

ASSESSING THE IMPACTS OF TOURISM IN MUSANZE DISTRICT, RWANDA.

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Assessing the impacts of tourism in Musanze district, Rwanda.

By

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Abstract

Tourism is one of the fastest expanding markets. It has received much attention in developing world and impoverished regions around the world. It has been observed in literature that examining tourists' movements and revenue earnings generated by tourists tells us nothing about the economic and social impacts on destination area; as a result various techniques were applied to avoid personal and methodological biases. Musanze district is one of Rwanda's leading tourist destination areas, mainly because of the gorillas and its scenic beauty. Tourism has stimulated the development of a variety of allied infrastructures and facilities such as hotels, roads and other socioeconomic facilities in Musanze district. Through its backward linkage, banks and retail business have been established to facilitate the development of tourism. Tourism in Musanze district also provides employment opportunities to the local communities and it has been significantly acted as a source of market to the local produce in the area. Tourism has been promoted and adopted by Rwanda Office of Tourism and national parks as a strategy for funding the conservation of protected areas, while at the same time contributing to the socioeconomic development of the host communities. As a path to diversify and develop country's economy, Rwanda's government has implemented the policy to develop tourism through collaboration of communities surrounding the park, hence the development of socioeconomic infrastructures in the wards neighbouring the park is a result of government's intervention.

This study sought to assess the impacts of tourism across Musanze district where it is being promoted as a national strategy. The study is intended to find out the capacity of tourism to generate benefits to both local communities and the district and thus its contribution to economic development.

Given the exploratory nature of this research, qualitative and quantitative analysis was used. Interviews, observations and secondary sources were the main vehicles of inquiry employed in this study. Cross-sectional regression, spatial autocorrelation and policy impact evaluation techniques were used to limit the personal and methodological biases. Cross-sectional results indicated that, annual income of the ward in Musanze district highly depends on the number of hotels, distance to the tourism resource (park), paved roads and other tourism related activities. However, spatial autocorrelation results indicated that tourism impacts are clustered in the wards neighbouring Virunga national Park. Policy impact evaluation results indicated that what people benefit from tourism is a result of NGOs and government's intervention. It is observed that government's activities to develop tourism are clustered in the wards neighbouring the park.

Given the success of the policy, the findings indicated that there are undesirable outcome of the policy such as community displacement of the indigenous communities from the park and conflicts between park managers and local communities. The overall findings indicated that tourism has played a significant role in community and district development, and government intervention carried out to develop tourism has been achieving its intended goals. It has been effective in improving the lives of the communities in Musanze

Key words: Impacts of tourism, cross-sectional regression, spatial autocorrelation, policy impact evaluation, Musanze district

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**Dedicated to
My Wife Angelique and Our son Bence**

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List of Abbreviations

AWF:	African wildlife Foundation
CAPMER:	Centre d'Appui aux Petites et moyennes Entreprises au Rwanda
CAR:	Conditional Autoregressive
CBP:	Community Based Projects
DFGFI:	Dianney Fossey Gorilla Fund International
GDP:	Gross Domestic Product
GeoDa:	Geographical Data analysis
GIS:	Geographical Information System
GO:	Gorilla Organization
GoR:	Government of Rwanda
GPS:	Geographical Positioning System
ICCN:	Institut Congolais pour Conservation de la Nature
IGCP:	International Gorilla Conservation Program
INES:	Institut Nationale de l'éducation supérieur
ISAE:	Institut Supérieur d'Agriculture et d'Elevage
MINICOM:	Ministry of Commerce, Industry, Cooperatives and Tourism
NGOs:	Non Governmental Organizations
ODI:	Overseas Development Institute
OLS:	Ordinary Least Squares
ORTPN:	Rwanda Office of Tourism and National parks
PNA:	Parc Nationale de l'Akagera
PNV:	Parc Nationale de Virunga
PPA:	Participatory Poverty Assessment
RIPA:	Rwanda Investment promotion Agency
SACOLA:	Sabyinyo Community Lodge Association
SAR:	Simultaneous Autoregressive
TWG:	Tourism Work Group
UK:	United Kingdom
UNICEF:	United Nations International Children Emergency Fund
USA:	United States of America
USD:	United States Dollars
WTO:	World tourism Organization
WTTC:	World Travel and Tourism Council

1. Introduction

1.1. General Introduction

“Tourism comprises the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes” (WTTC, IFTO et al. 2002). Further more, World Travel and Tourist Council consider the travel and tourism sector to be one of the largest – if not the largest – in the world, particularly in terms of its contribution to the world economy. Through extension, tourism means all economic activities linked to movement of tourists outside their habitual residence. It includes the industry that offers products and services to tourists. Hence it occupies the more important part of international trade in providing services.

Tourism development has been the focus of the study in recent times e.g. (Dwyer, Forsyth et al. 2004; Hjerpe and Kim 2007; Lee and Chang 2008). A general consensus has emerged that it not only increases foreign exchange income, but also creates employment opportunities, encourage the growth of the tourism industry and by virtue of this, stimulates overall economic growth (Lee and Chang 2008). As such tourism development has become an important goal for most governments. It is frequently assumed that tourism provides a means of relieving poverty (Blake, Arbache et al. 2008), for example international organizations such as World Tourism Organisation (WTO 2001) usually link its development with potential for poverty relief.

It has been recognised that tourism can have an impact on economic activity. All types of tourism changes such as additional tourism to a country or a region sometimes encouraged by infrastructure development e.g. air transport, roads, tax changes, and special events such as festivals or sporting events, will have an impacts on patterns of economic activity overall in the economy, and especially in the locality which is directly affected (Dwyer, Forsyth et al. 2004).

According to World Travel and Tourism Council report (WTTC 2006), total of 174 national economies around the world tourism generates around 214.7 million jobs worldwide (or 8.3% of world employment) and accounts for over 10.4% of global gross domestic product (WorldBank 2001).

Governments in Africa are showing increasing interest in tourism as a source of growth and diversification. Recent work indicates that tourism in Africa can, in the right circumstances contribute effectively to economic development (WorldBank 2001), because: barriers into the international market are lower than for most external trade sectors; tourism expenditure can provide a significant stimulus to other production and service sectors; properly managed, tourism has the potential to alleviate poverty, preserve cultural heritage and protect natural resources; and international, tourism is relatively high-growth industry (WorldBank 2001). Further more, the World Bank suggests that, for tourism to be sustainable, government needs to create the policy framework that will encourage for

profit investments, but also formulate the incentives and regulatory frameworks that will ensure economic, environmental and cultural sustainability, poverty alleviation and social inclusion.

It goes without saying that tourism induces changes in many areas, not only socio-economic but also environmental. The assessment of such effects is however burdened with many difficulties, as the tourist sector comprises a complex set of interlinked activities, such as travel, accommodation, catering, shopping etc. Therefore, tourism cannot be considered as a specific sector or industry; it is essentially a complex branching of economic activities that in combination determine the quantity or quality of the tourist product of an area (Giaoutzi and Nijkamp 2006).

Like other developing countries, tourism in Rwanda is recognized as the one of the priority sectors for the development. The preparation of tourism policy is based on Vision 2020 that places the protection of the environment and promotion of tourism among the principal strategies for poverty reduction and for sustainable development. Rwanda's tourism industry, anchored on the attractions of gorilla tourism for international visitors, is now being rebuilt after civil strife and genocide, and diversifying to encompass the promotion of cultural tourism (Mazimhaka 2007). This strategy is multi-sectoral and needs to be coordinated with other policies in different areas of development (CAPMER 2008).

1.2. Background and Justification of the research

The Musanze district is in the North Province of Rwanda. It is country's most mountainous district, containing the largest part of the Volcanoes National Park. Five of the eight volcanoes of the Virunga chain (Karisimbi, Bisoke, Sabyinyo, Gahinga and Muhabura) are within the district boundaries. It is also in this district that most of Rwanda's mountain gorillas are found, making it the most popular tourist destination in the country (Wikipedia-contributors 2008). Since some years ago, Rwanda is fully committed and involved in the process of promoting and stimulating the tourism sector. Coming up with this sector, policy will definitely lead to both global and sound framework within which all sector development partners would take shares and bring their contributions (MINICOM 2007). Likewise, in both developed and developing countries government authorities have recognized tourism as a means of generating employment and income in vulnerable economies (Ryan and Net Library 2003), for instance it was noted that, among the 49 least-developed countries surveyed by the World Tourism Organisation (WTO) in 2001, in 7 countries tourism was the leading source of foreign exchange earnings and other 10 countries, tourism earnings were among the top three sources of foreign exchange income (WTO 2001).

Despite its usefulness on economic development, the issue is whether tourism benefits have significant impacts on destination region due to their specific features (Lee and Chang 2008). There are no empirical researches that have been done specifically in Rwanda to find out causal relation between tourism and development of socio-economic activities on national or regional level. Therefore, it is in this regard that the researcher intends to carry out a study so as to assess the socio-economic impacts of tourism in Musanze district. While the datasets and findings of the research is particular to the study area, assessment of socio-economic impacts of tourism as well as the results of this study will be largely generic and can be applied else where.

1.3. Problem Statement

In the eyes of many decision makers and politicians tourism has magic potential. It generates income and employment based on the indigenous resources of the tourist areas concerned. It has been rapidly growing sector and a wide-sweeping socio-economic phenomenon with broad economic, social, cultural and environmental consequences (Giaoutzi and Nijkamp 2006). For example, national parks can assume a critical role in the social and economic development of rural environments. Many communities adjacent to large national parks have economies that are highly dependent on tourism expenditures, with the highest level of economic dependence found in small service-oriented communities in relatively rural areas (Hjerpe and Kim 2007). Likewise, tourism can present potential risks to hosting communities. (Eagles, Paul et al. 2003) delineated three kinds of costs associated to tourism: financial and economic, socio-cultural and environmental. Therefore, as the increase of visitors may lead land transfer of local people to tourism (e.g. from farming) which may raise conflicts, overloading of key infrastructures, changes of rural functions to urban and so on (Mason 2003). Tourism is thus a double edged sword (Giaoutzi and Nijkamp 2006). It may have positive economic impacts and negative impacts which are related to social aspects, cultural aspects, and environmental aspects of host areas.

Further more, tourism expenditure by foreign tourists can enhance domestic tourism construction as well as bring about an accumulation of physical capital, and the needs for skilled labour in the tourism which may lead human capital investment to increase (Lee and Chang 2008). As Rwanda government authority has identified tourism as means of generating employment and income in local area, there may be debates about the precise scale of tourism's impact on the world economy, but few would argue against its major contribution. It has been observed in literature that examining tourists' movements and revenue earnings generated by tourists tells us nothing about the economic and social impacts on destination area. Whether, or not this is true remain to be seen, therefore due to a lack of empirical evidence on community impacts of tourism in Musanze, a research can be conducted to empirically examine the causal relationship between tourism and development of socio-economic activities in the area of study and critically analyse the impacts of tourism on local income, employment and environment. This becomes the basis for conducting assessment research to examine the impacts of tourism in Musanze which is a crucial economic sector in the region.

1.4. Research Objectives

1.4.1. Main Objective

The main objective of this study is to assess the impacts of the tourism in Musanze district.

1.4.2. Specific Research Objectives

1. To evaluate the economic impacts of changes in the supply of tourism opportunities.
2. Examine the contribution of tourism to the development of social infrastructures in the area
3. To evaluate the effects of policies and actions which affect tourism activity either directly or indirectly in Musanze.

1.5. Research Questions

Table 1-1: Research Questions

No	Specific Objectives of the Research	Research questions
1	To evaluate the economic impacts of changes in the supply of tourism opportunities.	<ul style="list-style-type: none"> • To what extent has tourism added value to the economy of Musanze as hosting region? • How tourism economic impacts are spatially observed? • How much income does tourism generate for local community in the area?
2	Examine the contribution of tourism to the development of social infrastructures and environmental conservation in the area.	<ul style="list-style-type: none"> • What is the role of tourism on development of social infrastructures in the area? • Do the infrastructures vary across the district? • What is the impact of tourism on Gorilla population?
3	To evaluate the effects of policies and actions which affect tourism activity either directly or indirectly.	<ul style="list-style-type: none"> • Can the social and economic impacts of tourism be explained by the policy or are they the result of some other factors? • Do the policy impacts vary across different wards of Musanze? • Are there any undesirable effects of the policy, either on local community or government?

1.7. Research Design

A research needs a design or a structure before data collection or analysis. It ensures that the evidence obtained enables the researcher to answer the initial questions as unambiguous as possible (De Vaus 2001). Therefore, figure 1-2 shows the procedure that was followed in carrying out research. The literature review was carried out with the purpose of establishing theoretical framework for more fully understanding of socio-economical impacts of tourism, compare contribution of tourism in regional development with other economic sectors and evaluate policies that ensure tourism development in Musanze district. The research problem was identified through literature review and based on the problem, appropriate research objectives were defined and questions were formulated which were answered after field work.

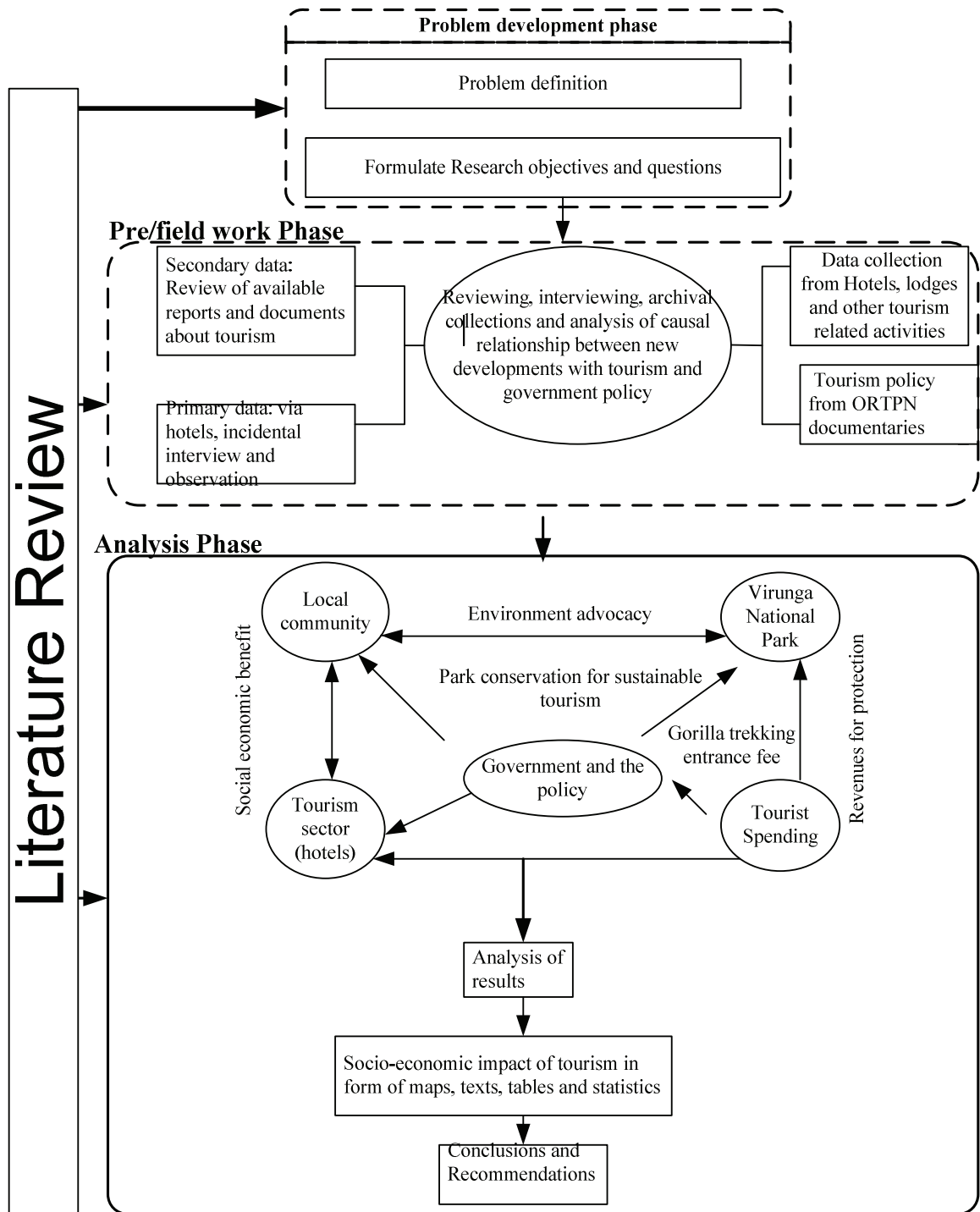


Figure 1-2: Research design

1.8. Thesis Structure

The research is organised into seven chapters:

Chapter-1: Contains general introduction, background and justification of the study, the problem statement, objectives of the study, research questions and the research design.

Chapter-2: Describes and defines theoretical concepts of tourism along with literature reviews relevant to the study. It includes social and economic impacts of tourism, the role of government in tourism policy and planning, policy impact evaluation and negative potentials of tourism.

Chapter-3: Presents a methodology and data collection techniques. It gives a detailed account to the methods used to accomplish the research task, including the research techniques, source of data and acquisition methods and methods of data analysis.

Chapter-4: Presents a brief introduction of the study area. It discusses the physical, demographical and socioeconomic conditions of Musanze district including regional tourism potentials.

Chapter-5: Presents the main findings and discussion of the research. 5.1 present economic impacts of tourism in district of Musanze and to the local communities. It also discusses the results of hotel managers' survey, 5.2 present the contribution of tourism to development of social infrastructures in Musanze district.

Chapter-6: Discusses the policy interventions carried out by the government to promote tourism in region and evaluate its influence on tourism impact indicators in the area.

Chapter-7: Presents conclusion and recommendations based on the results of the study

2. THEORETICAL AND CONCEPTUAL FRAMEWORK

This chapter deals with concepts and theories that are relevant to the issues to be raised in the research for assessing the impacts of tourism. It includes the concept of tourism, social and economic impacts of tourism, government policies on tourism and negative impacts of tourism.

2.1. Basic Tourism Concepts

"Tourism" and "tourist" are two common words, yet they receive no universally accepted definitions. Both terms are capable of diverse interpretations according to the purposes for which they are used. One of the oldest conceptual definitions of tourism was given by two pioneers of tourism research. Hunziker and Krapf (1942), cited by (Vanhove 2005) they defined tourism as *"being a sum of relations and phenomena resulting from travel and stay of non residents."* (Malhotra 1997) in the *"encyclopaedia of hotel management and tourism"*, built on ideas of Hunziker and Krapf viewed tourism as *"a composite phenomenon embracing a whole range of different relationships between travellers and the host population."* Tourists are different from those individuals who migrate and arrive for the purpose of long term visits, they are considered as transitory and embarking on short term visit for the purpose of leisure (recreation, holiday, health, study and sport), business, family, mission, and meeting (Vanhove 2005). Though, Hunziker and Krapf's ideas of relationships were incorporated into later ideas of tourism and had a partial influence of modern concept of tourism but the definition on technical view point was weak. They didn't differentiate the conceptual and technical part of tourism.

A conceptual definition that deserves special attention is the one given by (Vanhove 2005). *"Tourism is one part of recreation which involves travel to a less familiar destination or community, for short-term period in order to satisfy a consumer need for one or a combination of activities"*. The advantageous of this definition is that it places tourism in the overall context of recreation; it retains the need for travel outside the normal place of work habitation and focuses on the reasons of travel.

As the definition of tourism continued to create confusion, in June 1991, 250 individuals from ninety countries participated in a landmark meeting co-sponsored by the World Tourism Organization (WTO) and Tourism Canada held at Ottawa, Canada. The international committee had three primary aims (Theobald 1998):

- *Development of a uniform and integrated definition and classification system of tourism;*
- *Implementing of a strict methodology for determining the economic impact of tourism [...]* (Theobald 1998).
- *Establishing a means of dialogue between governments and the tourism industry*

The conference was successful in agreeing on approaches to standardize tourism definition as

"Tourism comprises the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes" (Theobald 1998).

As indicated in figure 2-1, for a given country, three basic forms of tourism are identified; (1) domestic tourism (2) inbound tourism and (3) outbound tourism. WTTO defined domestic tourism as

a kind of tourism that which is comprised of residents visiting their own country; inbound tourism-comprised of non-residents travelling in a given and (3) outbound tourism-comprises of residents travelling to another country (Theobald 1998). These forms can be combined in a number of ways in order to get categories of tourism as mentioned by (WTO 2001). (a) Internal tourism-involves both domestic and inbound tourism; (b) national tourism-involves both domestic and outbound tourism; (c) international tourism-involves both inbound and outbound tourism. It should be noted that although figure 2-1 refers to a country, it can be applied to any other geographical area.

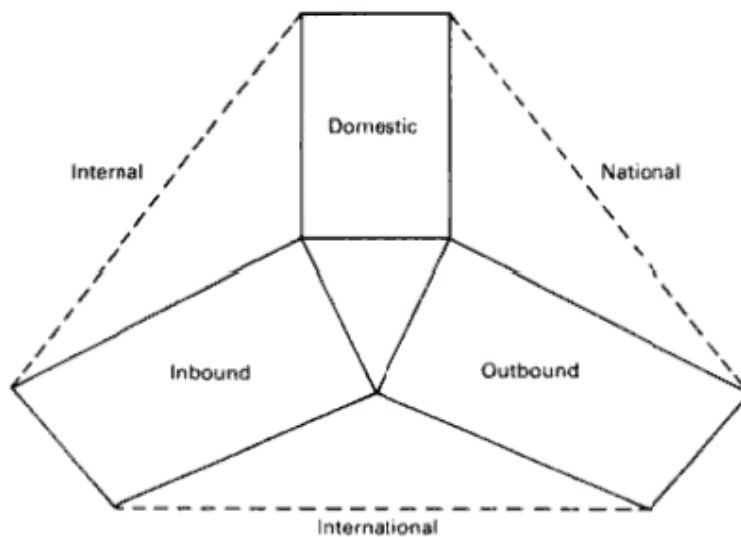


Figure 2-1: Basic forms of tourism, adopted from World Tourism Organization (2001)

2.2. Tourism Impact Assessment

Tourism takes place in the environment, which is made up of both human and natural features. The human environment comprises economic, social and cultural factors and processes. The natural environment is made up of plants and animals in their habitat. It is therefore possible to make a distinction between the human environment and the natural environment and this is partly useful when discussing the impacts of tourism (Mason 2003). However, it is important to note that, in a real setting, the human environment and the natural environment are interwoven and human activity is both affected by and has effects on the natural environment

It has become a formula to state that tourism is the world's largest industry. Many writers make this claim and support the contention by citing World Tourism Organization and /or World Travel and Tourism Council data on shares of Gross Domestic Product or the numbers of passengers flown (Chris 2003), but does the claim matter? Perhaps it was a claim made simply to attract the attention of politician and those who fund the research. In many cases, the claim of being biggest is not worth mentioning. What can be stated beyond any doubt is that tourism is a major economic force in the world economy and therefore researches and literatures have to be made to briefly highlight the importance of tourism an economic activity.

The World Tourism Organization (WTO) estimates that tourism is among the top five export earners for 83% of all countries and the top source of foreign exchange for at least 38% of all countries comparing export earnings of different industrial sectors, tourism ranked top earner in 1998 (Figure 2-

2) surpassing all other international trade categories; this is a crucial reason for investors' preference of tourism over other economic sectors.

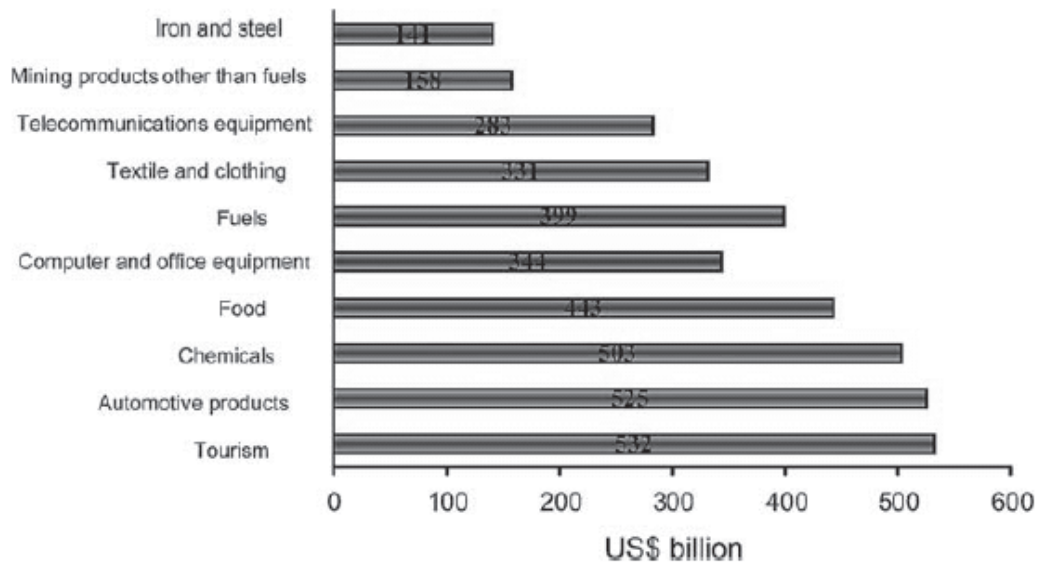


Figure 2-2: worldwide exports earnings in 1998, adopted from (Dwyer, Forsyth et al. 2004)

It has been argued that, the major shift towards tourism in the post-world-war era by the developing countries is attributed to the problems of declining terms of trade for agriculture products and high levels of protection against manufacturing (Batta 2000). Many developing countries had to turn to tourism in search of remedies for balance of payments deficits and a possible alternative source. However, tourism's direct contribution to the foreign exchange receipts is not reliable indicator of the sector's contribution to the economy. It is partly due to non-availability of accurate data. Moreover, the impacts of tourism can be positive or beneficial, but also negative or detrimental (Mason 2003; Lee and Chang 2008). Whether impacts are perceived as positive or negative depends on the value position and judgment of the observer of the impacts (Mason 2003). In the following sections, both negative and positive impacts of tourism shall be discussed and conclusion will be drawn basing on the arguments of different researchers.

2.2.1. Economic impacts of tourism

An assessment of tourism's contribution to economic development in host regions requires an analysis of the backward and forward linkages between tourism and other sectors, an understanding of the spatial location of tourism activities and identification of the beneficiaries of its economic and other impacts (Mbaiwa 2003). This means if tourism is to have a major influence on the economy of a country or a particular region, it should have strong linkages with the rest of the domestic economy.

Tourism is a cross-sectoral activity, in which visitors spend money directly in hotels, but, in most cases, they also spend a substantial amount of money outside the hotel. Estimates of such ex-hotel expenditures vary according to the type of hotel and local circumstances, but can range from half to nearly double expenditures in the hotel. These direct expenditures that are induced through the accommodation investment give such tourist operations their relatively high economic returns (WorldBank 2001). According to (WTTC, IFTO et al. 2002), visitor expenditures also have a "flow-through" or catalytic effect across the economy in terms of production and employment creation. As

illustrated in figure 2.3 below, the role of tourism as an entry point in an economy can be seen. Each new production or service activity that is either started or expanded to meet actual or potential tourism demand will, evidently, require new investment.

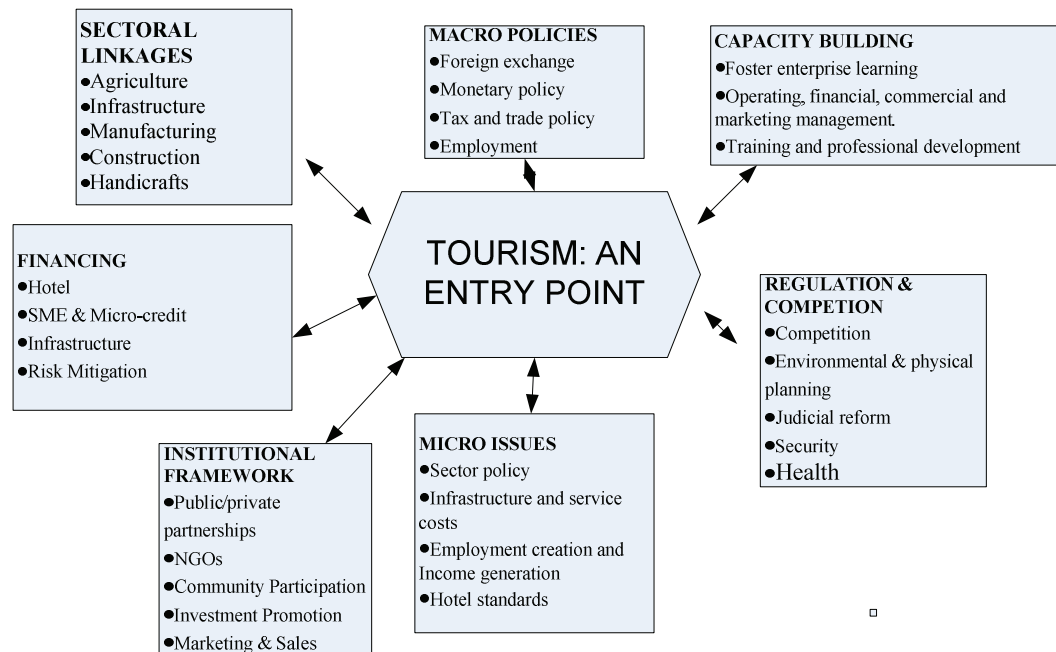


Figure 2-3: Tourism as an entry point to the economy, adopted from (WorldBank 2001)

However, one can ask her/himself; does tourism development lead to economic growth or does economic development cause tourism growth? Therefore, the recent studies about the relationships between tourism development and economic growth are currently unfortunately fuzzy due their being different results for different countries in the same subject or region (Lee and Chang 2008).

Although tourism lays claim to higher returns to the economy, it nevertheless impinges upon the biophysical and socio-cultural environment at the destination by consuming and competing for resources such as water, land, and fisheries. Like any resource use activity, ecotourism risks becoming unsustainable if local ecological and socio-cultural capacities are not respected (Teh and Cabanban 2007).

2.2.1.1. Employment in tourism

Although tourism is not a clearly identifiable industry in its own right, tourism activities are generally believed to create and maintain employment in a variety of relatively disparate areas of the economy, from hotels and restaurants (WTO 2000). According to (Giaoutzi and Nijkamp 2006), tourism is labour-intensive and also requires much unskilled and semi-skilled labour, which offers great opportunities for less favoured regions. As shown in the figure 2.4, Rwanda T&T Economy employment is estimated at 78,000 jobs in 2007, 4.6% of total employment, or 1 in every 21.7 jobs. By 2017, this should total 104,000 jobs, 4.7% of total employment or 1 in every 21.2 jobs. Rwanda's Travel & Tourism Industry employment contribution is generally increasing (WTTC 2007).

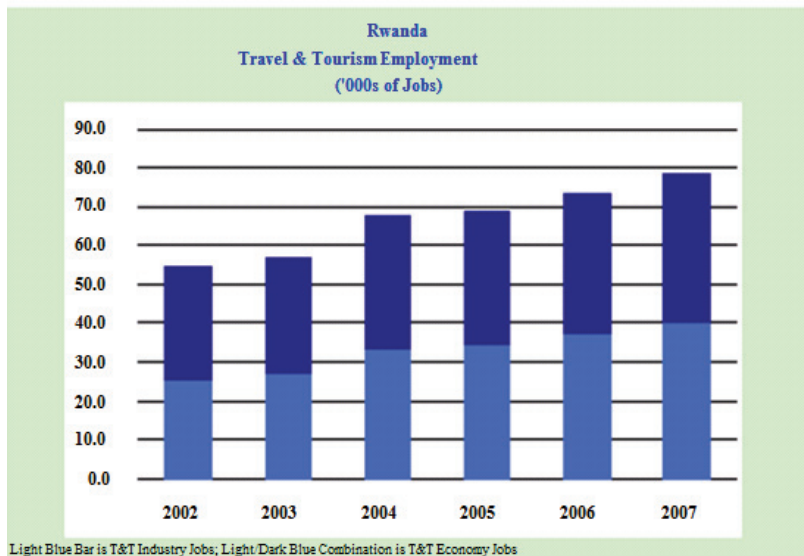


Figure 2-4: Travel and Tourism employment in Rwanda, adopted from WTTC (2007)

(Hjerpe and Kim 2007), suggest that a jobs created by tourism is better appreciated by the public than any other measure of economic welfare. They also illustrate that the outdoor recreation sector (tourism) of the economy is relatively labour intensive. Measures of labour intensity are based on the number of jobs per dollar of output. Thus, outdoor recreation creates many jobs, yet these jobs are of lower wages and are typically seasonal in nature. This can be helpful to communities with slightly higher levels of unemployment, yet it will also reduce the per capita wages in the region—an overall indicator of the quality of a regional economy.

According to WTTC (WTTC 2007), Travel & Tourism is a human resource intensive, creating quality job across the full employment spectrum. In 2007, one in 12.0 jobs will be generated by the Travel & Tourism Economy. The Travel & Tourism Economy accounts for 8.3% of global employment. Today there are 76.1 million Travel & Tourism Industry jobs and 231.2 million jobs in the Travel & Tourism Economy, and these will rise to 86.6 million Travel & Tourism Industry jobs and 262.6 million Travel & Tourism Economy jobs by 2017. Though, the most praised economic benefits of tourism are increased opportunities for employment and income generation for locals at the tourist destinations. The, experience shows that most jobs in tourism are seasonal, with low wages, no guarantees for future employment or assurance of work-related medical benefits. The employees receive little or no training, nor do they receive recognition of the skills and experience they bring to the industry (Budeanu 2005).

2.2.1.2. Tourism infrastructures

One of the areas in which tourism can influence the domestic economy is through the development of infrastructure in host regions. All protected areas require some level of visitor's service infrastructure. The explosion of car- and coach-based tourism in the 20th Century contributed heavily to the development of extensive road networks throughout the developed world, increasing habitat loss to tarmac and augmenting habitat fragmentation. Many roads were built simply to connect tourist attraction sites and sight-seeing opportunities (Davenport and Davenport 2006). As visitors increase,

so does the demand for basic services such as policing, transportation infrastructure, fire, and health care services (Hjerpe and Kim 2007).

The impression that leisure and tourism traffic has grown refers not to the number of trips, but to the distances covered by these trips. Growing distances are a common fact of transport science, due to higher degrees of motorization and the increasing use of motorized vehicles. Nevertheless the growth has been above average in the field of leisure and tourism traffic where the increased use of aircraft in particular has for a long time led to a significant rise in passenger kilometres travelled per year (Gronau and Kagermeier 2007). Only a substantial tour reception scale can support large investment in fixed assets. Moreover, the improvement of facilities and the strengthening of marketing can attract more tourists. Under the influence of such a circulation and accumulation mechanism, tour activities will exhibit a phenomenon of dense spatial gathering (Weng and Yang 2007).

Infrastructure reform in Rwanda lies at the heart of vision 2020. This commitment to infrastructure improvement reflects the government's recognition of the central role that reliable and accessible infrastructures plays in supporting and enabling poverty eradication and economic growth (Public-Private Infrastructure Advisory, World Bank et al. 2005). The progress that Rwanda has made since 1994 has been achieved primarily through affective partnership with donor community. Looking ahead however, the government fully recognizes increasing importance of the private sector's contribution including tourism investors to realize country's development agenda.

Whilst an area may have initially attracted tourists, if it seeks to attract more tourism and move into mass tourism, then additional investment will have to be made by both private and public sectors (Chris 2003). While the private sector will provide hotels, bars, restaurant, discos and many other forms of entertainment facilities, the government will have to provide arrange of infrastructure support. Therefore, accessibility will be improved by the provision of roads and car parking space; service relating to hygiene and so on. The building of these services is obviously a means of generating employment in areas of high unemployment, if local labour is utilized.

However, one would wonder tourism and infrastructures which should be developed first. According to the research done by (Khadaroo and Seetanah 2007) in 28 countries, found that on top of other tourism infrastructures and other classical determinants, transport infrastructures is a significant determinant of tourism inflows into the destination. Likewise, sensitiveness of tourist flows to transport infrastructure does vary depending on the origins and destinations. In the findings of (Khadaroo and Seetanah 2008) show that tourists from, America and Asia are particularly sensitive to transport infrastructure. So, which should be accredited the development of one another (tourism and infrastructure).

2.2.1.3. State Revenue

There is an acceptable thought that governments are looking at the mushrooming tourist industry not from the rational principles of taxation, but simply as a new revenue source, particularly as foreign tourists are not voters in the destination (Jensen and Wanhill 2002). The tourism industry has to cope with specific taxes, such as a departure tax, and general taxation, such as value added tax (VAT). Unlike other levies, tourism taxes can increase domestic welfare since international tourists bear most of the welfare loss associated with higher revenue. Taxing products rather than tourists affects income

distribution via changes in factor markets and domestic consumption, and corrects for the distortion caused by monopoly power (Gooroochurn and Thea Sinclair 2005).

Contributions received by the government from the tourism sector may be direct or indirect. Direct contributions arise from charging taxes on income; for example, private and company incomes generated by tourism employment and business. Indirect sources of income will mainly comprise the range of taxes and duties levied on goods services supplied to tourists (Lickorish, Jenkins et al. 1997). As stipulated by Lickorish, government revenues in most developing countries Rwanda inclusive are derived from indirect taxes, e.g. on land, on crops, on imports, civil servants and so on. Indeed, if tourism is a prominent source of employment it does provide an opportunity for government to widen its tax base. However, direct taxation should not be overstressed; high levels of taxation will act as disincentives to investors and might discourage reinvestment.

Not only government generates income from tourism, it facilitates the country to maintain its balance of payment (reduce deficit). Balance of payments of a country reflects at a particular time a set of accounts representing the country's trade with the rest of the world. Tourism is among the services in invisible accounts that helps government to balance its balance of payments (Lickorish, Jenkins et al. 1997). Tourism is considered as a potential export industry. For example in 2002 tourism represented approximately 7 per cent of the total exports of goods and services, and nearly 30 per cent of services (Holden 2005). Since developing countries' economies traditionally rely on primary products which always lead them to have balance of payment deficit, tourism can play important role in the balance of payments in developing countries.

For example in the early 1990s the Finnish government recognized the role tourism had to play in reducing its balance payment deficit (Holden 2005). In the research of (Lee and Chang 2008) about *tourism development and economic growth*, the results provide evidence supporting a long-run steady-state relationship between GDP and tourism development. This means that the two variables are causally related at least in one direction.

2.2.2. Social Impacts of tourism

The social impacts of tourism refers to the manner in which tourism and travel effects changes in collective and individual value systems, behaviour patterns, community structure, lifestyle and the quality of life (John 1990; Hall 2006). Most of the early studies of the impacts of tourism focused upon the economic aspects of tourism (John 1990). However, during the past decade increasing attention has been given by researchers to the social impacts of tourism (John 1990; Hall 2006; Cesar Tovar 2008). The principle reason given by (Cesar Tovar 2008), regional social impact studies are crucial input to tourism planning and decision making.

According to (WTTC, IFTO et al. 2002), tourism can be both a force for the preservation of or a threat to a community's natural and cultural heritage. While culture heritage creates a foundation for tourism's growth, tourism has the power to generate funds that make conservation possible. Cultural heritage loses much of its meaning without an audience, and a society participating in and benefiting from it. Without sustainable management, tourism loses its potential for growth. With the growing interest in culture and community, tourism is finally being recognized as an industry that can boost rural economies, create entrepreneurs and jobs and help preserve indigenous cultures. 'Above all,

tourism offers a better life not just for those who make money, but for those who pay money to enjoy it.

As stipulated by (Budeanu 2005), tourism has an important role in enhancing cultural exchanges, improving living standards, supporting cultural preservation (e.g. museums, monuments) and stimulating locals' pride for their homeland. For example, The Rwanda Office of Tourism and National Park (ORTPN) and indeed the entire Rwandan community found it pertinent to extend the much cherished secular Rwandan tradition of naming every new born baby to the Gorillas. The ceremony of giving a name to a new born baby commonly known as "*Kwita Izina*" has been part of the Rwandan tradition for centuries. This ceremony has also been used for past 3 decades now to give names to new born gorillas. The names attributed to the gorillas play a great part in the program of monitoring of each individual and gorilla groups in its habitat (ORTPN 2007). However, it does not necessarily mean that they are always the results obtained. For example, when locals perceive the tourists' lifestyles as more desirable than their own, the phenomenon of 'relative degradation' can occur, with effects varying from adopting tourists' fashion (Budeanu 2005). (Farooquee, Budal et al. 2008) argued that tourism needs to be sensitive to local environmental and cultural norms and beliefs in order to be accepted; therefore government needs to lay down norms to be followed by tour operators to minimize the negative environmental and cultural impacts of tourism activities.

As mentioned by (Giaoutzi and Nijkamp 2006), tourism is labour-intensive and also requires much unskilled and semi-skilled labour; indeed by providing many young or unskilled people with their first job experience, the industry also effectively offers them an opportunity to enter into the labour market (WTTC, IFTO et al. 2002). For this case, some hotel companies have signed agreements with trade unions, which focus on issues of trade union rights, skills training and equality in the work place. As suggested by (Stronza and Gordillo 2008) there should be strong institution to avoid the tragedy of the commons because communities are able to cooperate effectively for long term management of shared resources.

2.3. The role of government in tourism policy and planning

"All governments, be local or national, have a policy for tourism, whether it represents an active involvement, laissez-faire approach or somewhere in between" (Baum and Szivas 2008). In many less developed countries, government has played a major role in the evolution and the development of the tourism industry. In this regard apart from being involved in formulation of tourism policy framework, and the development plan, governments in many less developed countries has been actively engaged in tourism entrepreneurial activities as regards to the operation and provision of hospitality facilities and services (John 2002). However, one can pose a question if direct involvement of government in business is transparency in helping the investors in tourism?

According to the (Baum and Szivas 2008), a key motive behind government support and involvement in tourism in any country, be it full diversified developed economy or a less developed country, is tourism's ability to create employment opportunities and hence contribute to the overall development of the nation. (Jenkins and Henry 1982) classified the involvement of government in two classes: the passive involvement and active involvement.

1. Passive involvement: “[...] occurs where government undertakes an action which may have implications for tourism, but is not specifically intended to favour or influence tourism” (Jenkins and Henry 1982). Passive involvement by government in tourism may also be categorized into mandatory and supportive involvement. Passive mandatory involvement is usually linked with legislative provision where for example government may enact legislation concerning employment of local people or foreigners or government may offer incentives to investors. Supportive involvement is situation when a government does not deliberately slow down the development of tourism but neither does it encourage it. For example group of national investors may establish a tourism board with being authorized by the government but lacking any governmental input or government may establish vocational courses but not relevant to the needs of investors. As cited by (Jenkins and Henry 1982) World bank had described the situation as “*benign neglect*”.

2. Active involvement implies not only recognition by government of the specific needs of the tourism sector, but also of necessity for its participation to attain a certain objective. This is again categorized into two; managerial and developmental involvement. In Managerial, government not only sets tourism objective but also introduces necessary organizational and legislative support to attain the objective. For example government can discriminate in favour of nationals or foreigners in offering jobs in tourism or the priority of investment in tourism may be given foreigners rather than nationals. Developmental involvement implies when government or its agencies undertake an operational role in the tourism sector. This is usually undertaken when private sector is unable or unwilling to become involved in tourism (Jenkins and Henry 1982).

Without a doubt, many researchers like (John 2002; Baum and Szivas 2008) supported direct involvement of government in tourism. For example (Baum and Szivas 2008) in their research, most of the government agencies at every level from the international down to small towns have adopted progressively more active role in the use of tourism as a development tool. The reason behind this, government is a major player in shaping the economy and its development in all countries, in measure ranging from active intervention to deliberately distancing or incompetent neglect (passive involvement).

2.3.1. Impact evaluation of government policies

Impact or outcome evaluation is used to assess what changes can be attributed to the introduction of particular intervention, program or a policy (Kumar 2005). He further stipulated that, in determining the impact of a policy, it is important to realise that the changes produced by the policy may not be solely because of the policy.

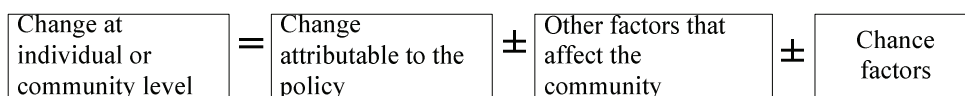


Figure 2-5: Causal chain between a policy and outcome, adopted from Kumar (2005)

The impact of a policy is thus the difference between the outcome with the program and the outcome without the program (refer to figure 2-5). As stipulated by (Organisation for Economic and Development 2005), it is not enough to look at the outcomes, but one should a much wider range of criteria to obtain a good picture of how much a policy is worth.

2.3.2. Designs for policy impact evaluation

There are many designs from which a researcher can apply in conducting an impact assessment. According to (Kumar 2005; OECD 2005; Organisation for Economic and Development 2005), the commonly used design are: after-only design and before-and-after design.

After-only design (post-test design) - this design measures the impact of a program after it has occurred without having a baseline or time series. The data used in assessment are collected only after the program has been completed. Its effectiveness is judged on the basis of the current picture of the state basing on the evaluation indicators.

Before-and-after design (pre-test and post-test)-this design is most appropriate than the first one. It uses the data on outcomes before and after the policy implementation. The key strength of this design is that, it is possible to evaluate the policy nationally. The main weakness, the change brought by the policy can not be separated out from change that would have happened anyway.

Rwanda's tourism strategy is to attract high value tourists with unique environmentally friendly tourism. It hopes to transform the economy from one dependent on subsistence agriculture to a modern, broad-based economy that welcomes investors, and creates employment and new opportunities. Evaluating the impacts of such policy requires selection of indicators relating to the national goals. Assessing the impacts of policy in Musanze therefore, would require scaling up of the new developments in the area and relating them with the policy goals.

2.4. Tourism's negative potentials

It has become increasingly clear that tourism is not "the smokeless industry it claims to be" (Budeanu 2005). Often, the economic benefits of tourism come at a high price paid by nature and societies, endangering the core assets of tourism itself, nature and human cultures (Davenport and Davenport 2006). While this is not characteristic for every tourism activity and in every country, it certainly puts tourism's benefits into perspective and demonstrates the need to have a holistic and preventative view on the overall effects tourism has on nations, economies and the ecosystems upon which all depend (Briassoulis 2002; Budeanu 2005).

Though it is claimed that most praised economic benefits of tourism are increased opportunities for employment and income generation for locals at the tourist destinations, experience shows that most jobs in tourism are seasonal, with low wages, no guarantees for future employment or assurance of work-related medical benefits. The employees receive little or no training, nor do they receive recognition of the skills and experience they bring to the industry (Budeanu 2005). Besides this, the most serious accusation that can be made against tourism is the manner in which both members of the industry and destination authorities have exploited indigenous populations in their desire to develop tourism in ways that maximize their own interest (Holloway and Taylor 2006). Some examples of such exploitation include child labour, sexual exploitation, drug addiction, vandalism, brawls and the whole sale removal of locals from their tribal lands to permit development of tourism. the recent example of such cases as mentioned by (Haralambopoulos and Pizam 1996; Holloway and Taylor 2006), was the removal Masai tribe people from Ngorogoro crater hunting lands in Tanzania, to allow tourist for free movement to photograph wildlife; also Botswana expelled Gana and Gwi Bushmen from their land in the central Kalahari game reserve to open the area of tourism.

Socially, tourism has an important role in enhancing cultural exchanges, improving living standards, supporting cultural preservation (e.g. museums, monuments) and stimulating locals' pride for their homeland. Although it creates numerous opportunities for such good outcomes, it does not necessarily mean that they are always the results obtained. For example in the wards of (Farooquee, Budal et al. 2008), tourism increase out-migration, frustration among the youth, and cultural degeneration. It has been argued that when locals perceive the tourists' lifestyles as more desirable than their own, the phenomenon of 'relative depravation' can occur, with effects varying from adopting tourists' fashion, to the formation of a 'developed culture' that often includes aspects such as drug consumption and prostitution (Hunter and Green 1995). Although tourism usually brings cultural exchanges due to long-term interactions between representatives of different cultures, in order to develop respect and understanding for each other's values. Unfortunately, this is rarely or not the case for tourists, although the possibility exists. Most frequently, the relationships between tourists and locals are rather superficial and unbalanced due to language barriers, financial status differences, and the short time tourists spend in destinations (Budeanu 2005).

2.5. Conclusion

Figures in literature show that tourism is clearly one of the most important industries for the world's economy. Facts demonstrate that it can also bring benefits in terms of environmental protection and socio-cultural conservation. Its share in the world's progress is so fundamental that any efforts to reach sustainable development globally or locally are doomed to fail without considering tourism's implication and ensuring that tourism activities are fully integrated within sustainable development policies and procedures.

Due to its beneficial aspects, tourism is being strongly encouraged in most countries and is expected to continue growing. At the same time, there is an increasing recognition that tourism in its extensive developments has potentially damaging effects on nature, societies and cultures. Therefore, concerns for responsible tourism practices should have an equal focus on correcting past mistakes and on preventing future ones from occurring; thus, a clear preventative approach must be embedded into current tourism policies and strategies at all levels, if tourism is to help society make progress towards sustainability (Budeanu 2005).

3. RESEARCH METHODOLOGY

Research is common manner of speaking as a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic (Kothari 2005). In other words, research is an art of scientific investigation. There are two basic approaches to research as (Kothari 2005) stipulated; quantitative approach and the qualitative approach. The former involves the generation of data in quantitative form which can be subjected to rigorous quantitative analysis. Qualitative approach to research is concerned with subjective assessment of opinions, attitudes and behaviour.

The advantage of employing qualitative and quantitative methods in research is getting increasing recognition among researchers. It enables to benefit from the insights that the two methods provide when used in combination. Moreover, the most effective evaluation research is one that combines qualitative and quantitative components (Babbie 2004). Thus, the data that will be used in this study combine both qualitative and quantitative. However, most of the data collected were a qualitative one, it is on this basis that discussion and findings will be based on the data gathered from various secondary sources, including statistical data and survey reports from Rwanda office of tourism and national parks (ORTPN), the district of Musanze and from fifteen wards of Musanze and partners of ORTPN. Primary data were also collected to supplement the documents.

3.1. Selection of study area

Musanze district was selected to be the area of study simply because it is the district that most of Rwanda's mountain gorillas are found, making it the most popular tourist destination in the country.

The study area is divided into 15 wards (Imirenge) from which four borders Virunga National Park. Also Musanze has great tourism potentials that should be valued. Therefore, studying the impacts of tourism in Musanze is of much interest to the researcher in particular and the district in general. In other words, the selection of study area was purposive. Purposive sampling is one which is selected by a researcher subjectively. In a nutshell, the researcher attempted to obtain a case study that appeared to him as would provide rich information that manifest the phenomenon intensively. 13 hotels out of 19 were studied in the district. All these hotels are distributed in three wards; they were enough for the researcher to provide the information needed to supplement secondary source information.

3.2. Field data collection

The field work was based on both primary and secondary sources of information. Primary data were collected through survey and field observation. Secondary data were collected by use of archival research from governmental organisations both at district and ward level and Rwanda tourism office of tourism and National parks (ORTPN) and NGOs.

Most of the data required to answer and validate the research questions were collected from secondary source. Primary data were collected from hotels in Musanze through interviewing hotel managers. Since hotels are only 19 in Musanze, and they almost located in one ward, 13 hotels were enough for

the information needed. However, the geographical points for all hotels were collected using mobile GPS.

3.2.1. Primary data

As stated earlier that most of data required to answer the questions were secondary data, but also primary data were needed to supplement the analysis from secondary data. Therefore, two types of primary data were collected: the data collected from interview of hotel managers and personal observation around the case study area.

The data from hotel managers at each hotel was sought in order to document the number of employees currently the hotels employ, the number of rooms that a hotel has, current guest occupancy rate, purchasing behaviour of hotels, year it started to operate, price charged on a room. Managers were also asked a series of questions, designed to capture the importance of tourists coming to visit the park on their business, how they work with the government and problems that they may be facing in their business. Hotels located near the Park and in the town were visited at each site to capture the geographical coordinates. Interviews were held with the manager or assistant manager at thirteen of the nineteen hotels at Musanze district. The summary of the collected data are categorized into two: quantitative and qualitative data.

3.2.1.1. Observation

To complement the interview process and data from reports and other documents, field observations were conducted and various tourism related infrastructure were visited. During observation, incidental interviews were also made trying to understand how residents say about importance of tourism in their area. The observation was made to support information from documents and interview findings.

3.2.1.2. Incidental interview

During the week of observation, incidental interviews were made. As the researcher was observing the activities that were developing in Musanze he tried to ask some people whom he met at the field asking how they see the importance of tourism in the area.



Figure 3-1: Researcher in process of observation

3.2.2. Secondary Data

Secondary data collected included qualitative, quantitative and spatial data which are summarised below:

Table 3-1: Summary of secondary data collected

S/N	Data type	YEAR	Data source
1	A Revised Tourism Strategy for Rwanda	2007	ORTPN
	Tourism Revenue sharing in Rwanda. Provisional policy and guidelines	2005	
2	Conservation based community report	2007	ORTPN
3	Annual activity report of NVP	2006	ORTPN
4	Gorillas in crossfire. population dynamics of the Virunga mountain gorillas over the past three decades	2003	ORTPN
5	1989 census of mountain gorillas in the Virunga of central Africa	1989	Karisoke Research Centre (NGO)
6	Rwanda hotel market study	2007	ORTPN
10	SACOLA report 2007	2007	Community Based Organisation
11	Economic development and Poverty reduction strategy	2008-2012	Republic of Rwanda
12	District development Plan	2008-2012	Musanze district
14	Rwanda community conservation programme	2007	Gorilla Organization
15	Gorilla naming document. A benefit to the community.	2007	ORTPN
16	Wards development plan	2007	Various Wards of Musanze
Statistical data			
	Number of visits and revenues in the national parks from 1994-2007 august.		
	Tourism statistics from 1974-2007		
	Number of visits in the national parks from 1994-2007		
	Number of tourists to the national parks from 2000-2006		
	Tourism projection revenues 2004-2007		
	Rwanda Projected Tourism Portfolio (2010)		
	Tourism trend from 1974-2006 for visitors		
	Tourist by residence status		
	Tourism statistics outside National parks		
	Number of tourists and receipts generated from the national parks from 2000-2006		
	Tourism investment in 2007		
	Rwanda Projected Tourism Receipts (2003-2010)		
	Projects funded by ORTPN from funds of revenue sharing and Gorilla naming	2005-2006	
	Support from The Gorilla Organization	2005-2007	
	District income from 2006-2008	2006-2008	
	District income from trading licence taxes	2007-2008	
	District income from tour operators	2008	
	Projects funded by tourism since 2005	2005-2008	
	Maps		
1	Virunga National Park Boundary		GIS Centre

2	Musanze district boundary		GIS centre
3	Distribution of socio-economic activities of revenue sharing from tourism in Musanze district		GIS centre
4	Distribution of hotels in Musanze		Geographical coordinates collected by researcher
5	Community Based Projects (CBP) map		
6	Water tank distribution		
7	Population map		

3.3. Data Preparation

The collected data was entered immediately in SPSS after field survey and this was done especially during the weekend in the period of field study. However, the secondary data collected from different sources were organized in ITC after field work since most of them were in soft copy format. Therefore, we organized the documents which were important for the thesis and put them together and were converted to appropriate data format for analysis.

3.4. Methods of Data Analysis

The central purpose of this study is to assess the impacts of tourism in Musanze district through an examination of the current tourism-park/resource-people relationships and resulting community impacts. Qualitative and quantitative analysis were deemed both to be appropriate given the nature of the research. The advantage of simultaneously employing qualitative and quantitative methods in the study of tourism impacts in local community is getting increasing recognition among researchers. This is because it enables to benefit from the insights that the two methods provided when used in combination. In summary the methodological

However, as researchers debated sometimes quantitative methods are best, sometimes qualitative methods and sometimes mixture of both. It all depends on what you want to find (Burns, Ritchie et al. 2004). Interviews, observations and secondary sources are the main vehicles of inquiry used in this study. Basic quantitative analysis is used to aid in the presentation and interpretation of interview results.

In summary the methodological framework employed for the data analysis is outlined in Figure 3-2 below:

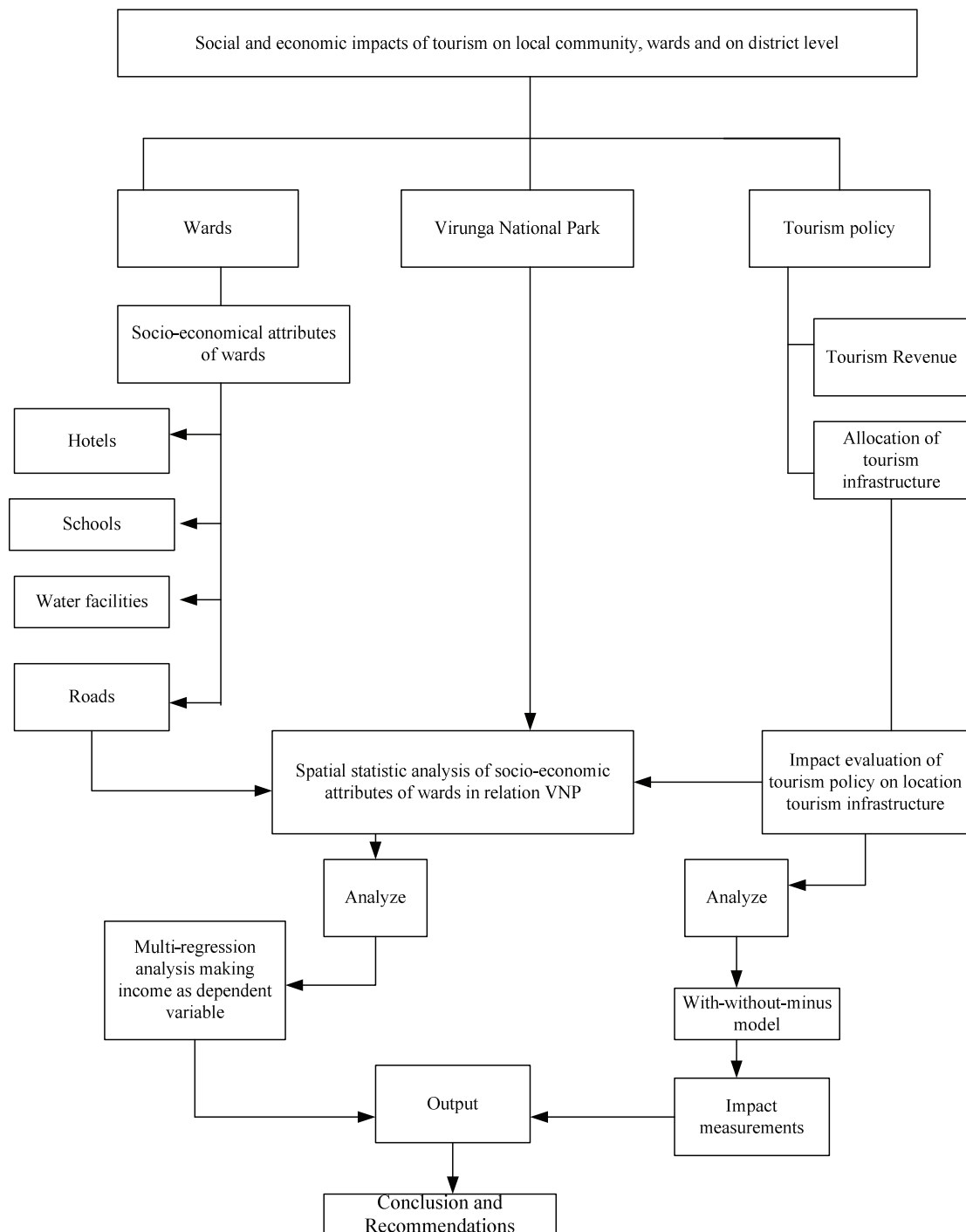


Figure 3-2: Research Methodology

3.5. Quantitative analysis

Both primary and secondary data gathered will be analyzed by employing statistical tools. There are three methodological approaches that are expected to be used. Those are normal statistical analysis, multi-regression analysis using GeoDa software, autocorrelation analysis to show auto clustering of socioeconomic activities of tourism and “with-minus-without” for measuring impacts of tourism.

3.5.1. Qualitative Analysis

Qualitative data analysis is the nonnumeric assessment of observations made through researcher observation, content analysis, in-depth interviews and other qualitative research techniques (Babbie 2004). Qualitative data gathered from the key informants and other documents related to the study were reviewed systematically basing on the impacts of tourism in the area. Then conclusion was drawn and supplemented the output from statistics.

3.6. Model specification

Choosing an appropriate model and analytical technique depends on the type of variable under investigation. Methods and regression models deal with cases where the dependent variable of interest is a continuous variable which we assume, perhaps after an appropriate transformation, to be normally distributed.

3.6.1. Multi-Regression Model

Multi regression allows us to have many independent variables in a model and examine how each one uniquely helps to explain or predict a single dependent variable. They specify a functional relationship between a response variable (Y) and k explanatory variables (X_1, \dots, X_k). The standard regression model specifies a functional relationship between y_i , (the response variable at ward i), so that:

$$y_{i,j} = \beta_0 + \beta_1 X_{k,i} + \dots + \beta_k X_{k,i} + e_i \quad i=1, \dots, n \quad (1.1)$$

Where y_i is income of ward i - j (X_1, \dots, X_k) are factors determining income, β_0, \dots, β_k are regression coefficients and e refers to the error or disturbance term. In matrix notation (1.1) can be written:

$$Y = X\beta + e \quad (1.2)$$

where as before X is an $(n \times (k + 1))$ matrix of observations on the explanatory variables, with the first column consisting of 1s; y and e are $n \times 1$ vectors and β is a $(k + 1)$ vector.

The effect of an explanatory variable (number of hotels, roads, number of well off households, population, percentage of the poor, distance to park) at any site, may however not be limited to the specified site (Haining 1990). If y_i measures the income of each ward (umurenge) in district and X_{ki} measures the number of hotels in the ward, then y_i may not merely be a function of number of hotels in that ward but also number of hotels in the neighboring wards or other independent variables in district.

3.6.2. Cross-Sectional Analysis

A cross-sectional study involves observations of a sample, or phenomena that are made at one point in time (Babbie 2004). This design is best suited at finding out the prevalence of tourism impacts by taking a cross-section of 15 wards of Musanze district. It is useful in obtaining an overall picture as it stands at the time of the study (Kumar 2005). Geographic data analysis software (GeoDa) was selected to be used to find out the overall picture of the impacts of tourism in Musanze district.

A somewhat different conceptual model from what mentioned above, which is also a form of regression model which includes adjustment for spatial autocorrelation is known as conditional autoregressive model (CAR). In this model the expected value of the response variable is regarded as

being conditional on the recorded at all other locations (Anselin 2005). In the study by (De Smith, Goodchild et al. 2007) cited earlier, they chose to use CAR rather than SAR model, following the recommendation of Cressie (1993) and because they felt it to be more appropriate for their study. They found no real difference in the results obtained with the CAR model from those achieved using SAR model.

The standard or proper CAR model for the expectation of a specific observation, y_i , is of the form:

$$E(y_i | all y_{j \neq i}) = \mu_i + \rho \sum_{j \neq i} w_{ij} (y_j - \mu_j) \quad \text{Equation 1}$$

Where μ_i is the expected value at i , and ρ is a spatial autocorrelation parameter that determines the size and nature (positive or negative) of the spatial neighbourhood effect. The summation term in this expression is simply the weighted sum of the mean adjusted values at all other locations j — this may or may not be a reasonable assumption for a particular problem under consideration.

This was applied to see the likelihood effects of independent variables in the wards and to see clustering of social-economic attributes in relation to the Virunga National park. Having fitted the chosen CAR model to the sample data, the residuals may be examined by mapping using the Moran I correlogram I, to identify the presence of autocorrelation of tourism infrastructures in relation to the park. In doing so, the Moran's test was applied based on the hypothesis that:

Ho: there is no association between the observed at a location and observed values near the national park as a source of tourists' attraction.

Ha: Nearby wards have either similar or dissimilar values.

$$I(d) = \frac{\sum_i \sum_{j \neq i} w_{ij} (x_i - \bar{x})(x_j - \bar{x})}{S^2 \sum_i \sum_{j \neq i} w_{ij}} \quad \text{Equation 2}$$

$$S^2 = \frac{1}{n} \sum_i (x_i - \bar{x})^2$$

Where x_i denotes the observed value of income or tourism infrastructures at location i , \bar{x} is the average of x_{ij} over the n locations, and w_{ij} is the spatial weight measure defined as 1 if location i is continuous to location j and 0 otherwise.

3.6.3. Additionally or With-minus-without

This principle was used to measure the impacts of tourism related activities from trends in background conditions in Musanze. This was used because some changes may arise even without tourism. As stipulated by (Edwards-Jones, Davies et al. 2000), the correct methodology to measure the impacts of a project is to calculate the changes of things that are directly attributable to the project.

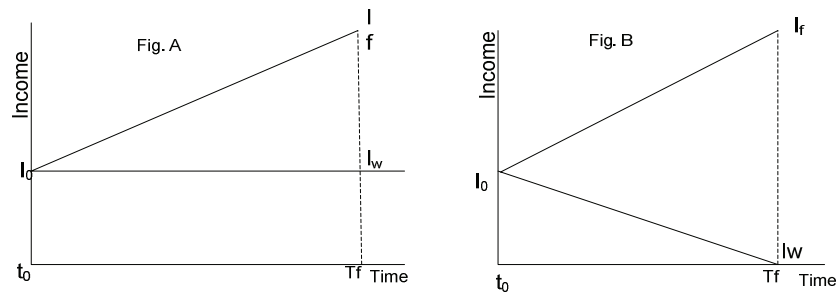


Figure 3-3: with-minus-without scenarios for two trends in income on hypothetical projects. The lower line represents “Without tourism” income level and the upper line the “with tourism” income level.

The hypothetical example shown above reveals that each of the two projects commences at t_0 and finishes at T_f . Between t_0 and T_f the income level without the project (I_w) would either have stayed constant in the region (refer to figure 3-3A) or decreased in the region in Figure 3-3B. The “with-minus-without” methodology thus provides a true picture of the impacts attributable to tourism in Musanze.

4. STUDY AREA DESCRIPTION

4.1. Geographical situation of Musanze

Musanze District is one of the five districts of the Northern Province, created by the law No. 29/2005 of 23/12/2005, for the purpose of decentralizing and organizing administrative districts' boundaries by specifying the number of districts in Rwanda. Musanze district therefore created as a result of the merging of the following former administrative entities:

- The ancient town of Ruhengeri
- Former Mutobo District
- Former Kinigi District
- 14 areas of the former BUGARURA District
- 3 wards of the former Bukamba District

The total surface area of Musanze district is 530.4 km²; 60 km² of Virunga National Park and 28 km² Lake Ruhondo. Musanze District is bordered:

- In north; Uganda, and Virunga National Park
- North-west; Democratic Republic of Congo
- South: District Gakenke
- East: the District of Burera
- South-West: the District of Nyabihu

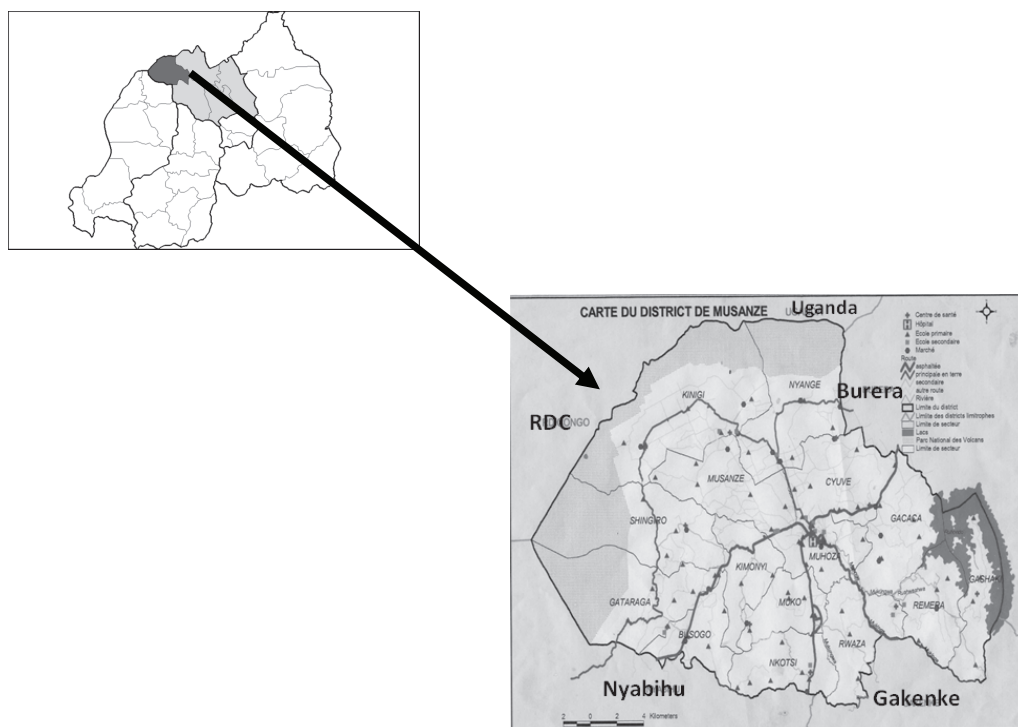


Figure 4-1: Musanze district

Currently District of Musanze has 15 wards, 68 cells and 405 villages commonly called “Imidugudu”, as shown in the table 4.1 below:

Table 4-1: Administrative wards of Musanze

Ward	Gashaki	Remera	Rwaza	Gacaca	Muhoza	Cyuve	Kinigi	Nyange	Nkotsi	Muko	Musanze	Kimonyi	Busogo	Shingiro	Gataraga	Total
No. of Cells	4	5	5	4	4	6	5	5	5	4	5	4	4	4	4	68
No. of Villages	24	24	27	23	26	40	28	43	27	24	27	19	28	25	20	405

Source: Development plan of Musanze district 2008-2012

4.1.1. Relief

The District of Musanze familiar known as high terrain region and is characterized by two major natural regions; the volcanic plateau region and the mountainous region.

The plateau and volcanic region extends over the central part to Northern part of the District. It covers the administrative Wards of Musanze, Muhoza, Muko, Kimonyi and Cyuve. It arises to more or less 1860 m of altitude.

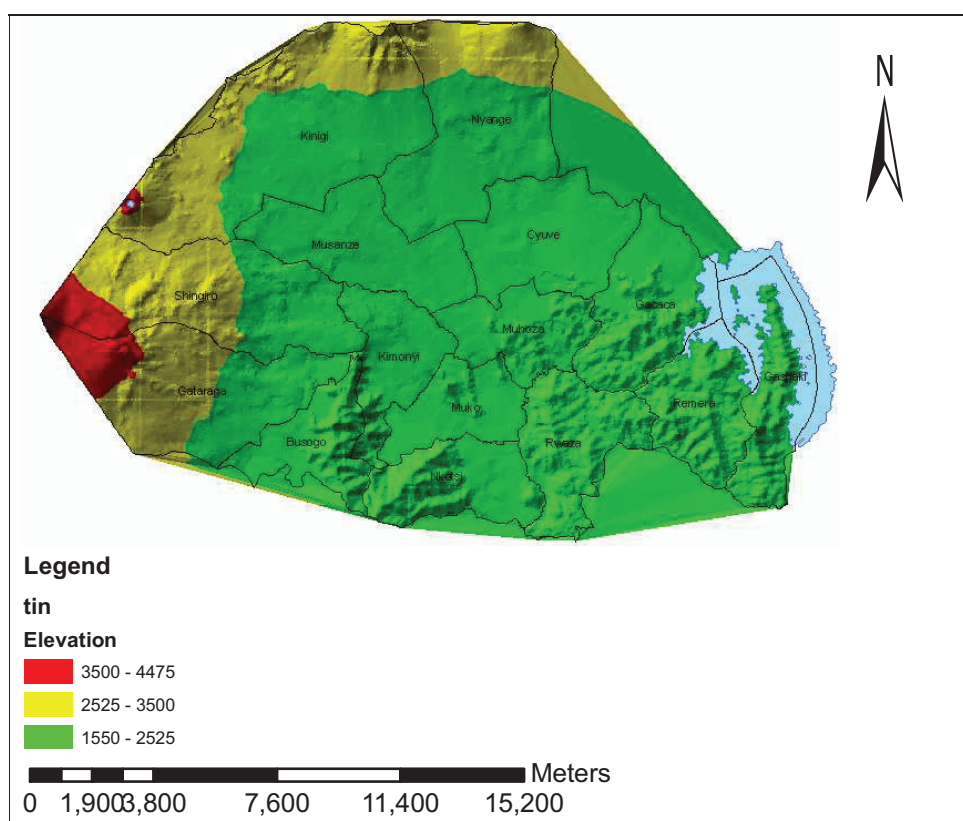


Figure 4-2: Relief of Musanze

The mountainous region is located in the southeast and covers an area approximately 1 / 3 the size of the District. The altitude varies between 1900m and 2000m and covers part of the ward of Cyuve, Muhoza, Gacaca, Rwaza, Gashaki, Remera and Nkotsi.

As a whole, the average altitude of Musanze District is 2000m including the chain of volcanoes that extends from west of the district to the north that is Karisimbi (4507 km²), Muhabura (4127 km²), Bisoke (3711 km²), Sabyinyo (3574 km²), Gahinga (3474 km²) which offers a beautiful view and attractive to tourists.

4.1.2. Climate and Altitude

Musanze District has a tropical type of climate and high altitude with an average temperature of 20 ° C. Broadly speaking, the rainfall is abundant and the annual rainfall varies between 1400 mm and 1800 mm.

The climate system has two rainy seasons and two dry seasons throughout the year:

- From June to mid-September: the long dry season
- From January to mid-March: short dry season
- From mid-March to late May: the long rainy season
- From mid-September to late December: the short rainy season.

4.1.3. Demography

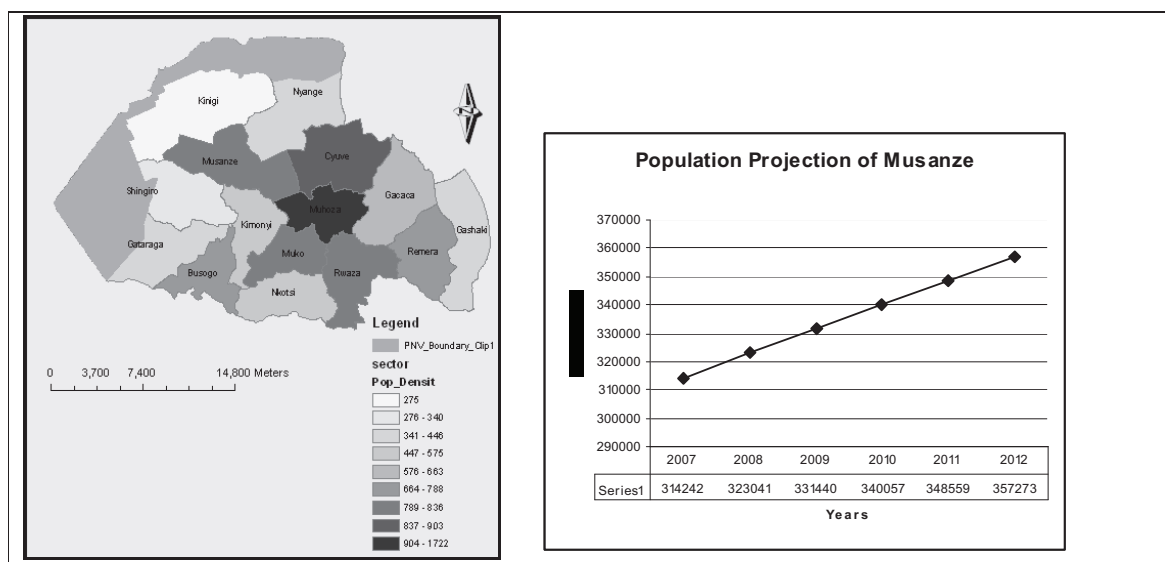
The 2007 population census results put the total population of Musanze district to 314,242 inhabitants over an area of 530.4 Km² with an average density of 592.6 people per km².

The distribution of population by gender shows that the number of females (166 763) is higher than the number of males (147 479) or with proportions of 53% and 47% for the entire District respectively.

Table 4-2: Population structure of wards

Wards	Total Population	Male	Female	% of female
Remera	19336	8815	10521	54.4
Kimonyi	12408	5649	6759	54.5
Muhoza	36753	17413	19340	52.6
Musanze	27127	15428	11699	43.1
Muko	16212	6754	9458	58.3
Nkotsi	12886	5666	7220	56.0
Gataraga	20303	9184	11119	54.8
Busogo	15795	7125	8670	54.9
Shingiro	18155	8304	9851	54.3
Cyuve	30493	14643	15850	52.0
Kinigi	22271	10105	12166	54.6
Nyange	24235	10857	13378	55.2
Gashaki	13391	6360	7031	52.5
Rwaza	23058	10553	12505	54.2
Gacaca	21819	10623	11196	51.3

Though, the district is highly densely populated, there exists a considerable disparity among the wards of the district. The wards that are most densely populated are: Muhoza, Cyuve, with densities of



Based on 2007 population census, majority of the population living in Musanze district are below 25 years which represents 60% of the total population. This is due to the fact that, the average growth rate of population in the District was estimated to be 2.8% in 2007. However, due to government policy of family planning, the district is planning to lower the growth rate at 2.5% by 2012. Currently, the average fertility rate is estimated to be at 4-5 (the number of children per reproductive female). The vision of the country is to reduce fertility rate to 3 children per female.

It appears that in the next five years the population of Musanze will increase by nearly 400.000 (see figure 4-3) people and the majority will be young. The strategies taken by the district to minimize the problems that may arise due to high population, is by educating people of all categories and creation of employment.

Musanze District has a natural forest and is part of Volcanic National park. It is a rainforest mountain with bamboo as dominant plants. Musanze District also has artificial forests where eucalyptus represents the dominating species. On the side of the animal kingdom, there are many animal species including the famous mountain gorillas, buffalo, elephants, antelopes, chimpanzees, monkeys as well as various species of birds.

Given the majority of the population is under 25 years, 26% of the total population are in primary schools. The rest of active population between 20 and 59 years, are mainly distributed in the following areas:

- Agriculture / livestock;
- Crafts industry;
- Trade;
- Liberal Professionalism

However, due to lack of depth study on unemployment in Rwanda and Musanze in particular, the data on the socio-professionalism situation remains vague and skewed. For example those without jobs declare themselves as farmers which inflate the proportion of this professional category. A study on this subject therefore, proves to be essential to facilitate the planning for each sector.

4.2.1.1. Poverty situation

Rwanda's poverty is the outcome of both economic and historical factors. First, the economic structure reflects a chronic failure to achieve productivity increases in a context of a large and growing population. This failure became increasingly evident in the 1980s and early 1990s, leading to severe structural problems. Second, the war and genocide of 1994 left a horrific legacy, further impoverishing the country and leaving a number of specific problems and challenges (Rwanda 2002).

As part of the Participatory Poverty Assessment (PPA), the '*ubudehe mu kurwanya ubukene*' pilot generated substantial amounts of grassroots information on people's poverty situation and the survival strategies they used in Musanze. As part of this process, communities defined social categories for their households. The six most common categories defined are presented in the table 4-3 below:

Table 4-3: Socioeconomic categories

Category	Characteristics
<i>Umutindi nyakujya</i> Abject poor	Those who need to beg to survive (they have no land)
<i>Umutindi</i> The very poor	Physically capable of working on land owned by others (they have no land)
<i>Umukenye</i> The poor	They live on their own produce but no savings to sell for taking their children to school
<i>Umukenye wifashije</i> The resourceful poor	Have small ruminants and their children go to primary school
<i>Umukungu</i> The food rich	Has land and livestock and often have salaried jobs.
<i>Umukire</i> The money rich	They have land and livestock and often salaried jobs, good house often own a vehicle, and have enough money to lend and get credit from the bank.

Musanze like other districts in the country is generally poor, the household that are in the category of being poor (53.379) out of 70830 household are dominating group (76% of the households in the district). The details of the distribution of the households by socio-economic category and in the ward are shown by the map figure 4-4 below.

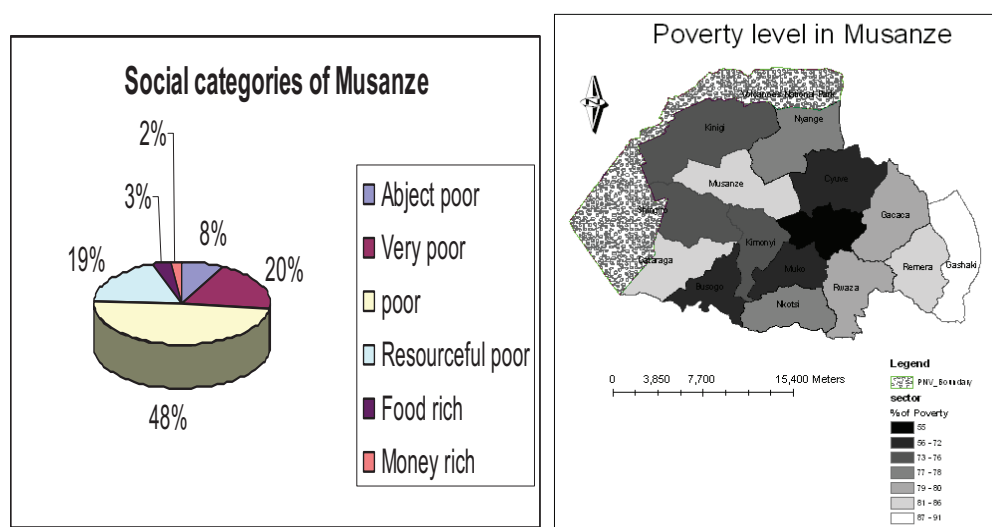


Figure 4-4: Social categories of Musanze

4.2.2. Economic aspects

The economy of the District of Musanze is dominated mainly by the activities of the primary sector. The District is also developing several activities in the tertiary sector, such as tourism related activities, banking, commerce and trade, insurance etc... which are almost concentrated in the town of Musanze.

4.2.2.1. Agriculture

In Musanze district, agriculture is the main economic activity. The ecological conditions in the region contribute to the production of many varieties of food and cash crops. The most important food crops include: potatoes, beans sorghum, wheat, peas and maize. The main cash crop is pyrethrum and this is grown along the western half of Virunga National Park. Food production is subjected to the constraint of parcelling out land as a consequence of growing population

Although agriculture is the main activity for more than 90% of the local population, food production is still insufficient. This is highlighted during periods of food shortage, especially in October-November and April-May of each year. Other consequences of this situation include malnutrition, low income and poverty among the local population. In the fields close to PNV, crops are frequently damaged by wildlife, which contributes to limiting agricultural production. Such a situation encourages the local population to resort to exploiting the natural resources of PNV to compensate for their losses.

4.2.2.2. Hotels and Tourism

The tourism and hospitality are areas which can produce positive effects on agriculture and crafts through the consumption of these activities. The District of Musanze has great tourism potential that should be valued. In addition to the known tourist places, other places of interest such as KABAGEMA, RUGINGA and Musanze caves have been identified. They need to be developed.

On the side of facilities, the District of Musanze account hotels already operating such Gorilla Nest, Hotel Muhabura, CPND of Fatima, Urumuli Hotel, La Palm Hotel, The Welcome Center ERA,

Assoferwa, the Breeze Tourist Lodge, SACOLA (Sabyinyo Community Lodge Association) etc... Still others are under construction like volcanoes lodge, and many others (Musanze 2007). The trend for the future concerns is the development of community tourism to stimulate the taste and interest of local people to visit, enhance and protect the best tourist sites.

4.3. Tourism in PNV

Tourism is of great potential in PNV, and has had a long history since 1974. Although tourism was set back by the 1994 War and Genocide, and the insecurity that followed in 1998, the upward trend in tourism has continued. Endowed with Mountain gorillas (*Gorilla beringei beringei*) as the main tourist attraction, other species and activities include; Golden monkey (*Cercopithecus kandti*), Dian Fossey's tomb, mountain hiking on Bisoke and Karisimbi, nature walks to the Crater Lakes, and bird watching. Despite the effects of 1994 War and Genocide and insecurity in 1998 that effected gorilla tracking in PNV, mountain gorilla tourism in PNV has since grown (refer figure 4-6 below).

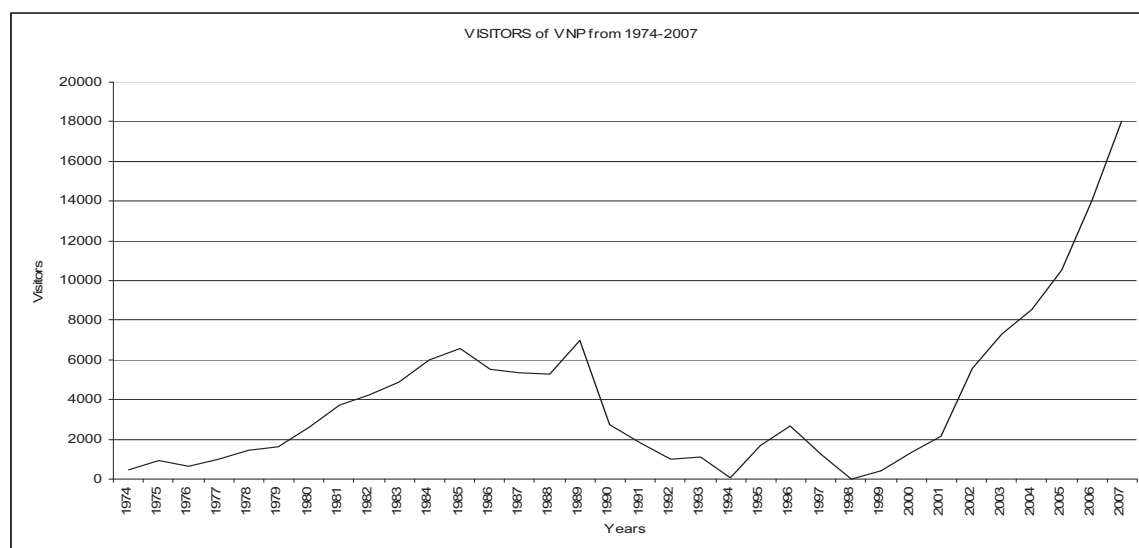


Figure 4-5: Tourist trend from 1974-2007, adopted from ORTPN

Tracking mountain gorillas is restricted to 40 tourists per day, who can be assigned to visit one of five gorilla groups (Susa, Sabyinyo, Amahoro, Umubano and Group 13). Only 8 people are allowed to visit a group and each tourist pays between 375-500 USD. This makes gorilla tracking in PNV Rwanda's highest foreign exchange earner after tea and coffee, and is considered the backbone of tourism in Rwanda (ORTPN, 2004). Gorilla tourism in PNV is therefore of great importance for ORTPN and Musanze in particular.

4.4. Conclusion

The above belief description gives an overview of the physical, demographical and socio-economical situation of Musanze district. Generally the poverty level is high despite the presence of tourism potentials in the district. However, there is existence of relationships between tourism sites (Park) and poverty level in wards near national park. Therefore, it is important for the district to develop its tourism potentials to address the problem of poverty that is high in the area.

5. DISCUSSION AND FINDINGS: THE IMPACTS OF TOURISM IN MUSANZE

Tourism in Rwanda is a relatively young industry. Rwanda's principal tourism products are its natural beauty, rich wildlife and unique mountain gorillas. As a result of its present low level of development, the industry has significant growth potential, especially within the hotel and accommodation sector. Thus recognition of tourism as a means to alleviate poverty has turned to creating opportunities for the poor to become involved in the industry – not only as employees, but as suppliers, entrepreneurs, even partners. To achieve this it is necessary to understand at what point in the tourism supply chain the local people can become involved or benefit and at what level?

This chapter explores major impacts of tourism on Musanze district in general and the local community in particular. However, tourism impact assessment is among the most problematic issues in tourism research, as in many cases the associated impact overlap. Therefore for the purpose of clarification, the chapter is grouped into two categories: the economic and social impacts which will answer the questions for first and second objectives which will follow each other in sub-chapter 5.1 and 5.2 respectively.

5.1. Economic changes in supply of tourism opportunities

Assessing tourism's contribution to the economic development in host region requires an analysis of the backward linkages (short-term economic effects) and forward linkages (long-term economic effects) between tourism and other sectors, and understanding of spatial location of tourism activities. As stipulated by (Mbaiwa 2003), for the tourism to have a major influence on the economy of particular region, it should have strong linkages with the rest of domestic economy. Gorillas as Rwanda's main tourism revenue earner have made most progress in terms of product development and brand-building in the international market place for the country, then:

- To what extent has tourism added value to the economy of Musanze as hosting region?
- How are tourism economic impacts spatially distributed?
- How much income does tourism generate for local community in the area?

The questions above form the content of this section. To answer these questions, cross-sectional regression approach was used to prove the significance in explaining the linkage of tourism with the rest of domestic sectors. Also geographic Data analysis (GeoDa) was used to find out the spatial likelihood impact of tourism in 15 wards, Ilwis for mapping the impacts and SPSS regression analysis. Also primary data collected from hotels are used to see jobs created.

5.1.1. Value added of tourism to economy of Musanze: Cross-sectional regression approach

Investigating the value added by tourism to the economy of Musanze district, cross-sectional regression approach is used to estimate the linkage of tourism with other economic sectors since its impact have to be identified in 15 wards making income of each ward as dependent to the number of hotels in the ward, distance from the park (the near the better), number of well off house holds and total roads in meters. An empirical analysis of economic impacts of tourism in Musanze would be incomplete without a correlation and causal determination. The variables were chosen because travel

and tourism have a direct influence on them. A correlation analysis was conducted in SPSS to test the independent variables for significance and co linearity (table 5-1). The Pearson's R for each proposed variable is depicted in table 5-2. The model examines how each variable uniquely helps to explain or predict the income of each ward as dependent variable. It is estimated with ordinary least squares. The estimated model is:

$$\text{Income}_{i-j} = \beta_0 + \beta_1 \text{No_hotels} + \beta_2 \text{DIST_PARK} + \beta_3 \text{ROADS_METR} + \beta_4 \text{well_HH} + \beta_5 \text{TRAD_LICET} + e_i$$

Equation 3

Where Income $i-j$ is the income of ward i to j , β_0 constant, $\beta_1 \dots \beta_n$ are regression coefficients and e refers to the error or disturbance term. As shown by the results in table 5-1 below, the model seems to perform reasonably well. The R-squared of 0.78 indicates that much of the variation of income of each ward in Musanze district can be attributed to the given explanatory variables (i.e. number of hotels, distance from the park, paved roads, amount of tax, number of well off household¹) with p-value less than 0.05 significant level. This means that income of a ward depends whether it is located near the park, have hotels, have paved roads and high number of well off households.

Table 5-1: Cross-sectional regression output

REGRESSION				
SUMMARY OF OUTPUT: ORDINARY LEAST SQUARES ESTIMATION				
Data set	: Without_muhoza			
Dependent Variable	: INCOME	Number of Observations:	14	
Mean dependent var	: 4.27203e+006	Number of Variables	: 6	
S.D. dependent var	: 4.01804e+006	Degrees of Freedom	: 8	
R-squared	: 0.781602	F-statistic	: 5.72609	
Adjusted R-squared	: 0.645104	Prob(F-statistic)	: 0.0154017	
Sum squared residual	: 4.93634e+013	Log likelihood	: -222.103	
Variable	Coefficient	Std. Error	t-Statistic	Probability
CONSTANT	2884494	2837830	1.016444	0.3391696
STAND_HOTE	2511170	765010.4	3.28253	0.0111456
DIST_PARK	-22.46121	96.42445	-0.2329411	0.8216565
TRAD_LICET	3.579823	1.233563	2.90202	0.0198302
ROADS_METR	27.25864	216.0158	0.1261882	0.026961
WELL_HH	4086.312	3202.097	1.276136	0.2377074

Source: author (2008)

To clarify the value added by the tourism to individual economic sector, Pearson's correlation was performed to reflect the degree to which tourism variables (number of hotels per ward and distance from the park) are linked to other economic variables such as paved roads, well off household and income. Analysis of the individual variables to see the link between tourism and other economic sectors, table 5-2 shows that paved roads are highly negatively correlated with the distance from the park where $r = -0.675$ with p-value of 0.003 which is less than the significant level of 0.05. This means that meters of paved roads increases as distance to a national park decreases (See appendix 1).

¹ Well off households are those who have land or able to rent house and sometimes have salaried jobs.

As stated by Mbaiwa (2003), one of the areas which tourism can influence the domestic economy is through development of infrastructures, from 2003 paved roads in the wards bordering national park started to be constructed after period of insecurity to support the increasing number of tourists. For example Muhoza-Kinigi road is important in that it provides a link to the main road from Kigali hence facilitating the tourists who visit Virunga national park in Musanze district. Not only roads constructed in the wards near national park are meant for tourists but local farmers have benefited in transporting their crops to the market as the area is rich in producing Irish-potatoes (refer to figure 5-1)



Figure 5-1: Local produce waiting for transportation via Kinigi-Muhoza roads

Further more, number of well off households is highly correlated with number of hotels. In other words, the wards with hotels have a large number of well off households where $r = 0.91$ and p -value (0.000) less than the significant level of 0.05; the same applies to trading tax collected by ward is highly correlated with the number of hotels in a ward.

Table 5-2: Pearson's correlation output

Correlations		Income	Number_hotel	Welloff_HH	Trade_licenceTax	Dist_park	Paved_roads
Pearson Correlation	Income	-	.962	.876	.995	.033	.419
	Number_hotel	.962	-	.910	.968	-.061	.503
	Welloff_HH	.876	.910	-	.900	-.210	.597
	Trade_licenceTax	.995	.968	.900	-	.015	.411
	Dist_park	.033	-.061	-.210	.015	-	-.675
	Paved_roads	.419	.503	.597	.411	-.675	-
Sig. (1-tailed)	Income	.	.000	.000	.000	.454	.060
	Number_hotel	.000	.	.000	.000	.415	.028
	Welloff_HH	.000	.000	.	.000	.226	.009
	Trade_licenceTax	.000	.000	.000	.	.479	.064
	Dist_park	.454	.415	.226	.479	.	.003
	Paved_roads	.060	.028	.009	.064	.003	.

Source: the author 2008

Due to the fact that the wards around the park have many well off households and paved roads is due to the government policy of allocating at 5% of the total gross revenue of each year to be distributed as revenue sharing within the community around the park. The detailed policy impact on distribution of tourism impact indicators is discussed in chapter six.

However, one can raise a question whether the area of the ward can determine the difference in kilometres of roads each ward has. We performed a cross sectional-regression analysis to see if the roads in each ward depend on its size.

$$\text{Roads}_{i-j} = \beta_0 + \beta_1 \text{AREA_KM} + e$$

Table 5-3 indicates that adjusted R-square is 0.146 with p-value of 0.08 which is not significant. So there is no relationship between the size of the wards and its roads.

Table 5-3: Regression output

R-squared	:	0.207045	
Adjusted R-squared	:	0.146048	Prob(F-statistic) :0.0883382

Variable	Coefficient	Probability	

CONSTANT	1412.106	0.7694899	
AREA KM.	292.6276	0.0883382	

5.1.2. Spatial observation of economic impacts of tourism in Musanze

According to (Scheyvens 2002), the spatial concentration of tourism facilities and infrastructures increases likelihood of tourism's impacts in hosting region and also can permit other areas for sharing the benefits that the tourism may bring. So we can formulate the hypothesis that:

H₀: There is normal distribution of income and tourism related activities

H₁: Income of a ward depends on its location and tourism related activities are clustered together in that ward

To find out the spatial likelihood significance of tourism in Musanze, geographic data analysis (GeoDa) was used. Two tests were performed; the first was spatial regression using Ordinary Least Squares (OLS) to evaluate spatial dependence of income in the regression with tourism related activities and the second is likelihood ratio test of spatial dependence. The OLS results are depicted in table 5-1. The likelihood ratio test output depicted in table 5-4 indicates the value of 15.42 with p-value of 0.000086 which is less than the significant level of 0.01 hence rejecting our H₀ that there is normal distribution income and tourism related activities and we accept our H₁ of spatial dependence of income and tourism related activities of each ward.

Table 5-4: Regression summary of output: spatial lag model - maximum likelihood

Variable	Coefficient	Std.Error	z-value	Probability

W_INCOME	-0.4980284	11.51917	-0.04323473	0.9655143
CONSTANT	-3172732	6.756434e-007	-4.695867e+012	0.0000000
NUMB_HOTEL	6400907	2.041393e-006	3.135559e+012	0.0000000
DIST_PARK	-434.882	0.005776669	-75282.49	0.0000000
WELL_HH	27397.73	0.0002049096	1.337064e+008	0.0000000
ROADS_METR	1829.055	0.002488089	735124.6	0.0000000

DIAGNOSTICS FOR SPATIAL DEPENDENCE				
SPATIAL LAG DEPENDENCE FOR WEIGHT MATRIX : kax.GAL				
TEST		DF	VALUE	PROB
Likelihood Ratio Test		1	15.42409	0.0000859

Source: The author 2008

The coefficients and test for significance of each variable in Spatial LAG Model in table 5-4 indicates that number of hotels and paved roads are positively related to income per ward. The proportion of well off households per ward is positively related to income. We can then postulate that the number of

well off household in each ward does determine its income, since it is measured basing on whether a household has a land or able to rent and probably has a job.

The map performed in Ilwis (figure 5-2) giving the six variables the same weight (income, number of well off house holds, paved roads, number of hotels, distance from the park and trade license tax) indicate that as you move north direction towards the park, wards are better off than the wards far away from the park.

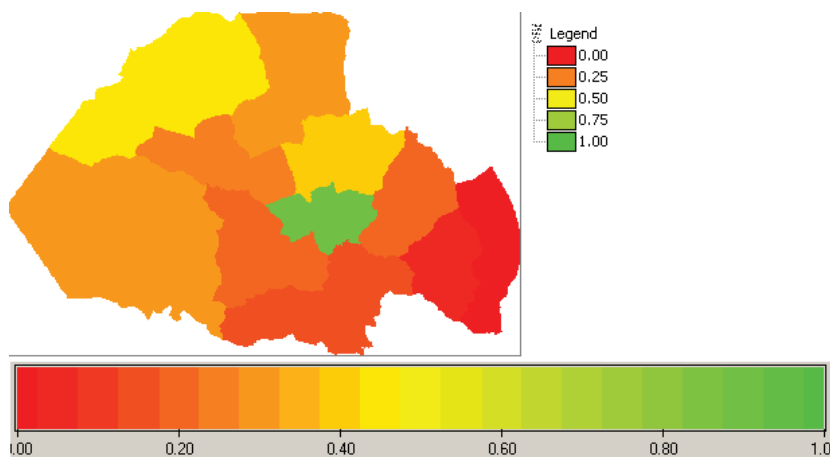


Figure 5-2: Weight index map showing tourism economic impacts throughout Musanze

As stipulated by (Fritsch and Johannsen 2003), a well-intentioned ecotourism can worsen social and economic inequalities in a destination area. In their research conducted in Nepal, they found similar results as we got from Musanze. Communities located near trekking routes were able to prosper from providing facilities like lodges, roads, water facilities for tourists, while the wards far only few miles away receive no tourist income at all.

5.1.3. Tourism Income generation for local community in Musanze

Tourism in rural communities often is encouraged for its ability to create jobs and generate income for local households (Machlis and Field 2000). To find out how much tourism has generated to the local community in Musanze, primary data collected from hotels and secondary sources from government reports, ORTPN statistics were used. Since hotels are only distributed in 4 wards, no cross-sectional comparison among the wards was made as applied in previous sections. Also, no comparison was made between tourism contribution and other economic sectors as data were not available in Musanze. Therefore, graphs and qualitative analysis was used to answer our research questions.

Due to shortage of time, two variables where tourism has direct contact with local communities were identified and then discuss each variable in depth basing on the primary and secondary source information to answer the research question. These variables include wages or employment provided by the hotels and what do local people who are not employed by hotels earn from tourism industry.

5.1.3.1. Wage/employment

Private accommodation facilities for tourists out side the park are mostly hotels in Musanze. As indicated on cartogram figure 5-3, most of the standard hotels are clustered in wards located near the

park. Therefore, we can stipulate that impacts of tourism on local community vary in wards where hotels are located. Based on the data collected from hotels, table 5-5 indicates that, in average 18.2% of the hotels' revenue is spent on pay roll costs and more than a half of this money is spent on local staffs that are unskilled and semi-skilled.

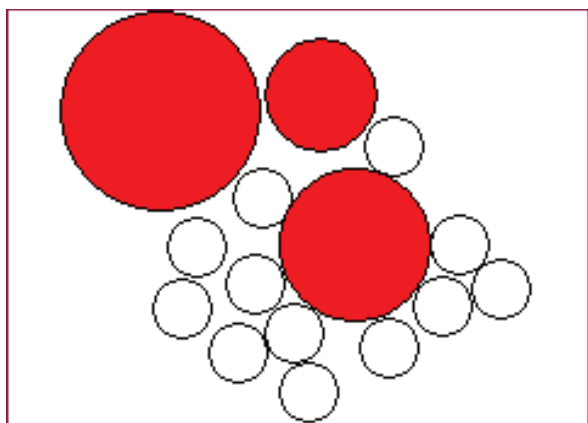


Figure 5-3: Number of high standard hotels by ward.

NB: The number of hotels corresponds to the size of circle and the location of a circle is aligned as closely as possible to the location of assigned area.

Table 5-5: Expenditures of hotels

Hotel	Average expenditure on staff (%)	Other expenditures
1	20	80
2	19	81
3	15	85
4	18	82
5	17	83
6	22	78
7	21	79
8	14	86
9	17	83
10	19	81
11	20	80
12	18	82
13	17	83
Av.	18.2%	81.8%

Source: The Author 2008

Table 5-6 indicates that in the total of 382 of staff employed by the hotels, 80% of the staff are locals from Musanze and they earn from 36-50 US Dollars per month (see figure 5-4) and 20% are staff recruited from other regions by which most or all of them are top managers and they earn from 190-460 USD.

Table 5-6: Hotel employees

Hotels	Total number of staff	Locals Freq.	Percent	From other region Freq.	Percent
1	60	55	92	5	8
2	4	3	75	1	25
3	20	17	85	3	15
4	27	25	93	2	7
5	60	56	93	4	7
6	22	19	86	3	14
7	35	0	0	35	100
8	45	40	89	5	11
9	20	18	90	2	10
10	21	18	86	3	14
11	7	5	71	2	29
12	35	28	80	7	20
13	26	23	88	3	12
Totals	382	307	Av=80%	75	Av=20%

Source: The author 2008

As indicated by figure 5-4, Kinigi ward, is the one that offers best salaries both to the locals and those from other region. This is due the fact that Kinigi has many high standard hotels.

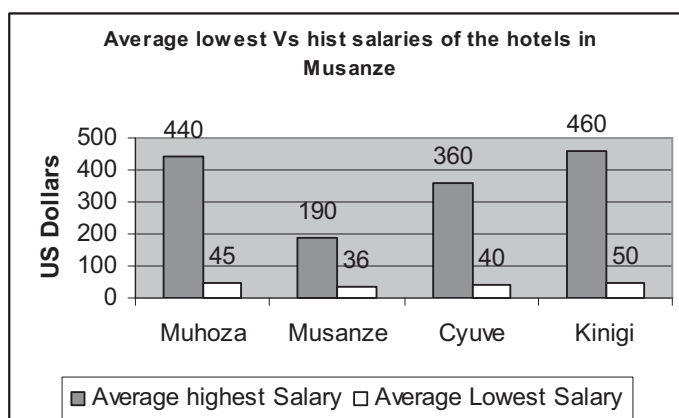


Figure 5-4: Salaries paid to the hotel staff

While hotels provide employment to people of Musanze, locals generally hold poor quality and low-paying jobs, where most of them doing manual work. Though tourism industry contributes positively to income earning for the local people in Musanze, findings in figure 5.4 indicate that there is disparity in wages between the local staff and top managers who are recruited from other region. As reason given by one hotel manager for a big gap in terms of wages he mentioned that;

“Those who are recruited from other regions possess skills in tourism industry which locals do not have”

As stipulated by (Mbaiwa 2003; Budeanu 2005), most jobs in tourism are with low wages and no guarantee for future employment or assurance of work-related medical benefits. The findings in table 5-7 indicate that 92% of the hotel managers do not pay medical insurance for their workers.

Fortunately, all hotel managers pay social security fund for their workers (see table 5-8) as it is a policy from the government for each registered business to pay such funds.

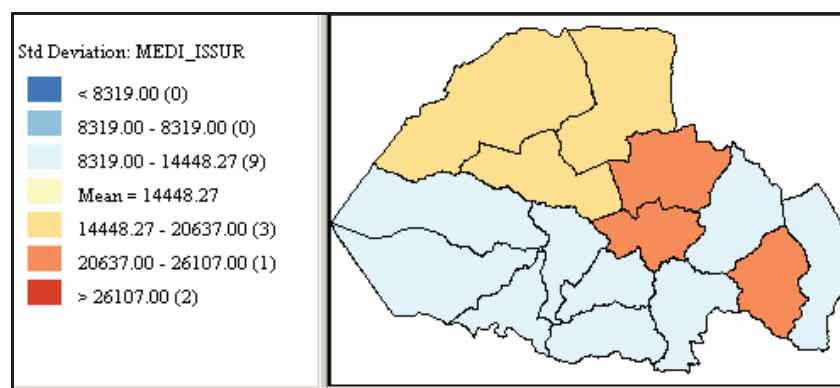
Table 5-7: Payment for medical insurance

Response	Frequency	Percent	Valid Percent	Cumulative Percent
no	12	92.3%	92.3	92.3
yes	1	7.7	7.7	100.0
Total	13	100.0	100.0	

Table 5-8: Hotel managers who pay Social security fund

Response	Number of hotels' manager	Percent	Valid Percent	Cumulative Percent
yes	13	100.0	100.0	100.0
no	0	0		

While hotel managers do not pay health insurance for their workers, small earnings local people get from hotels help them to pay their medical insurance. The standard deviation map figure 5-5 performed in GeoDa indicates that wards with hotels and located near the park falls above the mean of those who possess medical insurance in entire district.

*Figure 5-5: Standard deviation map of medical insurance in Musanze*

It can therefore be concluded that even though tourism in Musanze has led to creation of employment opportunities and generation of revenue for the people in the area, the poor quality jobs and low salaries they get indicate that tourism can be exploitative industry to local people if proper management and control are not in place.

5.1.3.2. Local produce supplied to hotels

Hotels and restaurants in Musanze are big businesses, serving not only tourists but also residents. Local people do not earn income only in being employed by the hotels but also supply goods such as food to the hotels. Table 5-9 indicates that in average 72% of the purchase of hotels is produced in Musanze and 28% from other regions. One hotel manager reveals that “about 8000 USD are spent on food and beverages per month”. According to the research conducted by Overseas Development Institute (ODI 2007), one hotel can earn 250,000 USD per year for the farmers in Rwanda.

Table 5-9: Hotel purchases in Musanze

Hotels	Purchase from Musanze (%)	Purchase from other regions (%)
1	70	30
2	100	0
3	100	0
4	90	10
5	80	20
6	70	30
7	10	90
8	40	60
9	70	30
10	90	10
11	90	10
12	72	28
13	50	50
Av. %	72%	28%

Source: The author 2008

But a question can arise, to what extent do poor households have access to such opportunities of supplying food to hotels? We did not get data on whether those who supply food are poor households but hotels are clearly an important domestic market for farmers and workers. According to ORTPN official, market hotels have encouraged farmers to develop new specialties such as growing mushrooms. These kind of changes that result from community participation as a part of benefit from tourism (Stronza and Gordillo 2008) called it as an integrative assessment of development of the community.

Some researchers such as (Ryan and Net Library 2003) hypothesized that in determining the significance of economic impacts of hotels on local community in the area, two things must be considered (1) Where hotels are located in the area and (2) the degree of out-of-region ownership. Table 5-10 indicates that 73.7% of the hotels are located in the town and 26.3% in village. While table 5-11 indicates that 89.5% of hotels in Musanze are not owned by local proprietors, only 10.5% of the hotels are owned by the local proprietor.

Table 5-10: The location of hotels

Location	Number of hotels	Percent
Locating in Village	5	26.3
In town	14	73.7
Total	19	100.0

Source: The author 2008

Table 5-11: The location of owners of hotels

Location of the owner	Number of hotels	Percent
Located out of region	17	89.5
Located in Musanze	2	10.5
Total	19	100.0

According to (Ryan and Net Library 2003), the more the hotels built are located in the village the more it is significant to the income of the villagers rather than when it is in town. Also if most of the hotels are not owned by the local proprietors, the profits are remitted back to the regions of the

owners. This signifies that Musanze might be losing a lot of income from tourism to other regions of the country.

It should be noted that, though there might be some leakages in Musanze due to high degree of out-of-region ownership, employment and income gained by the local would not have occurred if tourism had not been in the region. Ryan (2003) called this kind of gain as “*wholly incremental*” where economic activities may develop due to presence of certain features such as the park that attracts the visitors and it would not happen in destination region if the event (i.e. presence of gorillas) was not in the area. Consider the figure 5-6 below which shows what would happen without the tourism. Assume that the number of hotels would have remained constant at *qty0* but due to profits made by the hotels’ owner also employment level would have likely to increase from *Emp0* to *Empf* hence *efgh* would be considered as total employment of hotels without tourism. However, due to presence of gorillas which attracted many visitors in the area, also hotels were constructed by private individuals to accommodate the visitors which increased the demand of workers in the area hence increasing the level of employment from *Emp0* to *Emp1* making a total employment level of **ABCD** due to presence of tourism.

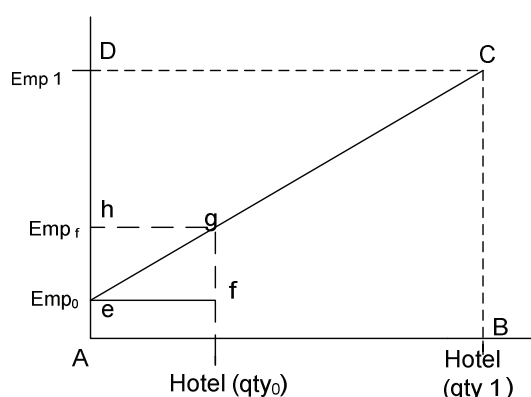


Figure 5-6: Impacts of tourism on employment after and before Rwanda tourism strategy of increasing number of visitors.

According to ODI 2007, local people earn income from many tourists’ visits to Virunga national park in Musanze. There are around five types of tourist expenditure around the park such as wages of local staff, sales of food by local farmers to hotels, community income from SACOLA (one community lodge), unskilled wages from working in PNV and income from producing and selling handicraft. Figure 5-7 indicates that each area is probably generating 100,000 USD per year as income to the local community. This cash flow probably adds up to a figure approaching to 1000,000 USD per year.

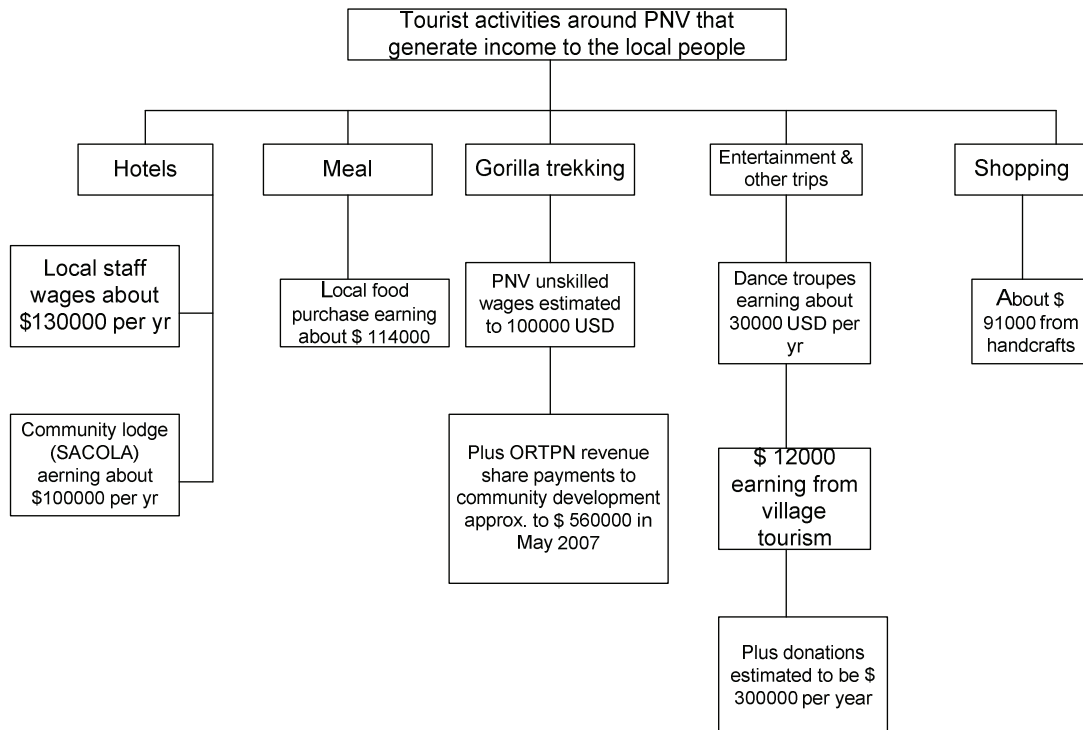


Figure 5-7: Tourism activities generating income to local people in Musanze, adopted from ODI 2007

In conclusion, many people who reside in Musanze district especially those around the park have benefited from the tourism industry primarily in terms of employment in hotels, small scale trade, and income from food supply and revenue sharing payments for community development. However, the economic impact on local people depends great deal on the location of their ward. Generally speaking, people living in Muhoza as destination point of tourists and wards around the park appear to receive more economic benefits than do people in distant wards.

The role of ward location as a factor of tourism benefit is understandable given the government policies of sharing the benefits generated from tourism with the people around the park as one of the community conservation tools through which community-park relations can be improved. If this continues, it is likely to cause in-migration especially from distant areas seeking jobs in tourism industry which may increase population pressure in the area.

5.2. Social impacts of tourism development in Musanze

Today tourism is one of the largest and dynamic developing sectors. Socially tourism has a great influence on the host societies. Social impacts of tourism refers to the manner in which tourism and travel affects changes in collective and individual value systems, behaviour patterns, community structures, life styles and the quality of life (Hall 1999). According to (Stronza and Gordillo 2008) tourism has been known to trigger a cascade of social, ecological and cultural changes which were not easily managed by local residents. Tourism has been ascribed with the power to sustain rural livelihoods, catalyze new development, renew culture pride, empower local peoples and protect diversity.

This sub chapter has some limitations, due to limited time for interviewing local households the researcher only explores whether the development of social infrastructures such as hotels, roads, schools and water facilities and environmental conservation in Musanze have a direct link with tourism. It does not cover the perception of local people on tourism in the area. However, in chapter seven the researcher recommends further research on attitudes of local people on tourism and how tourism might have influenced social-behavioural change of the local community. So the contents of this sub-chapter are only based on the following research questions:

- What is the role of tourism in development of social infrastructures in the area?
- Do the infrastructures vary across the district?
- Do the park conservation motivated by tourism?

The above research questions were answered basing on the secondary data source obtained from Rwanda Office of Tourism, GIS centre and Gorilla Organisation (GO). To measure the impacts of tourism in development of social infrastructures in the area “with-minus-without” method is used to find out what would have happened without tourism on development of such infrastructures based on times series data. GeoDa Software also is used for cross-sectional regression and manipulating the distribution of impacts across the region.

5.2.1. Tourism and development of social infrastructures

One of the areas in which tourism can influence the domestic economy is through the development of infrastructures in host region (Mbaiwa 2003). The secondary data source gathered from various governmental and non governmental organisations indicated that the level of tourism impact on construction of social infrastructures is significant. Table 5-12 indicates that the development of tourism in Musanze district has been enabled the construction of 30 water tanks, 21 schools, bridges, curio-shops and so on. As told by one of the residents near the park how tourism has facilitated them.

“ORTPN has helped us access portable water which has improved our lives before, our children had to walk long distances to fetch fresh water and sometimes they would miss their classes”.

Table 5-12: Social infrastructures developed due to tourism

Infrastructures by type	Number of projects	Percent
Water tanks	30	35.3
Health centre	2	2.4
Bridge	10	11.8
school	21	24.7
Medical tradition gardens	2	2.4
curio-shops	3	3.5
Nursery beds	2	2.4
Bee keeping	1	1.2
Batwa homes	2	2.4
houses	6	7.1
roads	1	1.2
Buffalo wall	3	3.5
cultural troops	2	2.4
Total	85	100

Source: The Author 2008

However, the social benefit of local communities can be questioned, whether these benefits are linked with direct participation of local communities with tourism industry. The policy paper of tourism revenue sharing stipulate that

“protected areas share benefits with local communities in the form of natural products (water, honey, medicine, fuel wood), cultural or spiritual values, environmental services (climate, rainfall) etc...The rationale behind revenue sharing is that communities around the parks can support park management despite the fact that they experience problems from national parks such as (crop raiding, social transformation). They should therefore get direct benefits from the national parks, providing and enabling environment for good community relationships with national parks” (ORTPN 2005).

Hence social infrastructures development such as roads, schools, water facilities are merging in the wards bordering the park is a result of the policy. As indicated by the map figure 5-8, income from the park only funds community projects bordering the park. As told by one of the ward official: *“northern Musanze was prior to the 2000s very much inaccessible, paved roads were virtually non-existent”*. The situation gradually changed when government began to realize that gorilla tourism has the potential of significantly contributing to the economy of the country. In its policy of promoting sustainable tourism in collaboration with all the relevant stakeholders especially those communities surrounding the park, government hence emphasised the set up of projects that benefit local community so as to provide and enable good relationships with national parks. Also paved roads were constructed to facilitate tourists to access the park in northern Musanze.

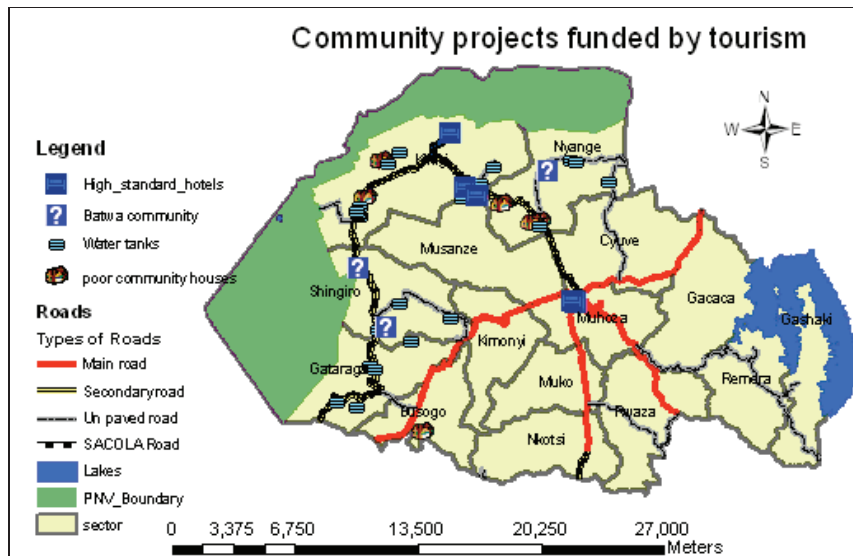


Figure 5-8: Community projects near the park



Figure 5-9: Water tanks for rain water collection and houses for the poor around the park

While the tourist revenue is substantial to the development of social infrastructures in the wards surrounding the park, (Bryden, 1973) stipulated that in long run infrastructures may lay some stress and heavy burden on both government and local communities. The government will continuously invest more money in social infrastructures even though they appear to be a considerable amount of excess so as to develop tourist sector. At that moment, the farms of local communities will be replaced. Local people will divert to other activities instead of developing their agricultural sector. For such case if tourist sector collapse, the local people are likely to suffer and then that burden will fall again on government to look after its citizens. According to (Bryden, 1973) such problems are particularly faced by relatively small regions such as Musanze in the process of developing tourist sector.

Also, one should think about the contribution of other organizations such as NGOs in development of social infrastructures. This can be seen in figure 5-10 a and b showing the contribution of tourism board with other organizations. Figure 5-10a shows that, 33% of the projects were funded by ORTPN, 33% by Sabyinyo Community lodge Association (SACOLA) a CBO project that is discussed in chapter six and the rest by other NGOs such as Gorilla organization (GO). However, the aggregate projects in the ward bordering Virunga National Park (VNP) in figure 5-10 b, only 25% of the project were funded by Rwanda Office of Tourism and National Parks (ROTNP/ORTPN), and the rest by other organizations in which Gorilla organization dominates in funding the social infrastructures that are developing in the wards around national park.

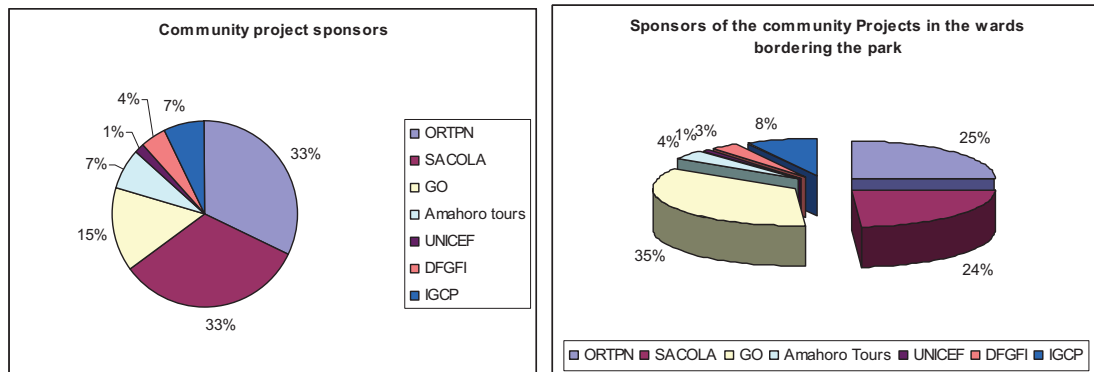


Figure 5-10 ab: Community projects and their sponsors in Musanze

As mentioned earlier, what would have happened if government didn't have interest in gorilla tourism? To measure the impacts of tourism, time series data was analyzed taking a baseline of before the policy of tourism revenue sharing (<2005) and after (>2005) which will help us to measure the impacts. With-minus-without methods was used; as stipulated by (Edwards-Jones, Davies et al. 2000) provides a true picture of the impacts attributable to a project.

Consider figure 5-11, the development of social infrastructure started in 2002 sponsored by NGOs just for the purpose of gorilla preservation which are not related to tourism. The quantity of infrastructures in 2003 and 2004 were taken as constant and we assumed that they would have stayed constant without the policy (the lower line). The figure 5-11 shows that after implementation of revenue sharing policy in 2005, the quantity of social infrastructures increased sharply hence **ABC** can be considered as impacts attributable to revenue sharing policy where 5% of the money was invested in local community activities.

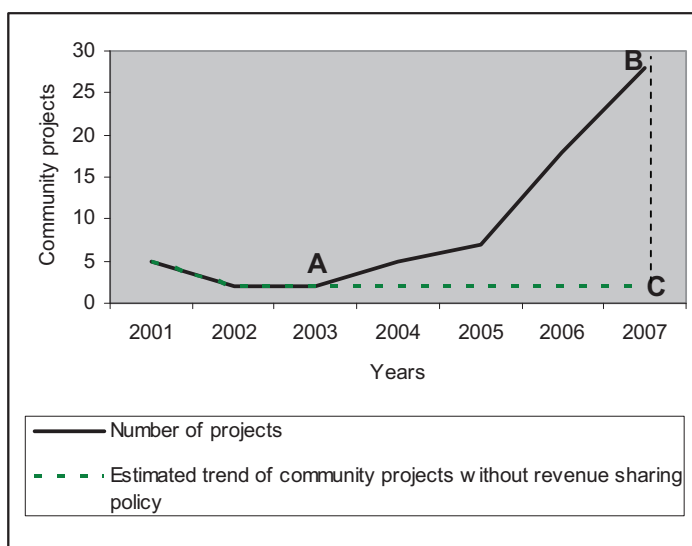


Figure 5-11: With-minus-without for a trend in community projects.

During field work, observation was among the tool used to collect data. Tourism has been able to influence establishment of social facilities like banks in the area (figure 5-15). As most of the

materials especially the manufactured ones used in tourism industry in Musanze district are obtained outside the region, the banks enable tourists and local community obtain the necessary assistance they require on financial transactions.



Figure 5-12: Banks in Musanze district

Other activities that have been influenced by tourist are local crafts business; by observation at least within 300 metres there are shops for souvenirs that are waiting the tourists from the parks. Not only selling their supplies to tourists but local people have managed to use tourist to market their hand craft abroad more especially in Europe and USA One seller of souvenir products mentioned:

“We no longer only relay on tourists, currently we have international markets of our products in Europe and USA that is why you see many souvenir shops in Musanze”.



Figure 5-13: Some of souvenir shops in Musanze

As suggested by (Hall, Roberts et al. 2003) sustainable tourism development should preferably focus on satisfying the needs of local communities through promoting local products supply chains, encouraging local crafts, optimising the retention of tourism earnings within destination and insuring that the development is within local environment and social capacities.

5.2.2. Tourism and environmental conservation

Tourism impacts on environment are diverse (Petrosillo 2006). As stipulated by many researchers like (Goodall 1995; Mbaiwa 2003; Petrosillo 2006), nature-based tourism depends on the quality of environment more than any other form of tourism. Therefore, whatever benevolent it may be, will have some impacts on the environment and it requires management and control like any other resource exploitation.

“Primate tourism, an economic benefit and conservation tool in many habitat countries, has exploded in popularity over the past two decades in places like China, Borneo, Uganda, Rwanda, Northern Sumatra, Madagascar, Gabon and Central America” (Buffaro 2007).

As indicated in the figure 6-5, Volcanoes Mountain gorillas' population has found increased in their numbers by 17% from 1989 to 2003. As observed in figure 6-5 in the next chapter, a total of 324 gorillas in 1989 have increased up to 380 individuals in 2003. Some of the revenues from tourism were used to fund some community based projects (CBP) that were used to depend on the park. In principle, such projects funded by tourism boards improve conditions for local residents, alleviate pressures on reserves and reduce conflicts between community members and park managers. (Balint 2006) stipulated that because CBP are implemented in association with park authority management, the purpose for funding such projects is conservation of the park which is a resource for tourists.

Since 1970s, poaching has been tremendous problem to gorillas. For example 1970s, there records being killed and body parties (ears, tongue, genitals) being removed by witch craft, again mid-1970s a trade developed for gorilla heads and hands as well as live infants, 2002 marked a resurgence of direct poaching and presumed trade of infant mountain gorillas (ICCN 2005).

To minimize such evils, a ranger based monitoring program was launched by International Gorilla Conservation Program (IGCP) working together with ORTPN in Rwanda and other protected areas authorities in neighbouring countries and working together with ex-poachers to minimize the killing of gorillas and other animals.



Figure 5-14: *Ex-poachers in training*

There is no doubt that tourism programmes have been very successful in creating economic and political incentives for gorilla conservation. As observed in figure 5-15, there is positive correlation (0.715) between increase of gorillas and tourist visits in Virunga national park with p-value of 0.008. As mentioned earlier some funds from tourism have channelled to funding of ex-poachers. However, other organizations such GO and IGCP have played a significant role in Gorilla conservation.

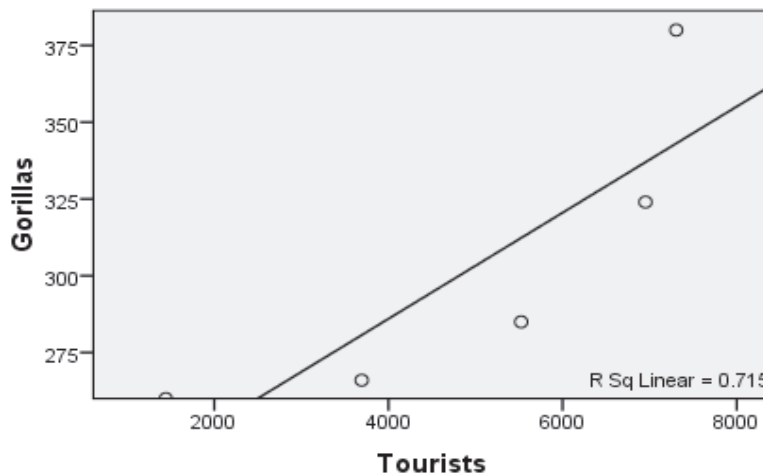


Figure 5-15: Linear regression of increase of gorillas' population and tourists visits (1978-2003)

Despite the fact that tourism has played a big role in gorilla conservation, various researchers have pointed out the diverse effects of tourism on primates, for example:

- The daily visits of tourists to the gorillas pose a risk in terms of behavioral disturbances and diseases (ICCN, ORTPN et al. 2005).
- Tourists provoke an unprecedented level of adult aggression which leads them to kill infants (Berman, Li et al. 2007);
- Presence of tourists is associated with reduced time spending on feeding by the gorillas and that gorillas regularly move off or react in other ways in response to visitors and guides (Muyambi 2004).

As stipulated by (Mbaiwa 2003) “tourism contains the seeds of its own destruction, tourism can kill tourism, destroying the very environmental attractions which visitors come to”. Therefore, if poorly managed or allowed to expand in short term, it has the capability to destroy the very resources upon which is built.

5.2.3. Spatial distribution of socioeconomic infrastructures of tourism

Understanding of the spatial distribution of tourism growth and impacts on publically provided infrastructures can facilitate informed decision making on where to invest and adopt proactive policy, planning and resource allocation (Tribe and Airey 2007). Distribution of socioeconomic infrastructures in Musanze such as schools, roads, water tanks is skewed towards Virunga national park. In other words, social infrastructures are concentrated in the wards around the park. Local Moran's I statistics indicate the strength of the spatial similarities or dissimilarities of neighbouring wards in Musanze. As depicted by the maps in figure 5-16, wards of similar characteristics are neighbouring each other; i.e. wards with similar number of socioeconomic infrastructures are clustered together.

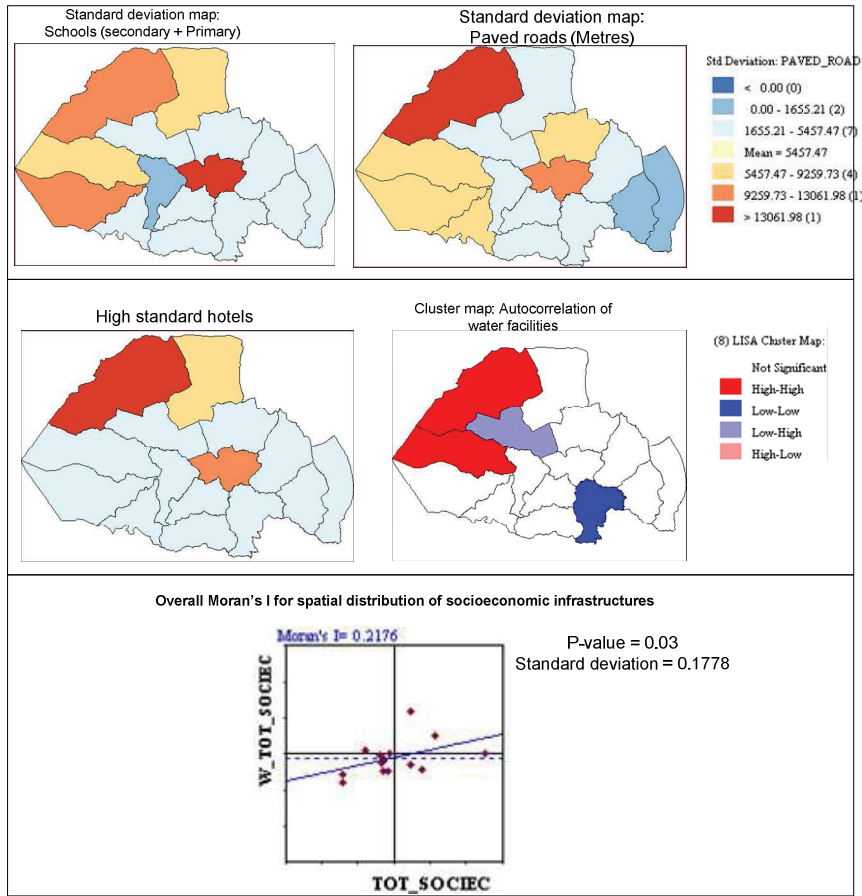


Figure 5-16: Wards with spatially similar or dissimilar socioeconomic infrastructures in Musanze district

Moran's statistics also measures the spatial autocorrelation which shows whether the spatial similarity of neighbourhood units in Musanze district. As depicted by the figure 5-17 below, the upper right quadrant is considered high-high and the lower left quadrant is considered low-low. It is these two quadrants that represent positive spatial autocorrelation and the lower right are low-high and high-low respectively, which represent negative spatial autocorrelation. The diagonal line in figure 5-17 represents overall spatial autocorrelation of water tanks in Musanze i.e. 0.4144 which means there a considerable amount of spatial autocorrelation.

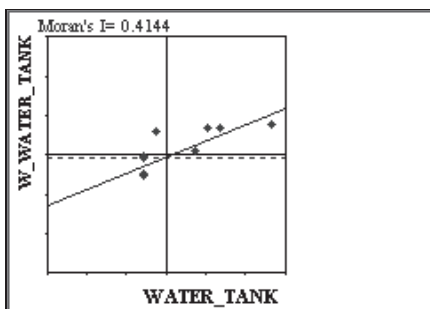


Figure 5-17: Moran's scatter plot of water tanks in Musanze

Despite the fact that tourism has important role in enhancing socioeconomic infrastructures, cultural exchanges, improving living standards, supporting cultural preservations and stimulating locals pride for their home land but such good outcomes are not only ones that are obtained (Budeanu 2005). For example when locals are trying to adopt tourists' lifestyle, it often includes aspects such as drug consumption, prostitution, theft and so on. As indicated in table 5-13; sex related crimes comes as second crime committed in Musanze and drug consumption at third place. Although there is no statistical significance of spatial difference among the wards of Musanze, there is no doubt that there is relationship between developments of tourism related activities and crimes such as drugs, money and document falsification and crimes related to sex. However, further research need to be conducted to find out the relationship between crimes and tourism across Musanze.

Table 5-13: crimes in Muhoza ward 2008

Types of crime	Number of cases
Fighting	41
Sexual related crimes	48
Theft	67
Money and document falsification	20
Drugs	33
Total	209

Source: Musanze district 2008

6. Evaluating the impacts of the policy in terms of social and economic impacts of tourism.

The objective of this chapter is to assess the impact of tourism policy on the tourism sector and a preliminary study of the possible impact such policy imperatively might have on the socio-economic fabric of the region. In this study, we utilised the methodological involving a historical preview of the evolution of Rwanda tourism activities basing on the goals of the policy. It is argued that the development of tourism sector is not exclusively dependent on the factors within the sector, but its influenced by the general socio-economic environment, the political system and the overall policy framework (EQUATIONS 2008). Thus this chapter integrates within itself the dynamic aspects of historical changes that are taking place at the macro-level. Its contents are based on the following research questions:

1. Can the social and economic impacts of tourism be explained by the policy or are they the result of some other factors?
2. Do the policy impacts vary across different wards of Musanze?
3. Are there any undesirable effects of the policy, either to local community or government?

The discussions and findings of this chapter are based on the data gathered from various secondary sources, including statistical data and policy papers from Rwanda Office of Tourism and National Park (ORTPN). For evaluating the impacts of the policy, before-and-after design based evaluation will be used. This is a type of policy evaluation in which policy-makers want to know whether the outcome, target or goal has been achieved is a result of the policy (Patton 2002).

6.1. Policy framework

The Rwanda tourism strategy developed in 2003 focuses on creating competitive advantage over other nearby destinations by increasing visitor yield and raising tourist loyalty. The overarching vision of Rwanda's tourism industry is to help diversify Rwanda's economy while creating high quality for private sector, communities and the overall population. To achieve this vision, Rwanda's tourism industry has three sectoral objectives;

- To promote sustainable tourism in collaboration with all the relevant stakeholders to benefit the communities surrounding the park as well as the Rwandan population in general.
- To conserve rich biodiversity and the values of protected areas.
- To generate 100,000 million USD in tourist receipts by 2010.

Expanding upon the Rwanda tourism strategy, the ministry of tourism and commerce developed the Rwanda national Tourism policy in 2006. This policy covers strategies relating to: marketing and distribution, product development, eco-tourism, international and regional collaboration, land, infrastructure development, capacity building, investment and financing. The mountain gorillas and other primate species are key to the eco-tourism strategy. The framework of the policy is outlined in the figure 6.1 below:

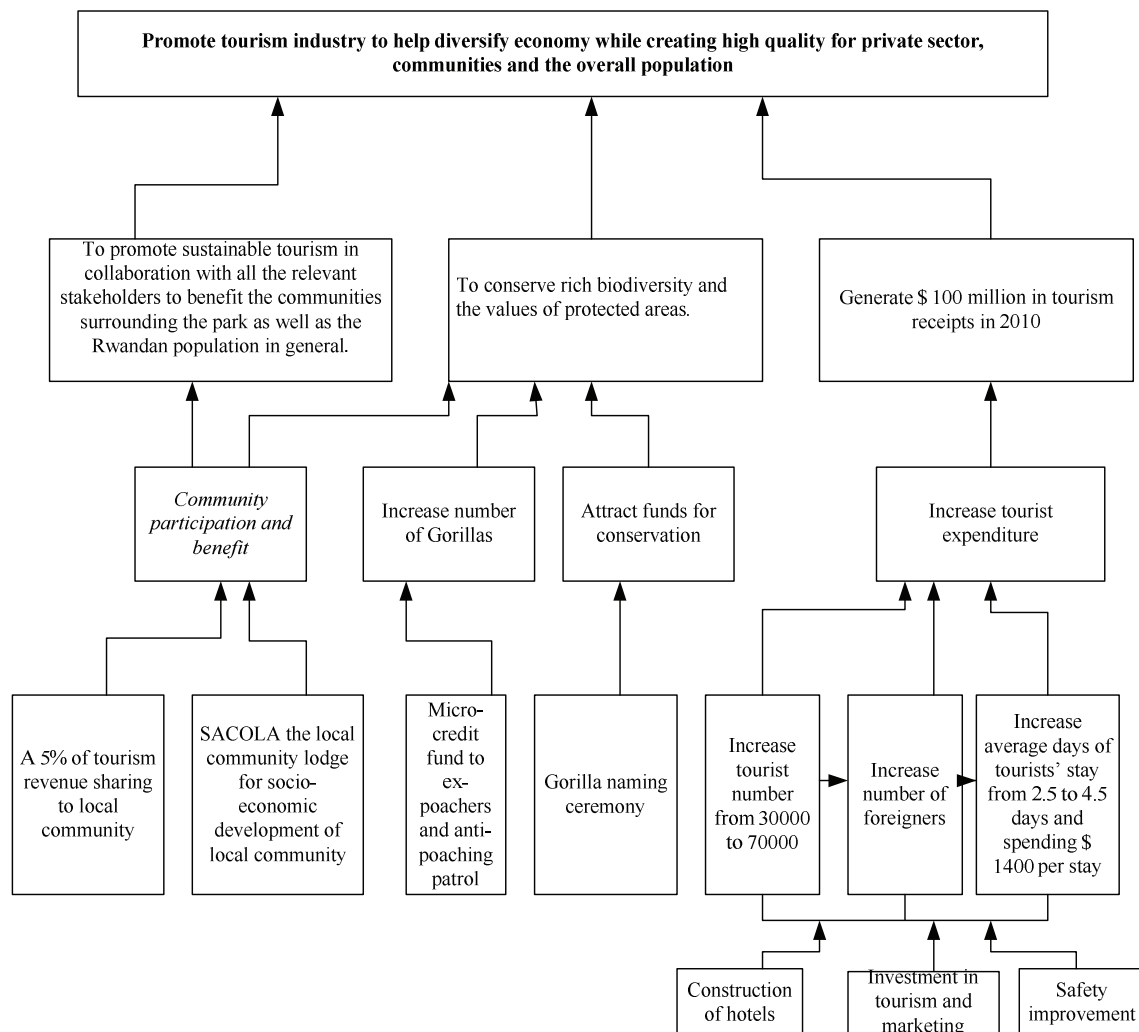


Figure 6-1: Policy tree

6.1.1. Revenue sharing policy: The benefit to local community surrounding the park

Rwanda is an agriculture country and more than 90% of the population relies on agricultural activity and depends on natural resources for fire wood, water, medicinal plants and other non-timber products such as honey. As result of human pressure on natural resources, and the need for agricultural land, the total area of Rwanda's national parks has been reduced by more than 50% over the last 50 years (ORTPN 2007). The issue is, if the parks share benefits with local community in form of natural products and they are considered as the main tourist attractant sites that need to be conserved, then how much should be given to the local community to substitute what they get from protected areas? According to the Rwanda Office of Tourism and National Parks (ORTPN) reports, the main threats of the parks originate in the areas bordering the parks.

Tourism policy suggests that sharing of the benefits from the park with local communities is one of the conservation tools through which community-park relations can be improved. Rwanda Office of tourism and National park initiated a policy of tourism revenue sharing which grants 5% of the total

gross revenue from tourism receipts of each year towards supporting community projects to improve their welfare and to be distributed in the following year. It started 2004 distributing 42 million Rwanda Francs from revenue generated in 2003. These funds were allocated to the districts bordering the three national parks in the ratio of 50% to Virunga National park, 25% Nyungwe national park and 25% in Akagera national park. The revenue sharing policy prioritized the projects that meet the needs of the poorer and more disadvantaged groups within the target area around the park. This group of local communities are those who are likely to conduct illegal activities such as poaching or encroachment and on whom the park has the most impact. Examples of projects funded by revenue sharing are:

- Community eco-tourism micro enterprise development projects
- Social infrastructure projects (i.e. schools, clinics, roads, water tanks)
- Projects producing substitutes for products normally desired/obtained from the park.

Figure 6.2 indicates that the number of the above mentioned projects increased tremendously after introduction of revenue sharing policy in 2004. This increase can be attributable to tourism policy. Revenue sharing policy is consistent with a number of Rwandan policy documents such as the poverty alleviation strategy and 2020 vision. In these documents, tourism has been identified as a key economic driver for the country that should benefit all players starting from the poorest among communities.

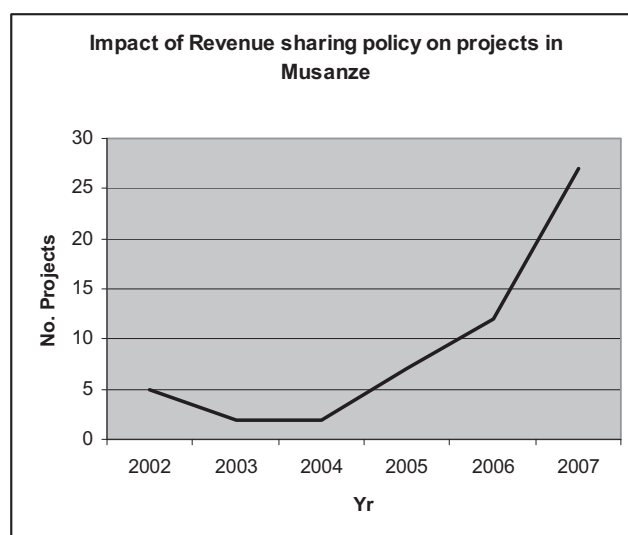


Figure 6-2: Trend of community projects in areas adjacent to VNP

6.1.2. Community participation and benefit from tourism industry: SACOLA

Rwanda recognises that the development of its tourism industry will ensure that communities especially the ones living around protected areas, have a stake in tourism. The special interest groups are rural dwellers, women and youth from tourism industry.

As a result of the policy, Sabyinyo silverback Lodge was built funded by African Wildlife Foundation (AWF) in partnership with International Gorilla Conservation Programme (IGCP) and Rwanda Office of Tourism and National Parks (ORTPN). The lodge is owned by SACOLA (Sabyinyo Community livelihood Association), a Rwandese community trust with conservation and socioeconomic development objectives. SACOLA which represents 6000 households in the area use rental and other income from Sabyinyo Silverback lodge to achieve its conservation and socioeconomic objectives.

Each time a guest stays at the hotel, 50 USD goes to the community and at the end of the month SACOLA also receives 7.5% of the gross sales from the lodge. The lodge also provides direct benefits to the local community in the form of jobs (about 70% of the staff are from nearby communities) and invites Rwanda artisan and performers to entertain guests. Also during construction of the lodge, over

300 workers (relate to figure 6-3) of nearby community helped the construct the lodge which is located in a hilly area inaccessible by car. Now the lodge is open for business, local people work at the lodge, supply the lodge with fresh local foods, and are benefiting from initial investment in the infrastructure of the area needed to make tourism viable.



Figure 6-3: Local people carrying stones for lodge construction
(http://governorscamp.com/responsible_tourism_rwanda.php)

In an interview with the president of SACOLA, we asked him the origin of their idea to form an association, he responded in the following words:

“The idea of forming an association originates from complaints of the local community after being excluded to get natural benefit from the park by the government. The locals complained that government is only gaining without considering what we used to get from the park. Then we submitted our proposal to ORTPN, IGCP and AWF. After securing funds, we announced the market of constructing the lodge, and then Governors camp won the tender of constructing and running the hotel where we agreed with governor’s camp to pay 7.5 percent of the monthly gross sales and \$ 50 per visit per day”

According to chairman of SACOLA, just in five months of hotel operation, it managed to generate \$ 15000 which was invested in road construction of a paved road so that local workers and visitors can easily access the lodge and local goods can be transported more efficiently. As the lodge grows and becomes more well known, the association managed to generate revenue that was used to build 6 houses for the poor households, water tanks, bee keeping projects to mention a few. Figure 6-4 indicates that approximately 80 percent of water tanks constructed in 2007 were funded by SACOLA.

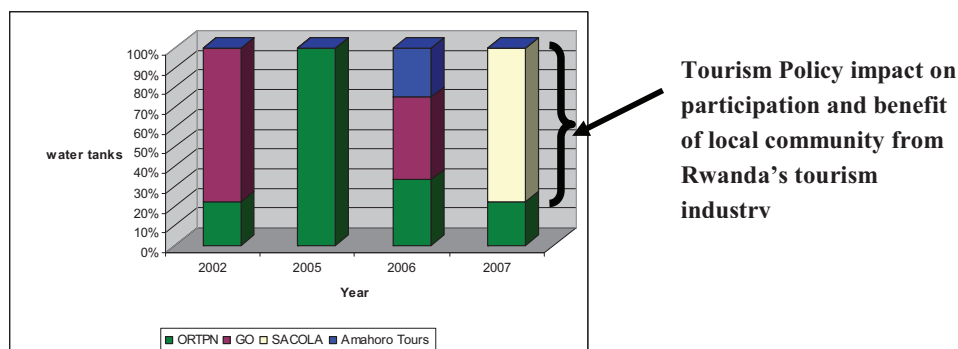


Figure 6-4: trend of water tank constructed and their sponsors

The local community participation policy in tourism development, planning and management is mostly based on economic and environmental consideration in Rwandan tourism policy. According to (Sodhi 2008) for economic consideration, all protected areas are created for tourism purposes. He suggested that one of the reasons for involving the local communities in tourism is the belief that those living closest to protected areas are largely characterized by low income hence tourism can provide a valid alternative to encroachment of resources in protected areas. Thus policies that facilitate local community to participate and benefit from tourism reduce burdens on government as the financing mechanism. For environmental consideration, community participation in tourism helps to insure sustainable use of natural resources and avoid negative impacts on ecological condition.

Despite the fact that local community participates and benefits from tourism but still they are lacking skills to manage and control this highly commercial enterprise, hence local communities aspiring to tourism may depend on middle man in their participation such as NGOs, private enterprises or government bodies (Butler and Hinch 2007). Figure 6-4 shows that, parastatals and Non-governmental organizations (NGOs) are dominant sponsors of community projects. Butler and Hinch stipulated that such external agencies can work for their own benefits instead of the community. A good example is Sabyinyo silverback lodge a community property which is run by governors' camp and only generates 7.5 % to SACOLA while the rest remains in their pocket. Thus (Butler and Hinch 2007) concluded that even if community participation in tourism ventures is generating income, employment and funding for ecological projects, but it has a potential to be a double edged sword.

6.2. Tourism and Biodiversity conservation

In Rwanda, the conservation of biodiversity has been a major concern since the colonial era, with the creation of the three national parks that harbour rich natural resources and exceptional tourist opportunities. After independence, the Rwanda office of Tourism and National parks (ORTPN), whose main mandates are to ensure the promotion of sustainable tourism and the conservation of wildlife was established to respond to this concern. Furthermore, the Rwandan government adopted the protection of environment and the promotion of tourism among the main focus of poverty reduction and development in its document "vision 2020", with the overall aim to support sustainable development.

ORTPN was restructured in 2002 and its overall mission is to conserve the rich biodiversity and the values of protected areas; and to promote sustainable tourism in collaboration with all the relevant stakeholders specifically the communities surrounding the protected areas as well as the Rwandan population in general. In this perspective a lot of initiatives were put in place in accordance with the mission of the policy. These include eco-lodge design, community sharing scheme, anti-poaching control and public gorilla naming ceremony which was launched in 2005 as a fundraising event for conservation and funding the tourism projects. The first two means are discussed in previous sections and the remaining is discussed in the following section to see how these means influenced the impact of tourism in the area.

6.2.1. Anti-poaching control

Protection of the parks and their habitants is the prime focus of the ORTPN and its partners such as DFGFI. Special focus is given to gorillas in volcanic National Park (PNV) as they are considered as

the most endangered species in the world. These primates continue to be under threat due to their habitat destruction, poaching, and mining, amongst other threats.

Rwanda Office of Tourism and National Parks and Dian Fossey Gorilla Fund International (DFGFI) have created anti-poaching teams which provide daily monitoring and protection for several groups of mountain gorillas, plus associated subgroups and lone silverback. Anti-poaching staffs also collect information daily on the location of different types of illegal activities in the park and on all types of park encroachment, such as cattle grazing and firewood collection. They also remove snares in the forest most of which are set for Antelopes.

DFGFI and ORTPN do not only use anti-poaching patrols as only means for conservation but also to help the communities bordering the park with special needs. This includes a goat projects for the often marginalized Batwa people, the indigenous hunter-gatherers who have historically hunted in the park for protein sources. They help the Batwa to integrate into local communities outside the park and to provide alternative sources of protein by raising goats. Also micro-credit funds have been set up for associations of the people living near the park and the groups of former poachers have benefited from this credit.

This regular, long term monitoring and protection activities are the primary reasons for a 17% increase in the population of Gorillas observed between 1989 and 2003 as shown in figure 6.5. There is no doubt that tourism programmes have been very successful in creating economic and political incentives for gorilla conservation.

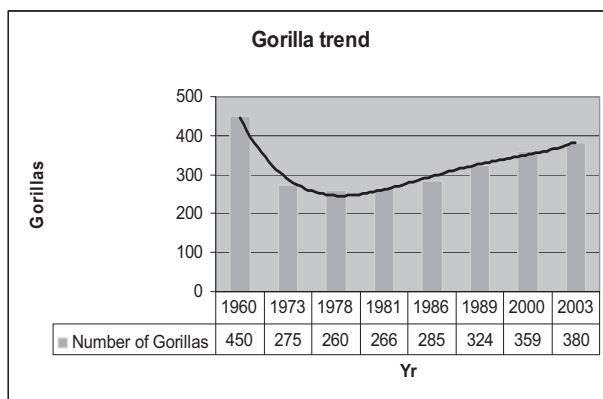


Figure 6-5: Tourism trend from 1960-2003

In conclusion tourism can provide the impulse and economic investment for improved conservation in protected areas. According to (López-Espinosa de los Monteros 2002) tourism activities may provide benefit for conservation but are not comparable to the cost involved in the conservation of protected areas concerned, hence conservation policy cannot easily achieve its goals. It is on this basis that most of conservation activities in Musanze are sponsored by NGOs. Therefore, the achieved goal of biodiversity conservation is a result of NGOs and ORTPN to a less extent. Although conservation is driven by NGOs, government policy instrument such as promotion of sustainable tourism in collaboration with all relevant stakeholders can only be effective (conservation) by ensuring that all activities match with the policy goal of the government.

6.2.2. Annual Gorilla naming ceremony

Gorillas play an essential role in contributing to the positive image of Rwanda and act as ambassadors on the international scene by raising the profile of the country. They also contribute greatly to Rwanda's tourism industry which ranks third in terms of foreign currency generation. Rwanda has enthusiastically received thousands of international visitors and appreciates the revenues generated through gorilla tourism.

As a means of raising awareness at the national and international level about the protection of the mountain gorillas and their habitat, ORTPN launched the annual gorilla naming ceremony in 2005 (ORTPN 2009). It was aimed to ensure the future of Rwanda's mountain gorillas and provide an opportunity for all those who care about the mountain gorillas. The names attributed to the gorillas play an important role in the program of monitoring of each individual and gorilla groups in its habitat. Table 6.1 indicates the efforts put in conservation of gorillas and encouraging international visitors to participate in conservation. For example the fourth annual Gorilla naming ceremony of 2008 was an opportunity to celebrate the success of the collaboration with international visitors that has been achieved in the protection and conservation of mountain gorillas. The money raised from this ceremony is reinvested in the community projects of the people living near the park.

Table 6-1: “Kwita izina” Gorilla naming

Year	Number of Gorilla babies named	Main theme of the year
2005	30	<i>“Ensure the future of mountain gorillas of Rwanda” “Recognise the role of international tourist who selected Rwanda as destination”</i>
2006	12	
2007	23	<i>“Caring for our wildlife”</i>
2008	12	<i>“Working together for our wildlife”</i>

Not only gorilla naming ceremony has facilitated gorilla conservation, but also has made Rwanda tourism being recognised internationally hence increasing the number of tourists coming to visit gorillas in Virunga National Park (PNV). Figure 6.6 indicates that after launching the gorilla naming ceremony in 2005, tourist visits in Virunga national Park were larger than visitors in other national parks. So the ceremony has played several roles in tourism development. These include:

- Gorilla conservation,
- Raising funds for community development projects,
- Increasing the number of international visitors,
- Making Rwanda tourism recognisable worldwide,
- Increasing income earned from tourism.

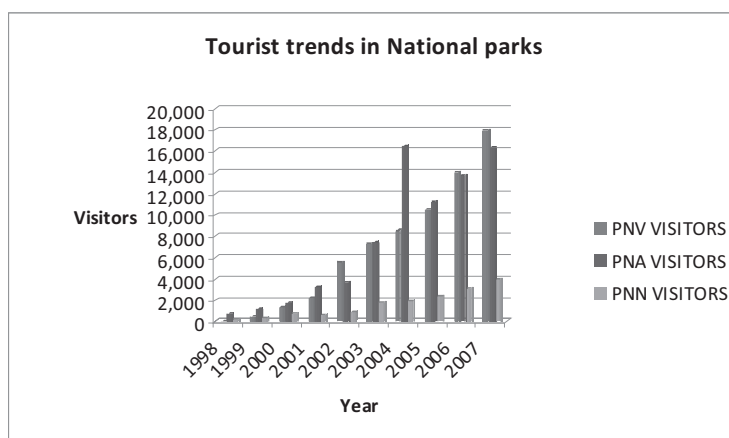


Figure 6-6: Tourists trend from 1998-2007 adopted from ORTPN Statistics

It is observed that Rwanda's tourism has been steadily growing over the past seven years. Gorilla naming as a tool adopted to enhance biodiversity conservation will also help tourism industry to achieve its vision of 70,000 tourists and 100 million USD in 2010 as well. As indicated in the figure 6-6, gorilla naming ceremony is likely to be the primary cause for a 72% increase in tourists' visitors in Virunga national park between 2005 and 2007.

6.3. Tourism receipts

In its vision 2020 plan, Rwanda set ambitious goals for its development. Between 2000 and 2020, the country would like to grow its per capita GDP from 250 to 900 USD which means that the overall economy needs to expand by over 600% when population growth is put into consideration (GoR 2007). Given its potential to contribute to Rwanda's export diversification, the tourism industry was identified as a priority focus area in 2001.

In 2002, Tourism Work Group (TWG) developed a strategic vision of generating 100 million USD in tourism receipts in 2010 and increasing the number of tourism arrivals to 70,000 each staying 5 days and spending a minimum of 250 USD per person by focusing on creating high value and low environmental impacts. These 70,000 tourists would originate from major tourism market such as the USA and Europe, regional and domestic market.

Visitor numbers show a rapid increase since genocide in 1994 (see figure 6.7). Using visit figures from national parks obtained from ORTPN, the progress has been excellent. Figure 6-7 indicates that in 2007, the actual tourist visitors were a head of targets at 38901 visitors Vs 30000 visitors. Whilst this park data excludes leisure tourists who do not visit national park and cannot account for multiple visits, it does have a significant value indicator of achieving the goal in 2010.

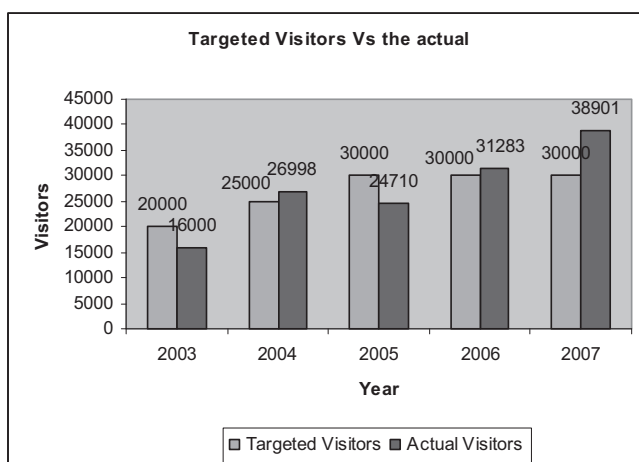


Figure 6-7: Target visitors Vs the actual

Though the leisure tourists have been positive from 2003 to 2007, this rate is likely to decrease as currently Virunga National Park has exceeded its maximum number of 14600 visitors per annum (40 visitors per day multiplied by 365 days). Based on 40 visitors per day for 365 days of the year, PVN has received average 49 and 55* visitors per day in 2007 and 2008 respectively which is a head of maximum number of 40 visitors per day (refer to figure 6-8).

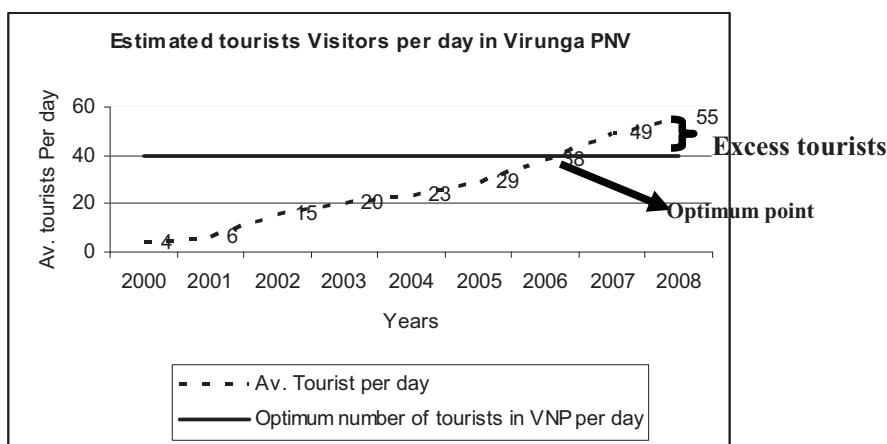


Figure 6-8: Trend of average number of visitors per day

Despite its considerable success, Rwanda's tourism is likely to be threatened by lack of product diversification away from gorillas. According to ORTPN statistics, over 90% of tourism earnings are driven by gorillas' product. This growth is likely to be limited by number of gorilla permits available annually.

6.3.1. Tourism Source of Markets

According to the data obtained from ORTPN (table 6.2) based on the park data, the United States is the largest individual foreign source market in 2007 (20 percent), followed by the UK (10 percent), Germany (6 percent), Belgium (5 percent), Canada and Australia (4 Percent), France, Italy and

* Estimated average value tourists per day based on number of visitors in PNV from January to October 2008

Netherlands (2 Percent). The remaining 19 percent is made up of small percentages of visitors from international and regional countries.

Table 6-2: Tourist Nationalities in Rwanda

Year	2004	2005	2006	2007
Nationalities				
Rwanda	50%	35%	36%	26%
USA	10%	18%	17%	20%
UK	8%	11%	9%	10%
Germany	6%	6%	6%	6%
Belgium	5%	5%	6%	5%
Canada	2%	2%	3%	4%
Australia	3%	3%	3%	4%
France	2%	3%	3%	2%
Italy	1%	1%	2%	2%
Netherlands	2%	2%	2%	2%
Others	11%	14%	13%	19%

Figure 6-9 indicates that foreign residents are the most tourists of Virunga National Park. There is no doubt that expenditures of foreign residents in Musanze have significant effect on the economy and local community.

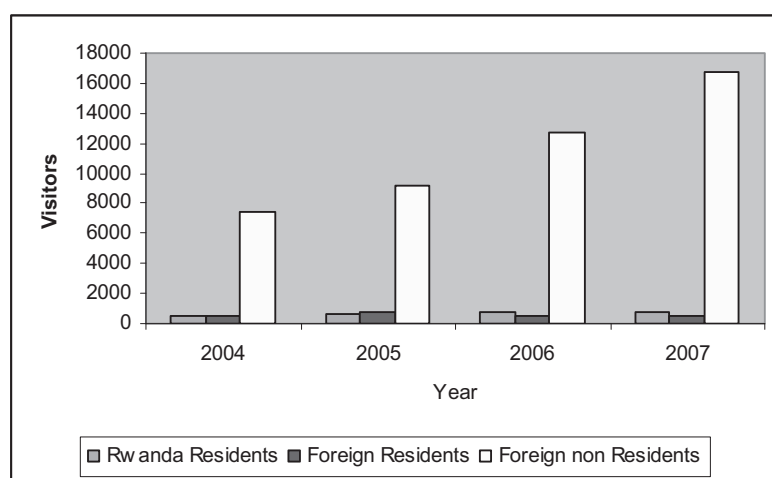


Figure 6-9: PNV tourist visitors by residents

6.3.2. Tourist average expenditure per day

Rwanda has managed to record considerable growth in average spent per day (for both business and leisure tourists). Figure 6-10 indicates that average expenditure per day has increased from 174 to 267 USD from 2004 to 2006. This is largely due to the introduction of upmarket hotels in Musanze and Kigali, increases in average room rates and inflation. Also the recent increase of the gorilla permits from 375 to 500 USD is likely to result in an increase in the average spend of tourists as tourists spend more due to higher prices (GoR 2007).

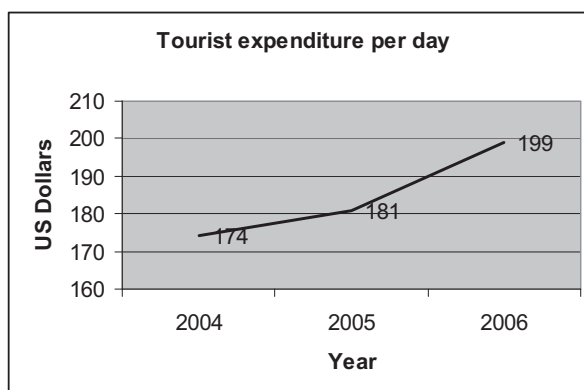


Figure 6-10: Tourist expenditure

6.3.3. Tourist length of stay

According to the Ministry of Tourism, Rwanda has been able to steadily increase its average length of stay (for both business and leisure visitors) from 2.5 days in 2001 to 4.7 days in 2006, representing an average annual growth rate of 13.61 percent. Due to the low tourist numbers and the low average length of stay any increase could have a significant impact in increasing tourism's contribution to the country and Musanze in particular since hotels of Musanze predominantly targets international tourists seeking a gorilla trekking experience in the Virunga National Park.

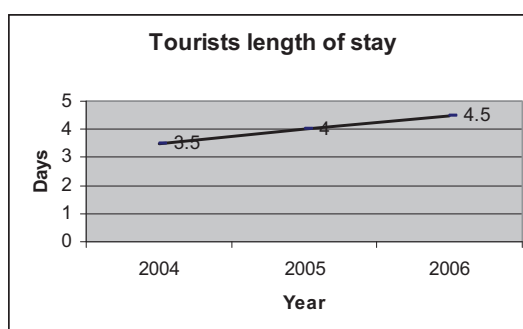


Figure 6-11: Tourist length of stay

Statistical data indicate that, Rwanda tourism has recovered since 2001 with a focus on the gorillas. As noted earlier, Rwanda's tourism policy is to attract high number of tourists. To date, the progress has been excellent. Figure 6-12 indicates that 2007 tourism receipts were a head of targeted indicator at 138 million USD Vs 100 million USD which was expected to be achieved in 2010. But what is not clear is how much Musanze district and local communities around the park benefit from this success given that all bookings are done in Kigali. Although the government revenue sharing scheme is unique, arrangements must be made to make all bookings on district level to expand the benefits a district from tourism.

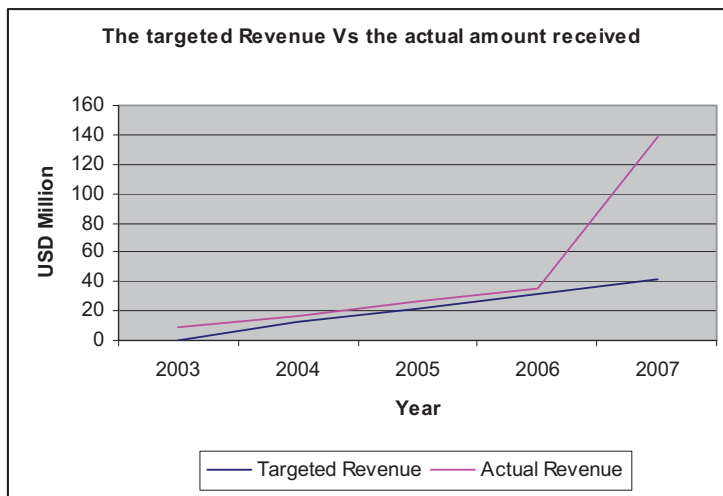


Figure 6-12: The targeted revenue Vs the actual amount received

6.3.4. Hotel supply

In order to attract the more up market clientele, the government's strategy is to build hotels that fit international standards. Hotels in Musanze predominantly targets international tourists seeking a gorilla trekking experience in the Virunga national park. Aside from 13 hotels in informal accommodation catering for the lower market, the international standard hotels increased from 3 in 2005 to 7 in 2007 as indicated in figure 6-13.

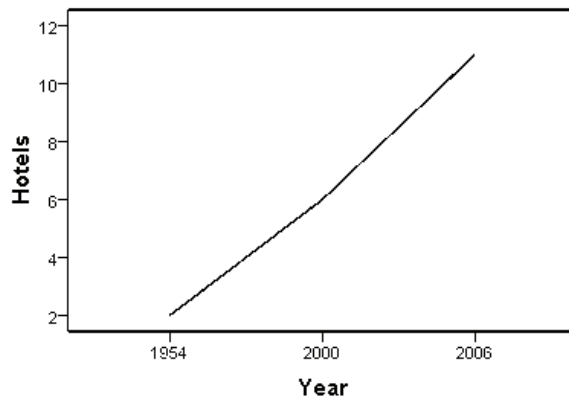


Figure 6-13: the trend of hotels in Musanze

Table 6-3 shows that, most of high standards hotels are built in Kinigi ward which is bordering the park. Sabyinyo Silverback lodge owned by SACOLA (the local community association) is the newest and most exclusive establishment with excellent views of the volcanoes and the park. The lodge is only few minutes away from the headquarters of the park from where clients walk on foot to see the magnificent mountain gorillas. Particularly in the areas surrounding the park, construction of hotels with a good strategic fit has been excellent in the country and it might be the basis for increasing tourist spending and length of stay in the country hence facilitating government to achieve its policy.

Table 6-3: International Standard hotels in Musanze

Hotel	Location	Star	Bedrooms	Standard Single Rate (USD)	Standard Double Rate (USD)
Virunga Lodge	Kinigi	4	8	480	800
Mountain Gorillas Nest	Kinigi	3	40	80	120
Hotel Muhabura	Muhoza	2	13	30	35
Sabyinyo Silverback Lodge	Kinigi	4	8	600	800
La Palme	Muhoza	4	12	80	100
ASOFERWA	Kinigi	2	11	50	60
Village touristique de Kinigi	Kinigi	2	12	40	50

6.3.5. Safety improvement

For tourist numbers and their length of stay in a region, security is essential element if a region wants to raise the number of tourists and their length of stay (Martínez-Garcia and Raya 2008). In Rwanda, security is on top agenda not only for the promotion of tourism but also for the well-being of its citizens. Figure 6-14 indicates that tourists' rating of Rwanda on security which is a key decision driver for tourists, has improved significantly with Rwanda now rated as the safest country in the region, while in 2002 tourists were unaware of Rwanda's safety.

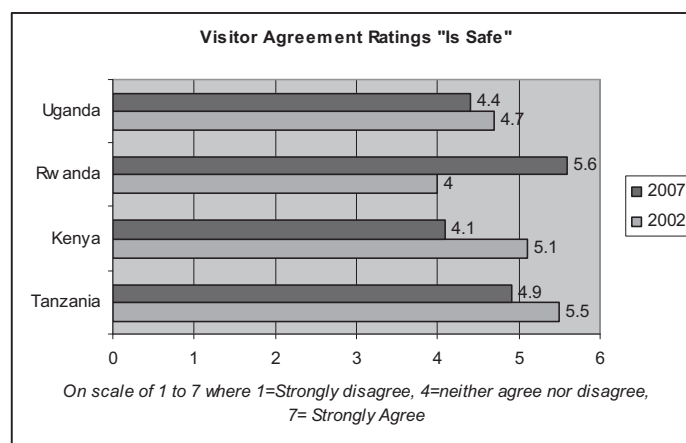


Figure 6-14: Visitor Agreement rating "Rwanda is safe" adopted from OTF Group Tourism (2007)

Risk free travel is not just goal of every tourist. To minimize or avoid tourists' crises, it is tourism industry interest to ensure safe trips for each and every traveller world wide (Mansfeld and Pizam 2006; Martínez-Garcia and Raya 2008). Since 11, September 2001, security is no longer a minor travel consideration but rather an unquestionable requirement to which each tourism destination must strictly adhere.

6.3.6. Tourism Investment

Rwanda tourism policy covers strategies rating to: marketing and distribution, product development, eco-tourism, investment, financing to mention but a few. The government through the Rwanda Investment Promotion Agency (RIPA) is ready to work hand-in-hand with investors to realize their

goals and drive the economy forward for the better future. Figure 6-15 indicates that the considerable growth of investment in tourism has occurred since 2003. Since the policies consider mountain gorillas and other primate species as key for growth of eco-tourism, there is no doubt that growth of hotels in Musanze is a result of strategy to invest in tourism and encourage private sector participation for the goal achievement of the policy.

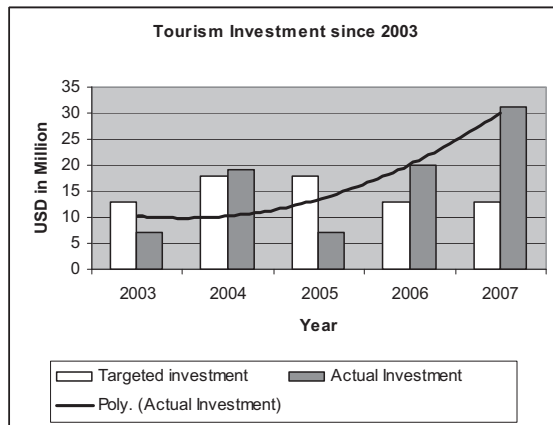


Figure 6-15: Tourism investment from 2003-2008

6.4. Do the policy impacts vary across different wards of Musanze?

To find out whether the impacts of the policy vary across the wards of Musanze, the distribution of socio-economic infrastructures were analysed using Geographical data analysis software (GeoDa). The variable chosen are those that have direct linkage with tourism. These include: hotels, paved roads, water facilities and schools of each ward. The total number of these variables were computed and entered into GeoDa.

Autocorrelation analysis revealed that there is positive autocorrelation with Moran's I equal to 0.2176 and p-value of 0.035 which is less than the significant level ($P < 0.05$; 999 permutations). This implies that the wards of similar amount of socioeconomic infrastructures are located together. As indicated by the map figure 6-16, the wards that are above the mean of socioeconomic infrastructures in the whole district, are located near the park.

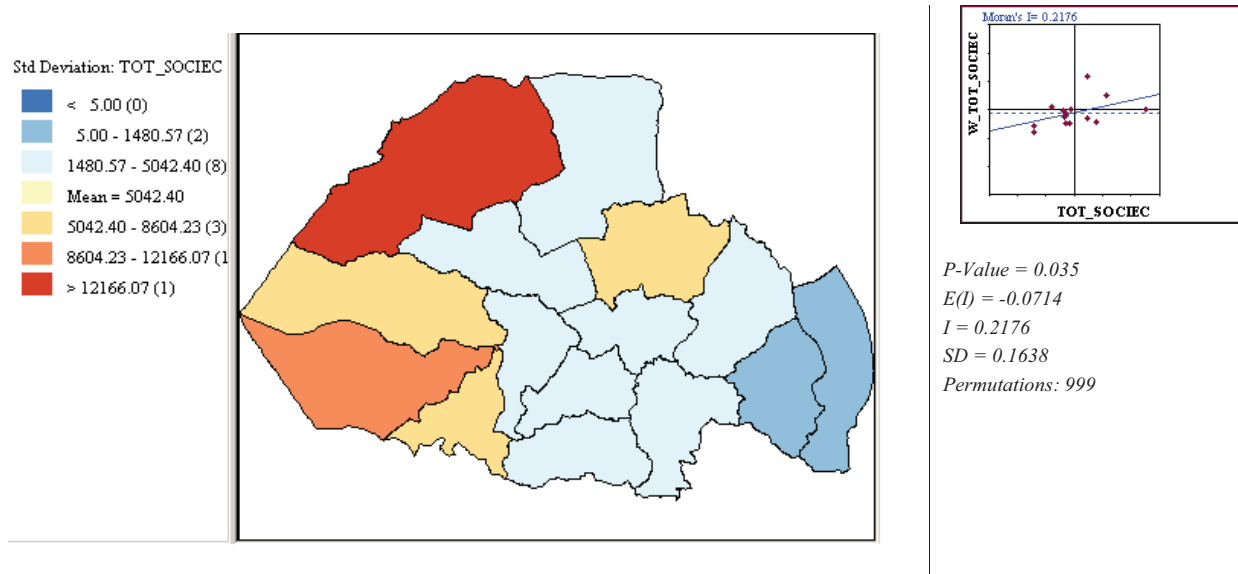


Figure 6-16: Policy impacts across Musanze district

The detection of positive autocorrelation of socioeconomic infrastructures provided evidence that the impacts of tourism policy is effective in areas around the park, hence the development of socioeconomic infrastructures such as hotels, paved roads, water facilities and schools in the sectors around the park in Musanze is due to powerful economic and political incentives from government as a tool to develop sustainable tourism.

6.5. Undesirable effects of the policy

Strategic tourism policy discussed above may also have unfortunate and sometimes unexpected side effects. As mentioned earlier in the policy goals, tourism in Rwanda is more sensitive and dependent upon high quality of environment. The researchers such as Cellaballo argued that tourism increases the value of protected areas. As a result, the undesirable effects of the policy arise when local community are denied to access the protected area for environmental conservation. The most undesirable effects of tourism policy in Musanze district are: human-park conflicts and indigenous community displacement.

6.5.1. Human-park conflicts

It is argued that tourism is one of the determinants of the value of protected area (Ceballos-Lascurain 1992). Therefore conflicts arise from the desire to preserve natural areas and if properly managed the expectation of tourists and the denial of local community to access the park. (Cater 1995) called this situation win/lose scenario.

Consequently, local community if benefits from the park are not harmonized efficiently the local communities start illegal activities. As indicated in table 6-4; high human-park conflicts may be the results of the imbalances in the follow of tourism revenue and what the local community need from the park.

Table 6-4: Human park conflicts cases in 2006

<i>Human park conflicts</i>	<i>Number of cases</i>	<i>Percentage</i>
Illegal human track	1610	34 %
Bamboo wood cutter	1097	23 %
Water collector	833	18 %
Snares	798	17 %
Bee hives	221	5 %
Honey collector	69	1 %
Illegal poachers	59	1.46 %
Animals killed	26	0.55 %
Dogs	17	0.36 %
Grazing	10	0.21 %
Total	4740	100

Source: ORTPN 2006

Despite the effort that is being made by ORTPN such as buffalo wall construction, revenue sharing policy and others, substitutes of what the communities get from the park should be improved together with sensitization about park conservation. To enable such decisions, (Cater 1995) suggested that policy makers need to give more detailed on the extent and nature of such substitutes. This will lead to compromise solution and finally minimize the human-park conflicts.

6.5.2. Indigenous Community Displacement

Many resource management systems and conservation policies still separate people from their environments, freezing and stereotyping both cultures and ecosystems (Millennium Ecosystem 2005). According to millennium Ecosystem assessment, such policies are less effective in addressing linkages between eco-system functioning, development and well-being. For example: Batwa communities are indigenous inhabitants of Rwanda.

Traditionally, Batwa were forest hunter-gatherers and they believe that the forest is the source of all abundance and it is maintained by proper sharing of spirits, and by singing and dancing rituals which ensure the support of spirits to help them to satisfy their needs. Currently they were deprived from the park in order not to disturb gorillas, and Batwa have little information about park management. Although, they were brought together for community integration and share the revenue with others, but still the Batwa are claiming to have been deprived from their traditional way of life. In the interview, one of Twa man mentioned this:

“You speak to me of what I gain from the park, and all that I know is that the authorities and soldiers came from far way in order to chase us away with guns and tell us never to return to the volcanoes where we were forbidden to hunt, look for honey, water and wood”, said Batwa man.

As stipulated by Millennium Ecosystem, conservation policies that take into account the historical, economical and cultural context are more effective in terms of contributing to both ecosystem and human well-being.

6.6. Summary

Over the past 5 years, the tourism policy has proven that it can succeed and has the potential to become a major contributor to Rwanda's GDP. Through a combination of political stability, industry leadership and focused product development, Rwanda has become the safest country in East African with high value tourism. The effects of this transformation are surprising; dozens of new entrants into the tourism industry, new hotels cropping up around the country and regular sighting of tourists in Musanze and the other major tourist sites. Despite considerable success of Rwanda's tourism policy, it is likely to be threatened by a dangerous lack of product diversification away from the gorillas. The statistical data indicates that over 90 percent of tourism revenue earnings are driven by gorillas' products. This is likely to create an overreliance of government on one institution to drive a change in an economy. For example figure 6-17 indicates that service and tourism sector is increasing while other sectors such as industry and agriculture are decreasing.

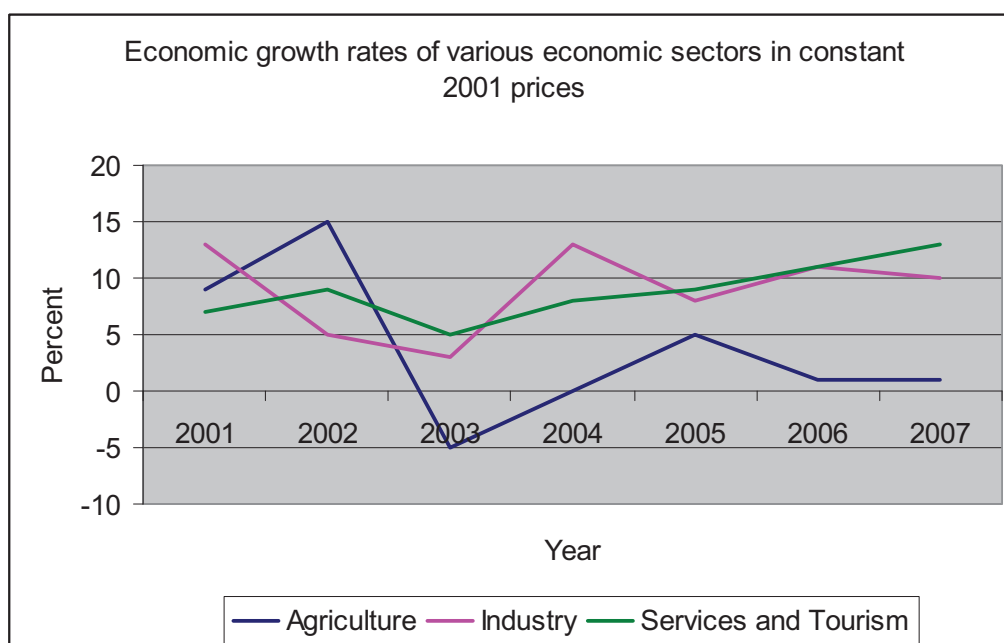


Figure 6-17: Growth rate of economic sectors in Rwanda

Despite the positive impacts of policy to the development of tourism-related activities and human well-being improvement in the region, it is the primary contributor to the socioeconomic inequalities that exist in region between the wards bordering the park and those far away from the park. This is due to the fact that tourism policy prioritises the community living near the parks to benefit from tourism industry. Also the policy does not take into account the linkages between nature and cultural bondage (human-park relationship). For example, the indigenous Batwa community (traditionally hunter-gatherers in park) are claiming to have been deprived from their traditional way of life (from the park). As mentioned earlier, conservation policies that take into account the historical, economical and cultural context are more effective in terms of contributing to both conservation and human well-being.

7. Conclusion and Recommendations

7.1. Conclusion

Figures in both literature and findings show that tourism is clearly one of the most important industries for world's economy. Facts demonstrate that it can bring benefits in terms of environmental protection, infrastructure development and social-cultural conservation.

The findings indicated that, Rwanda Office of Tourism and National Parks' policies incorporate measures to support social and economic development of the communities neighbouring the park for the purpose of park conservation as the way to achieve sustainable tourism. The study has shown that tourism in Musanze district has influenced the development of infrastructures and provision of social facilities in the area. It has been enabled local farmers to supply their produce to the hotels and get jobs as employees of the hotels. The findings indicated that about 400 local residents have secured jobs in tourism industry, hence contributing to about 40 percent of annual income to the district in term of taxation. As a result most of the goods used in tourism industry are produced in Musanze, thus earning to about 1 million USD annually to local community.

This study has also shown that, in terms of revenue generated from tourism, much of it goes to non-local residents of Musanze and to the government rather than to the local communities on which tourism resource are located. While there area attempts to make local communities derive benefits through tourism revenue-sharing, the approach is problematic, the money is invested in developmental projects rather than cash-flow projects. The argument given by hotel managers and other officials is that, local people lack the necessary entrepreneurship and management skills to participate in the tourism business in the area.

In this study, we used cross-sectional regression, spatial autocorrelation and policy impact approaches to increase our validity and reliability of our findings. Cross sectional regression approach indicated that annual income of each ward in Musanze highly depends on tourism activities such as hotels, distance to the park, roads and so on. Using spatial autocorrelation approach to find how the impact are clustered in the district, the findings indicated that socioeconomic impacts of tourism are clustered in the wards neighbouring Virunga national park (PNV), while wards far away from the park are worse-off. While policy impact evaluation approach was used to find out the link between socioeconomic impact of tourism and the policy, the findings revealed that, all development of new infrastructures such as hotels, roads, and local community benefits from tourism industry is a result of policy goals. Tourism policy goals attempts to achieve sustainable tourism, increase income receipts and promote environmental conservation. By achieving these goals, government believe to collaborate with all relevant stakeholders especially those who live near protected areas to benefit from tourism industry. In other words, strategies or means applied to achieve the policy goals are concentrated around the park, hence its impacts are viewed in the wards neighbouring the park where tourism resources are located.

Despite the considerable success of Rwanda's tourism policy, it is likely to be threatened by a dangerous lack of product diversification away from the gorillas. The statistical data indicates that over 90 percent of tourism revenue earnings are driven by gorillas' products. This is likely to create an overreliance of government on one institution to drive a change in an economy as shown in the findings.

While tourism has been claimed to increase opportunities for employment, infrastructure development and income generation to locals and destination regions, often the benefits of tourism come at high price paid by nature and societies. The findings indicated that indigenous Batwa have been displaced from the park to develop tourism in ways that maximize the interest of tourism board. Likewise, a great part of the tourist generated income is leaked away from Musanze due to out-of-region ownership of hotels. The findings indicated that 89 percent of the hotels are owned by non-residents of Musanze.

The aim of this study was to assess the impacts of tourism in destination area. It has been observed in literature that examining tourists' movements and revenue earnings generated by tourists tells us nothing about the economic and social impacts on destination area, thus more methodological approaches were used to increase validity and reliability of the findings.

7.2. Recommendations

Our study focused upon on assessment of visible socioeconomic impacts of tourism in Musanze. It was mainly based on finding how new developments in Musanze are associated with tourism and link it with Rwanda's tourism policy. Therefore further research needs to be conducted on residents' perception on tourism. This can help us to know the ways in which tourism contributes to changes in value systems, individuals' behaviour, family relationship, collective life styles, safety levels, moral conduct, creative expressions, traditional ceremonies, and community organisations (John 1990). He further stressed that such findings about residents' perception on tourism can provide variable information for future planning.

Also further research needs to be conducted on participation of residents in conservation of the park; using a comparative study of three national parks in the country surrounded by the communities of different occupation. Basing on ideas of (Stronza and Gordillo 2008) tourism's connection to conservation comes through participation in ownership and management rather than through economic benefits. This can help residents be able to translate economic benefits into broader goals.

Further more, Rwanda Office of Tourism (ORTPN) should develop other tourism potentials in the country to reduce overreliance on Gorilla products as it already exceeded the optimum point, this would reduce the adverse environmental effects caused by mass tourism and would increase the benefits a country derive from tourism and influence visitors to spend extra days in the country thus raising the yield per visitor.

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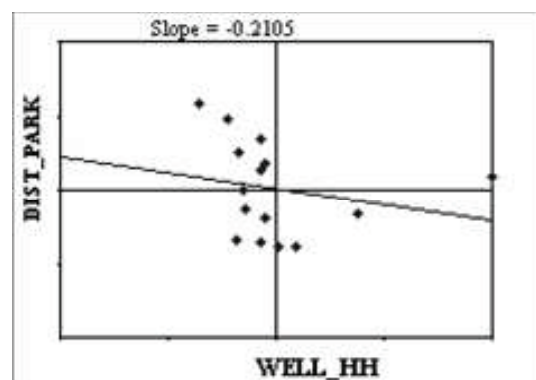
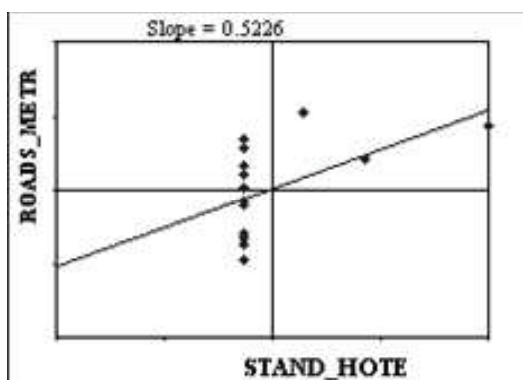
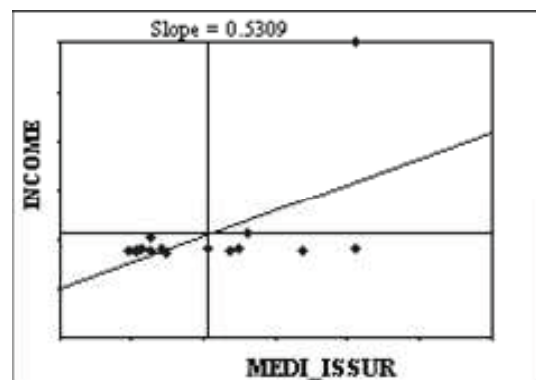
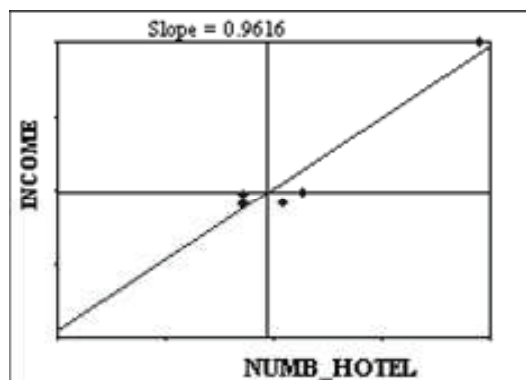
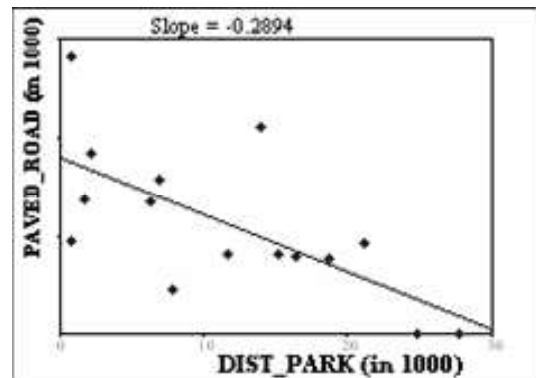
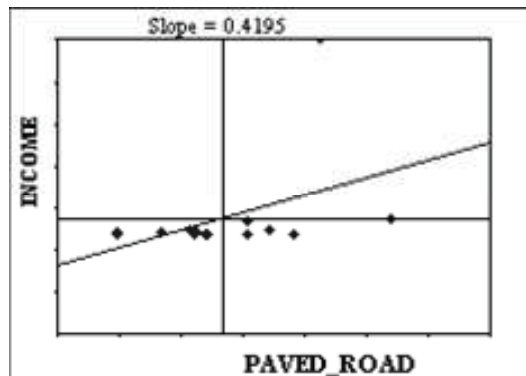
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Appendix 1: Scatter Plots



Appendix 2: Check List

Check list

Information collected from wards

- The total employees (in numbers) in tourism industry for each ward
- Number of hotels for each ward
- Estimate of the average annual tax collected from each ward
- The total length of paved roads in km in each ward
- The total length of unpaved roads in km in each ward
- The number of population of each ward
- The estimate of average annual income of each ward

Evolution of investment in tourism sector

- amount of money invested in tourism
- Evolution of tourists' earnings
- Evolution of tourists' numbers
- Year in which investment was done
- paved roads constructed
- unpaved roads constructed
- Number of hotels built
- How total employment evolved
- How total annual income of the region evolved
- Other social amenities constructed under the influence of tourism

Hotels

- Location of the hotel
- Privately or public ownership
- Whether owned by nationals or foreigner
- Average monthly visitors
- Average monthly income
- Capacity or number of visitor able to accommodate
- Price charged per visitor
- Average monthly occupancy rate
- Total number of employees
- Full time employees

Policies

- Strategies for improving tourism industry in the region
- Policies that facilitate local people to get or create jobs in tourism industry
- Adverse effects of the policy

Data on secondary effects of tourism

- Improvement of culture
- Crimes
- Prostitution
- Conservation of environment