to consider importance of conservation. In complementing conservation, compounds that have similar pharmacological action which can be produced from artificial substitutes in the laboratories would displace human dependency on animal medicines (Oldfield 1989; Costa-Neto 2005). What it means is that in considering the ejiao production from donkey skins, other artificial substitutes should be developed that can lessen the demand for donkey skins as sources of ejiao. In so doing, donkeys may be preserved for other household uses that may generate income on a daily basis.

2.10 Previous Studies

There is need to look at other countries and evaluate how the donkey skin trade has been handled and to assess what benefits or challenges the trade has brought. This is against the background that not all countries have banned the trade yet most countries have banned it. Dodd and Cattaneo (2006) posit that a household’s income is derived from the earnings of several factors and not just a single one. This may imply that in evaluating the potential of income generation that may be derived from donkey skins trade, it is imperative to also understand that the households may also have other ways of generating income.

In a study done in Nigeria, Hassan et al. (2011) concluded that increasing the number of working days with donkeys by one day was estimated to significantly decrease the weekly income from donkeys by 15%. This study becomes important in the Zimbabwean context in that if donkey populations dwindle then pressure will be put on the remaining donkeys at a household to do the extra work. The few donkeys become overwhelmed with work thus their output becomes compromised much to the detriment of the owner’s income.

In the same study, Hassan et al. (2011) noted that as the number of donkeys increase by one donkey it significantly increased the weekly income of the farmers by 62%. This observation agrees with that put forward by the Donkey Sanctuary (2017) which posits that donkey skin trade has a potential of negatively impacting on livelihoods. These views may be translated to
mean that the more the number of donkeys a farmer has, the more income they realise from utilising them. The study by Hassan is also important for Zimbabwe in that any programme or policy that may lead to reduced number of donkeys per household has a capacity to reduce the income of families. Hassan et al (2011) conclude that donkeys have a great role in stimulating the socio-economic well-being of smallholder farmers and need to be promoted.

There is general observation by Valette (2014) that the potential of generation of savings can arise from working animals such as donkeys through the efficient transport of water, animal feed, agricultural produce, household goods and people for the benefit of the household. Because of their resilience, donkeys are a valuable asset during times of drought and are often used to transport water. There are also numerous social benefits derived from donkeys which include enabling poor households to fulfill social obligations, tightening links in the communities for example though borrowing, enabling owners and their families to acquire a more important status in the community. Donkeys provide ambulance and school transport services for the sick and children and allow equine owners to play a greater role in their community (Valette, 2014). Valette (2014) asserts that donkeys should be considered as livestock assets which should be offered great consideration in government policies and programmes. FAO (2014) also agrees that working animals such as donkeys are often ignored in national agricultural and rural-transport strategies and policies. The failure to recognise the significance of donkeys has led to general lack of prioritization during animal health interventions, research programmes and extension activities (FAO, 2014).

The Donkey Sanctuary (2017) in its report entitled “Under the Skin” stated that the rapidly emerging market for production donkeys has seen many individuals profit from the sale or theft of donkey in the countries where this trade has been happening. However, while many people may have genuinely benefited from this new market there is need to educate farmers on the potential longer-term, devastating effects of this market on donkey prices and sustainable donkey populations (Donkey Sanctuary, 2017). There is unprecedented donkey population decimation as a result of the trade and the risk of losing capacity to produce need to be taken cognizant of. The Donkey Sanctuary claim has been echoed by Dennis (2017)
who agreed that donkey prices may skyrocket to the extent that many people will not afford to replace them.

Kenya has allowed the slaughter of donkeys for meat and skins export and has become the latest entrant from Africa (Chebet, 2017). Kenya approved three Chines-owned donkey export slaughterhouses that are processing hundreds of donkeys per day (Masinde, 2017). According to Kenya National Bureau of Statistics, in 2009 Kenya had 1.8 million donkeys and because there is no commercial donkey breeding programmes, the donkey population has dramatically reduced to less than 1.5 million (Chebet, 2017). As observed by Masinde (2017), in less than three years the price of donkeys in Kenya increased from $40 to between $90 and $130 (Masinde, 2017). Thus, it has led to ordinary people failing to afford a donkey and impacting on their livelihoods. In addition to that, the donkey trade has been associated with increased theft of donkeys for slaughter and jeopardizing people’s livelihoods. Quite critical are the findings to the Zimbabwean context since due diligence will need to be done such that the Zimbabwean donkey farmers who rely on the donkeys will not be short-changed in the event that such trade is allowed to take place.

A study in Kenya has estimated that the net economic value of a working equid can reach up to USD$2272 per annum and in Ethiopia the net incomes averaged USD$330 per working donkey per annum. (Valette, 2015). The Donkey Sanctuary (2017) also agrees with Valette (2014) that rural communities may become impoverished as a result of selling donkeys to meet the Chinese demand for donkey skins (The Donkey Sanctuary, 2017). The findings of the study in Kenya are important to this current study which seeks to find out if donkey skins trade can be feasible in the Zimbabwean context as it informs policy makers to consider the potential economic value that can accrue from the use of donkeys over many years of providing help at household level instead of focusing on short-term gains through donkey sales. As highlighted by Valette (2014), the value of a working donkey cannot be solely reflected in its monetary value.

Botswana is one of the Zimbabwean neighbours and has tapped into the Chinese-driven donkey export market before. It issued export permits in 2016 for trading in donkey meat and
hides to the Asian market with the hope of creating an economic opportunity for local donkey farmers. According to Pinielo (2017), a feasibility study had been done in 2002 on the possibility of exporting donkey meat to Europe. This study then formed the basis for allowing the export to China. Botswana had also identified other lucrative markets for donkey meat such as Denmark, Germany and France and actually encouraged local farmers to rear donkeys for export. However, despite the potential of revenue generation to Botswana, the government had to suspend issuance of all exports licenses after observing that the trade threatened the survival of the local donkey farming communities (Pinielo, 2017). The donkey farmers welcomed the suspension since they felt that the mass killings of the donkeys threatened their livelihoods by wiping out donkeys which they heavily relied on. Pinielo (2017) also documents that previous research conducted in Botswana revealed that Ejiao, a product made from donkey hides, sold for up to US$403.70 per kilogramme (equivalent to BWP 3878) yet Chinese companies had set up in Botswana to buy donkeys at around US$ 57.26 per donkey (equivalent to BWP 550). If Botswana was to continue trading donkeys at such a rate, it was going to threaten farmers as they would be left with no draught power to work arable land. The importance of the Botswana case study is that it forms a basis for interrogating whether or not the donkey skins trade may indeed form an economic opportunity for Zimbabwe.

2.1.1 Theoretical framework

2.11.1 The sustainable livelihood framework

The emerging export market for donkey skins has both the potential to usher in improved livelihoods to donkey owners yet it also harbors the likely impact of destroying the same livelihoods. This study will be underpinned on the sustainable livelihood approach (SLA). Morse and McNamara (2013) pointed out that that the SLA is founded upon the principle that intervention must be based upon an appreciation of what underpins livelihoods. If the intended value addition through donkey trade in Zimbabwe is aiming at addressing poverty then it should not be narrow in perspective but should be all embracing. Morse and McNamara (2013) cited Krantz (2001) who posits that poverty is not only about monetary income but has ties with health and education as well as to the less tangible entities such as a sense of powerlessness. If donkey slaughter and export is allowed in Zimbabwe, it may
succeed in boosting the income of some people but this might be at the expense of others thus making the venture a short-lived boost.

According to Kanji and Barrientos (2002), this approach gives an analysis of trade and poverty and is complementary to the McCulloch et al (2001) framework. The framework compounds socio-economic perspectives of poverty and broadens the concept to include not only consumption and income measures but vulnerability, insecurity, isolation and powerlessness (Kanji and Barrientos (2002). Thus, the essence of the livelihoods approach specifically considers people’s capabilities and social assets and not to only material assets. Kanji and Barrientos (2002) further argues that it is firstly important to assess people’s assets (broadly defined) and their vulnerability to poverty in the face of different types of shocks. This would allow consideration of the risks and opportunities presented by, for example, establishing a donkey abattoir and trade donkey meat and skins for export. In addition, analysis of institutions and processes conducive to participation in the market can assist with the identification of market and non-market factors which impact on poverty (Kanji and Barrientos, 2002).

The SLA considers a broader perspective on defining what a positive impact or outcome is owing to trade reforms other than just an increase in income. Inherently, according to Kanji and Barrientos (2002), this would include (non-income) outcomes such as reduced vulnerability, food security and sustainable natural resource use.

The aspect of sustainability is core in evaluating the feasibility of donkey skin trade for export from Zimbabwe. According to Greenwood (2001), attempts have been made to broaden the concepts of economic growth and development by considering the natural environment, the economy, and society as inextricably interrelated. Greenwood (2001) further cites the definition of sustainable development by the United Nations’ Bruntland Commission which states that it is the fulfillment of the needs of the present without compromising the ability of future generations to meet their own needs. Greenwood (2001) also cites Harris (2000: 5-6) who defined economically, environmentally and socially sustainable systems as follows:
“An economically sustainable system must be able to produce goods and services on a continuing basis, to maintain manageable levels of government and external debt, and to avoid extreme sectoral imbalances which damage agricultural or industrial production. An environmentally sustainable system must maintain a stable resource base, avoiding over-exploitation of renewable resource systems or environmental sink functions, and depleting nonrenewable resources only to the extent that investment is made in adequate substitutes. This includes maintenance of biodiversity, atmospheric stability, and other ecosystem functions not ordinarily classed as economic resources. A socially sustainable system must achieve distributional equity, adequate provision of social services including health and education, gender equity, and political accountability and participation”. [Harris, 2000 pp. 5-6].

Similarly, IMM (2008) considers the Sustainable Livelihoods Approach (SLA) as an important approach that evolved in the late 1980s with the aim to enhance advancement towards elimination of poverty. This approach focuses its attention on the livelihoods of people and defines livelihoods broadly to include all the various fundamentals that people utilise or are influenced by in generating a means of living for them and their families (IMM, 2008). The definition concedes that a livelihood is not just about income-generating. A more concise definition by Chambers and Conway (1992) qualifies sustainable livelihood as that which can cope with and recover from stress and shocks, maintain and enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels in the long and short term (Chambers & Conway, 1992).

Greenwood (2001) goes further to assert that when political accountability collides with the preservation of atmospheric stability conflict arises and cited developing countries where providing adequate food and water to everyone caused damage to the ecosystem. In summing up, Greenwood (2001) cites Howarth and Norgaard 1993, Norgaard 1990) who observed that sustainability was an extremely normative concept because it does not automatically resolve these trade-offs in the way that the neoclassical economic model does. Thus, economists have been uncomfortable with the term sustainability.
2.11.2 The Four Capitals Model of sustainability

For any development to be sustainable, the human well-being is maximized in the present but in doing so, it should not lead to the ultimate decline in the well-being of future generations through the destruction or depletion of environmental resources (Ekins et al., 2008). Also, according to Ekins et al. (2008) economic development tends to maximize wealth at the expense of other assets such as human health, clean air, social networks and biological diversity. This leads to negative impacts on the welfare of humanity in the long-term.

The Four Capital Model of sustainability posits that there are four capitals that make a society sustainable and without maintaining the balance among these four capitals sustainability does not materialize. The concept of ‘capital’ used in the model has been derived from economics.

The four capital stocks according to Ekins et al. (2008) are grouped as manufactured capital, natural capital, human capital and social capital. The manufactured capital emphasises on infrastructure while the natural capital considers the natural resources. The human capital looks at the well-being, health and productive potential of individuals. The human well-being at the societal level is considered under the social capital. According to Ekins et al. (2003), other types of capitals that include financial capital have been put forward by other scholars. However, in their view, the financial capital may be seen as type of social capital. Development takes place through the services and outputs accruing from these four types of capital and is therefore assumed to be sustainable if these capital stocks or assets are maintained or increase over time (Ekins & Medhurst, 2003).

In order to create and maintain the sustainability in the society, the four capitals must be balanced in that society. If donkey trade is to happen in Zimbabwe and focus is only on the financial gains while ignoring the other capitals, the donkey trade may not be sustainable as it will leave communities poor. The need to evaluate the trade-offs that may exist with introduction or banning of a donkey abattoir in my opinion becomes critical and should therefore speak to the aspect of sustainability since donkey numbers in Zimbabwe are limited.
2.12 The conceptual framework

From Figure 2.1 above the link between the dependent variable and the independent variable as well as the moderating variable is shown in a conceptual framework. Donkey skin trade as a dependent variable is dependent on the need by owners to improve household income, donkey populations and owner willingness. If the people do not need income from the trade, they will not participate in the trade. This will then suffocate the supply chain making the
country fail to tap into the donkey skin export market. It is also imminent that the donkey owners may want to compare the benefits of selling off donkeys in the short term with the income accrued through donkey use.

The donkey skins trade is also dependent on the population of donkeys that is available in a country (The Donkey Sanctuary, 2017). The trade has to be sustainable hence if there are few numbers of donkeys and given the annual slaughter targets, the populations can be decimated. For example, in Zimbabwe the banned abattoir projected a daily slaughter capacity of 70 donkeys (Nsingo, 2017). This is means almost 25 000 donkeys will be slaughtered annually. It will therefore require that donkey numbers be high enough and also for them to keep increasing. The element of coming up with breeding programmes need to be underscored.

The moderating variable is the stakeholder agreement. Apart from the donkey owners, other stakeholders include the government and the animal welfare organisations. The government has the authority to pronounce a trade ban. On the other hand the animal welfare groups may view the donkey skin trade as potentially harmful to the welfare of donkeys as they become worried with how the donkeys will be transported, fed, kept and slaughtered and see to it that the five freedoms of animal welfare are catered for before trade can be accepted (Valette, 2014). Thus for Zimbabwe to tap into the donkey skin export market, these stakeholders need to be convinced that donkey skins trade is an opportunity and not a threat.

2.13 Summary
This chapter sought to review literature relating to donkey skins trade and its feasibility in the Zimbabwean context. Previous studies in other countries have been cited which are critical to this research as their findings opened many areas that need to be considered for the trade to be feasible. Two theoretical frameworks have been discussed which underpin this study and these are the Sustainable Livelihoods Approach (SLA) and the Four Capital Model of Sustainability. The chapter ends with a conceptual framework whose variables are significant in pursuing and guiding this study.
CHAPTER 3: METHODOLOGY

3.1 Introduction
This chapter highlighted and put justification to the research method and instruments selected. It revealed the target population, sampling technique and the procedures that were followed. The chapter also discussed the data collection procedure, requisite data analysis tools as well as the methods.

The focus of the study was to investigate the feasibility of donkey skin trade as a strategy to tap into the emerging donkey export market for Zimbabwe. In order to gain the understanding, donkey owners, animal welfare organisations, and business people in the abattoir industry in Zimbabwe were selected for this study.

Some of the questions asked to the donkey owners related to their willingness to sell their donkey to the markets, their perceptions on the ban on the donkey skin export as well as the effects that the donkey skins trade have on their livelihoods as rural donkey owners in Zimbabwe. Animal welfare organisations were also interviewed to get their insight into the feasibility of donkey skins trade with particular focus on how impactful it was on the welfare of donkeys. The donkey abattoir owner was also interviewed to obtain the business perspectives about the donkey skins trade and how it was supposed to benefit communities. According to Leedy (1997) research assists in answering a question, resolving a problem or gaining greater understanding of a phenomenon and it attempts to do so systematically using data. Kwesu et al. (2002) also highlight that it is imperative that research methodology should give a rich description of all the activities done during the course of the research.

In order to address the research objectives fully, an outline of the research methodology as guided by the research onion (Saunders et al., 2009) is given in this chapter and begins with the research philosophy.

3.2 Research Philosophy and Methodology Used
For the purpose of this study the research process onion in Figure 3.1 below was adapted from Saunders, Lewis, Thornhill (2003:127) and Saunders and Lewis (2012).
3.2.1 Philosophy

According to Burke (2007), philosophy can be defined as the questioning of basic fundamental concepts with the need to embrace a meaningful understanding of a particular field. According to Saunders et al. (2009), the research philosophy that a researcher adopts has important assumptions about the way in which that researcher views the world. Saunders et al. (2009) further posits that it is these assumptions that underpin the research strategy and the methods chosen as part of that strategy.

This study was a mixed methods research and followed a pragmatic philosophy. According to Creswell (2003) pragmatism is not confined to any one system of philosophy and reality. Creswell (2003) agrees with Cherryholmes (1992) that in mixed method research, the researcher employs both quantitative and qualitative assumptions and has the freedom to choose the methods, techniques and procedures of the research. However the choice must be able to achieve the needs and purposes of the researcher. The use of both quantitative and
qualitative data by investigators provides the best way to understand a research problem (Creswell, 2003). In this study the pragmatism was necessary because the research problem needed both the quantitative data that came through the use of a questionnaire administered to donkey owners and qualitative data from interviews. The questionnaire that was used contained both observable and subjective meanings and integration of different perspectives were crucial in data interpretation as highlighted by Saunders et al. (2009). Qualitative data was derived from the in-depth interviews done with animal welfare organisations, and the donkey abattoir owner. The qualitative data sources comprised small groups of people and the questions asked were only relevant to each respective group yet managed to interrogate the same issue of whether donkey skins trade could be feasible in the Zimbabwean context. Subscribing to only one way would have missed pertinent information. Collection of information from the different stakeholders was necessary in order to gain a multi-faceted perspective into the area under study. In this study, it was critical to have donkey owners, animal welfare organisations and the donkey abattoir owner responding to some set of questions so that their perceptions could all be understood as the feasibility of donkey skins trade in Zimbabwe was being interrogated. These three groups of respondents constituted, in the researcher’s opinion, important stakeholders in the donkey skins trade discussion.

3.2.2 Research approach

Creswell (2003) identifies three research approaches namely qualitative, quantitative and mixed approaches. According to Creswell (2003) a qualitative approach is one in which the researcher makes knowledge claims based on the multiple meanings of individual experiences. A quantitative approach is one in which the investigator primarily uses positivist claims for developing knowledge and employs strategies that collects data on predetermined instruments that yield statistical data (Creswell, 2003).

However, Saunders et al. (2009) classifies these approaches into two broad groups namely deductive and inductive. According to Saunders et al. (2009), deduction possesses several important characteristics. It first seeks to explain the causal relationships between variables. A hypothesis is then developed which is tested. Deductive approach dictates that the researcher be independent of what is being observed (Saunders et al., 2009).
Deductive approach involves the development of a theory which is subjected to a rigorous test (Saunders et al., 2009). Hussey and Hussey (1997) posit that a deductive approach is suitable for scientific research, in which a researcher develops a hypothesis, tests it and examines it to establish a theory. Another critical aspect of deductive approach as pointed out by Saunders et al. (2009) is that there is need for concepts to be operationalized in a manner that quantitatively measure of fact. However, the deductive approach has been criticised for its inclination towards the construction of a rigid methodology which does not permit alternative explanations of what is going on (Saunders et al., 2009).

The second approach as described by Saunders et al. (2009) is the inductive approach. This approach is theory building in nature. According to Flach and Kakas (2000), it is the results of the analysis that would formulate theory after beginning with observations that were specific and limited in scope. Saunders et al. (2009) concur with Flach and Kakas (2000) and state that inductive approach generates data and analyses it to get a reflection upon what theoretical themes the data may be suggesting. Unlike the deductive approach, inductive approach is particularly concerned with the context in which events take place and is more appropriate for a small sample of subjects than the deductive approach which suits well for a larger sample. Researchers applying this approach are therefore more inclined to working with qualitative data (Saunders et al., 2009).

Other scholars highlight that apart from the inductive and deductive approaches, a third approach is called abductive approach (Bryman 2016, Collis and Hussey 2009, Creswell 2014, Flach and Kakas 2000, Mantere and Ketokivi 2013). Abduction involves the interplay of observation and theory during the research process and is an approach to research involving inference to the best explanation response to an observed anomaly (Rose et al., 2015).

Some components of this study were better suited to the deductive approach since quantitative data was obtained and in getting some of the data the researcher was independent of what was being researched as stated by Saunders et al. (2009). On the other hand, some components were better covered inductively. Obtaining quantitative data alone was not
sufficient for this study as the need to get the qualitative data from other stakeholders namely animal welfare organisations and abattoir owner was critical. In doing so, an inductive approach was employed. Since these two groups of respondents were few it was not possible to utilise qualitative means. The appropriateness of the inductive approach was justified by the fact that the research focused on topic that is new and had little existing literature. The researcher also recognised the assertion by Saunders et al. (2009) who stated that gaining an understanding of the meanings humans attached to the events is important. For the purposes of this research, it was also pertinent to get information through qualitative means from these other groups of people on the issue of donkey skins trade feasibility in Zimbabwe.

Given the nature of the research objectives, the overall approach employed in this current study was the abductive approach that had both the inductive and deductive approaches. According to Teddlie and Tashakkori (2009) abductive approach is such that both qualitative and quantitative approaches to data gathering, analysis, interpretation, and presentation are used. The assertion by Friedrichs and Kratochwil (2009) that abductive research can explain, develop or change the theoretical framework before, during or after the research process made it more applicable in this study instead of just adopting either inductive or deductive reasoning.

Creswell (2003) defines a mixed methods approach as one in which the researcher dwells on pragmatic grounds and focuses on the problem while collecting data either simultaneously or sequentially in a bid to fully understand the research problem. According to Saunders et al. (2009), it is possible to perfectly combine deduction and induction within the same piece of research and this has many advantages. It was necessary to apply both inductive and deductive approaches in the research because triangulation helped in interrogating the research problem through both qualitative data collected through use of semi-structured interviews for animal welfare organisations and abattoir owner as well as quantitative data obtained by utilisation of questionnaire administered to donkey owners. The combination of the inductive and deductive approaches provided a more far-reaching understanding of the research problem than either approach alone (Greene, 2007).
3.2.3 Research design

Saunders et al. (2009) describes a research design as the general plan of how a researcher will go about answering their research question(s). This description is supported by Leedy (1997) who posits that a research design is a plan which guides data collection and analysis of a study.

In this present study, the researcher obtained and described the views of the respondents regarding the feasibility of adopting donkey skins trade as an export opportunity in Zimbabwe. The structure of the research problem, the research objectives and the questions and the complexity of each of these influenced a purposeful research design in order to fulfill the aim of the study. The use of the multiple methods research design was therefore deemed relevant to conduct the research.

Saunders et al. (2009) identify three main research designs namely exploratory, descriptive and explanatory. Saunders et al. (2009) cites Robson (2002:59) who stated that an exploratory study is an important way of finding out “what is happening; to seek new insights; to ask questions and to assess phenomena in a new light”. The author goes further and describes exploratory design as particularly useful if a researcher wishes to clarify their understanding of a problem in instances where one is not sure about the precise nature of the problem. Thus, the choice of the exploratory design was justified by the fact that this research delved into a new area of study that sought to explore the donkey skins trade and its feasibility in Zimbabwe. The flexibility and adaptability housed in the exploratory design was an advantage to the researcher as new insights into this area of study kept coming that demanded willingness to change direction by the researcher. This phenomenon resonates with that which Saunders et al. (2009) posits.

The study also had a component of descriptive research design and as cited by Saunders et al. (2009), Robson (2002:59) identifies the object of descriptive research as “to portray an accurate profile of persons, events or situations”. Polit and Beck (2004) suggests that descriptive design is appropriate when a researcher seeks high degree of representativeness and easiness to obtain the participants’ opinion. However, descriptive alone could not be
sufficient without going further to draw conclusions from the data being described (Saunders et al., 2009). Saunders et al. (2009) further underscores the need for data evaluation and idea synthesis instead of ending at descriptive alone culminating in descripto-explanatory study. Hence, in the current research, descriptive became a precursor to the explanations given to certain trends in the data analysed to give a descripto-explanatory design.

Thus, overall, the research design for the study followed an exploratory study that was complemented with descripto-explanatory features. While the exploratory element of the research sought to clarify their understanding of the problem that pertained to whether donkey skins trade could be adopted as a strategy to tap into the emerging export market or not, the descripto-explanatory described and attached explanations to certain features from the qualitative and quantitative data.

3.2.4 Research strategy

Saunders et al. (2009) define research strategy as the tool or tools the researcher employs for addressing the research question and go further to identify many research strategies which include experiment, case study, survey, action research, grounded theory, ethnography and archival research. This research was based on case study as a strategy. The current study took Zimbabwe as a case regarding the donkey skins trade and singled it out from the rest of the other countries that may or may not have been involved in the donkey skins trade. As stated by Simons (2009), the purpose of using a case study is to research the uniqueness of the single case chosen and understand the peculiarity of that one case. In that regards, the researcher sought to understand if Zimbabwe as a country could be able to tap into this donkey skin trade. Yin (1994) justifies the applicability of case studies not only in exploratory studies but in descriptive and explanatory studies. This also suited this study as it had all the components of the three namely descriptive, exploratory and explanatory.

The appropriateness of the case study as a research strategy was attributable to it being able to provide an in-depth account of experiences, expectations and perceptions of donkey owners, animal welfare organisations and the business community represented by the donkey abattoir owner regarding the feasibility of donkey skins trade in the Zimbabwean context. Simons (2009) views a case study as an in-depth exploration from multiple perspectives of
the complexity and distinctiveness of a particular project or policy as it occurs in real life. Yin (1994) considers case studies as helpful in gaining knowledge about phenomenon that are related to individuals, groups, organizations among others.

The use of multiple sources of data was done to triangulate in order to ensure that the data provided much reliable information. Hence, questionnaire and interviews were done in order to triangulate the qualitative and quantitative data. An understanding of the feasibility of donkey skins trade in Zimbabwean context was the overall aim of the research. Hence, a case study became the strategy owing to the specificity that it had on Zimbabwe as a country. Other countries had banned the donkey skin trade citing various reasons which may or may not have been applicable to the Zimbabwean context. In the researcher’s opinion, individual countries are peculiar in the way they interpret business opportunities such as export markets or animal welfare due to cultural and geographical differences. Thus, taking Zimbabwe as a case study in this research sought to give home grown propositions and recommendations borne out of interrogating the donkey skin trade in the country itself rather than from generalised extrapolations from other countries.

To further classify the type of case study, the suggestion by Saunders et al (2009:147) was sought which stated that

“Even though you are researching and are concerned with a single organisation as a whole, if you wish to examine also a number of logical sub-units within the organisation, perhaps departments or work groups, then your case will inevitably involve more than one unit of analysis. Whatever way you select these units, this would be called an embedded case study”. [Saunders et al., 2009:147]

The fact that Zimbabwe was considered as a case study and various sub-units of analysis identified qualified the study to become an embedded case study. Three units of analysis that were chosen were the donkey owners, the animal welfare organisations and the donkey abattoir owner.
The case study approach enabled the researcher to use multiple sources of data collection techniques. In this research in-depth interviews and questionnaires were used as the key methods while documentation assisted in triangulation.

### 3.3 Research Method

#### 3.3.1 Sampling

Scott and Morrison (2007) describe sampling as the selection of a subset of persons or things from a larger population in order to gain a representation of a particular population since it would be impracticable for one to survey the entire population due to budget and time constraints (Sunders, 2009; Sekaran 2010). Sampling helps overcome these challenges by using a representative of the population. According to Bryman (2016), it is essential that the unit of analysis be defined as it determines the boundaries within which the research is done whilst guiding the process of picking or sampling the study cases.

#### 3.3.2 Unit of analysis

In this study the unit of analysis was defined by the researcher as "The Donkey Stakeholders". Due to the multi-faceted nature of the donkey stakeholdership, it was necessary to identify the subsidiary units of analysis which Easterby-Smith et al. (2002) refer to as embedded cases. In this study three of these were chosen namely the donkey owners, the animal welfare organisations and the donkey abattoir owner. These three formed the basis of the sample about which data was collected and analyzed (Collis & Hussey 2009).

#### 3.3.3 Population

According to Cooper and Schindler (2014) when conducting research, the first step is to define the population to be studied in terms of its geographical, demographic and other boundaries to decide whether it should be fully or partially covered. The target populations for this research therefore were defined under 4 categories.

Category 1 was a population of donkey owners in 5 districts chosen in Zimbabwe. The basis of choosing these districts was because of their high donkey populations and as such they presented high chances of being exploited as supply areas by business people exploiting the
donkey skins trade. The donkey populations for districts having highest donkey populations were obtained as secondary data from the Department of Livestock and Veterinary Services (DLVS) and are shown in Figure 3.2 below. The districts which used were sampled and their donkey numbers were Buhera (n= 17467), Beitbridge (n= 34534), Gokwe (n= 30565), Gwanda (n=38250) and Tsholotsho (n= 31015).

![Donkey Populations by Districts](image)

**Figure 3.2: Donkey populations by districts for 2017**

(Source: Department of Livestock and Veterinary Services, 2017)

Category 2 was a population of animal welfare organisations operating in Zimbabwe and there were five of these namely Society for the Protection of Animals Abroad (SPANA), Bulawayo Society for the Prevention of Cruelty to Animals (SPCA), Veterinarians for Animal Welfare in Zimbabwe (VAWZ), Animal and Wildlife Area Research and Rehabilitation (AWARE Trust) and Lupane Youth for Development Trust (LUYD).

Category 3 was the donkey abattoir owner based in Bulawayo.
3.3.4 Sampling technique

The research utilised both probability and non-probability sampling techniques as follows:

3.3.4.1 Donkey owner sample and sample size determination

First, the 5 districts that had high donkey population as supported by the donkey census obtained from the Department of Livestock and Veterinary Services (2017) were considered as the target places. Districts which were chosen were Beitbridge, Gwanda, Gokwe North, Buhera, and Tsholotsho. From each of these districts one Ward was chosen.

Probability sampling using random sampling was used to select household heads who owned donkeys from one Ward per District who were asked to respond to the researcher administered semi-structured questionnaire as shown in Figure 3.3 below.

![Figure 3.3: Illustration of the multi-stage cluster sampling used during the study (HH = Households)](image)

The sampling of donkey owners followed a purposive sampling since only donkey owners were selected under each Ward. The choice of donkey owners was deliberate as the researcher considered these people as relevant to the responses sought which were very tightly pinned on the donkey ownership and willingness to sell donkeys among other key issues. The researcher therefore did not include non-donkey owners for that reason. Saunders
et al. (2009) asserts that in purposive sampling a sample is selected on the basis of the knowledge of the population, its elements and subjects are selected based on the purposes of research and their usefulness in case study research. Purposive sampling involves identifying and selecting individuals or groups of individuals that are knowledgeable about or are experienced with an area under scrutiny (Cresswell & Plano Clark, 2011). Bryman (2004) attests to the appropriateness of purposeful sampling where the researcher samples on the basis of wanting to interview people who are relevant to the research question.

To determine the sample for donkey owners a formula by Pfeiffer (2010) below was used. The sample size of 140 donkey owners was arrived at as follows:

Sample size calculation: 

\[ n = \frac{Z^2 \cdot p \cdot (1-p)}{L^2} \]

Where: 

- \( n \) = the sample size;
- \( Z \) = 1.96, the Standard Normal Deviate at the desired confidence interval, 95%;
- \( p \) = 0.9 (90%), the assumed proportion of the households who own at least a donkey;
- \( L \) = 0.05 (5%), the precision.

\[
\begin{align*}
\text{Sample size} &= 1.96^2 \cdot [0.9 \cdot (1-0.9)/0.05^2] \\
&= 3.84 [0.9 \cdot (0.1/0.0025)] \\
&= 3.84 [0.9 \cdot 40] \\
&= 3.84 [36] \\
&= 138.24
\end{align*}
\]

The total number of households per ward was adapted from ZIMSTAT (2012). However, this number included the people who did not own donkeys. Thus, there was need to adjust this population by multiplying the figure by 0.9 to get the assumed proportion of the households who owned at least a donkey. It is this value which became the target population of donkey owners in each Ward. The sample size of 140 owners was then computed from this value to arrive at Gwanda (n=26), Beitbridge (n=33), Tsholotsho (n=29), Buhera (n=36) and Gokwe North (n=16) as shown in Table 3.2 below.
Table 3.1: Table showing population and sample sizes of donkey owners.

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>PLACE</th>
<th>TOTAL No. of Households (A)</th>
<th>TARGET POPULATION (A* 0.9)</th>
<th>SAMPLE SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GWANDA</td>
<td>Ward 17</td>
<td>1283</td>
<td>1155</td>
<td>26</td>
</tr>
<tr>
<td>BEITBRIDGE</td>
<td>Ward 8</td>
<td>1654</td>
<td>1489</td>
<td>33</td>
</tr>
<tr>
<td>TSHOLOTSHO</td>
<td>Ward 12</td>
<td>1471</td>
<td>1323</td>
<td>29</td>
</tr>
<tr>
<td>BUHERA</td>
<td>Ward 27</td>
<td>1774</td>
<td>1597</td>
<td>36</td>
</tr>
<tr>
<td>GOKWE NORTH</td>
<td>Ward 29</td>
<td>811</td>
<td>730</td>
<td>16</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>6993</td>
<td>6294</td>
<td>140</td>
</tr>
</tbody>
</table>

3.3.4.2 Animal welfare organisations sample and sample size determination

Mwenje (2015) cites Latham (2007) who posits that sampling methods enable the researchers to reduce research costs, conduct research more efficiently and provides for greater accuracy. Mwenje (2015) goes further to cite Marshall (1996) who states that for a sample size to be appropriate for a qualitative study it should adequately answer the research question.

In this study 5 animal welfare organisations operating in Zimbabwe were chosen and from each only one representative from the senior management was interviewed. Thus, 5 people were interviewed from the 5 animal welfare organisations in Zimbabwe namely Society for the Protection of Animals Abroad (SPANA), Bulawayo Society for the Prevention of Cruelty to Animals (SPCA), Veterinarians for Animal Welfare in Zimbabwe (VAWZ), Animal and Wildlife Area Research and Rehabilitation (AWARE Trust) and Lupane Youth for
Development Trust (LUYD). The sampling of animal welfare organisations followed a non-random sampling method.

3.3.4.3 Donkey abattoir owner sample and sample size determination

In order to get the perceptions of the donkey skins trade from the business side and considering that there was only one individual that had attempted the opening of a donkey abattoir in Zimbabwe, a non-random sampling method was used that identified the only prospective donkey abattoir owner in Zimbabwe based in Bulawayo. Thus, a purposeful sampling was done as it targeted the individual whose donkey abattoir had been banned. An in-depth interview was done.

Table 3.2: Summary of the targeted population and sample sizes determined for questionnaire and interview data collection.

<table>
<thead>
<tr>
<th>Donkey Stakeholder</th>
<th>Subjects</th>
<th>Target Population</th>
<th>Sample size</th>
<th>Research Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal welfare organisations</td>
<td>Senior Managers at AWARE Trust, SPANA, VAWZ, Bulawayo SPCA and LUYD</td>
<td>5</td>
<td>5</td>
<td>Semi-structured Interview</td>
</tr>
<tr>
<td>Donkey owners</td>
<td>Donkey owners in Wards under Buhera, Gokwe North, Tsholotsho, Gwanda and Beitbridge Districts</td>
<td>6294</td>
<td>140</td>
<td>Semi-structured researcher administered questionnaire</td>
</tr>
<tr>
<td>Donkey abattoir owner</td>
<td>Donkey abattoir owner</td>
<td>1</td>
<td>1</td>
<td>Semi-structured Interview</td>
</tr>
</tbody>
</table>
3.4 Data Collection
The research purpose can be described as exploratory with some descripto-explanatory component. Exploratory in the sense that there was lack of knowledge in as far as feasibility of donkey skins trade as well as the potential impact that it could cause on livelihoods of donkey owners. The study aimed at revealing new insight and to evaluate the research phenomena in a new light (Saunders et al., 2009). The study was descriptive in that the animal welfare organisations were among other things asked to describe their opinions with regards the adoption of donkey skins trade and the impact that it could cause on those people who relied on donkeys. The study also took an explanatory route when it tried to attach explanations to the descriptions that were presented by the qualitative data so that it could be more meaningful.

3.4.1 Data Collection techniques
The data collection involved gathering both numeric information and text information. Numeric information was obtained through the use of the questionnaire while text information was obtained from the interviews. These data collection methods were very relevant for this research because the according to Creswell (2014), a case study strategy allows the researcher to use a variety of sources, a variety of data collection techniques and a variety of research methods as part of the investigation (Creswell 2014). It was important to get the information from different stakeholders who had varied opinions in the donkey skin trade.

The data collection techniques in this study involved gathering both numeric information on the questionnaire, as well as text information from in-depth interviews and questionnaire. The study used two techniques namely a questionnaire and in-depth interviews.

3.4.1.1 Questionnaire
A questionnaire with self- introductory cover letters was used in this study and was administered to the donkey owners by the researcher. The questionnaire aimed at complimenting the other methods that were used for data collection and its design was underpinned by the objectives and research questions of the study. According to Saunders et
al. (2009) the type of data variable collected through the administration of questionnaire is an opinion variable.

Bird (2009) cites Bulmer (2004) who defined a questionnaire as a tool that is useful in research for obtaining information on participant social characteristics, behavior or attitudes and their beliefs and justification of certain actions in view of the topic under investigation. The need for reliability, validity and effective participant engagement dictates that a questionnaire format, sequence and wording and length are thoughtfully considered (Bird, 2009). The layout and appearance of the questionnaire was such that it was professional with instructions that were clear. The questionnaire was short to avoid monotony. Edwards et al. (2002) posits that longer questionnaires will reduce response rates as compared to shorter questionnaires. Hence, the design of the questionnaire was such that it maximized the response rate, validity and reliability

A researcher completed questionnaire survey was distributed to 140 donkey owners belonging to 5 Wards. One Ward was selected per each of the 5 Districts that were identified. The Districts which were chosen were Beitbridge (Ward 8), Gwanda (Ward 17), Gokwe North (Ward 29), Buhera (Ward 27), and Tsholotsho (Ward 12). The questionnaire was administered at homesteads whose household heads owned at least a donkey. The researcher would randomly select a household and confirm if they owned at least one donkey for him to administer the questionnaire there. The number of households per district that responded to the questionnaire survey were Gwanda (n=26), Beitbridge (n=33), Tsholotsho (n=29), Buhera (n=36) and Gokwe North (n=16) which followed a predetermined sample size calculation. The researcher opted to administer the questionnaire himself as he noted that the literacy levels were low and that would compromise the responses.

The questionnaire addressed questions focusing on donkey ownership, perceptions on donkey skins trade and willingness to sell donkeys to the donkey abattoirs and household income sources as the major areas. The questionnaire survey was administered so that it could provide descriptive and contextual data in the study of the feasibility of donkey skin trade as a strategy to tap into the emerging donkey export market in Zimbabwe.
Mwenje (2015) cites Hussey & Hussey (1997) who described questionnaires as having important attributes such as being economical by allowing a considerable amount of research data to be collected at a relatively low cost in terms of materials, money and time. Mwenje (2015) goes further to state that questionnaires are easy to arrange and are simpler than personal interviews. A questionnaire was utilised in this study because of the standardised answers that it supplied which made the responses from all the 140 respondents easier to analyse since questions posed to all of them were exactly the same. However, there were some few questions that were open ended such as "How would you dispose of donkeys that are no-longer productive?" where the respondents exercised their own freedom to give their own opinions. Bird (2009) cites Bazeley (2006) who remarks comments generated from open-ended questions can be still be useful in corroborating, illustrating or elaborating on the meaning of quantitative responses. The bulk of questions for this study were closed whose answers were pre-coded and according to Mwenje (2015) the pre-coding of answers allow for an efficient collation and analysis of data by the researcher as respondents choose from what is provided. These allow for the speedy collation and analysis of data by the researcher (Fink, 2003).

The questionnaire included a combination of open and closed questions. The open ended questions allowed the respondents to give answers in their own way while closed questions provided a number of alternative answers from which the respondent was instructed to choose (Saunders et al., 2009). The questionnaire had more of the closed questions as these are usually quicker and easier to answer.

3.4.1.1.1 Advantages and disadvantages of questionnaire

Questionnaires are economical they allow research data to be collected with relatively less material, costs and time (Hussey & Hussey, 1997). It is also easy to make arrangements for questionnaire administration than it is with personal interviews (Mwenje, 2015). Since questionnaires are standardized, it has the advantage of posing exactly the same question to all respondents.

The disadvantages of questionnaire include the fact that may offer little opportunity for the researcher to check the truthfulness of the answers given by the respondents (Mwenje, 2015).
Questionnaire if self-administered may fail to yield 100% response rate as some respondents may to return them.

3.4.1.1.2 Pre-testing the Questionnaire

According to Palmier (2017) pre-testing a questionnaire is important to a researcher. The interviewer observes the respondent’s verbal behaviours in order to realize whether respondent misunderstands question. Perneger et al. (2014) suggests that the main purpose of the pre-testing is to verify if the target audience has managed to understand the questions and proposed response options as intended by the researcher. It seeks to ensure that the respondents are able answer meaningfully. A pre-test presents an opportunity to identify problems such unclear questions, unfamiliar word, vague grammar, as well as the deficiency of applicable answers. Ultimately, pretesting may lead to modification of the instrument.

In this study, the questionnaire was pretested on 10.7% (n=15) of the sample size. This was done on respondents who owned donkeys in Shashe village in Beitbridge Ward 8 giving the questionnaire a pilot testing in real life settings as the respondents mimicked the targeted respondents of the real study. The pre-test revealed two errors in Question 10 and 17. The first one was grammatical error in question 10. Question 17 was a double barrelled question which asked owners “How do you dispose of old-blind donkeys that are no-longer productive” and was modified to “How do you dispose of donkeys that are no-longer productive”. This was done after realizing that a donkey can be old and not blind or vice versa such that the question was ambiguous.

3.4.1.2 Interviews

The researcher used interview methods in order to gather valid and reliable data that were relevant to the research questions and objectives (Sekaran et al., 2010). This is because interview methods are social relationships designed to exchange information between the participant and the researcher. Saunders et al. (2009) states that an interview is a purposeful discussion between two or more people thus the use of interviews enabled the exchange of information between the participant and researcher. King (2004) asserts that the goal of any research interview is to see the research topic from the perspective of the interviewees, and to understand why they have a particular perspective. It was critical that the opinions of the
animal welfare organisations and donkey abattoir owner be captured in order to get their perspectives with regards to whether or not donkeys should be traded and slaughtered for their skins.

Alshenqeeti (2014) cites Kvale (2003) who consider interviews as more powerful in eliciting narrative data which can allow researchers to investigate people's views in greater depth. Alshenqeeti (2014) further cites Cohen et al. (2007) who points out that interviewing is valuable in exploring the construction and negotiation of meanings in a natural setting. As observed by Berg (2007: 96) the interview is a method that enables interviewees to “speak in their own voice and express their own thoughts and feelings”.

According to Alshenqeeti (2014), four types of interviews are frequently employed in social sciences namely structured, unstructured, semi-structured interview and focus group interviewing. He further qualifies a structured interview as one organised around a set of predetermined direct questions requiring immediate, mostly ‘yes’ or ‘no’ type, responses giving the interviewer and interviewees little very little freedom (Berg, 2007).

The second type of interviews is the open-ended (unstructured) which Gubrium & Holstein (2002) stresses that it gives greater flexibility and freedom to both the interviewers and interviewees. Often the interviewer would be more keen in following up interesting developments and to let the interviewee elaborate on various issues (Dörnyei, 2007).

The third type is focus group interviewing in which participants are

“Selected because they are a purposive, although not necessarily representative, sampling of a specific population, this group being ‘focused’ on a given topic” [Barbour and Schostak 2005:46]

The fourth type of interviews is the semi-structured interview. Alshenqeeti (2014) cites Rubin & Rubin (2005: 88) who stated

“that a semi-structured interview is a more flexible version of the structured interview as it allows depth to be achieved by providing the opportunity on the part of the
Forrester (2010) defines a semi-structured interview as a method of collecting data where a flexible interview schedule guides a single interviewer who uses active listening and probing to allow for in-depth detail and understanding. An interview guide is used which contains questions and topics to be discussed during the conversation usually arranged in a particular order. The interviewer is not constrained by the schedule but is free to follow topical trajectories in the conversation that may drift away from the guide when there is need to further explore a subject.

A checklist is often used that will cover all relevant areas so that while allowing for in-depth probing it enables the interviewer to keep the interview within the parameters traced out by the aim of the study (Berg, 2007).

For the purposes of this research, a semi-structured interview was utilised. The face-to-face semi-structured interviews with managers of animal welfare organisations and donkey abattoir owner were done to gather their opinions and enabled the researcher to gain the information about the perceptions that these organisations had on the donkey skins trade. For each interview, an interview guide was used to keep the interview within the parameters that were determined by the aim of the study. However, the interviewer managed to allow for in-depth probing in order to gain more understanding and allowed the interviewee to shed more light on certain questions.

3.4.1.2.1 Advantages and disadvantages of face-to-face interviews

There are a number of advantages attached to interviews as a research instrument. Firstly, advantages of face-to-face interviews gives the interviewer more control over who answers the questions thus it generates a higher response rate (King, 2004). It also allows probing so that data which is rich and detailed can be obtained (Raymond, 2006). The fact that the interviews can be tape recorded makes the interview report more accurate than writing out notes. However, consent of the interviewee has to be sought first.
The disadvantages of interviews have been summarized by Easterby-Smith et al. (2008). They posit that face to face interviews like the ones utilised in this study are costly in that travelling expenses to distant places require transport. In this study, the researcher travelled to Bulawayo to do interviews with Bulawayo SPCA manager and the LUYD Director. Face to face interviews is also constrained by time as the researcher will need to transcribe all the data and analyse it such data which has not been standardised. Thus, according to Ghauri and Grønhaug (2005) concerns about reliability and credibility arise.

3.4.1.3 Documentation

Mwenje (2015) cited Blaxteret et al. (2001) who indicated that to some extend researches tend to involve the use and analysis of documents. Thus, researchers are therefore supposed to read, understand and analyse critically the writings of others. The sources of documents in this study included libraries, internet and offices. From documentation, this study managed to obtain secondary data such as the current donkey census and stock cards from the Department of Livestock and Veterinary Services Department. The researcher also managed to access the writings of prominent investigative journalists who extensively wrote about the donkey skin trade. The researcher also utilised documents from the Zimbabwe National Statistics Agency to gain access to the population of households in the individual 5 Wards studied. This was very critical in determining the sample sizes. The Public Health Regulation (1995) and the Prevention to Animal Cruelty Act were also used to evaluate the extent to which legislature addressed the issue of donkeys in Zimbabwe. In utilising the document, the researcher was cognisant of the need to evaluate the credibility, authenticity and meaning of the documents accessed (Mwenje, 2015).

These data sources were very appropriate for this research since the case study strategy has been described by Creswell (2014) as allowing the researcher to use a variety of sources, a variety of data collection techniques and a variety of research methods as part of the investigation.

3.4.2 Validity and Reliability

Validity could be defined as a test of precision, for instance, on whether the data hit the target predicted or hypothesized. Reliability is a test for whether the results could be reproduced.
Hence, the researcher combined both the qualitative and quantitative research approaches in his study in order to take advantage of the strengths of the two approaches, to obviate the weaknesses of a single approach and to increase reliability and validity of findings. Furthermore, to ensure validity and reliability, the pre-coded questionnaire was pilot tested before being put into the field by distributing the data collection instruments to his colleagues. His colleagues assisted him in discovering whether there were errors as well as providing suggestions to ensure that the data collection instruments made sense and were understandable for the respondents. Moreover, the researcher also conducted a reliability test on the data collection instrument using SPSS and the findings are illustrated in Table 3.3 below and discussed afterwards.

Table 3.3: Cronbach's Alpha

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.791</td>
<td>34</td>
</tr>
</tbody>
</table>

The results shown in Table 3.3 above indicate that the Cronbach alpha was 0.791 which entails that the data collection instrument used in this study was reliable for objective data collection as it was above the acceptable 0.7 threshold (Saunders et al., 2013). Therefore, the researcher in an effort to ensure the validity and reliability of the information used in this study he combined both the qualitative and quantitative research approaches, as well as conducted a pre-test of the data collection instruments and also conducted a reliability test which showed positive results above the reliability threshold.

3.5 Delimitations

The study was done in Beitbridge, Gwanda, Gokwe North, Buhera, and Tsholotsho districts in Zimbabwe. The respondents to the questionnaire were donkey owners selected from these communities. In-depth interviews were made with Society for the Prevention of Cruelty to Animals (SPCA), Veterinarians for Animal Welfare in Zimbabwe (VAWZ), Society for the Protection of Animals Abroad (SPANA) who represented the animal welfare organisations. The donkey abattoir operator in Bulawayo was also interviewed.
3.6 Limitations

a) Lack of previous studies in the research area. The donkey skin trade is a recent phenomenon in African countries. Because of this, the study area has not been explored by many researchers hence literature was not readily available. However, effort was made to get as much of the available literature through library usage, internet and journal searches and other relevant articles.

b) Language constraints. The researcher was not conversant in Ndebele and Venda language and communication posed a threat in Gwanda, Tsholotsho and Beitbridge where respondents spoke mainly in Ndebele and Venda. Interpretation was solicited to be able to communicate with these communities.

3.7 Ethical considerations

All the interviews were done with the informed consent of the respondents and the objectives of the study were clearly articulated to them at the start. The researcher did not hide any pertinent information that the respondent needed to be told so that they would decide on whether or not they felt comfortable in continuing as respondents of the study.

The researcher guaranteed protection of the anonymity and confidentiality of respondents. This was done in order to give the respondents the freedom to give their opinions. The issue of donkey skin trade had been a contentious issue which had political involvement such that some respondents needed protection.

The researcher made known to the participants that recordings were going to be made of their responses during the interviews and these recording were thus made with their consent. In the interviews a tape recorder was used but only after consent with the respondent.

The researcher highlighted to the respondents that they had the right to withdraw from the research in the event that they felt uncomfortable to continue participating in the study. No participants were forced to continue when they felt like withdrawing their participation.

3.8 Approach to data analysis

Once the fieldwork has been completed, the data must be converted into a format that answers the researcher’s questions (Zikmund, 2000). The purpose of this study was to investigate the feasibility of donkey skin trade as a strategy to tap into the emerging donkey
export market in Zimbabwe. Both qualitative and quantitative data were obtained from the study. The data was subjected to processes of data preparation, which included editing, coding and data entry. The data was converted from the raw form to reduced and classified in forms that were more appropriate for analysis. The quantitative data from the questionnaire was entered in excel in preparation for export for analysis using Statistical Package for Social Sciences (SPSS) version 22. SPSS enabled descriptive statistics in the form tables, bar graphs and pie charts. According to Zikmund (2000) descriptive analysis can convert raw data to a form that is easy to comprehend and interpret.

However, according to Pearl (2009), description cannot be the only ultimate goal of a research as conclusions need to be drawn. Inferential statistics was used on the quantitative data to test hypotheses and make inferences about the population characteristics. Three hypotheses that had been formulated based on the research objectives were tested using regression and correlation. The dependent variable was taken to be the willingness to sell donkeys to donkey markets. The hypotheses were:

**Hypothesis 1:**

$H_0$: Donkey skin trade does not increase the income of rural donkey owners in Zimbabwe.

$H_1$: There is a connection between the total number of donkeys owned and the willingness to trade

**Hypothesis 2:**

$H_0$: There is no connection between the total number of donkeys owned and the willingness to trade

$H_1$: There is association between of location of donkey owner and the willingness to trade

**Hypothesis 3:**

$H_0$: There is no association between location of donkey owner and the willingness to trade.

$H_1$: Donkey skin trade increases the income of rural donkey owners in Zimbabwe.
Significance testing (Bryman & Bell, 2003) was used as part of examining relationships between variables. Where the probability was low \( (p < 0.05) \) a statistically significant relationship existed whereby the null hypothesis \((H_0)\) was rejected and the alternative hypothesis \((H_1)\) accepted. Where \( p > 0.05 \) there was no statistically significant relationship and hypothesis \((H_1)\) is rejected and null hypothesis accepted (Saunders et al., 2009).

Qualitative data was organized around 6 themes. The transcribed interviews formed the qualitative data and was organised around themes that were categorised guided by the research objectives. Continuous comparisons were used to develop the analysis which emerged with six themes namely: opinions about the adoption of donkey skin trade; perceived impact of donkey skins trade on donkey welfare, acceptance of trading in sick or injured donkeys; the appropriateness of the ban on donkey slaughter in Zimbabwe, donkey skins trade and concern for donkey theft; impact of trade on the livelihoods of rural donkey owners in Zimbabwe; and the feasibility of donkey breeding as a way of countering donkey population. Data analysis followed a convergence style which brought both the quantitative and qualitative data together to one conclusion around the feasibility of donkey skins trade in Zimbabwe.

3.10 Summary

This chapter presented an outline of the research methodology and was structured by the research ‘onion’. A detailed explanation of the research process was highlighted. The research followed pragmatism philosophy and the approach was abductive with case study as the strategy. Data collection was done using researcher administered questionnaire responded to by donkey owners and face-to-face interviews administered to animal welfare organisations and a prospective abattoir owner. The chapter also presented how data would be analysed and highlighted that quantitative data will be analysed using Statistical Package for the Social Sciences (SPSS) version 22 enabled descriptive statistics in the form tables, bar graphs and pie charts while inferential statics would be used to test the hypotheses. Qualitative data was analysed thematically. The next chapter will focus on the data presentation, discussion and interpretation of the research findings.
CHAPTER FOUR: DATA PRESENTATION AND DISCUSSION

4.1 Introduction
This chapter shall present the discussion and the analysis of the results of the findings from the questionnaires and interviews that had been collected by the researcher. Donkey welfare organisations and donkey abattoir owner were interviewed as detailed in the methodology chapter. The interviews gave rise to the qualitative results that will be presented and discussed in this chapter. In order to capture the responses from the donkey owners, a questionnaire was administered to a sample of donkey owners as outlined in the methodology chapter. The questionnaire responses gave the quantitative data that will be presented in this chapter. The qualitative and quantitative data will be analysed and presented simultaneously and any relevant connections between the two will be discussed. The analysis and discussion shall be guided and undertaken in line with the research instruments used in the study

4.2 Research objectives revisited
The primary purpose of the study was to investigate the feasibility of donkey skin trade as a strategy to tap into the emerging donkey export market in the Zimbabwean context. The results were presented in line with the research objectives and corresponding research questions which are as follows:

Objective 1: To evaluate the perceptions of stakeholders on the donkey skins trade.
Research Question: What perspectives regarding the donkey skins trade do donkey owners, animal welfare pressure groups and donkey abattoir owner have?

Objective 2: To investigate the effects of donkey skins trade on the livelihoods of rural donkey owners in Zimbabwe.
Research question: Does donkey skins trade enhance the livelihoods of rural donkey owners in Zimbabwe?
Objective 3: To identify the factors that affect the sustainability of the donkey skins trade in the Zimbabwean context.

Research question: What factors determine the sustainability of donkey skins trade in the Zimbabwean context?

Objective 4: To identify the factors associated with the increasing demand for donkey skins trade in the emerging export market.

Research question: What factors influencing the increasing demand for donkey skins trade in the emerging export market?

4.3 Data findings

The data findings are pinned on the research questions highlighted above. In answering the research questions, both the qualitative and quantitative data are merged in order to give a holistic understanding of the findings. The initial section shall highlight the response rate as well as the demographic information of the respondents who participated in the study followed by interrogation of the four research questions.

4.3.1 Response Rate

This section shall analyse and discuss the response rate achieved in this study. It shall analyse the number of successfully conducted or collected interviews or questionnaires related to the number of interviews or questionnaires which had been planned or distributed respectively. The results are illustrated in the table 4.1 below:

Table 4.1: Response rate

<table>
<thead>
<tr>
<th></th>
<th>No. of Planned Interviews/Questionnaires</th>
<th>No. of Successfully Conducted Interviews/Questionnaires</th>
<th>Response Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews</td>
<td>6</td>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>Questionnaires</td>
<td>140</td>
<td>140</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 4.1 above shows that the researcher managed to successfully collect all the questionnaires (100%) he had planned to distribute as well as carry out all the face to face interviews (100%) as planned.

4.3.2 Demographic Information

This section shall analyse and discuss the demographic information of the donkey owners who participated in this study through the questionnaire. Some of the demographic information which shall be discussed in this study were the areas which the respondents came from, their age, sex, marital status and highest level of education. These results are illustrated in the tables and figures below.

4.3.2.1 Areas of Residence

Figure 4.1 below shows that 26% of the respondents were from Buhera, 23% were from Beitbridge, 21% were from Tsholotsho, 19% were from Gwanda and Gokwe North had 11% of the respondents. The majority of respondents were from Buhera, followed by Beitbridge, Tsholotsho, Gwanda then the least representation was from Gokwe North. The area of residence cuts across tribal lines such that all major tribes were represented i.e Ndebele (Tsholotsho), Venda (Beitbridge), Sotho (Gwanda) and Shona (Buhera and Gokwe North). Hence, views and opinions took into consideration the norms, beliefs of the diverse cultural groups in Zimbabwe.
4.3.2.2 Age of the Respondents

Figure 4.2 below shows the age of respondents. The majority of the respondents were aged 25 to 34 years (28%), followed by those over 55 years (27%), whilst 26% of the respondents were aged 45 to 54 years, 15% were 35 to 44 years old and the least (4%) representation were those aged under 25 years. Hence, these results show that the researcher sought the views of respondents of various ages which balanced the research and removed bias from certain outlying statistics emanating from views of a certain age group. Less than 4% of the donkey keepers were below 25 years and implies that there is less involvement in donkey keeping by the younger generation and this agrees with Swai & Bwanga (2008) who highlight that the younger generation is an active working group that includes those seeking higher paying jobs in urban areas. Therefore, any intervention programme for donkeys will have to focus on the older generations who actually own donkeys.
Figure 4.3 below shows that 85% of the respondents were male whilst 15% were females. The questionnaire was administered to donkey owning household heads only. These results could entail that the majority of rural donkey owners were male. This reflects the patriarchal nature of Zimbabwean culture where ownership of livestock and household headship is ascribed to the male members of the society. The majority of the female ownership were single, widowed, divorced marital groups or women giving interviews on behalf of the family head who was not available. On the other hand, since both males and females participated in this study this entails that there was a representation of views in this study from both sexes.
Zimbabwean is a patriarchal society and men are usually considered the owners of household property including livestock (Parpart, 1995). Males were therefore the most interviewed at households showing that the majority of decision making is done by the men. Yet, alternative draught power particularly donkeys is normally to the benefit of women as the traditional roles and duties designated to them include fetching water and firewood as well as carrying heavy loads of grain to the grinding mills which are sometimes very far. Sometimes there is tendency by men to disregard the importance of donkey draught power to the women and children by selling working donkeys.

4.3.2.4 Marital Status
Figure 4.4 below shows that the marital status of respondents. The majority of respondents who participated in this study were married (78%) followed by those who were widowed (15%) and the least were single (7%). Hence, it can be concluded that the vast majority of rural donkey owners were married and widowed with thriving economic demands which require intensive labour in the form of draught power such that donkeys are critical animal assets.
4.3.2.5 Highest Level of Education

According to Figure 4.5 below, the majority of the respondents had attended secondary school (46%) as their highest level of education, followed by 39% who had only attended school up to primary level whilst 15% of the respondents had never attended school all their lives. However, only 5% of the respondents had reached tertiary level education.
Swai & Bwanga (2008) cites Nyangito (1986) who showed there was a relationship between education and the adoption of new and improved methods in livestock husbandry. Considering that from this study, 54% had either not attended school at all or only attended up to primary school, opportunities and prospects for adoption of donkey management practices may be low and they may end up disposing of donkeys if persuaded to sell donkeys. The finding could also entail that the majority of rural donkey owners were not educated above secondary level and are less competitive on the job market more so in Zimbabwe where the unemployment rate is high and confines them to doing either irregular menial jobs or stay at home and find means of making a living with donkeys being important draught power.

4.3.3 Research Question: What perspectives regarding donkey skins trade do owners, animal welfare pressure groups and business have?

The perspectives were captured through the interviews done with animal welfare organisations, the donkey abattoir owner and a questionnaire administered to donkey owners. The opinions were obtained through various questions that were posed which sought to clearly understand the thinking of these stakeholders behind the donkey skins trade. Some of the responses given by animal welfare organisations were compared or matched with those given by the abattoir owner to see the point of divergence or convergence. The donkey owners also gave their perceptions which were analysed. The perceptions covered opinions on adoption of donkey skin trade as an export strategy, the perceived impact of donkey skins trade on donkey welfare, the ethics surrounding slaughter of non-productive donkeys such as blind or fractured donkeys. It also sought to obtain views on the appropriateness of the ban on donkey slaughter in Zimbabwe and major concerns regarding donkey skins trade.

4.3.3.1 Opinions about the adoption of donkey skin trade as a way of tapping into export market by Zimbabwe.

The animal welfare organisations were asked to respond to the Question 4 (Appendix II) pertaining to their opinions on the donkey skins trade as a way of tapping into the export market by Zimbabwe. They raised four main areas of concern in arguing that such a trade should not happen in Zimbabwe. Firstly, they raised concern over the decimation of donkey numbers. They argued that the population of donkeys cannot be sufficient to sustain such a
highly demanding trade. They felt that extinction of donkeys was imminent should the trade be allowed to happen. Secondly, the trade would lead to the loss of donkeys which are important animal assets in their livelihoods. The loss or reduction of donkeys would therefore shift the burden to women and children. The respondents also warned that once one abattoir is allowed to operate, nothing will block more players to also seek licensing to operate such a business venture. This will further decimate the donkey numbers. The respondents highlighted that it was not good to promote a trade that has short-term financial gains yet proffering a long-term and consequential poverty in the rural communities where donkeys are mostly used for transportation and farming. This is also supported by Mwanyumba (2014) who conceded that the selling of productive animal assets can be detrimental to sustainability. However, Santiapillai (2009) disagrees and justifies the utilization of animal resources and describes African citizens as very poor thus their needs have to be satisfied first instead of placing animal welfare above that of humans. It is however important to recognise that while slaughter of donkeys may be acceptable, there is need to understand the potential threat it presents on the livelihoods of people who rely on donkeys for draught power.

Thirdly, the respondents highlighted that the donkey skins trade dictated that donkeys be replenished to enable communities to remain with donkeys. However, the late puberty attainment and long gestation periods of donkeys mean that the reproduction and replenishment of donkeys is slow. According to a study by Perez-Marín (2010), the average gestation length of a donkey was found to be between 347 to 378 days. Pugh (2002) indicates that the puberty in donkeys usually attained in 1 to 2 years. These factors make breeding of donkeys unreliable in countering the decline in donkey numbers.

Fourthly, the animal welfare organisations also felt that it was not right to embark on the donkey skin trade and slaughter donkeys simply to fulfil the cultural desires and beliefs of the Asian community who demanded the production of the traditional medical remedy called Ejiao. Wolf (2008) agrees that anthropocentrism fails to recognize the intrinsic value of non-human life and argues that it leads to detrimental outcomes. However, a balance should be sought in order to satisfy both the human demands and preservation of biodiversity.

The donkey abattoir owner responded to Question 9 (Appendix III) and suggested that tapping into the donkey skins export market has the potential of earning the country foreign
currency, creating employment and enabling donkey owners to earn some extra income. The response shows that there can be benefits accrued from donkey skin trade and is a utilitarian viewpoint. However, according to Ekins et al. (2008) economic development tend to maximize wealth at the expense of other assets such as human health, clean air, social networks and biological diversity. Thus, it entails that the donkey skin trade need careful thinking to be done to prevent deleterious consequences from impacting on communities in the long run.

4.3.3.2 Perceived impact of donkey skins trade on donkey welfare

Animal welfare was the major theme that came out from interviewing the five animal welfare organisations. Thus, it was important to find out the opinions regarding donkey skin trade and animal welfare as stated in Question 5 (Appendix II) which asked how donkey skin trade would impact on the welfare of donkeys. The main issues identified were transportation of animals in pain over long distances, deliberate neglect of donkeys, possibility of inhumane slaughter processes, as well as some indirect effects.

All the respondents mentioned that in such a trade where the sick, injured or old donkeys are targeted for slaughter, these donkeys will be forced to walk long distances to the donkey selling points at village level. Furthermore, the same donkeys with compromised health status are transported over long distances loaded in trucks to the abattoir causing more suffering. Knowles and Gallagher (2016) also agree with the finding and acknowledge that the welfare of donkeys used to produce skins and meat is frequently compromised during sourcing, transportation and slaughter.

The donkey abattoir owner was asked in Question 1 (Appendix III) where he was going to buy donkeys for slaughter from and responded that he would buy from all over Zimbabwe after organising donkey markets at village level which will act as his buying points. The donkey abattoir owner confirmed that he would be buying only the non-productive or injured donkeys (Question 7, Appendix III). He highlighted that in any given population there are either blind, injured or donkeys that are no-longer able to breed. The respondents from the animal welfare organisations mentioned that sick, injured donkeys should be euthanized on site and not transported to any other place in such painful state. The sentiments by animal welfare organisations agree with those put forward by Gregory and Grandin (2007) who
highlight that is important that the welfare of any donkey is prioritised both during and at the end of its life just like any other food-producing animal. This is also embedded in the 5 freedoms of animal welfare according to Farm Animal Welfare Committee (1993).

Animal welfare organisations considered donkey skin trade as carrying the danger of causing deliberate neglect of donkeys so that they can be sellable. One respondent commented:

“Donkey skin trade will promote the neglect of donkeys as owners will feel incentivised not to look after the donkeys so that they can become candidates for the donkey markets. Many donkeys will suffer this way.”

Animal welfare organisations expressed discomfort with the slaughtering process which they said had the potential of becoming inconsistent with animal welfare dictates citing other countries where this had been done inhumanely. Donkeys were brutally slaughtered including being bludgeoned with hammers in South Africa and this was a serious animal welfare issue (Sigauqwe 2017; NSPCA, 2016).

The respondents highlighted that there were no clear guidelines that were existing for the slaughter of donkeys in Zimbabwe such that it was difficult to monitor donkey abattoir operation and processes. Thus, the welfare of donkeys was feared could be compromised if trade was allowed to happen. However, the researcher looked at Statutory Instrument 50 of 1995 on Public Health (Abattoir, Animal and Bird Slaughter and Meat Hygiene) Regulations and recognised that it mentions about equines. Although it does not specifically mention about donkeys, it acknowledges that some special examination needs to be done when slaughtering equines. According to Statutory Instrument 50 of Public Health (Abattoir, Animal and Bird Slaughter and Meat Hygiene) Regulations of 1995, ‘For equines, the special examination procedure for sheep and goats shall be the same as for bovines….’

However, the same Regulation defines the term animal as ‘… any bovine, sheep, goat, pig, rabbit or game animal other than a bird that is intended for human consumption’. The omission of ‘donkeys’ in the above definition of animal may be construed to mean that they are classified under game animal.
On donkey welfare, one respondent also argued that donkey trade will lead to low donkey numbers at households such that the few remaining donkeys will be forced to overwork in order to compensate for the demand created for draught power. This concern has also been highlighted by The Donkey Sanctuary (2017) who argues that if donkey trade is allowed to happen there is decimation of donkey numbers resulting in overworking of the few donkeys remaining.

However, the donkey abattoir owner claimed that donkey welfare will actually improve if donkey trade is to be allowed to happen. He responded to Question 8 (Appendix III) where he was asked to comment on the claim that donkey skin trade would adversely affect the welfare of donkeys. He highlighted that if market is created for donkeys it will in turn increase the value of donkeys. The abattoir owner said that once people begin to see value in donkeys, they would begin to look after them properly and they would begin to stable the donkeys at night so that they will not be preyed on by predators. He mentioned that as a result of the donkey trade, people will ensure that the donkeys are kept well so that they can multiply in order to for them to be able to sell more. However, the drawback is the reproduction of donkeys which is slow compared to other domestic species.

There was a general feeling that donkey skin trade would be inconsiderate to animal welfare in many ways (Question 6, Appendix II). Animal welfare organisations indicated that donkeys will be stolen being stolen and will not be properly looked after by the thieves. Some respondents expressed fear that stress associated with handling, movement and slaughter would happen. Starvation of donkeys to allow easy skinning was also another fear that came from animal welfare organisations. This is supported by SPANA (2018) who highlights that donkeys are often treated terribly throughout the transport and slaughter process including being loaded onto cramped and dangerous vehicles as well as being starved and brutally killed.

4.3.3.3 Dealing with non-productive donkeys such as blind or fractured donkeys

The claim that the donkey abattoir business model will involve the buying of non-productive donkeys such as the blind and injured or fractured raised concerns in the animal welfare fraternity which were noted by the responses given to Question 7 (Appendix II). The animal
welfare organisations’ views on how to deal with the non-productive donkeys could be summed up in five ways namely: treatment of the sick donkeys; euthanisation of badly injured donkeys on site; educating donkey owners; offering special care to old donkeys till they die; and a paradigm shift of mind-set from thinking about disposal of donkeys on the basis of non-productivity.

Animal welfare organisations also highlighted that the sick or injured donkeys should be afforded treatment instead of selling them. All the respondents agreed that those donkeys that are badly injured and cannot recover with treatment should be euthanized in situ. They highlighted that the intention by the donkey abattoir owner to buy such animals in bad state could not be an option as it could lead to prolonged pain and suffering.

Another respondent suggested that more education be given to donkey owners and as well encourage them to avoid injuring the donkeys and not take the donkey skin market as an option. There was also a suggestion that special care be given to donkeys that are old until they die instead of slaughtering them at donkey skins abattoir. The researcher opines that while this option can be regarded as proper, it lacks practicality because in the eyes of the donkey owners it is a loss to keep a donkey that is not able to work. Unless there is assistance given to such donkeys in terms of free access to supplementary feeding and medication, the owners will neglect these old donkeys resulting in prolonged suffering owing to lack of nursing care.

The suggestion that old and non-productive animals should not be slaughtered based on their non-productivity came out from one of the respondents from animal welfare organisations who stressed that:

“Donkeys do not exist for human satisfaction. It is baseless to slaughter a donkey simply because it cannot reproduce or work anymore. We do not kill human beings because they are old or non-productive. Therefore, the same should apply to the animals. We should not take advantage of sick animals to achieve monetary gains”.

This anthropocentric view against considering donkeys as inferior animals augurs well with those by Singer (1975); Fox (1978); Regan (1979); Routley & Routley (1979) as cited by
Wolf (2008) who show displeasure towards the inferior moral standing assigned to other species of animals.

The trading and slaughter of injured or non-productive donkeys was also viewed as a potential loophole that could lead donkey slaughterhouses to end up buying and slaughtering the healthy donkeys which are important working animals to the livelihoods of the rural communities in Zimbabwe. The researcher’s opinion is that is there is subjectivity that may exist in classifying a donkey as healthy or not healthy. Another animal welfare respondent mentioned that there is need to put in place a firm legal framework to curb that from happening in Zimbabwe so that the rural people will not be easily be enticed to sell even their healthy donkeys ones owing to the economic challenges they face. This can create a loophole that can be abused by donkey buyers because it cannot be enforceable. Mwanyumba (2014) also highlight that growing financial pressures, food insecurity and frequent droughts may lead people to become indiscriminate and sell more animals regardless of productivity, age or sex and may impact on their drought power source and livelihoods in the long run.

Donkey owners were asked how they disposed of donkeys that are no-longer productive Question 17 (Appendix I). These results are illustrated in Figure 4.6 below.

Figure 4.6: Graph showing how non-productive donkeys are disposed
Figure 4.6 above the overall 76% of the rural donkey owners let them die on their own whilst 15% sell them but 9% kill them. Moreover, this is also the case in Gwanda, were 92% let them die on their own and 8% kill them; in Beitbridge 88% also let them die and 12% kill them; whilst in Gokwe North the majority let them die (50%), 38% kill them and 12% sell them but in Buhera all the respondents from there stated that they let their donkeys die when they are no longer productive. On the other hand, in Tsholotsho 66% of the respondents stated that they sell their donkeys when they are no longer productive whilst 34% let them die. Hence, these results show that the majority of rural donkey owners let their donkeys, which are no longer productive, die naturally. This may be attributable to the fact that in Zimbabwean culture consider donkey meat consumption as taboo. If it was the same case with livestock considered edible in the Zimbabwe society, such non-productive animal would be slaughtered for meat thereby salvaging value which would otherwise be lost if the animal was to be left to die on its own. The other reason why donkeys are left to die on their own could be the failure to access euthanisation services as often the veterinary personnel do not have the drugs or are too far from the farmers. In Gwanda and Buhera districts, selling donkeys as a way of disposal was never mentioned as an option.

**4.3.3.4 Justification to slaughter donkeys given that other animals such as cattle, sheep and goats can be slaughtered.**

There were various reasons given by the animal welfare organisations in responding to Question 9 (Appendix II) which asked for their views regarding the claims that if cattle, sheep and goats can be slaughtered, could there be justification to stop the slaughter of donkeys. They responded that donkeys are not production animals and are not easy to replenish when their numbers drop and also that they become susceptible to diseases such as hyperlipemia if intensive breeding is embarked on. The other response given was that the importance of donkeys is not for their skins or meat but their draught power to sustain livelihoods in communities. This viewpoint is supported by The Donkey Sanctuary (2017) who indicates that households can earn more through donkey use than donkey sales. One respondent argued that it was taboo in the Zimbabwean culture to slaughter donkeys and doing so simply to fulfil the desires of the Asian community was not sensible.
4.3.3.5 Awareness about the banned donkey abattoir in Zimbabwe

This section sought to establish whether rural donkey owners had heard about the banned donkey abattoir in Zimbabwe. These results are illustrated in Figure 4.7 below.

Figure 4.7 Awareness about the banned donkey abattoir in Zimbabwe

Figure 4.7 above 61% of the rural donkey owners who participated in this study had not heard about the banned donkey abattoir in Zimbabwe. This was the case in mainly in Tsholotsho (90%), Buhera (89%) and Gwanda (89%) were the majority of rural donkey owners in those areas had not heard of the banned donkey abattoir in Zimbabwe. However, in Gokwe North (75%) and Beitbridge (100%) most of the rural donkey owners in those areas had heard of the ban. Hence the results entail that most of the rural donkey owners were not aware of the banned donkey abattoir in Zimbabwe, especially those from Tsholotsho, Buhera and Gwanda. However, those from Gokwe North and Beitbridge seemed to have knowledge of the ban. The fact that there is lack of knowledge of the ban in most areas may entail that illicit underground trading may still happen as donkey owners will be assuming that they are selling donkeys to legitimate bona fide buyers yet these will be illegal. Illegal donkey trading has been cited in South Africa (NSPCA SA, 2018) and in Beitbridge (Nkala, 2017) where donkeys were killed for their skins under cruel circumstances.
4.3.3.6 The appropriateness of the ban on donkey slaughter in Zimbabwe

The perspectives of the animal welfare organisations were sought on the appropriateness of the ban on donkey slaughter in Zimbabwe (Question 10, Appendix II). The respondents agreed that the ban was very appropriate and had come at the right time. They went further to comment that the ban was supposed to come with a strong statement that would make it clear that donkey skin trade will never happen in Zimbabwe. One respondent recommended that there be a law passed to the effect that donkey slaughter for skins trade becomes illegal. One respondent from animal welfare organisations remarked that ‘the demand for ejiao was huge and contributed to the insatiable demand for donkey skins in China such that Zimbabwe’s small donkey population would be wiped off easily. Thus, the ban was the right thing to do’. They further highlighted that if the donkey slaughter had not been banned, the prices of donkeys were going to increase much to the detriment of the poor people who would find it difficult to afford a donkey or replace one. However, the sentiments in support for the ban conflicts with those by Cole (2012) who cites Cooney and Jepson (2006) and revealed that imposing blanket bans on a species does not necessarily eliminate demand for that species in the international market and may pave way for illegal underground trade.

Another respondent from the animal welfare organisations argued that if the ban was not imposed, the donkey welfare situation in Zimbabwe was going to be dire prompting tourist to stop visiting the country. They cited the case of the killing of a lion called Cecil which was killed in Hwange National Parks in July 2015 which trended on social media with the generality of the people condemning the act. The respondent stated that:

‘The killing of Cecil the Lion raised animal welfare concerns resulting in some people declaring that they would not visit Zimbabwe as tourists and impacted negatively on the country’s foreign currency earnings. Similarly, donkey skin trade has the potential of becoming an animal welfare issue that may take the same trajectory’.

Chikowore (2015) notes that the killing of the lion caused tourism drop in Zimbabwe as the country was now viewed as one that did not promote and protect animal rights. A similar trajectory may happen if donkey trade happens with severe animal welfare concerns. Tourists may shun the country.
The donkey abattoir owner response on the ban was that if the ban was not effected business had a lot of potential to create jobs, earn the country foreign currency, and a source for the donkey owners to earn extra income to pay fees and other pressing needs. He also argued that the trade was going to benefit the rural communities through the levies the business operation will be paying to the local councils during the donkey sales which would be utilised to improve amenities such as roads and water provision (Question 9, Appendix III). The finding therefore conflicts with the preservationist viewpoint of animal welfare organisations who argue that donkey owners gain more through long-term use of donkeys than once off donkey sales.

The abattoir owner was also asked to respond to Question 13 (Appendix III) on why Zimbabwe would still want to embark on the donkey skin trade when other countries had banned it. He argued that those countries had not put systems in place that could make the trade feasible. He stated that, “Zimbabwe should learn from the mistakes of these countries and design ways that could enable the trade to happen in such a manner that will make everyone happy”.

The donkey owners also had varying feelings on the banning of donkey skin trade in Zimbabwe (Question 22, Appendix I). A five Likert scale was used to measure the importance of each feeling i.e 1=very excited; 2=excited; 3=indifferent; 4=disappointed; 5=very disappointed. Therefore, the range was from 1 to 5 whereby the higher the value the greater the feeling of disappointment about the banning of donkey skins trade in Zimbabwe. These results are illustrated in Figure 4.8 below.
Figure 4.8: Feelings about the banning of donkey skins trade in Zimbabwe

Figure 4.8 above shows that in overall the rating was 2.74 which according to the scale could be viewed as between excited and indifferent which entails that the rural donkey owners who participated in this study were generally excited to indifferent about the banning of donkey skins trade in Zimbabwe. The Figure 4.8 above also shows that rural donkey owners in Gwanda (3.13) and Gokwe North (3.13) felt the most disappointed about the banning of donkey skins trade in Zimbabwe whilst those from Buhera (2.42) and Tsholotsho (2.59) were rated to be the least disappointed about the banning of donkey skins trade in Zimbabwe. Gwanda and Gokwe had experienced the donkey trade during its short stint when it happened (Nkala, 2017). Thus, the people may have enjoyed the income they earned from selling donkeys and were still interested in the trade.

4.3.3.7 Consumption of donkey products

The fear that the donkey slaughter business would end up putting donkey meat in the human food chain necessitated the need to find out whether rural donkey owners consumed donkey meat or milk (Question 23, Appendix 1). The results are illustrated in Figure 4.9 below.
In terms of rural donkey owners consuming donkey milk the overall assessment was that the 88% did not consume donkey milk whilst 12% stated they consumed it. Furthermore, the figure above also shows that all of the rural donkey owners stated that they did not eat donkey meat and their main reason was that it was taboo. However, the results also showed that the areas that had the highest percentage of donkey owners who drank donkey milk were Gokwe North (37%), followed by Gwanda (23%), then Tsholotsho (10%) and Buhera (6%).

The main reason for consuming donkey milk was that it was medicinal as it assisted in curing whooping cough. However, the rural donkey owners in Beitbridge (100%) stated that they did not consume donkey milk at all. Therefore, these results could entail that the majority of people, do not drink donkey milk nor eat donkey meat. However in some areas like Gokwe North, Gwanda, Tsholotsho and Buhera donkey milk could be consumed by the minority to assist in whooping cough but donkey meat is not consumed because they believe it is taboo.

The findings by Dai et al. (2016); Giribaldi et al. (2017) and El-Agamy (2007) reveal that elsewhere across Europe donkeys are kept as both working animals and for milk and meat production. They further posit that the peculiar biochemical composition of donkey milk makes it a recommended for children with allergies to cow milk. Jirillo and Magrone (2014) also concur that donkey milk has immunomodulatory, anti-inflammatory and anti-hypertensive qualities. The revelation from these studies demonstrates that donkey milk and
meat is actually safe to consume despite the taboo tagged on these products in most Zimbabwean societies.

The taboo contributed to the fear that donkey skins trade was going to end up putting donkey meat into the human food chain. The abattoir owner was asked how he was going to dispose of donkey carcasses after selling the skins (Question 3, Appendix III). He indicated that the donkey meat would also be sold to the Asian market. Question 11 (Appendix III) also asked the abattoir owner to comment on the claim that donkey meat could end up in the human food chain in Zimbabwe when donkeys are slaughtered. He responded that,

“While eating donkey meat does not kill human beings as evidenced by other communities that consume it, my intention was not to impose the meat on the Zimbabwean population who consider the meat as taboo. Instead, I would export the meat to earn foreign currency as it makes more business sense”.

4.3.3.8 Donkey skins trade and concern for donkey theft

Donkey skins trade was perceived as a business model that could fuel donkey theft by both the animal welfare organisations and the donkey owners themselves. Question 18 (Appendix I) sought to find out if donkey owners were willing to sell donkeys to the donkey skins market. The overall assessment was that the majority of were willing (58%) whilst 42% were not willing to sell donkeys to donkey trade. The reasons given for not wanting to sell donkeys included the fear of fuelling donkey theft, the need to retain donkeys for household uses and the appreciation that more value could be accrued through using the donkey over its lifetime than what is earned in a once off donkey sale.

The 58% who stated that they were willing to sell donkeys cited the fact that they would earn income to supplement their earnings. They highlighted that the donkey markets were an opportunity to sell off non-productive or injured donkeys. Their willingness was subject to number of donkeys owned as they said they would only sell if they had excess donkeys. The fear that donkey skins trade would fuel donkey theft was also cited by the animal welfare organisations. However, the donkey abattoir owner disregarded this and argued that donkey thefts were always happening even without the donkey skins trade taking place. Responding to Question 4 (Appendix III), the abattoir owner said, ‘Donkey theft happens because people
use donkeys to till their land. It has nothing to do with donkey trade. Even cattle are stolen’. As a measure to curb the rise in donkey thefts following legalisation of donkey skin trade, the abattoir owner indicated that he would not buy donkeys without confirmation of donkey ownership something which his agents will do in collaboration with the police, Department of Livestock and Veterinary Services personnel as well as local community leadership such as Chiefs and kraal head (Sabhuku). He mentioned that no one would just come from nowhere and sell them a donkey. While this can be possible, there can be people who will evade the checks and controls instituted and stolen donkeys will still be sold (Nkala, 2017).

The researcher noted that indeed donkey theft had been documented to have been increased in Silobela following the brief donkey trade that happened prior to banning of abattoir. According to Nkala (2018) Chief Malisa of Silobela raised concern to the Vice President on 22 October 2017 during a field day highlighting that his people had lost dozens of donkeys since the circulation of news about a donkey abattoir opening in Bulawayo. He said,

“We are very angry because every day we wake up to find our donkeys missing. Ever since talk emerged about the opening of a donkey abattoir in Bulawayo, there has been an increase in the theft of donkeys in our area. We are afraid that our donkeys are being taken to the abattoir in Bulawayo by the thieves. We have already lost a good number, and fear that if this trend continues we will be left with no draught power. We use our donkeys for farming. So how will we do that?”

The researcher looked at a sample of the Stock Card that is used to record livestock ownership by the Department of Veterinary Services (Appendix IV). It was clear that there was no enough space on the Stock Card to record donkey births, deaths sales or thefts to get an aggregate of the total donkeys that one owned at a given period. However, enough space was noted to be available to record cattle. This observation agrees with those of Bough (2011) and Gregory and Grandin (2007) who observes that there is inferior status and ridicule given to donkeys when compared to other domestic animals. This has the potential of increasing donkey thefts as such inadequacies in capturing donkey numbers and failure to confirm donkey ownership can create loopholes such that anyone can claim ownership of a donkey they picked on their way to the donkey market. The researcher learnt that the stock cards are inspected at every cattle dipping by a Dip attendant from the Department of
Livestock and Veterinary Services who updates the stock cards and captures the statistics in the Department recording system. Since donkeys do not go for dipping, no such records can be made of donkeys that can be referred to during a donkey market.

Furthermore, donkey identification in Zimbabwe has been attempted by owners in various ways. While some use hot iron branding, some people cut donkey ears as a way of identifying donkeys. It therefore presents a stock theft risk as these identification methods are liable to manipulation by thieves who will end up selling donkeys that do not belong to them. Thus, in the opinion of the researcher, the need to first put measure that can curb donkey theft need to be considered before embarking on the donkey skins trade. The failure to provide enough space on the stock card to capture and track the changes in donkey numbers for each household is a reflection that the government is not putting donkeys on its national programmes such that programmes such as vaccinations and dipping are not designed by the government for donkeys in Zimbabwe. This is supported by Dai et al. (2016) who highlights that donkeys can easily become invisible to official national databases and figures thereby presenting challenges in getting accurate population statistics for donkeys and in assessing their economic value to a country. FAO (2014) also agrees that working animals such as donkeys are often ignored in national agricultural and rural-transport strategies and policies.

4.3.4 Research Question: Does donkey skins trade enhance the livelihoods of rural donkey owners in Zimbabwe?

The research question was answered by donkey owners, animal welfare organisations as well as the donkey abattoir owner. In order to interrogate the research question, the researcher began by asking donkey owners the importance of donkeys at household level.

4.3.4.1 Importance of donkey uses at a household

The section below sought to establish the importance of identified donkey uses to the rural donkey owners. A five Likert scale was used to measure the importance of each donkey use whereby 1=not important at all; 2=not important; 3=not sure; 4=important; 5=very important. Therefore, the range was from 1 to 5 whereby the higher the value the greater the importance of the use to the donkey owner. The results are illustrated in Figures 4.10 below.
Figure 4.10: Graph showing the importance of each of the following donkey uses at a household

Figure 4.10 above shows that the most important uses of donkeys were rated to be transportation of goods (4.32) and ploughing (4.32), followed by transportation of people (3.8) and then finally hiring for income generation. Furthermore, per region in Gwanda the most important use of donkeys was for ploughing (4.96) whilst transportation of goods (4.62) and people (4.62) as well as hiring for income generation (4.62) were all rated as with similar importance. In Buhera, hiring for income generation (3.94) was the most important use of donkeys followed by transportation of goods (3.42), then ploughing (3.31) and finally transportation of people (3.26). In the case of Gokwe North the most important use was transportation of goods (4.88), followed by ploughing (3.5), then transportation of people (3) and finally hiring for income generation (2.07). Additionally, the figure above also shows that in Beitbridge the donkey owners rated ploughing (5) as the most important use of donkeys in that area, followed by the transportation of people (4.82) and goods (4.82), and then finally hiring for income generation (3.55). However, in the case of Tsholotsho the most important uses of donkeys were rated to be ploughing (4.69), followed by transportation of goods (4.13) and then hiring for income generation (3.25) and finally transportation of people (2.75). Figure 4.10 above also shows that respondents from Beitbridge and Gwanda had higher ratings for the importance of the various uses of donkeys as compared to the other three areas which could entail that donkey owners in Gwanda and Beitbridge believed that their donkeys
were more essential to them unlike in Buhera and Tsholotsho and to a lesser extent in Gokwe North. The results above show that donkeys have important uses at households as such donkey skin trade can only happen when people are convinced that what they will earn from it surpasses what they accrue from the use of donkeys. Dorward et al. (2015) indicated that indirect financial contributions can be achieved through the transport of goods such as homemade goods and agricultural produce such as crops, grains, milk to markets.

4.3.4.2 Valuation of the donkeys

Question 13 (Appendix I) sought to establish what valuation the donkey owners gave their donkeys. The results are illustrated in table 4.2 below.

**Table 4.2: Valuation of donkeys**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>$138.31</td>
<td>$38.233</td>
</tr>
<tr>
<td>Tsholotsho</td>
<td>$180.69</td>
<td>$23.442</td>
</tr>
<tr>
<td>Gwanda</td>
<td>$169.77</td>
<td>$19.844</td>
</tr>
<tr>
<td>Buhera</td>
<td>$126.06</td>
<td>$4.962</td>
</tr>
<tr>
<td>Beitbridge</td>
<td>$120.00</td>
<td>$23.299</td>
</tr>
<tr>
<td>Gokwe North</td>
<td>$76.88</td>
<td>$14.009</td>
</tr>
</tbody>
</table>

According to Table 4.2 above the overall average value of donkeys that rural donkey owners gave to their donkeys was $138.31. Nevertheless this figure seemed to vary per area with the highest valuation being in Tsholotsho ($180.69), followed by Gwanda ($169.77), then Buhera valued their donkeys at an average of $126.06, whilst Beitbridge their average value was $120 and the least valuation was from Gokwe North at only $76.88. The table also shows that the standard deviation values were all less than their mean values which entails that there is a small coefficient variation of the results. However, these results could mean that rural donkey owners in Tsholotsho and Gwanda had the highest valuations for their donkeys whilst those in Gokwe North valued their donkeys far less significantly as compared to all the other
areas. The importance of understanding the value attached to donkeys is key in influencing the donkey owner to either sell or retain their donkey. According to Pétry (1995) donkeys have an existence value in as much as they are not considered as a source of meat.

4.3.4.3 Generation of income through donkeys

The study established whether or not households generated income through the use of donkeys and further analysed and discussed the average monthly income derived from using the donkeys. The results are illustrated in Figures 4.11 and Figure 4.12 below.

![Figure 4.11: Graph showing the income generated through donkey use](image)

Figure 4.11 above shows that a slight majority (52%) of the donkey owners who participated in this study acknowledged that they were generating income through donkeys whilst 48% of the respondents argued that they were not generating income through donkeys. Furthermore, Figure 4.11 shows that only two areas had a majority of rural donkey owners who have been generating income through donkeys and they were namely Buhera (89%) and Beitbridge (82%) whereas the majority of rural donkey owners in Gwanda (96%), Gokwe North (63%) and Tsholotsho (76%) argued that they were not generating income through donkeys. Consequently, these results entail that a slight majority of rural donkey owners were generating income through donkeys, particularly in Buhera and Beitbridge but this was not the case especially for rural donkey owners in Gwanda, Tsholotsho and Gokwe North. If households generate income through donkey use, it may entail that there are likely not going
to sell donkeys unless the donkey stops giving them income. These 48% who are not generating income may be taken as people who have alternative income generation or they use donkeys for household roles and not enterprising with donkeys. This can be explained by Morse and McNamara (2013) who cited Krantz (2001) who posits that poverty is not only about monetary income but has ties with health and education as well as to the less tangible entities such as a sense of powerlessness. The finding can also be supported by Dodd and Cattaneo (2006) who posit that a household’s income is derived from the earnings of several factors and not just a single one.

Figure 4.12: Graph showing the average monthly income by district

Figure 4.12 above overall 51% of the rural donkey owners stated that they derived no income from using donkeys whilst 22% said that they made less than $100 monthly, 14% stated they made between $101 to $200 and 13% mentioned that they made more than $200 per month from using donkeys. Furthermore, the figure above also shows that the majority of rural donkey owners in Tsholotsho (76%), Gokwe North (75%) and Gwanda (96%) concur that they derived no income from using donkeys. However, this was not the case in Beitbridge and Buhera. In the case of Beitbridge the majority of rural donkey owners stated that they made between $101 to $200 (52%), followed by 36% who stated that their monthly income from donkeys was less than $100 and only 12% stated that they derived no income from using donkeys. Whereas in the case of Buhera, 47% of the rural donkey owners stated that
they derived more than $200 from donkeys even though 25% argued that they derived no income from using donkeys in that area. Therefore, the results could entail that in most of the areas rural donkey owners were not deriving any, if much, income from the using their donkeys, particularly in Gwanda, Gokwe North and Tsholotsho. However, in rural donkey owners in Beitbridge and Buhera seemed to derive income from the using their donkeys, especially Buhera were the majority stated they made more than $200 per month. The importance of appreciating how much is generated through donkey use is that it makes a donkey owner weigh out the pros and cons of selling a donkey at a market where they will be given a once off payment of $70 versus earning more throughout the lifetime of the donkey. According to Valette (2015), the annual net economic value of working donkey in Ethiopia is USD$330 while in Kenya it is USD$ 2272. Thus, from donkey related activities over a working life of 20 years, a donkey will have earned its owner USD$6,600 and USD$45,440 in Ethiopia and Kenya respectively. These figures suggest that using a donkey over its lifetime brings more income to donkey owners than selling it.

Although Tsholotsho, Gokwe North and Gwanda respondents mentioned that they did not derive income from donkeys, it should not be interpreted as if donkeys are useless there. Fernando and Starkey(2018) acknowledges that the use of donkeys in communities is a part of social network such that one who does not own a donkey can borrow from a neighbour and it is not possible to charge a neighbour for something as basic as fetching water. Thus, it is possible to own donkeys and not earn income through using them. However, the role played by donkeys in lessening the burden on women and children cannot be overemphasised especially considering the fact that most small farmers can neither afford tractors nor motorised transport means that donkeys are important animal assets. (Valette, 2015; Nkala, 2015; Fernando & Starkey, 2018).

4.3.4.4. Willingness to sell donkeys to skin trade and increase in income
Figure 4.13 below the willingness of donkey owners to sell donkeys to donkey skins trade. It shows that 58% were willing to sell donkeys to donkey skins market and 42% were not willing. It also shows that most of the rural donkey owners believe that the selling of their donkeys to the donkey skins market would increase the income of their household (55%) but 45% argued otherwise. The results also showed that the areas that had the highest percentage
of donkey owners who were willing to sell their donkeys to the donkey skins market were Gokwe North (75%), followed by Gwanda (69%), then Beitbridge (58%) and Buhera (69%). However, the majority of rural donkey owners in Tsholotsho (59%) were against the selling of their donkeys to the donkey skins market.

Figure 4.13 Graph showing the willingness to sell donkeys to donkey skins market

On the other hand, in the case of whether the selling of donkeys to the donkey skins market would increase the income of their households the majority of rural donkey owners from Buhera (69%) and Tsholotsho (59%) did not agree with that assessment. However, the majority of rural donkey owners in the other three areas namely Gokwe North (87%), Gwanda (73%) and Beitbridge (64%) were of the view that the selling of donkeys to the donkey skins market would increase the income of their households. Therefore, these results could entail that the majority of rural donkey owners, especially from Gokwe North, Gwanda and Beitbridge, were willing to sell their no-longer productive donkeys to the donkey skins market and they also believed that this would increase the income of their households. However, even though most of rural donkey owners from Buhera were willing to sell their no-longer productive donkeys to the donkey skins market they did not believe that this would
increase the income of their households. On the other hand, the majority of rural donkey owners in Tsholotsho were against the selling of their donkeys to the donkey skins market as they did not believe that this would increase the income of their households. This belief suggests that the Tsholotsho people have an appreciation that a donkey has more value through using it than in selling it.

Question 13 (Appendix II) asked the animal welfare organisations about their opinions on whether donkey skin trade would contribute meaningfully to the income of households in rural areas. The first impressions from 3 out of 5 respondents was that it was difficult to tell since the donkey skins trade had not been allowed to happen in Zimbabwe. However, 2 out of 5 admitted that they could use the brief donkey trade that had happened in Gwanda and Gokwe in 2017 as reference points. Prior to donkey slaughter banning, there had been people who had moved into Gokwe and Gwanda buying donkeys from the farmers with the intention of supplying the donkey abattoir that had been set up in Bulawayo (Nkala, 2017). The respondents indicated that donkeys were being bought for as low as $50. Given that scenario, the animal welfare organisations opined that donkey skin trade was a mere exploitation as donkey owners would certainly get more income through donkey utilisation than from the donkey sale. One respondent stated that, “It is better for a farmer to keep his donkey and earn $1000 over the donkey’s lifetime than selling the donkey for $50. More value is accrued from donkey use instead”. The value of donkeys over a lifetime has also been highlighted by The Donkey Sanctuary (2017) who suggested that selling a donkey to donkey skins trade is a short term gain as it was detrimental to the livelihoods of people in the long run when they cannot afford a donkey for transport and farming. Valette (2015) consider donkey trade as a catastrophic business venture that can leave women and children overburdened when they wake up one day with no donkeys either through theft or after they have been enticed to sell them. George et al. (2015) cites a study of Indian slum settlements by Parikh et al. (2015) and concluded that the provision of water services increased education by 62% and income by 36% due to the emancipation of women from troubles associated with getting water. This illustrates how important donkeys are to societies.

Donkey skin trade, was viewed as having short-term gains as initially people will get extra income from selling these non-productive donkeys but in the long-run when people begin to
sell the healthy ones it becomes catastrophic as no meaningful income will be accrued compared to keeping donkeys for draught power that will enable them to generate more income.

The role of middlemen was also identified by the animal welfare organisations as having a potential to unfairly fleece donkey owners of the real value of donkeys. Middlemen have a tendency of suppressing the buying price of donkeys so that they can also profit from the deal assigned to them by the donkey abattoir owners. For example the abattoir owner may be offering $100 for a donkey but the middlemen will offer $40 so that he can pocket the extra $60.

There was general consensus by animal welfare organisations that there was no meaningful contribution of donkey skins trade to household income. Nkala (2017) agrees with these opinions and observes that the donkey trade was only a contributor and aggravating factor in community poverty. He further indicates that the benefits that communities draw from having and using the donkeys are by far incomparable to the short-term monetary gains that culminate the loss and deprivation of rural communities. According to Pritchard et al. (2005) and Leed et al. (2003) donkeys contribute directly and indirectly to people’s livelihoods in developing countries and they are used as draught animals and/or in agriculture.

From the donkey abattoir owner’s viewpoint, the donkey skins trade would actually earn the donkey owners an extra income that can assist at household level (Question 10, Appendix III). They said, “Imagine someone sells 5 donkeys at $70 each. At the end of the year he will have earned $350 which he can use to pay for school fees for his children”. While the sentiments above from the abattoir owner make sense, the researcher opines that the income earned can only be meaningful if the donkey owners remained with a good set of donkeys that can still provide draught power to the family. Disposing all the donkeys to get whatever amount will not be futuristic and may drive a family into abject poverty as highlighted by Kanji and Barrientos (2002) who posit that any trade should not just focus on increase in income but also non-income outcomes such as reduced vulnerability, food security and sustainable natural resource use.
From the findings above, it can be apparent that for donkey skins trade to enhance the livelihoods of rural donkey owners in Zimbabwe the benefits accrued from it should outweigh the value that donkey owners accrue from utilization of donkeys. The buying prices should also be such that they are not exploitative but should enable the donkey owner to be able to purchase meaningful assets that can continue to enhance their livelihoods.

4.3.5 Research Question: What factors determine the sustainability of donkey skins trade in the Zimbabwean context?

The donkey population dynamics were identified as key in the sustainability of donkey skin trade because of the fear that population decimation is a threat. Population dynamics involve the ability of donkeys to replenish their species so that enough numbers can exist for household utilisation.

4.3.5.1 Number of livestock kept by rural donkey owners

The section below sought to establish the number and array of livestock kept by rural donkey owners across the various areas of Zimbabwe. The first part of this section shall show the overall average number and array of livestock kept by rural donkey owners in Zimbabwe whilst the second part shall analyse and discuss the average number and array of livestock kept by rural donkey owners per each area. The results are illustrated in Figures 4.14 below.

Figure 4.14: Graph showing the overall average number and array of livestock kept by rural donkey owners
Figure 4.14 above shows that an overall average of 28.87 female sheep and goats were kept by rural donkey owners, followed by male sheep and goats (20.69), then female chickens (11.96), female cattle averaged 10.12, whilst male cattle were around 7.58 per household, whereas male donkeys averaged 4.95 and female donkeys had an average of 4.31, but male chickens averaged 4.13 per household according to the results. Thus these results entail that donkey owners besides keeping donkeys they also had a wide array of livestock that they also kept at their households particularly chickens, sheep and goats. The presence of other livestock may give the household head a wider choice of animals to sell to meet pressing household needs. The ownership of working animal such as donkeys and cattle as well as other food animals is critical in that rural families rely on agriculture for sustenance. Maltsoglou and Rapsomanikis (2005) concur that the poorest places are rural areas and that in these areas agriculture contributes immensely to the household income and food from substantial livestock production.

### 4.3.5.2 Average number of donkeys kept by rural donkey owners

Figure 4.15 below shows the average number of donkeys kept by rural donkey owners who participated in this study. As shown earlier the overall average number of female donkeys was 4.31 whilst male donkeys averaged at 4.95 per household. On the other hand, the figure above shows that in terms of regions or areas Beitbridge had the highest average number of donkeys per household at 6.88 male donkeys and 6.55 female donkeys followed by Gwanda which had the most male donkeys (7.04) and an average of 5.12 female donkeys in the area. Gokwe North is the next area with the most donkeys with an average of 3.43 female donkeys and 4.07 male donkeys, followed by Buhera with an average of 2.91 female donkeys and 3.79 male donkeys and then finally Tsholotsho with 2.38 female donkeys and 3.28 male donkeys. Hence these results could entail that the region or area with the most donkeys per household could be Beitbridge and Gwanda which both had average number of donkeys which were above the overall average of the country. Whereas the areas with the least average number of donkeys per household in this study were Tsholotsho and Buhera.
4.3.5.3 Maximum number of donkeys one would prefer to keep

The donkey owners were asked (Question 10, Appendix I) about the maximum number of donkeys that they would prefer to keep. The results are illustrated in Table 4.3 below.

**Table 4.3: Maximum number of donkeys that owners prefer to keep**

<table>
<thead>
<tr>
<th>Area</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>11.4714</td>
<td>5.35830</td>
</tr>
<tr>
<td>Gwanda</td>
<td>16.1923</td>
<td>5.38159</td>
</tr>
<tr>
<td>Beitbridge</td>
<td>12.7576</td>
<td>3.82451</td>
</tr>
<tr>
<td>Gokwe North</td>
<td>10.2500</td>
<td>2.88675</td>
</tr>
<tr>
<td>Buhera</td>
<td>9.9444</td>
<td>4.66565</td>
</tr>
<tr>
<td>Tsholotsho</td>
<td>8.3448</td>
<td>5.62695</td>
</tr>
</tbody>
</table>

According to Table 4.3 above the overall average maximum number of donkeys that rural donkey owners prefer to keep were about 11 donkeys per household. However, the numbers seemed to vary per area as in Gwanda the average maximum number they preferred to keep were about 16 donkeys, whilst in Beitbridge they preferred 12, Gokwe North rural donkey
owners stated an average maximum of 10, and Buhera rural donkey owners preferred almost 10 as well at 9.9444 whereas in Tsholotsho the donkey owners believe that a maximum average of 8 is sufficient for them. Table 4.3 also shows that the standard deviation values were all less than their mean values which entails that there a small coefficient variation of the results. Therefore, these results could mean that rural donkey owners in Gwanda, Beitbridge and Gokwe North preferred having the highest maximum donkeys per household as compared to those in Buhera and Tsholotsho. This could also explain why in Gwanda, Beitbridge and Gokwe North they kept the most donkeys per household.

4.3.5.4 What is done with excess donkeys above the maximum?

The findings established the various ways people would opt to deal with excess donkeys at households. The results are illustrated in Figures 4.16 below.

![Figure 4.16](image-url)

**Figure 4.16 Graph showing what owners do with excess donkeys**

Figure 4.16 shows that in overall 70% of the rural donkey owners sell the excess donkeys which were above the maximum they could keep whilst 30% prefer to keep those excess donkeys. Furthermore, this is in line with the views shared by rural donkey owners in Tsholotsho were 79% also preferred selling and 21% preferred keeping them, in Buhera the majority (72%) also preferred selling and 28% preferred keeping them and this was also the case in Gokwe North were 62% preferred to sell whilst 38% preferred to keep them. In the
case of Beitbridge all their donkey owners preferred to sell their excess donkeys. On the other hand, in Gwanda the majority of donkey owners preferred to keep their excess donkeys (77%) whilst only 23% preferred to sell their donkeys. Hence, these findings entail that the majority of donkey owners in Zimbabwe preferred to sell their excess donkeys, particularly those from Beitbridge, Tsholotsho, Gokwe North and Buhera. However, those from Gwanda were overwhelmingly against selling them but rather preferred to keep them.

The reasons for selling excess included the failure to adequately feed many donkeys and the need to earn extra income from excess donkeys. For the donkey skin trade to progress there is need for willing people who can opt to sell excess donkeys. Thus, for the trade to be feasible there has to be programmes in place that can enable donkey population to grow so that the excess numbers can be attained. The increase in donkey numbers at household may happen naturally through new births or it can happen if thefts and donkey deaths are avoided. While it is difficult to control the dynamics of new donkey births, efforts may be put to prevent donkey thefts such as stabling donkeys at night and proper identification of donkeys using such methods as micro-chipping. Donkey deaths may to some extend be controlled by making sure that sick donkeys are treated as well as protection from predators such as hyenas among other things.

4.3.5.4 The feasibility of donkey breeding as a way of countering donkey population decline.

The donkey population decimation was one critical area of concern that was highlighted by different respondents in this study. It was said to be key in sustainability of donkey skins trade. In order to gain more understanding, the animal welfare organisations were asked the Question 14 (Appendix II) which sought to look into the feasibility of donkey breeding as a way of countering donkey population decimation in Zimbabwe. The general consensus among the animal welfare organisations was that there was nowhere in the world where this breeding had been done and proved to be effective. The respondents cited that donkeys reach puberty late and the gestation period of donkeys was longer than cattle. They argued that unlike cattle which can produce one calf per cow per year, the female donkey cannot be able to do so since donkey breeding is slow.
The prospective abattoir owner said he intended to slaughter 70 donkeys per day (Question 2, Appendix III). The projected slaughter target of 70 donkeys per day by the abattoir raised issues of sustainability. The population of donkeys according to the Department of Veterinary Services (2017) was 365612. Assuming that 70 donkeys are slaughtered per day, the annual projected number of slaughtered donkeys can be 25550. Thus, it may take about 15 years to wipe out all the donkeys if no matching rate of replenishment is attained. Ekins and Medhurst (2003) suggest that development is assumed to be sustainable if assets are maintained or increase over time. Tapping into the donkey skin trade requires that important evaluation be done first.

One respondent also indicated that an attempt at breeding donkeys intensively had the risk of causing hyperlipemia as donkeys are highly susceptible. Burden et al (2011) agrees that if donkeys are stressed they go off feed and this may culminate in hyperlipemia. Thus, it is imperative to consider that any attempt at breeding donkeys is done cognisant of this potentially dangerous condition. Hyperlipemia can be prevented through reduction of stress and maintenance of appetite as well as treating donkeys which are suffering from pain associated within a primary disease process so that they do not lose appetite (Durman & Thiemann, 2015).

The abattoir owner was also asked to comment on the claim that donkey skins trade could cause unwarranted decimation of donkey populations in Zimbabwe (Question 5, Appendix III) and highlighted that the intentions were not to cause harm through the donkey skin trade. They further suggested that:

“The donkey skins demand is insatiable and can never be fully met. What we suggest is that the government establishes a quota system that governs the number of donkeys that can be slaughtered per year. This system is already working well for the elephants and other wildlife in Zimbabwe”.

The abattoir owner also claimed that there was no accurate population census of donkeys in Zimbabwe because not all owners had registered their donkey with the Department of Veterinary Services. Thus, he regards the current assumed donkey census as inaccurate citing that there could actually be more donkeys in Zimbabwe.
Question 12 (Appendix III) asked the donkey abattoir owner if there was any legislative framework that promoted or discouraged donkey skins trade in Zimbabwe. He stated that currently there was not any. The researcher’s opinion is that the absence of such a framework makes the donkey population vulnerable to overexploitation. While the license to slaughter donkeys has been denied, without the legal framework that clearly dictates a policy, there is nothing that can actually stop illegal underground donkey skin trade. According to Nkala (2018), the ban is not a sufficient instrument to curb the donkey trade.

4.3.6 Research Question: What Factors Influence the increasing demand for donkey skins trade in the emerging export market?

The abattoir owner indicated that his market for donkey skins was China. He further highlighted that he would also be exporting the donkey meat to the same market where it is a delicacy. Animal welfare organisations were asked Question 3 (Appendix II) about the factors associated with the increasing demand for donkey skins. It was clear from the responses given that the demand for the traditional Chinese remedy called Ejiao was identified as the driving factor of the increasing demand for donkey skins. SPANA (2018) acknowledges that previously, the supply of donkey skins used in ejiao production was largely sourced from Chinese farms but as China’s donkey population declined from 11 million in 1990 to 5.4 million in 2016. This stimulated the need to source donkeys from Africa (SPANA, 2018). The fact that China is looking for donkeys from other countries such as Zimbabwe where such donkeys are important sources of draught power implies that there should be proper evaluation of the impacts that may arise following the approval of such a trade. If the trade is allowed to take place without the necessary evaluation, it may cause regrettable outcomes (Valette, 2015). If a reduction in donkey numbers happens in a country such as Zimbabwe where donkeys are used for the purposes highlighted above there can be poverty planted in the people.
4.4 Inferential Statistics
Inferential statistics from the correlation and regression tests were conducted to test the three hypotheses which had been forward by the researcher. These results shall be illustrated in the tables below.

4.4.1 Hypothesis 1
The first hypothesis that the researcher put forward is highlighted below:

\( H_0 \): Donkey skin trade does not increase the income of rural donkey owners in Zimbabwe.
\( H_1 \): Donkey skin trade increases the income of rural donkey owners in Zimbabwe.

Correlation analysis showed the following results shown in Table 4.4 below

<table>
<thead>
<tr>
<th></th>
<th>Willing to sell</th>
<th>Donkey skin trade increase income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>1</td>
<td>.739**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>140</td>
<td>139</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

According to Table 4.4 above the \( p=0.000 \), and \( p<0.05 \). It entails that the results of this correlation analysis could be considered as statistically significant. Furthermore, the coefficient was 0.739, which was more than 0.7 considered to show a strong association. This also entails that there is a strong and positive association between the willingness to sell donkeys to donkey skins market and the perceived increase of income in the household. Therefore, one could reasonably state that an increase in the willingness to sell donkeys to donkey skins market could be associated with the perceived increase of income derived from the sale.

Regression Analysis showed the following results in Table 4.5 below
Table 4.5: Regression Coefficients\textsuperscript{a} for Hypothesis 1

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>.375</td>
<td>.096</td>
<td>3.912</td>
</tr>
<tr>
<td></td>
<td>Willing to sell</td>
<td>.744</td>
<td>.058</td>
<td>.739</td>
</tr>
</tbody>
</table>

\textsuperscript{a}. Dependent Variable: Donkey skin trade increase income; R\textsuperscript{2}=0.545; F(1,137)=164.406; P-value=0.000

According to the results from the regression analysis shown in Table 4.5 above the R-squared was 0.545, F (1,137) =164.406 and p-value=0.000. This entails that the willingness to sell donkeys to donkey skins market by donkey owners explains 54.5% of the increase of income in their household, and the results of this regression analysis can be considered as statistically significant as the p-value was 0.000 which was less than significance level of 0.05. Furthermore, the unstandardized B-coefficient (\(\beta=0.744\)) also means that an increase in the willingness to sell donkeys to donkey skins market by donkey owners by a single unit could lead to an increase of income in their household by 0.744. Therefore, these results entail that the sale of donkeys to donkey skins market by donkey owners could have an impact of increasing the income in their household.

Consequently, according to these results this study \textbf{rejects} the null hypothesis that ‘\textit{donkey skin trade does not increase the income of rural donkey owners in Zimbabwe}’ and \textbf{accepts} the \(\textbf{H}_1\) which stated that ‘\textit{donkey skin trade increases the income of rural donkey owners in Zimbabwe}’ as it was established that the sale of donkeys to donkey skins market by donkey owners could have an impact of increasing the income in their household.
4.4.2 *Hypothesis 2*

The second hypothesis that the researcher put forward is highlighted below:

\[ H_0: \text{There is no connection between the total number of donkeys owned and the willingness to trade} \]

\[ H_1: \text{There is a connection between the total number of donkeys owned and the willingness to trade} \]

Correlation analysis showed the following results shown in Table 4.6 below

**Table 4.6: Correlations for Hypothesis 2**

<table>
<thead>
<tr>
<th></th>
<th>No of donkeys</th>
<th>Willing to sell</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No of donkeys</strong></td>
<td>Correlation</td>
<td>.251**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>140</td>
</tr>
<tr>
<td><strong>Willing to sell</strong></td>
<td>Correlation</td>
<td>.251**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>140</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).**

Table 4.6 above the sig-value is 0.003, which is less than the significance level value of 0.05, hence it entails that the results of this correlation analysis could be considered as statistically significant. Moreover, the coefficient was 0.251, which was less than 0.3 considered to show a weak association. This entails that there is a weak and positive relationship between the number of donkeys a rural donkey owner has and their willingness to sell donkeys to donkey skins market. As a result, one could reasonably state that an increase in the number of donkeys a rural donkey owner has could be associated with an increase in their willingness to sell donkeys to donkey skins market.
Regression Analysis showed the following results in Table 4.7 below

**Table 4.7: Regression Coefficients\(^a\) for Hypothesis 2**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.312</td>
<td>.096</td>
<td>13.606</td>
</tr>
<tr>
<td></td>
<td>No of donkeys</td>
<td>.023</td>
<td>.008</td>
<td>.251</td>
</tr>
</tbody>
</table>

\(^a\) Dependent Variable: Willing to sell; \(R^2=0.251; F(1,138)=9.315; P\)-value=0.003

According to the results from the regression analysis shown in table 4.7 above the \(R\)-squared was 0.251, \(F(1,138)=9.315\) and \(p\)-value=0.003. This entails that the number of donkeys a rural donkey owner has explains only 25.1% of their willingness to sell donkeys to donkey skins market. Furthermore, the results of this regression analysis can be considered as statistically significant as the \(p\)-value was 0.003 which was less than significance level of 0.05. Additionally, the unstandardized B-coefficient (\(\beta=0.023\)) also means that an increase in the number of donkeys a rural donkey owner has by a single unit could lead to an increase in the willingness to sell donkeys to donkey skins market by 0.023. Consequently, these results entail that the increase in the number of donkeys a rural donkey owner has could have an impact of increasing the willingness to sell donkeys to donkey skins market by donkey owners.

Therefore, according to these results this study **rejects** the **null hypothesis** that ‘there is no connection between the total number of donkeys owned and the willingness to trade’ and **accepts** the \(H_1\) which stated that ‘there is a connection between the total number of donkeys owned and the willingness to trade’ as it was established that there is a connection between the total number of donkeys owned and the willingness to trade in that an increase in the total number of donkeys owned has an effect of enhancing the willingness to trade. This can be explained by the fact that when people have excess animals they may find it difficult to adequately look after them. It also means that as long as the people are willing to sell the donkeys for this reason then donkey skin trade will not fail to find donkeys to buy. However, the willingness may dwindle once people realise that they have lost important working
animals like donkeys. It is at this point that the abattoir operation may fail to meet its daily slaughter target.

**4.4.3 Hypothesis 3**

The third hypothesis that the researcher put forward is highlighted below:

- $H_0$: There is no association between location of donkey owner and the willingness to trade
- $H_1$: There is association between of location of donkey owner and the willingness to trade

Correlation analysis showed the following results shown in Table 4.8 below.

**Table 4.8: Correlation between location and willingness to sell**

<table>
<thead>
<tr>
<th></th>
<th>Village</th>
<th>Willing to sell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>1</td>
<td>-.148</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.080</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td>Willing to sell</td>
<td>-.148</td>
<td>1</td>
</tr>
<tr>
<td>Correlation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.080</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>140</td>
<td>140</td>
</tr>
</tbody>
</table>

According to Table 4.8 above the sig-value is 0.080, which is more than the significance level value of 0.05, hence it entails that the results of this correlation analysis are statistically insignificant. Even though the coefficient was -0.148, which can be considered to mean a negative weak association, the association or relationship between the willingness to trade their donkeys and location was determined to be insignificant. Hence, this could entail that there is no significant relationship between the location donkey owners are from and the willingness to sell donkeys to the donkey skin trade market.
Regression Analysis showed the following results in Table 4.9 below

**Table 4.9: Regression Coefficients for Hypothesis 3**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.733</td>
<td>.097</td>
<td>17.898</td>
</tr>
<tr>
<td></td>
<td>Village</td>
<td>-.051</td>
<td>.029</td>
<td>-.148</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Willing to sell; R²=0.022; F(1,138)=3.107; P-value=0.080

According to the results from the regression analysis shown in table 4.9 above the R-squared was 0.022, F(1,138) =3.107 and p-value=0.080. This entails that the location of the donkey owners explains only 2.2% of the willingness by donkey owners to sell donkeys to donkey skins market. However, the results of this regression analysis can be considered as statistically insignificant as the p-value was 0.080 which was greater than the significance level of 0.05. Therefore, these results entail that the place or location the rural donkey owners came from has no effect on the willingness of the rural donkey owners to trade their donkeys. The results show that geographical location does not affect the willingness of owners to trade in the donkey.

**4.5 Summary**

This chapter focused on the data presentation, discussion and interpretation of the research findings. The researcher used qualitative data analysis procedures in order to analyse data collected through interviews. Quantitative data obtained through questionnaire administration was analysed using SPSS version 22 package. The data was presented using tables, graphs and charts. Both qualitative and quantitative analyses were done concurrently to provide meaning to the data and answer the research questions. The researcher tied the research results to literature review wherefrom certain facts were justified or nullified using previous studies and theories. The researcher attempted at giving explanations to any deviations noted. Three hypotheses were tested using regression and correlation analysis and showed that donkey skin trade increased the income of rural donkey owners in Zimbabwe; there was connection between the total number of donkeys owned and the willingness to trade; and there is no association between location of donkey owner and the willingness to trade.
CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
This study sought to investigate the feasibility of donkey skin trade as a strategy to tap into the emerging donkey export market in the Zimbabwean context. The study was brought about by the fact that Zimbabwe had attempted to tap into the emerging donkey skins export market but a number of concerns had been raised which culminated in the ban on the slaughter of donkeys. There was therefore need to obtain data and analyse it to get the various viewpoints of interested stakeholders. This chapter focuses on three areas namely the summary of the major findings, the research conclusions and the recommendations.

5.2 Summary of the major findings
The findings confirmed that donkey skin trade was being fuelled by the Chinese demand for donkeys in order to manufacture traditional medical remedy called Ejiao and the abattoir owner was a major proponent of the trade as he cited that there were national, community and individual household benefits that could be derived from it. The findings confirmed that the major fears cited against the trade were decimation of populations, threat to donkey welfare and risk of donkey thefts. It also revealed that that donkeys were important animal assets in as far as draught power and livelihoods were concerned which needed to be kept to sustain a household in the long-term. The research findings confirmed that the breeding of donkeys could not be relied on as a way to counter donkey population reduction. The findings noted some objections to the buying of sick or injured donkeys for slaughter and confirmed that it was not acceptable. It was also confirmed from the research findings that there was lack of consideration for donkeys in national animal health programmes as reflected in the data entry systems of government. The non-consumption of donkey meat and milk in Zimbabwe was confirmed by the research findings to be influenced by a cultural belief that consider it as taboo although donkey milk was consumed to cure whooping cough in some communities.

The findings showed that there were variations in the valuation attached to donkeys and this varied between places. It was also confirmed that the majority of donkey owners were willing
to sell donkeys to donkey markets. 70% of the rural donkey owners said if they exceed the maximum number of donkeys they needed at household they would sell the excess whilst 30% preferred to keep even that excess number of donkeys. Statistical test revealed that donkey skin trade increases the income of rural donkey owners in Zimbabwe (p=0.00). It was proved that there was a connection between the total number of donkeys owned and the willingness to trade in that an increase in the total number of donkeys owned has an effect of enhancing the willingness to trade (p=0.03). It was also revealed that there is no significant relationship between the location of donkey owners and the willingness to sell donkeys to the donkey skin trade market (p=0.08).

5.3 Conclusions

5.3.1 The demand for donkey skins

The demand for donkey skin being fuelled Chinese demand for ejiao manufacture traditional medical remedy called Ejiao is insatiable and will continually require huge number of donkeys to be slaughtered every year. (Valette, 2015; Nkala, 2018). It therefore requires that there be replenishment of donkeys at a rate that meets consumption to avoid decimation of numbers. However, there have not been documented successful breeding of donkeys currently (The Donkey Sanctuary, 2018). The study revealed that donkey population dynamics are key in the sustainability of donkey skin trade because of the fear that population decimation is a threat. Given that active breeding of donkeys cannot be done, it requires that any trade that can drastically reduce donkey numbers be moderated.

5.3.2 Donkey skin trade carries some consequences

The findings that tapping into donkey skins export market carries some threats requires that enough work be done to ensure that the country does not embark on a trade that may dispossess families of livelihoods created by owning donkeys as animal assets. The findings consider the ban on donkey slaughter as an important first step that will however need to be supported with legislature if it has to stay permanently. Despite the appreciation of the ban by animal welfare organisations, the proponents of the trade holds that donkey skins trade can accrue national, community and individual household benefits.
The major fears cited against the trade are to a large extent justifiable. Decimation of populations and effects on animal welfare as identified by stakeholders can be serious challenges. It can be concluded that donkeys are important animal assets in as far as draught power and livelihoods was concerned and long term benefits should be sought instead of short-term financial gains proffered by the donkey trade to avoid long-lasting impacts after communities sell all their donkeys and are left with nothing to use. The indications from the findings highlighting that if donkey numbers decline, the few remaining donkeys will be forced to overwork in order to compensate for the demand created for draught power becoming welfare issue are real and should be addressed carefully before adopting donkey skin trade. The threat of donkey losses may impact negatively on women and children who will be forced to work extra hard to cover the gap. Also revealed was the concern that once donkey trade begins, donkey prices may increase and households will find it difficult to purchase a new donkey or replace one. This increase in donkey prices will be a result of the demand and supply dynamics that will be at play.

5.3.3 Donkey breeding

The revelation from the study that donkey breeding could not be relied on as a way to counter donkey population reduction poses a threat. Considering that the Ejiao demand keeps growing and yet the donkey population remain at a natural growth trajectory which is slow, embarking on donkey skin trade may actually become a huge set back. Donkeys are not production animals, have low reproduction potential and may succumb to stress related conditions such as hyperlipemia when intensively bred (Durman & Thiemann, 2015; Burden et al., 2011). Given the finding that donkeys are usually excluded in government programmes such as disease surveillance, vaccinations and dipping it may not be possible to envisage donkey breeding happening successfully under current settings

5.3.4 Trading in sick or non-productive donkeys

The findings reveal some concerns involved with the buying of sick or injured donkeys for slaughter and it was indicated that this was unacceptable. The fact that sick or injured donkeys are moved or transported over long distances prolongs their suffering and contradicts the law as prescribed by the Prevention to Cruelty Act. Such animals in severe pain if they cannot be treated are supposed to be euthanized at their point of location. The possibility of
eventual trading in the healthy donkeys cannot be underestimated once the donkey skin trade begins. The abattoir being a business venture that has targets for operational profits may lux their policy and end up buying even the healthy donkeys once their projected targets are not satisfied by the injured and non-productive donkeys. Thus, a loophole exists that may be difficult to monitor considering that there is subjectivity that prevails in trying to classify what is healthy or non-productive.

5.3.5 Lack of consideration for donkeys in national programmes.
There was lack of consideration for donkeys in national programmes. Apart from that there was inadequate provisions in government documentation such as stock cards which can be used for capturing donkey stock information such as numbers of donkeys born, sold and those that have died. Regarding the ban, findings also show that there is lack of sound legal framework which makes the ban liable to legal challenging. The importance of recognising the donkeys in national programmes is pertinent even to the designing of identification of donkeys as way of stock theft control thereby improving donkey welfare and accountability.

5.3.6 Variations in donkey valuations, income generation through donkey use and willingness to sell to markets.
There were variations in the valuation attached to donkeys. The importance of understanding the value attached to donkeys is key in influencing the donkey owner to either sell or retain their donkey. The majority of owners were found to be generating income through donkey uses with few owners arguing that they were not generating income through donkeys. These few may be taken as people who have alternative income generation or they use donkeys for household roles and not enterprising with donkeys. This is supported by Dorward et al. (2015) who highlights that indirect financial contributions can be obtained through the transport of goods such as homemade goods and agricultural produce such as crops, grains, milk to markets.

It can be concluded that donkey owners always have reasons to sell donkeys despite donkeys being important for draught power. The fact that there is a bigger number of willing sellers will mean that whenever and wherever donkey markets arrive there will always be people who are not difficult to entice to sell donkeys. It can be concluded that in order to stop the
donkey skins trade; it is this group of people who need to be educated so that they can understand that donkeys can unlock a long-term value through efficient use.

The majority of the rural donkey owners said if they exceed the maximum number of donkeys they needed at household they would sell the excess. There were few people who preferred keeping the excess number of donkeys. It can be concluded that the majority who prefer selling the excess donkeys would do so as a result of having reached a point of saturation beyond which they cannot manage looking after excess numbers. These are the people who will likely sell donkeys to donkey skins trade.

The category of owners who decide to keep the excess donkeys instead of selling them may be considering the income they get from the donkey sales as insignificant compared to hiring out the excess donkeys and generate more income. Hassan et al. (2011) revealed that as the number of donkeys increase by one donkey it significantly increased the weekly income of the farmers by 62%. This observation may mean that those families that had excess donkeys have the capacity of generating more income.

5.3.7 Tested hypotheses

5.3.7.1 Donkey skin trade increases income of rural donkey owners

There was general consensus by animal welfare organisations that there was no meaningful contribution of donkey skins trade to household income contradicted those by abattoir operator and some owners who opined that the donkey skins trade would actually earn the donkey owners an extra income that can assist at household level. The finding from the study that donkey skin trade increases the income of rural donkey owners in Zimbabwe (p=0.00) may not necessarily mean that the income is generated over a long time as it could be short-lived economic gain that may disappear once healthy donkeys are lost. Thus, careful consideration should be given to weigh out the pros and cons of adopting donkey skins trade as an income generation for communities and educate them about the impact it can have in the longterm as indicated (Valette (2015); Nkala, 2017 & SPANA, 20189).
5.3.7.2 There is connection between the total number of donkeys owned and the willingness
Statistically, it was proved that there was a connection between the total number of donkeys owned and the willingness to trade in that an increase in the total number of donkeys owned has an effect of enhancing the willingness to trade (p=0.03). This could be taken as a saturation for the need for draught power. Those who keep donkeys will at some point exceed the number that they can keep prompting the need to sell. Thus, instead of selling to donkeys skins trade, it may be essential to consider selling donkeys to other communities which can use them for draught power.

5.3.7.3 Relationship between the location donkey owners the willingness to sell donkeys
Findings showed that there is no significant relationship between the location of donkey owners and the willingness to sell donkeys to the donkey skin trade market (p=0.08). It can therefore be concluded that geographical location does not influence the willingness of owners to trade in the donkey and any awareness programmes should be done across the whole country.

5.4 Recommendations

5.4.1 Inclusion of donkeys in national programmes
It is evident that donkeys are not being included in national programmes such as vaccinations, dipping, and surveillance and identification efforts. It is recommended that government take steps to look into issues of donkeys in a similar way that species such as cattle are treated. The researcher noted the deficiencies in the Stock Cards issued by the Department of Livestock and Veterinary Services. It is recommended the Stock Card be improved to give more space for donkey records. Currently, it is only issued to cattle owners. It therefore entails that if one owns donkeys only and not cattle, they cannot have a Stock Card where records of the donkey births, acquisitions, deaths, sales can be recorded. This affects the donkey statistics as no proper record can be obtained in the national database.
5.4.2 National donkey survey
It is recommended that a national survey be done to get the true donkey population in the country. The correct donkey numbers will enlighten the nation about whether or not there is sufficient numbers to sustain a donkey skin trade.

5.4.3 Education and awareness of donkey owners
The study revealed some threats of donkey skins trade which will dictate that more education be given to donkey owners not to sell donkeys until the sustainability issued are addressed. Donkey owners should also be taught to appreciate that sick donkeys can recover if treatment is administered instead of ignoring them so that they can be sellable to donkey markets.

5.4.4 Advocacy
Impact assessments should be the first step before approving such trade. There is need for stakeholders to advocate for proper legislation that completely pronounce a stop to trade of this nature so that the ban currently in place can be strengthened.

5.5 Contribution to knowledge
The study managed to investigate the feasibility of donkey skin trade as a strategy to tap into the emerging donkey export market in the Zimbabwean context. The information obtained and documented will help in advising policy makers on the right steps to take regarding participation in the donkey skin trade.

5.6 Areas for further study
The researcher identified that a study need be done to investigate the donkey population dynamics in Zimbabwe. This is necessitated by the need to analyse factors that can sustain the donkey populations in Zimbabwe.
Another area of study on how donkey utilization can be maximized to assist household with income generation has been identified. This is necessitated by the need to dis-incentivize the slaughter of donkeys for donkey skins through guaranteeing continuous income generation at household level.

5.7 Summary
The increasing demand for traditional Chinese remedy called Ejiao has resulted in a huge demand for donkey skins in Asia. To meet the demand for donkeys, Asia has begun looking elsewhere for donkey skins supply. It was necessary to investigate if it was feasible for Zimbabwe to tap into this emerging donkey skins export market. This chapter revealed major findings that included that the sentiments against the trade were rooted in fears of donkey welfare violations, potential decimation of donkey numbers, possible increase in donkey thefts and likely reduction in quality of livelihoods of rural people. It was also noted that donkey breeding could not be relied on to counter population reduction. The exclusion of donkeys from national veterinary health programmes was also highlighted. The chapter also highlights the researcher’s recommended interventions such as donkey owner education, advocacy and inclusion of donkeys in national animal health programmes in order to avoid the negative effects that may emanate from Zimbabwe tapping into the emerging donkey skin trade. The researcher proposed further research into donkey population dynamics in Zimbabwe with the view to interrogate sustainability of donkey skin trade if the country was to embark on it. The researcher also recommends further studies to determine how donkey utilization could be maximized to assist household with income generation.
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APPENDIX I: COVER LETTER AND QUESTIONNAIRE FOR DONKEY OWNERS

RE: Academic Research

Dear Sir/Madam

My name is Erick Mutizhe. I am a student at Bindura University of Science Education under the Graduate School of Business doing a post graduate degree in Masters in Business Leadership. As part of the fulfillment of the program I am currently undertaking a study entitled “Feasibility of donkey skin trade as a strategy to tap into the emerging donkey export market: A case of Zimbabwe”. This research is purely for scholarly purposes therefore, all information you will provide will be treated with utmost confidentiality.

Should you want to get more clarification do not hesitate to contact me on the contact details below.

Contact Details
Phone Number: 0772 956 933
Email: vetmutizhe@gmail.com

Thank you
Erick Mutizhe
QUESTIONNAIRE: Donkey Owners

1. District…………………………………………………………………………………………

2. Ward…………………………………………………………………………………………

3. What is your age? (Tick applicable)
   - Under 25
   - 25-34 years old
   - 35-44 years old
   - 45-54 years old
   - Over 55 years old

4. Sex of respondent (Tick applicable)
   - Male
   - Female

5. Marital Status of respondent (Tick applicable)
   - Married
   - Widowed
   - Single
   - Divorced

6. Level of Formal Education of attained by respondent (Tick appropriate)
   - Primary
   - Secondary
   - Tertiary
   - Others (Specify)………………………………………………………………………………..
7. Indicate the number of livestock that you keep? *(Complete table below)*

<table>
<thead>
<tr>
<th>Livestock type</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donkeys</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheep/goats</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other, specify</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. Complete table below about donkey numbers from 2015 to 2017

<table>
<thead>
<tr>
<th>YEAR</th>
<th>No. at beginning of the year</th>
<th>No. Born during the year</th>
<th>No. died during the year</th>
<th>No. stolen during the year</th>
<th>No. Sold during the year</th>
<th>No. bought during the year</th>
<th>Total number available at end of year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. What do you keep donkeys for? .................................................................

10. What is the maximum number of donkeys you would prefer to keep? ............
11. If you exceed the maximum number of donkeys that you can keep, explain what you would do with the excess *(Tick applicable)*

- [ ] Keep excess
- [ ] Cull excess
- [ ] Sell excess

Support your answer……………………………………………………………………

12. How important is each of the following donkey uses at your household?

*Please tick [✓] the appropriate box using the rating scale below which ranges between 1 and 5 where:*

1= very important 2= important 3= not sure 4= not important 5 = not important at all

<table>
<thead>
<tr>
<th>Donkey Use</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ploughing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household transportation of goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation of people</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hiring for income generation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. How much do you value your donkey in US$?..............................................................

14. Do you generate income through donkeys *(Tick applicable )* 

- [ ] YES
- [ ] NO

Support your answer……………………………………………………………………

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15. What is the average monthly income you derive from using your donkeys? *(Tick applicable)*

- [ ] No income at all
- [ ] Less than $100
- [ ] $101 to $200
- [ ] Above $200

16. What other sources of income does the family have?

*Please rank them in the table below according to the value of income derived from the source with 1 being the highest income value.*

<table>
<thead>
<tr>
<th>Source</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages/salary</td>
<td></td>
</tr>
<tr>
<td>Remittances</td>
<td></td>
</tr>
<tr>
<td>Selling goods</td>
<td></td>
</tr>
<tr>
<td>Other, please specify</td>
<td></td>
</tr>
</tbody>
</table>

17. How do you dispose of donkeys that are no-longer productive? .................

18. Would you be willing to sell donkeys to donkey skins market? *(Tick applicable)*

- [ ] YES
- [ ] NO

Support your answer ........................................................................................................

19. In what way would donkey skin trade benefit the livelihood of your household?

........................................................................................................................................

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20. Do you think donkey skin trade will increase the income of your household? (Tick applicable)

☐ YES

☐ NO

Support your answer........................................................................................................

21. Have you heard about the banned donkey abattoir in Zimbabwe?

☐ YES

☐ NO

22. What do you feel about the banning of a donkey skins trade in Zimbabwe? (Tick applicable box).

Very excited    Excited        Indifferent      Not excited      Very disappointed

Support your answer........................................................................................................

23. Do you consume donkey milk? (Tick applicable)

☐ YES

☐ NO

Support your answer........................................................................................................

24. Do you consume donkey meat

☐ YES

☐ NO

Support your answer........................................................................................................

-End of Questionnaire-

Thank you
APPENDIX II: INTERVIEW GUIDE FOR ANIMAL WELFARE ORGANISATIONS

1. What legislation guides animal welfare in Zimbabwe?
2. What are your views on the donkey welfare situation in Zimbabwe?
3. What are the factors associated with the increasing demand for donkey skins?
4. What is your opinion on the adoption of donkey skin trade as a way of tapping into export market by Zimbabwe?
5. How does donkey skin trade impact on welfare of donkeys?
6. Under what circumstances may this trade be inconsiderate to animal welfare?
7. What is the best way to deal with non-productive donkeys such as blind or fractured donkeys?
   Is it best to sell them for slaughter? (Follow up question)
8. How ethical is it to buy non-productive, injured or blind donkeys for slaughter?
9. There are claims that if cattle, sheep and goats can be slaughtered, there cannot be justification to stop the slaughter of donkeys. What are your views on this?
10. Can you comment on the appropriateness of the ban on donkey slaughter in Zimbabwe?
11. What are the key animal welfare concerns surrounding the donkey skins trade in Zimbabwe?
12. If issues raised in 11 above were addressed would you reconsider your position regarding donkey skins trade?
13. In your opinion does donkey skin trade contribute meaningfully to the income of households in rural areas?
14. There are claims that to counter donkey population decimation, donkey breeding can be done. How feasible is that in Zimbabwe?
15. In conclusion, should Zimbabwe tap into the donkey skins export market?

-The End-

Thank you
APPENDIX III: INTERVIEW GUIDE FOR THE PROSPECTIVE ABATTOIR OWNER

1. Where did you intend to buy donkeys from?

2. What is the capacity of the abattoir per day? Is the 70 per day correct?

3. How would you dispose of donkey carcasses after selling skins?

4. There are concerns that donkey skin trade would fuel donkey thefts. What is your comment?

5. It is claimed that donkey skins trade would cause unwarranted decimation of donkey population in Zimbabwe. What is your comment?

6. What are the factors associated with the increasing demand for donkey skins trade?

7. The media reports that you aimed at buying only the non-n productive or injured donkeys. How true is this?

8. There are claims by animal welfare groups that donkey skins trade will adversely affect the welfare of donkeys. Can you comment on the assertion?

9. In what way, does the donkey skins trade benefit
   a) The country   b) Donkey owners   c) The communities

10. In your opinion does donkey skin trade contribute meaningfully to the income of households in rural areas?

11. What is your comment on the claim that donkey meat may end up in the human food chain in Zimbabwe when you slaughter donkeys?
12. Is there any legislative framework that promotes or discourage donkey skins trade in Zimbabwe?

13. Other countries have banned the donkey trade. Why would Zimbabwe still want to embark on it?

14. What are the economic benefits attributable to donkey skin trade in Zimbabwe?

Thank You

- The End-
APPENDIX IV: THE STOCK CARD

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<table>
<thead>
<tr>
<th>QUARTERLY CENSUS</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>G</td>
<td>B</td>
<td>H</td>
<td>K</td>
<td>C</td>
<td>D</td>
<td>F</td>
</tr>
<tr>
<td>DEPARTMENT OF VETERINARY SERVICES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STOCK CARD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUARTERLY CENSUS</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>G</td>
<td>B</td>
<td>H</td>
<td>K</td>
<td>C</td>
<td>D</td>
<td>F</td>
</tr>
<tr>
<td>DEPARTMENT OF VETERINARY SERVICES</td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>STOCK CARD</td>
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