THE IMPACT OF ACCOMMODATION TAX ON FOREIGN TOURISTS’ INFLOWS IN ZIMBABWE (2010 – 2017)

BY

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I, Thelma Mutete registration number B1543855 declare that this research study has not been submitted for any degree and the acknowledgements have been made to the contributions of others where appropriate.

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ABSTRACT

Tourist taxes have become an easy way for governments to collect extra revenue for investment purposes, infrastructure and social services. However, because tourism represents a primary source of wealth and focus of new employment for different destinations, it is important not to levy disproportionate taxes on this sector as it has adverse effects on the tourist arrivals. On the occasion of the recent introduction of a tourist tax in the Zimbabwe one of the most leading destinations in the Southern Africa. The objective of this paper is to evaluate its effects on tourist arrivals. In order to estimate this effect, a review on methodologies using secondary data focusing on the Theory of Elasticity for analysing the effect on tourism demand and empirical applications focused in Zimbabwe is undertaken. The results indicate that there is an adverse effect on tourist arrival. The results also indicate that tourist arrival is constrained by infrastructural development and government expenditure on tourism.
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LIST OF ABBREVIATIONS

ADF-Augmented- Dickey Fuller

DW-Durbin Watson

GDP-Gross Domestic Product

OECD-Organisation for Economic Co-operation and Development

OLS-Ordinary Least Squares

UK-United Kingdom

UN-United Nations

WTO-World Tourism Organisation

ZCT-Zimbabwe Council for Tourism

ZEPERU-Zimbabwe Economic Policy Analysis and Research Unit

ZIMASSET-Zimbabwe Agenda for Sustainable Socio Economic Transformation

ZIMSTAT-Zimbabwe Statistical Agent

ZTA-Zimbabwe Tourism Authority
CHAPTER I

INTRODUCTION

1.1 Introduction

Tourism has become a key economic activity for many countries. The economic benefits of tourism are obvious: an increase in the GDP, job creation, currency inflows, a better trade balance, investment etc, (Christie and Crompton 2001). However, tourism entails different social and environmental costs such as congestion, a decline in environmental quality and mass consumption of natural resources. Kester (2003) suggested that, consequently, the need for public sector intervention in tourism destination management is usually generally accepted in order to try and balance out the benefits and the costs and thus achieve the highest possible net social welfare.

Among the instruments at governments’ disposal, taxation is becoming an increasingly popular mechanism. Public administrations around the world have come to understand the potential source of revenue that the expansion of the tourist industry can represent. Indeed, the World Travel and Tourism Council estimates that taxes on transport and tourism will account for 10.7 per cent of all tax revenue by 2020 (Dwyer et al., 2010). At the same time, tourist taxes are a big cause of controversy: on the one hand, travel and tourism is one of the few export industries to be taxed and, on the other, tourists are tax payers with no local voting rights and hence an attractive solution for any democratic system that seeks to boost its public revenue.

Tourists encounter a variety of taxes on their travels and so it is important to try and define what is meant by a tourist tax. In addition to possible airport taxes or indirect ones levied on transport, tourists have to pay other taxes on purchases of goods or services whose consumption by the resident population would also be taxed. Thus, a tourist tax cannot be defined by the fact that it is solely paid for by tourists, because many of these taxes are non-discriminatory and residents also pay for them when they make these same purchases, even though it must be acknowledged that, in the case of certain goods and services, most of these purchases are made locally by tourists (e.g. hotel rooms and rental cars). This is the criterion that Dwyer et al. (2010) apply when they define ‘tourist taxes’ as taxes that are mainly paid for by tourists, citing taxes on hotel stays as an
explicit example that was previously exempted by the government. As such the government has proposed a tax base that is specifically allocated towards accommodation despite the indirect taxes that they encounter on purchase of goods. Thus the researcher seeks to identify the impact of accommodation tax on tourist inflow particularly in Zimbabwe in the period 2010-2017.

1.2 Background of study

Tourism was amongst the fastest growing sectors of the economy in Zimbabwe contributing significantly to Gross Domestic Product (GDP) during the period 1980 to 2000. The highest growth rate was in 1995 when Zimbabwe hosted the All Africa Games which saw a 35% increase in tourist arrivals. However, the years 2008 to 2016 saw tourist arrivals dwindling in Zimbabwe (Machipisa, 2001). Global growth dropped almost by 3 percent in 2012 after having grown by 4 percent in 2011. This slowing trend is likely to continue into the years, according to Forbes Magazine, Zimbabwe (2011).

Zimbabwe has recorded a 265 decline in tourist arrivals in the years having fallen from 2 423 280 to 1 794 230, (Zimbabwe Tourism Authority,2009). This decline has been contrary to the current global tourist arrival trends which have grown marginally by 4%. It should be noted that although there has been a decline in all the markets, the arrivals were strongly pulled down by mainland Africa which fell by a total of 479 397 arrivals.

International tourist arrivals grew by 7% in 2017 to reach 1.322 billion. The growth in arrivals is expected to continue in 2018 at a rate of 4%-5%. Arrivals into Africa also increased by 8% from 58.2 million in 2016 to 62 million. Despite the growth in arrivals, the market share of tourist arrivals in Africa has remained very small at an average of 4% for the past decade and currently stand at 4.7%, according to Zimbabwe tourism trends and statistics (2017), (Zimbabwe Tourism Authority).

More so its contribution to employment has been dwindling in the study period with much of a decline in between 2014 and 2016 with a decline from 8.2% to 7.2 % respectively. This however, shows that as labour is derived demand that is labour is not demanded for its sake but for the services it offers. As such this corresponds to imply that there has been a decline in the number of tourist’s arrivals such that it led to the increase in unemployment.
The government decided to exempt accommodation services on behalf of tourism from tax. To be specific accommodation tax as a strategy to enhance tourism industry performance with regards to its contribution to the Zimbabwean economy. The move was to ensure that services offered by Zimbabwe hotels, lodges and other providers have got a competitive edge with regards to what is being charged by other countries.

On the other hand as the tax base continued to contract due to economic hardships, the government turned out to be limited, compelling it to continue to explore other mechanisms to widen the revenue base. As a strategy to promote the tourism sector based on its contribution to the economy in Zimbabwe, Government decided not to exempt accommodation services for tourists from Accommodation Tax. This was intended to ensure that accommodation services offered by Zimbabwean hotels, lodges and other providers would have some competitive edge over what is charged in neighboring countries. However, as the tax base continues to shrink owing to economic challenges, Government became constrained, forcing it to continue to explore other mechanisms of enhancing fiscal space. Through the Ministry of Tourism and Hospitality, stakeholders lobbied for the regulations removing accommodation services from the services offered to tourists that are zero rated.

The Zimbabwe Council for Tourism (ZCT), the apex organization which represents actors in the tourism sector, commissioned the Zimbabwe Economic Policy Analysis and Research Unit (ZEPARU) to conduct a study on the possible implications of this policy measure to the tourism industry and the economy in general. Zimbabwe recorded a 1.5% increase in 2013 tourist arrivals which is below the 5% increase in global arrivals. Again in 2014 there was a 2% increase, this growth points below the average Sub Saharan growth of 3.3%. Zimbabwe still receives 85% tourist arrivals from low value markets.

Tourists’ arrivals also increased by 9% during the year 2015 after the imposition of accommodation tax compared to 2014 with all markets performing positively. The growth in arrivals in Zimbabwe was backed by growth in country’s traditional overseas source markets such as UK and USA as compounded by the performance of the Mainland. The growth in tourist arrivals has been steadily since the year 2013, thus contribute significantly to foreign currency earnings.
On the other hand industry captions perceive tourism taxation as a catalyst which draws back tourism performance and competitiveness. This is coming from the perspective that tourism tax may drive away potential tourists from the destination due to the fact that tourism tax might undesirably disturb tourism price competitiveness. Academic point of view, tourism taxation stands of precise interest as it is rather a current phenomenon and therefore several of the empirical and theoretical aspects stays essentially unmapped. There are numerous imperative concerns of the mutual interest about these parties which may differ in their approaches to the issues surrounding tourism taxes and their effects, which comprise of tourism’s tax structure, magnitude, and taxation effects. This took the researcher the interest to carry out a study on whether or not accommodation tax has an effect on growth in Zimbabwe.

1.3 Statement of the problem
The level of tourist arrivals over the decade has been facing a downward trend from 2010 whilst there has been an increase in unemployment. The Zimbabwe Tourism Authority has noted that the tourists growth has been unstable recording a 26% decline during the period in between the study. The government on the other hand, has offered the tourism sector accommodation tax which has been considered as adverse to the tourism performance. The researcher seeks to clarify the impact of accommodation tax on tourist arrivals.

1.4 Research objectives
Main objective

- To assess the impact of accommodation tax on foreign tourist’s inflows.

Specific objectives

- To investigate the influence of expenditure on tourism on tourist arrivals.
- To assess the extent to which infrastructural development affects tourist inflows in Zimbabwe.
- To establish the influence of inflation on tourist arrivals.
- To assess the competitiveness of the Zimbabwean tourism industry.
1.5 Research questions

- What is the impact of accommodation tax on foreign tourist inflows in Zimbabwe?
- To what extent does infrastructural development affect tourist arrivals?
- How does inflation influence tourists arrivals?
- What is the competitiveness edge of the tourism sector in Zimbabwe?

1.6 Justification of the study

- Policy formulators can use the findings of the study to implement sustainable policies that are not adverse to the designated population.
- The study will also assist shareholders such as tour operators through implementation of new ideas in attracting tourists thereby allowing growth.

1.7 Assumptions of the study

In the research the following assumptions have been made

- Information used is not biased.
- Data used in regression follows normal distribution and is stationary.
- The information collected from the secondary data sources are bound to the accurate and there are no elements of window dressing.

1.8 Delimitations of the study

- Relevant information will be obtained from Zimbabwe Tourism Authority and Zimbabwe Statistical Agency. The study will be restricted in Zimbabwe.
- Information such as profits and revenues which are related to tourism arrivals were not considered relevant in the research.
- Data will be contributed from attributed secondary sources, proceeding to confirmation by research supervisors. This study is sovereign to any sort of political stimulus.

1.9 Limitations of the study

- Data availability

Data was withheld by ZTA for security and competitive reasons.
• There are some things which cannot be measured which are qualitative hence limitation to the researcher.
• Data confidentiality

Due to high confidentiality of some of the data generated by organisation accessibility to data was limited

• Given the complexity of the research topic, the researcher will have little time to collect relevant data and the targeted information.

1.10 Definition of terms
Tourism – these are the activities of a person’s travelling and staying places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited.

Tax – is defined as a compulsory charge or payment imposed by the government at a particular rate on corporations such as accommodation.

Inflation - a situation in which the general price level of goods and services is persistently moving upwards.

Infrastructural Development – refers to the fundamental facilities and the systems serving a country, city or other area, including the services and the facilities necessary for its economy to function.

1.12 Organisation of the study
The study is organized as follows: Chapter 2 reviews both theoretical and empirical literature. Chapter 3 outlines the method of analysis used in the study. Chapter 4 represents and interprets results of the study. Chapter 5 concludes the study by giving policy recommendations and suggestions for future studies.
CHAPTER 2

LITERATURE REVIEW

2.0 Introduction
The study seeks to explain the impact of tax on accommodation tax on tourist’s arrivals in Zimbabwe in 2010-2017 therefore this chapter explores both theoretical and empirical literature that explains the effects of accommodation tax on tourist arrivals. The first section looks at the theoretical aspects and the second section looks at the empirical studies that have been undertaken to date.

2.1 Theoretical literature

According to (Blake And Jimenez 1997), tourism demand and its elasticity depend on many factors such as population, income, own and substitute price, `taste.

\[ Td=f(P,Y,P,Sp,T……..) \]

Own and substitute price elasticity and income elasticity are used to describe tourism demand. Elasticity measures percentage change in tourism demand as a result of percentage change in price or income (Blake and Jimenez 1997). Price and income elasticity are very useful to consider in relation to pricing, exchange rate and taxation. A large number of empirical studies have attempted to estimate the price elasticity of demand for international tourism and the results vary. Tourism demand varies significantly as it depends on tourists’ origin, destination and purpose of the travel so it can be both inelastic and elastic (Mak 2004).

Gago et al (2006) stated that the direct impact of any tax imposed on the tourism sector will depend, much in part, upon the value of the price elasticity of demand for tourism sector services. If the price elasticity of demand is high, the effect of an increase in tax may be to decrease revenue as the tourism destination will be considered as uncompetitive, corresponding to decrease in tourists inflow. Gago et al (2006) noted that a tourism tax will distort the market when demand is relatively elastic, since the price differential caused by the tax leads to a significant change in behavior of consumers of tourism goods.
2.2.1 The Partial Equilibrium Theory of Tax Incidence

In partial equilibrium theory, the effects of a tax are explained as a change of price (consumer price and producer price), and output change of the selected commodity. In terms of price, the approach determines whether it is the consumer or the producer who bears most of the tax. This further determines the amount of tax income. It uses the producer surplus and the consumer surplus to explain the welfare loss or deadweight loss. The partial equilibrium view of tax incidence can be presented in two different ways: incidence of a commodity or product tax and incidence of a factor tax. Incidence of a commodity/product tax can further be explained using a competitive market model and a monopolistic market model. In this section, the incidence of a unit tourism tax imposed on visitors is explained in a competitive market equilibrium condition and other aspects such as an ad valorem tax and a tax on tourism suppliers.

The partial equilibrium case of incidence is based on several assumptions. First, we assume that the economy is operating in a competitive environment. Second, consumers (tourists) and suppliers are concerned about the net demand price and net supply price, respectively. Thus, the demand and supply are functions of price. Third, at the equilibrium, the quantity demanded is equal to the quantity supplied. Fourth, a commodity tax creates a wedge between consumer price and supplier price and the wedge is equal to the tax (Bailey 1995, Pindyck and Rubinfeld 2001).

According to tax incidence, tax is levied to tour operators by the government in the view to promote the competitiveness of the tourism sector. Tourism participants therefore engage into tax shifting whereby the statutory and economic incidence of the tax is diverged. The burden is imposed on the end user who happens to be the visitor or tourist. The economic incidence of the tax is thus paid by the tourist, statutory incidence to the producer of the service. This may have an adverse effect on tourist arrivals since the price of accommodation services will be high.

When producer or seller is required to pay tax to the government, that is the legal incidence is on the seller, the tax increases the cost to the seller or producer. The tax establishes a new market supply which includes the cost imposed on the seller through the obligation to deliver tax to the government. Although sellers are obliged to pay tax to the government, sellers and buyers share the actual payment of the tax. Buyers who in this case are tourists pay part of the tax which is equal to increase in price. From this case as the price of accommodation would have increase through incidence, if may however reduce the demand for the service assuming that the good
follows the demand law which states that there is an inverse relationship between price and quantity demanded. Thus to say as price increases the demand for the services decreases.

2.2.2 Institutional Theory (Richter, 2005)

According to (Richter, 2005), institutional theory falls under the rubric of new institutional economies, a field that incorporates the theory of institutions into economics. Institutional economies are an extension of neoclassical theory, which results from cooperation between economists and political scientist studying the role of institutions in the economic growth.

According to institutional theory, it considers the processes by which structures, including schemes, rules, norms and routines become established as authoritative guidelines for social behavior, resource-rich countries must strive to develop norms of transparency and implement policies and laws that ensure benefits are brought to their citizens, (Scott 2011). According to Demisie (2014), enhancing institutional capacity and building foundations of good institutions is very difficult and complex task. More so natural resources such as tourist’s attraction views continue to be discovered in African countries building pressure to advocate for the best mechanism to benefit from resource revenues.

From the basis of the theory, institutional development is a basic need for tourists destination for instance better infrastructure for instance road networking, better buildings for accommodation, networking systems among others. There is need for better enhancement and development of infrastructure to increase viability of visitor destination. For instance Zimbabwe houses one of the Seven Wonders of the World tourist attractions that is Victoria Falls, many including local and international tourist are interested to be at the venture. Thus there is much relevance in developing and maintaining institutions in the area for attracting more tourists. The government should be keen to enhance institutional capacity and building foundations of good institutions, (Demise 2014).
2.3 Empirical evidence

2.3.0 Case studies from the region

African countries such as Tanzania, Uganda and Zambia have experienced similar situations to Zimbabwe as far as removing the exemption of accommodation for foreign tourists is concerned. During the fiscal year 2013/2014 the Tanzanian government indicated intentions to abolish the tax exemption on tourist services, as a way of raising revenue. Stakeholders in the tourism industry, however, successfully lobbied against the measure, which had to be postponed to allow for more consultations.

In July 2013, the Ugandan government eliminated tax exemption on hotel accommodation and introduced a tax of 18% on all accommodation facilities. In December 2013, however, the government reinstated exemption of tax on accommodation after the move had reduced competitiveness of Ugandan hotels. As the fiscal pressures persisted, the government made a further u-turn and reinstated the tax on supply of hotel accommodation in tourist lodges and hotels outside Kampala District in July 2014.

As of 1 January 2014, all tourism products in Zambia previously zero rated products (activities and tour packages) were standardized for accommodation tax at 16%. Other countries in the region which charge tax on accommodation services include:

South Africa 14% Botswana 12% Namibia 15% Kenya (a reduced rate of 14% when the standard rate is 16%).

Several countries however, have introduced tax on hotel accommodation services around the world due to fiscal pressures, although the sectors were previously exempted as export sector in majority of cases. The manner in which the tax is applied varies from country to country with some applying a standard tax rate while others mostly in Europe apply a reduced rate because of the sensitivity of the sector. Most Southern and East African countries competing with Zimbabwe for international and regional tourists apply a standard rate with the exception of Kenya which has a reduced rate for the hotel accommodation and other services.
Thus, the policy measure in Zimbabwe has generally placed Zimbabwe in the same line with other countries in the region. The payment of taxes for accommodation services is therefore not something unique to Zimbabwe.

ZEPARU (2015) found out that there has not been much impact in terms of tourist arrivals, given that most operators decided to absorb the cost of the tax. Thus to the tourist, there have not been much changes. However, there was a decrease in profits of hotels by about 27% for hotels and lodges. This decrease might actually negate any anticipated revenue collections from the tax on accommodation services.

2.3.1 Other studies
Confirmed Wanhill’s claims in their research in which they analysed the price competitiveness of UK tourism in the light of higher tax rates on tourism-related products. They argued that an improvement in the price competitiveness of the tourism sector in the UK could be achieved by means of depreciation of the exchange rate for sterling and also by a reduction in the rate of tax, so as long as tourism businesses respond to the tax reduction by decreasing prices. Jensen and Wanhill (2002) carried out some simulations in lowering accommodation tax rates for hotel and holiday centers in Denmark and found that overnight stays in hotel and holiday centres and tourism expenditures in Denmark increased by 6%.

Wanhill (1995) noted some empirical evidence about tax-induced changes in price competitiveness and related services in the growth momentums of tourism sector. Wanhill (1995) noted that the Irish tourism industry grew dramatically during the late 1980’s. International arrivals grew more than 60 % while tourism expenditure increased by more than 50%. He argued that the single most important driver of Irish tourist arrivals might have been the reduced accommodation tax rates and exemptions offered to the tourism sector and the subsequent increase in the price competitiveness. Moreover, analysing the results of a consumer survey conducted in the UK, Wanhill (1995) noted that international tourists to the UK were more likely to take a UK holiday if price reductions are offered.

Durbarry and Sinclair (2001) also analysed the issue of tourism taxation in the UK and used an econometric model to estimate the price elasticity of demand for tourism in the UK. Judging from available evidence about relatively lower hotel occupancy rates, they considered that the
elasticity of supply of tourism was greater than the estimated unitary elasticity of demand for tourism. This thus gave rise to the likely conclusion that the ratio of supply and demand elasticity is high. Accordingly, they concluded that most of the tourism tax burden is likely to be home by tourists. Moreover, they suggested that, based on the unitary elasticity of demand for tourism, Economics of Tourism Taxation in the UK, any increase in tourism taxes is likely to result in a considerable decrease in demand.

Sanso (2002) study argued that accommodation services should be tax exempted to increase tourism demand. According to the Economic theory, there is a negative relationship between accommodation tax and tourism demand. He noted that the relationship between accommodation price and tourism demand is negative. Now that tourists who have to pay tax have been characterized, the increase in tourist price must now be determined to estimate the the effect on demand for tourist. Considering the key factors in the design of tourist tax in terms of tax rates on tourism demand point has drop of between 0.9% and 0.4% in total demand of the Balearic Islands.

Gave interesting scenarios about how EU countries encountered different experiences following the requirement for tax for the tourism industry to be harmonized. The experiences show that those countries that has had to reduce accommodation tax benefited while those that had to increase encountered negative experiences. In France, the accommodation tax rate was reduced from 19.6% to 5.5% in July 2009. This was the time when other sectors, such as the construction sector, had to cut over 30,000 jobs over the same period, according to Hysi and Kocio (2015) study.

According to Deloitte (2013), in Germany, the accommodation tax was reduced from 19% to 7% with effect from January 2010. Following that, an annual increase of 2.4% and 2.9% in the number of jobs in hotels was observed in 2010 and 2011 respectively. In Luxembourg, the low level of VAT on hospitality services saw the sector increasing by 5% in 2012 when the rest of the economy only increased by about 0.4%. The hospitality industry created 1,650 new jobs in 2011 and more than 1,800 new jobs in 2012. A contrasting experience was observed in Latvia, where the tax rate on accommodation was increased in January 2009 from 5% to 21%. In 2009 the number of persons employed in the sector fell by 12,000 resulting in losses for the government in social and income taxes of around 14 million EURO. Following the
reintroduction of the reduced tax rate in May 2010 at 10%, employment grew by 8.3% and the dropping number of visitors started to rise again.

Ahearne (2015) carried out a research in Irish. In the backdrop of a challenging economy, the Irish Government announced a reduction in the rate of tax on tourism-related goods and services, including restaurant services and hotel accommodation, from 13.5% to 9% in May 2011. This was part of a general strategy to create employment. The new rate took effect and initially was due to expire at the end of 2013. However, pleased by its immediate success in attracting jobs, this reduced rate is still effect as of 2015. During the Irish National Budget Statement presentation, it was disclosed that the reduced 9% rate on tourism related activities had been able to create 23,000 jobs between mid-2011 and 2014. As a result, the 9% rate for the services was to be extended further.

2.4 Gap Analysis
This study attempts to look at the extent to which tourist arrivals is affected by the increased accommodation rates on foreign tourists, more over some studies looked on tourism tax and value addition tax but in this study the researcher is mainly concerned with tax on accommodation for foreign tourists. Furthermore, this research looks at the tourism sector in Zimbabwe, previous studies looked into other countries like Spain, South Africa, Kenya, Namibia and USA amongst others. This study focused on the Zimbabwean case which could assist several decision makers in policy making and ways to improve tourist arrivals and competitiveness.

2.5 Summary
This chapter has reviewed relevant literature from researches carried out by other scholars. This literature review shows the need to statistically measure the impact of accommodation tax on tourist arrivals. The next chapter will look at the methodology adopted to address the research questions in chapter 1.
CHAPTER 3

METHODOLOGY

3.0 Introduction

This chapter looks into the methods of analyzing how tax, government expenditure on tourism, inflation and infrastructural development affects the tourist arrivals. Research methodology comprises elements such as the research design, research instruments, model specification, and justification of variables, diagnostics tests, data collection procedures and measurement of variables. The study relied on Theory of Elasticity on model specification relying on secondary data, which generally include statistical data on the Zimbabwe tourism industry and general economic indicators from official sources.

3.1 Research Design

Research design is a plan selected by the researcher to answer research questions (Kreinin 2005). It is used in determining the accuracy of the outcome. Research design is a set of advance decisions that make up the master plan specifying the methods and procedures for collecting and analysing the needed information, Creswell (2003). Causal or explanatory research design was used to obtain evidence to cause and effect relationship. It has attempted to determine the extent to the change in variable tax cause changes in variable tourist arrivals.

3.1.2 Secondary Data

The researcher has adopted a case study approach, based on available literature; the reason was to identify other counties’ experiences with tax on accommodation services on tourists. The researcher has relied on secondary data, which included data from the internet and statistics from Zimbabwe Tourism Authority, ZIMSTAT and other selected tourism stakeholders. A formal letter was sent to Zimbabwe Tourism Authority with the regards of acquiring information which the researcher requires to carry out the research. Follow ups where made to ensure that the letter was received to the intended people so that the researcher can acquire the data. In the letter the researcher wrote the purpose for the information so as to ensure cooperation of the organization due to the sensitivity of the information which might hinder them in any way.

Selected interviews were also done on selected players in the tourism industry to obtain their views and experiences in applying accommodation tax, especially the impact in terms of
performance and profitability. The assumption was that tourist pursuing leisure are more sensitive to price movements compared to tourist who come for conferences and business.

Secondary data is already collected by and readily available from other sources for example authenticated sources such as ZIMSTAT. Secondary data is economical. It saves efforts, time and expenses. It helps to make primary data collection more specific since with the help of secondary data, we are able to make out what are the gaps and deficiencies and what additional information needs to be collected. Secondary data helps to improve the understanding of the problem. Secondary data allows for the evaluation of data to see if it meets the requirements of data availability, relevance, accuracy and sufficiency. However, secondary data seldom fits in the framework of the marketing research factors. Accuracy of secondary data is not known which may require coverage of gaps with primary data.

3.3 Data Analysis
Various tests can be used to conduct data analysis, which comprise linear regression, correlation test, normality test and heteroscedasticity test. Data analysis software which includes E-views will be used. E-views is more appropriate in examining time series data than Statistical Packages foe Social Science (SPSS).

3.4 Estimation Method
In this research, the researcher will be using Ordinary Least Squares (OLS) regression method of estimation. Mason (1996) states that regression analysis is a technique for developing or modeling several variables into linear equation and later used for prediction or forecasting. OLS regression test explains the behavior of the dependent variables resulting from changes in the independent variable. It acts as a method to estimate the relationship tourist arrivals and the independent variables comprising of tax, government expenditure and economic growth. The estimates obtained by each coefficient will show how a percentage change in the independent variables will affect the percentage change in the dependent variable.

3.5 Theoretical Model
The researcher built a model from the hybrid theory by Blake and Jimenez, Theory of Elasticity and the Theory of Growth by Harror Domar.
Theory of Elasticity Hybrid Model ………..(I)

Mathematical Model

Td = f(P, Y, PP, Sp, T)

Td  Tourism demand,
PP  Population,
Y   Income,
Sp  Substitute price,
T   tastes,

Econometric Model

Td= α+β₁Pp + β₂Y + β₃P + β₄Sp +β₅T + μ

Harrod Dommar Growth Model …..(II)

This growth model was developed by the economist Roy Harrod with his article An Essay in Dynamic Theory (1939), inspired by the nascent Keynesian doctrine. The model was a Harrod-Dommar model which is a dynamic extension of the Keynesian analysis of static equilibrium. The Harrod Dommar model is a growth model which aids to clarify how growth has arose and in what extent it may occur over in the future.

Harrod Dommar assumed a closed economy and savings will be used only for investment (S=I). A constant amount of money is channeled towards savings (S=Sy). GDP growth rate = (savings/capital) ratio.

S = I

S=sY

3.6 Model specification

It involves the determination of the dependent and explanatory variables. The specification of the model is based on combining the two models from the theoretical model, Harrod Domar and
the Theory of Elasticity. In this study the variables used include tourist arrivals as the dependent variable, infrastructural development, government expenditure on tourism, inflation and dummy variable which is tax.

**Harrow Domar**

GDP growth rate = (savings/capital output) ratio

Savings leads to Investment from both the Government and Private sector for instance Infrastructural development.

**Theory of Elasticity**

\[ Td = f(PP, Y, P, Sp, T........) \]

\[ Td=Tr=Ta \]

\[
\begin{align*}
Td & \quad \text{Tourism demand} \\
Tr & \quad \text{Tourism revenue} \\
Ta & \quad \text{Tourist arrivals}
\end{align*}
\]

Price is affected by costs and profit margins. Costs include production costs and government tax, hence deriving the research model from this hybrid model.

\[ Ta = f(T, Eg, Ge, Id, Inf.......). \]

**Mathematical model**

\[
Ta= \alpha + \beta_1 Tax_t+ \beta_2 Ge_t+ \beta_3 Id_t+ \beta_4 Inf_t+ \mu_t
\]

\[
\begin{align*}
Ta & \quad \text{Tourist arrivals} \\
T & \quad \text{Tax} \\
Te & \quad \text{Tourism expenditure} \\
Id & \quad \text{Infrastructural development}
\end{align*}
\]
Inf  Inflation
β  Parameter (coefficient)
μ  Sample error term

3.8 Justification of variables

Empirical and Theoretical review, indicates that there should be a negative relationship between Tourist arrivals and Tax and a positive relationship with other variables included in the research.

Tourist Arrivals (Ta)

Tourist arrivals are the dependent variable. It is going to be measured in terms of volume of number of foreign tourist arrivals. UNWTO states that Tourism is the largest industry in the world with an estimated 11.5% of the world GDP and employing about 12.5% of the world’s work force. Tourist arrivals rely on the explanatory variables specifically Tax (T), Tourism Expenditure (Te), Infrastructural development (Id) and Inflation (Inf). On the other hand, there is either a negative or positive relationship between the explanatory variables and the dependent variable. A positive sign means an increase on Tourism expenditure and an increase in growth of the economy will mean a positive change in the dependent variable and a positive change in tax will lead to a negative change in tourist arrivals holding other things constant. Dwyer et al, (2000) noted that potentially for any country’s tourism industry to develop, it mighty largely depends on its ability to maintain competitive advantage in its delivery of the tourism product.

Tax (T)

By definition taxes are mandatory payments collected by government to fund the provision of public services. Woellner. (2002, p. 66).It is a quantitative variable and measured in percentages (%) but in this research, tax will be made a dummy variable that is, before tax represented by 1 and after tax represented by zero. Tax makes a greater part of government revenue in Zimbabwe since all government revenue generating parastatals are struggling. In this study, the researcher is going to concentrate of the imposed accommodation tax on foreign tourists. Theoretically, an increase in price of any good or service will automatically result in a decrease in quantity demanded by a consumer holding other things constant. This implies that an increase in tax will trigger prices to shoot, since leisure tourists are relatively elastic. This may decrease the tourism
volume there by triggering a decrease in employment opportunities, output and foreign exchange earnings. This results in the decrease of tourist arrivals and competitive edge ceteris paribus.

**Tourism expenditure (Te)**

Government and private expenditure (Tourism expenditure) has a significant impact on tourist arrivals especially in most countries. An increase in government expenditure of tourism will lead to an increase in tourist arrivals ceteris paribus. The researcher will be expecting a positive relationship between the two variables. Most economic theories and empirics indicated and proved that government expenditure affects the growth of a sector positively hence government expenditure a significant variable to this research. According to McKercher and Ritchie (1997), local governments represent the third tier of public sector tourism management, which is often the scale at which most interactions with businesses occur and decisions regarding policy and tourism development are made (Nodder, Cate, Slater, & Milne, 2003).

**Infrastructural Development (Id)**

Tourism infrastructure can be viewed as the physical elements that is designed and erected to cater for visitors. The strong relationship between tourism development and infrastructure has been theoretically established by a number of authors (Adebayo, Iweka, 2014). Tourism infrastructure comprise of ancillary and complementary facilities, equipment, systems, processes, and resources necessary for the functioning of every tourist destination. This primarily includes roads, railways, airports, and the like, which make a tourist destination accessible for tourists. Popesku (2011) noted that there is a positive relationship between tourist arrivals and infrastructural development meaning to say an increase in infrastructure results in a positive change in tourist arrivals.

**Inflation (Inf)**

The researcher is expecting a positive relationship between inflation and tourist arrivals. When there is high inflation the imports will become relatively cheaper as compared to neighboring countries hence there will be more visitors but a low rate of inflation will make the local currency powerful hence Zimbabwe will become an expensive destination. Tourism is considered as an export in the research.
3.9 Tests

3.9.1 Diagnostic tests
The data that is used in the research is time series data. There is need to eliminate the problem of heteroscedasticity, multicollinearity, stationary and autocorrelation so as to ensure that the estimators satisfy the Gauss Markov BLUE (Best, Linear, and Unbiased Estimate) conditions and prevent spurious nonsensical and regression problems.

3.9.1.1 Multicolinearity test
Gujarati (2008) noted that multicollinearity is due to Ragnar Frisch. It meant the existence of “perfect”, or exact linear relationship among some or all of the explanatory variables in the regression model. For the k-variable regression involving explanatory variable \(X_1, X_2, \ldots, X_k\) (where \(X_1=1\) for all observations to allow for the intercept term). Implications of high multicollinearity are that the variances and covariance of the estimators will be too high such that it will be difficult to make precise estimation. This can result in increased confidence intervals and which may lead to the acceptance of the null hypothesis that the coefficients of the true population parameters are equal to zero, and this reduces the statistical significance of the variables. The \(R^2\) in this case can be misrepresenting by its high magnitude. Therefore, multicollinearity has been tested using the correlation matrix test for the explanatory variables in this study.

Montromery and Peck note, multicollinearity may be due to the following factors, data collection method employed, for example sampling over a limited range of values, constraints on the model or the population being sampled and model specification error. In the case that multicollinearity exist, the study considered the do nothing approach of collinear variables as a remedy, considering that the coefficients of the explanatory variables will be statistically significant.

3.9.1.2 Heteroscedasticity test
Refers to the situation where there is unequal variance in the error term, as opposed to the error term, homoscedasticity is when there is equal variance in the error term. In the presents of heteroscedasticity, the line test of best fit will be affected, what then appears to be statistically insignificant, we will not be able to rely on the t tests and f tests. If the research assumes for the presents on heteroscedasticity, the Bruesh Pargan-Goldfrey test is applied.
One of the important assumptions in OLS is that the error terms in the model must homoscedastic, which means that they must all have a constant variance. Violation of this assumption affects the efficiency of our estimators, increases the confidence intervals and may lead to biasedness in the estimation of the parameters. This affects the t-tests and f-tests and estimation with heteroscedasticity results in conclusions and inferences which can be very misleading (Gujarati, 2004). Therefore for our study a White heteroscedasticity test has been conducted to detect heteroscedasticity in our data.

H0: there is no heteroscedasticity
H1: there is heteroscedasticity

Rejection criteria: reject null hypothesis if the probability of the F-statistic is less than the probability values of the critical value

3.9.1.3 Normality test
The normality test tells us that the errors are normally distributed. If the errors are not normally distributed, testing the significance of the model using F statistics and T-tests becomes difficult. The Jarque-Bera statistic is used to test for normality, Gujarati (2008). The greater the Jarque-Bera statistic close to zero the better the normality, (Lumley et al 2002).

3.9.1.4 Stationary test
When dealing with time series data it is important to conduct stationarity tests because data with non stationarity may produce invalid information and unreliable results. Non stationary data produce spurious regressions whereby two variables may trend together and produce a very high R2 yet they are unrelated. This phenomenon of spurious or nonsense regression which was discovered by Yule may continue in non stationary data even if the sample is large (Gujarati, 2004). Therefore, in this study, the data is time series data and the issue of stationarity was taken into consideration. Unit root tests were done using the Augmented- Dickey Fuller (ADF) test to check for stationarity and where data was not stationary it was corrected by differencing.
H0: there is no stationarity

H1: there is stationarity

Rejection criteria: the ADF statistic should be greater than critical value.

3.9.2 Model specification

The model specification test insures that the model is correctly specified and that data used in the model best fits. T-tests and R-squared test are to be used. F-tests govern the validity of the model while R-squared tests for the goodness of fit and the degrees of freedom of the model. That is they test for the validity and reliability of the model.

3.9.2.1 T-tests

T-test measures the validity of the data used in the research. Validity can be defined the degree to which a test measures what it is suppose to measure. An effective research instrument needs to measure what it intends to focus on in order to attain its objectives, (Kothari, 2004).

3.9.2.2 R-squared tests (R²)

Gujarati, (2008) proposed that R-Squared (R²) measures the goodness of fit and the closer it is to one the better the goodness of fit. It measures how close an estimated Y value is to its actual value in a given sample. This research will concentrate on R-Squared (R²) regarding the degrees of freedom, where as adjusted R² gives the penalties of adding variables to increase R².

3.10 Summary

This chapter highlighted how the model in the study was developed and all the steps that were taken to ensure that the results of the analysis of the study are reliable and valid. The chapter also shows the various tests that were done on the data to ensure that the results are unbiased and valid. Therefore, this chapter serves to answer questions on the methodology of the study before results are presented in the next chapter.
CHAPTER 4

DATA ANALYSIS

4.0 Introduction
The study pursues to investigate the impact of accommodation tax on tourist inflows, (2010-2017). This chapter analyses and captures the outcomes of the estimation equation in chapter three. The Ordinary Least Squares Regression (OLS) analyses were conducted exhausting the econometric software E-views (version 7). Below are the results:

4.1 Descriptive statistics
Descriptive statistics are done to test the statistical properties of the data set are satisfied. This is also done to show variability of the explanatory variables with means, maximums and minimums and standard deviations which are tabularised below

Table 1: descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>TOURIST_ARRIVAL</th>
<th>TOURISM_EXP</th>
<th>TAX</th>
<th>INFRA_DEV</th>
<th>INFLATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2099446.</td>
<td>720288.8</td>
<td>0.468750</td>
<td>2616350.</td>
<td>0.752302</td>
</tr>
<tr>
<td>Median</td>
<td>2253194.</td>
<td>744500.0</td>
<td>0.000000</td>
<td>2653887.</td>
<td>1.309977</td>
</tr>
<tr>
<td>Maximum</td>
<td>2989893.</td>
<td>860000.0</td>
<td>1.000000</td>
<td>3548792.</td>
<td>5.136601</td>
</tr>
<tr>
<td>Minimum</td>
<td>1004615.</td>
<td>528000.0</td>
<td>0.000000</td>
<td>1690012.</td>
<td>-6.777300</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>544183.8</td>
<td>93107.07</td>
<td>0.507007</td>
<td>529330.7</td>
<td>2.725102</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.483408</td>
<td>-0.571086</td>
<td>0.125245</td>
<td>-0.185385</td>
<td>-0.926046</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>2.312388</td>
<td>2.318544</td>
<td>1.015686</td>
<td>1.863011</td>
<td>3.317942</td>
</tr>
<tr>
<td>Jarque-Bera Probability</td>
<td>1.876725</td>
<td>2.358587</td>
<td>5.333661</td>
<td>1.906953</td>
<td>4.708444</td>
</tr>
</tbody>
</table>

The table above reports the mean, maximum and minimum statistics and the statistics show that there are no outliers. Descriptive statistics was carried out with the original data in its original form as shown by the table above.
Data is said to be normally distributed if the probabilities are greater than 0.1, (Gujarati 2008). Normality of the variables is observed from the data of Tourist arrivals, tourism expenditure, tax and infrastructural development using Jarque-Bera statistics which is greater than 0.1 as suggested. Inflation has a probability of 0.094967 which is less than 0.1 which show that the data is not normally distributed. Although, inflation is not normally distributed but the linear combination of the error terms, does not violet the Classical assumptions, the researcher will proceed with the data for inflation in regression. The classical assumption suggests that the error term should be normally distributed for variability of data. We can however proceed with estimations and obtain results that are valid (Lumly et al, 2002).

The measure of dispersion, the standard deviation shows the variations of a variable from the mean. A low standard deviation shows that the data tend to be close to mean and high standard deviation shows that data is spread out over large range of values.

The measure of skewness show that tax distributions are biased to the right side of the normal distribution thus being positively skewed and tourist arrival, infrastructural development, tourism expenditure and inflation are negatively skewed.

4.2 Stationarity test

For regression purposes using OLS, data has to be stationary to avoid spuriously significant results and high R-squared even if the variables are not related. For us to test the long run relationship between time series variables, we have to make sure that the variables are integrated of the same wave-length. There are various methods used to test for stationarity but the researcher will use Augmented Dickey-Fuller Unit root test for stationarity. The Stationarity of data has been tested using the unity root test at levels and below are the results which were obtained.
Table 2: Unit root test at level difference

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF-test</th>
<th>1% critic</th>
<th>5% critic</th>
<th>10% critic</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation</td>
<td>-3.033146</td>
<td>-3.661661</td>
<td>-2.96041</td>
<td>-2.619160</td>
<td>stationary</td>
</tr>
<tr>
<td>Infa dev</td>
<td>-1.000622</td>
<td>-3.6793222</td>
<td>-2.967767</td>
<td>-2.62289</td>
<td>Non-stationary</td>
</tr>
<tr>
<td>Tourism expenditure</td>
<td>-2.2148898</td>
<td>-3.661661</td>
<td>-2.96041</td>
<td>-2.619160</td>
<td>Non-stationary</td>
</tr>
<tr>
<td>Tourist arrival</td>
<td>-1.882315</td>
<td>-3.661661</td>
<td>-2.96041</td>
<td>-2.619160</td>
<td>Non-stationary</td>
</tr>
</tbody>
</table>

The null hypothesis of Stationarity test states that there is no Stationarity or there is unity root while the alternative hypothesis states that there is Stationarity or there is no unity root. From the results, infrastructural development, tourist arrival and tourism expenditure are non-stationary at all critical values (1%, 5% and 10%) since the absolute value of ADF is less than the absolute critical values of these variables. The only variables which is stationary is inflation at 5%, its absolute critical value is greater than the absolute value of the ADF. Since there are some variables which are not stationary at all level, these variables were tested at 1st difference and there results which was found were presented below

Table 3: Unit root test at 1st difference

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF-test</th>
<th>1% critic</th>
<th>5% critic</th>
<th>10% critic</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infa dev</td>
<td>-6.5436009</td>
<td>-3.69322</td>
<td>-2.967767</td>
<td>-2.622989</td>
<td>Stationary</td>
</tr>
<tr>
<td>Tourism expenditure</td>
<td>-5.1885541</td>
<td>-3.670170</td>
<td>-2.963972</td>
<td>-2.621007</td>
<td>Stationary</td>
</tr>
<tr>
<td>Tourist arrival</td>
<td>-4.717045</td>
<td>-3.670170</td>
<td>-2.963972</td>
<td>-2.621007</td>
<td>Stationary</td>
</tr>
</tbody>
</table>

From the results shown in the table the variables which were non stationary at all levels are now stationary all 1st difference level since the absolute values of the ADF are now greater than the absolute critical values at all critical values (1%, 5% and 10%). The data will then be used in estimation of the equation.
4.3 Econometric results

After conducting the test of the impact of accommodation tax of tourist inflows in Zimbabwe from 2010-2017 the results show the equation in the table below using OLS.

Table 4: Regression results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. error</th>
<th>t-statistic</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-143094.0</td>
<td>88316.61</td>
<td>-1.706922</td>
<td>0.0998</td>
</tr>
<tr>
<td>DTourism exp</td>
<td>1.110994</td>
<td>0.653258.</td>
<td>-1.807851</td>
<td>0.0822</td>
</tr>
<tr>
<td>DInfra dev</td>
<td>0.475908</td>
<td>0.300719</td>
<td>-1.582567</td>
<td>0.1256</td>
</tr>
<tr>
<td>Inflation</td>
<td>-14456.10</td>
<td>20936.56</td>
<td>0.690472</td>
<td>0.0490</td>
</tr>
<tr>
<td>Tax</td>
<td>-233780.7</td>
<td>139756.7</td>
<td>1.672769</td>
<td>0.0164</td>
</tr>
<tr>
<td>R-Squared</td>
<td></td>
<td></td>
<td></td>
<td>0.824497</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td></td>
<td></td>
<td></td>
<td>0.710158</td>
</tr>
<tr>
<td>Durbin Watson</td>
<td></td>
<td></td>
<td></td>
<td>1.844178</td>
</tr>
</tbody>
</table>

The equation is ultimately transformed into the form

$$DTa= -143094 - 1.18DTe + 0.476DInfra - 14456.1Inf - 233780.7Tax + e$$

Significance of the whole model is shown by R-squared of 0.824497 which shows that about 82% of the variations of Tourist arrivals are explained by variations in the explanatory variables in this model. The other 18% is explained by the error term which are variables not included in the model. An Adjusted R-squared of 0.710518 which takes into account the degrees of freedom lost by increasing variables. Tax, Infrastructural development, Tourism expenditure have all proved to be significant at 10%, Inflation has proven to be insignificant.

4.4 Heteroscedasticity

Table 5: Heteroskedasticity test: Breush-Pagan-Godfrey

<table>
<thead>
<tr>
<th>f-statistic</th>
<th>Prob F-test</th>
<th>0.4396</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs R-squared</td>
<td>4.022995</td>
<td>Prob Chi-squared</td>
</tr>
<tr>
<td>Scaled explained SS</td>
<td>19.16731</td>
<td>Prob. Chi-Squared</td>
</tr>
</tbody>
</table>
There is no heteroscedasticity because the probability of 0.4396 which is greater than 0.1.

4.5 Auto correlation
From table 9, Durbin Watson statistics of 1.844178 which specifies that the level of auto correlation lies in the region of no auto correlation because it is close to 2. Appendix additionally shows the correlation matrix which depicts the level of correlation amongst the variables in the model.

4.6 Multicollinearity
Table 6

<table>
<thead>
<tr>
<th></th>
<th>TOURIST_ARRIVAL</th>
<th>TOURISM_EXP</th>
<th>TAX</th>
<th>INFLATION</th>
<th>INFRA_DEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOURIST_ARRIVAL</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOURISM_EXP</td>
<td>0.419718</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAX</td>
<td>-0.238499</td>
<td>0.318241</td>
<td>1.000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INFLATION</td>
<td>-0.511032</td>
<td>-0.026888</td>
<td>0.440176</td>
<td>1.000000</td>
<td></td>
</tr>
<tr>
<td>INFRA_DEV</td>
<td>-0.438878</td>
<td>0.204231</td>
<td>0.753985</td>
<td>0.627406</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

From the table above, the findings show that there is no co linearity amongst the variables since they are all below 0.8 as proposed by Gujarati 2008.

4.7 Normality testing
The classical normal linear regression model assumes that the error term in the regression model is normally distributed. There are several tests for normality, but the most popular is the Jarque-Bera test for normality. Hypothesis tests and estimation of coefficients rely on the assumption that the errors, and hence the dependent variable are normally distributed. The Jarque-Bera test for normality is based on how the residuals are symmetric close to zero, thus the distribution is said to be normally distributed as shown by the results below

Table 7: Serial residual test for normality

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Std deviation</td>
<td>2294.239</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.2721674</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>0.0926</td>
</tr>
<tr>
<td>Probability</td>
<td>0.000000</td>
</tr>
</tbody>
</table>
4.8 Interpretation of results
The regression coefficient of Infrastructural development is given as +0.475908 which shows that there is a positive relationship between Infrastructural development and Tourist arrivals over the period of research. The variable is significant at 10% level having a probability of 0.0256. This implies that a 1% increase in Infrastructural development will lead to 0.478908 increases in tourist arrivals. The regression coefficient of Tax is given as -233780.7 which show that there is a negative relationship between Tourist arrivals and Tax over the period of research. The variable is significant at 10% level having a probability of 0.0164. According to the results, imposing accommodation tax will lead to -233780.7 on tourist arrivals.

The regression coefficient of Expenditure on tourism is -1.180994, which show that there is a negative relationship between Expenditure on tourism and Tourist arrivals over the period of research. The variable is significant at 10% and has a probability of 0.0822. This implies that a 1% increase in Expenditure on tourism will lead to -1.180994 on Tourist arrivals.

The regression results of Inflation are nit significant at all level of testing with a probability of -0.690472, and this exhibits that there is no relationship between the dependent variable and the independent variable in the period of study.

4.9 Hypothesis Testing
The estimated results obtained showed changes in the level of Accommodation Tax in Zimbabwe are significant in changing the levels of Tourist Arrivals in the period of study. This allowed us to accept the null hypothesis. These findings however go hand in hand with Wanhill (2002) previous study about tax on tourist arrivals.
CHAPTER 5

SUMMARY, CONCLUSIONS AND POLICY RECOMMENDATIONS

5.0 Introduction
The study seeks to investigate the impact of accommodation tax on tourist inflows in Zimbabwe from 2010-2017. This chapter provides a supposition to the research of the determinants of Tourism arrivals in Zimbabwe mostly Tax as a determinant, the summary of key findings, policy recommendations and suggested areas of future studies.

5.1 Summary and Conclusions of the study
The study sought to show the impact of accommodation tax on tourist inflows in Zimbabwe from 2010-2017. Using the OLS the results show that accommodation tax has an impact on tourist arrivals in Zimbabwe over the period of study, however the study also show that the other variables explain the level of tourist arrivals in Zimbabwe. Infrastructural development, Tourism expenditure has also proved statistical significance on Tourist arrivals at 10% level of significance. Inflation exhibits any relationship with tourist arrivals in Zimbabwe.

There is significance on Infrastructural development on tourism arrivals. Infrastructural development coefficient has a positive sign from the equation in the regression results. This positive relationship is of importance in the study as the objective was to increase tourist inflow. Thus there is need to improve the infrastructural development of the country to enhance reliance of the destination aboard. Since an increase in infrastructural development imply an increase in tourist arrivals, the government should avail road, rail, airport construction and maintenance, and also embark on natural resource conservations for instance the tourist attraction monuments such as National wildlife, Victoria Falls just to mention a few.

Tourism expenditure has a positive relationship between tourist arrivals and expenditure. Tourism expenditure coefficient has a positive sign from the equation in the regression results. This positive relationship is of importance in the study as the objective was to increase tourist inflows. This means that the government should increase its contribution towards tourism viability on its expenditure as this helps increase tourist arrivals. As tourist arrivals increase there
is correspondence in increase in contribution to economic activities such as increase in GDP, foreign currency flow, and reduced unemployment rate among others.

Just like telecommunication services, which has faced new tax regimes, the tourism sector cannot be expected to be an exception especially given that other countries in the region are also taxing the service. There is need for flexibility, however to ensure that the viability of firms which is the main source of tax revenues, is not compromised by revenue boosting measures that do not take into account the sector side effects. This is particularly within the context of Zimbabwean players are at a disadvantage compared to their neighboring country counterparts.

5.2 Discussion
From the results, they proved that accommodation tax has adverse effects on tourist arrival in the period of study. These results have other contemporary researchers who had the same results from other countries. The Wanhill study in 2002 also supports an adverse effect on tourist activities. They argued that an improvement in the price competitiveness of the tourism sector in the UK could be achieved by means of depreciation of the exchange rate for sterling and also by a reduction in the rate of tax. As long as tourism businesses respond to the tax reduction by decreasing prices, tourist contribution will depict negative results. Jensen and Wanhill (2002) carried out some simulations in lowering accommodation tax rates for hotel and holiday centers in Denmark.

According to Elasticity theory, there is an inverse relationship between the price (accommodation prices) and tourism demand. Empirical literature on the subject has confirmed the hypothesis through the concept of price elasticities, mainly using time series data models. This hypothesis has been supported on the study of Sanso (2002) on the Balearic Island in Spain and these destinations have been characterized to be elastic. Characterized by the elasticity on tourist arrivals in terms of tax rates, exemptions and discounts are our reference, as such the estimation of the effects of tax on accommodation points to an inverse effect.

Durbarry and Sinclair (2001) also had the same results from the researchers which conclude that accommodation tax has a negative effect on tourist arrivals as they experience decline in economic contribution of the tourism sector to the economy. Gave (2015) also argued that
tourism services should be tax exempted or zero rated as this has adverse effect to the tourism sector.

In addition, ZEPARU (2015) found out that there has been an adverse impact in terms of tourist arrivals. However, there was a decrease in profits of hotels by about 27% for hotels and lodges. This decrease might actually negate any anticipated revenue collections from the tax on accommodation services.

However, in contrary to the researcher’s findings, Ahearne (2015) highlighted that accommodation tax has little to no effect on tourist activities. They main aim for taxing the tourism services was to create employment and as a result there was a 9% increase in employment between 2010 and 2014. His study more so had impact on tourist arrivals.

5.3 Recommendations
The findings show that there is a negative relationship between Tax and Tourist arrivals in the case of Zimbabwe. There is needed to strike a balance between industrial viability and revenue collection. There is need to revise the tax chargeable for accommodation services from the standard rate 15% to a reduced rate for the sector as in Kenya which is below 15%. To ensure that the tourism sector also contributes to Tax like all other sectors, there is need to incrementally introduce accommodation tax, starting with 5% (acceptable to tourists) before gradually getting to reduced rate within two years. This would recognize their vulnerability to competition, while at the same time giving them time to play a role in contribution to government.

5.4 Suggestion for further Research
The research utilized wholesomely secondary data from various sources which might be deep-rooted with errors and hence can compromise the outcomes outlined after the OLS regression has been ran. This exists because Zimbabwean macroeconomic data is subject to inaccuracies due to the fact that the nation suffers from inadequate coverage hence may lose some key observations and on the other hand price controls manipulates price behavior hence leading to compromised inflation rates. Hence need to use more reliable data collection methods which will bring out more reliable data.

Apart from this, further studies can be done focusing on VAT (Value Addition Tax) and its effects on Tourism Growth (revenue contribution) and competitiveness in Zimbabwe.
REFERENCES

Ahearne, A (2015), *Restoring Competitiveness to Ireland’s Tourism Industry: The Role of Reduced VAT*, February 2015, online copy


Deloitte 2013, „Analysis of the Impact of the VAT Reduction on Irish Tourism and Tourism Employment”, Failte Ireland National Tourism Development


Zimbabwe Tourism Authority, (2009). Zimbabwe Tourism Statistics and Economic Indicator Highlights
### APPENDIX

#### Appendix Figure 1: Regressed data

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Appendix Figure 2: Descriptive statistics

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<th>INFLATION</th>
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Appendix Figure 3: Augmented Dikey-Fuller Unit root test

Null Hypothesis: INFRA_DEV has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic - based on SIC, maxlag=7)

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Appendix Figure 4: Augmented Dickey-Fuller unit root test:

Null Hypothesis: D(INFRA_DEV) has a unit root  
Exogenous: Constant  
Lag Length: 1 (Automatic - based on SIC, maxlag=7)

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Test critical values:
- 1% level: -3.679322
- 5% level: -2.967767
- 10% level: -2.622989

Appendix Figure 5: Augmented Dickey-Fuller Unit root test

Null Hypothesis: TOURISM_EXP has a unit root  
Exogenous: Constant  
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

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Test critical values:
- 1% level: -3.661661
- 5% level: -2.960411
- 10% level: -2.619160

Appendix Figure 6: Augmented Dickey-Fuller Unit root

Null Hypothesis: D(TOURISM_EXP) has a unit root  
Exogenous: Constant  
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

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Test critical values:
- 1% level: -3.670170
- 5% level: -2.963972
- 10% level: -2.621007
**Appendix Figure 7: Augmented Dickey-Fuller Unit root test**

Null Hypothesis: TOURIST_ARRIVAL has a unit root  
Exogenous: Constant  
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

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**Appendix Figure 8: Augmented Dickey-Fuller Unit root**

Null Hypothesis: D(TOURIST_ARRIVAL) has a unit root  
Exogenous: Constant  
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

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**Appendix Figure 9: Augmented Dickey-Fuller Unit root test**

Null Hypothesis: INFLATION has a unit root  
Exogenous: Constant  
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

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Appendix Figure 10: Econometric model (equation estimation)
Dependent Variable: DTOURIST_ARRIVAL
Method: Least Squares
Date: 04/10/19   Time: 11:12
Sample (adjusted): 2010Q2 2017Q4
Included observations: 31 after adjustments
White heteroskedasticity-consistent standard errors & covariance

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R-squared 0.824497   Mean dependent var 27392.71
Adjusted R-squared 0.710518   S.D. dependent var 260523.6
S.E. of regression 246440.8   Akaike info criterion 27.81432
Sum squared resid 1.58E+12   Schwarz criterion 28.04561
Log likelihood 18.81662   Durbin-Watson stat 1.844178
Prob(F-statistic) 0.014378

Appendix Figure 11: Multicolinearity matrix

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Appendix Figure 12: Heteroscedasticity test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

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Appendix Figure 13: Residual estimations: normality test

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