THE MEDIATING EFFECT OF COMMUNITY PARTICIPATION ON TOURISM IMPACTS AND COMMUNITY ATTITUDES TOWARDS TOURISM DEVELOPMENT IN RIMOI NATIONAL RESERVE, KENYA

BY

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MOI UNIVERSITY

2025

DECLARATION

Declaration by Candidate

I declare that this research thesis is my original work and has not been presented for any academic examination in any other University. No part of this research may be reproduced without prior written permission of the author and/or Moi University

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DEDICATION

I dedicate this work to Almighty God, the Creator and Provider of all things, the foundation of knowledge, wisdom, and understanding. I also dedicate it to my husband, Njuguna George, my beloved parents Prof & Mrs. J. Boit, and to my siblings, James, Miriam, and Joanne, for their love, patience, kindness, and continuous encouragement, which strengthened me through the entire process of this work.

ABSTRACT

The success and sustainability of tourism development in a destination community heavily rely on how the local residents perceive it. Meaningful engagement with residents, especially in emerging destinations, is crucial to address their concerns throughout all phases of tourism planning. While existing research extensively explores how tourism directly impacts host communities and their attitudes, a notable gap remains in understanding how community participation influences these dynamics. Therefore, this study aims to examine the mediating effect of community participation on the relationship between tourism impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya. Specifically, the study explored residents' perception of tourism impacts and community participation on community attitudes towards tourism development, determined the relationship between tourism's economic, environmental, and socio-cultural impacts on community attitudes toward tourism development, assessed the mediating effect of community participation on this relationship. Guided by the Social Exchange Theory and the Normative Model of Community Participation in Tourism Development, this mixed-methods study adopted a pragmatic paradigm and employed a convergent design. The target population for the quantitative strand consisted of 548 household heads in the Rimoi community, while the qualitative strand comprised youth residents aged 18-34. The sample size included 231 household heads selected using systematic random sampling, and 10 resident youths selected through purposive sampling. Data collection methods included a survey questionnaire for quantitative data and focus group discussions for qualitative data. Quantitative data was analyzed using frequency tables, percentages, means, standard deviations, hierarchical multiple linear regression and bootstrapping using Hayes PROCESS Macro, while qualitative data was analyzed thematically. Quantitative results showed the following: There was a relationship between tourism economic impacts and community attitudes towards tourism development ($F(4,226) = 11.45$, $p<0.05$) with a significant positive effect ($\beta=.304$, $p<0.05$); there was a relationship between tourism environmental impacts and community attitudes towards tourism development ($F(4,226) = 9.194$, $p<0.05$) with a significant negative effect ($\beta= -.246$, $p<0.05$) and there was a relationship between tourism socio-cultural impacts and community attitudes towards tourism development ($F(4,226) = 30.306$, $p<0.05$) with a significant positive effect ($\beta=.540$, $p<0.05$). Results also indicated that Community participation partially mediates the relationship between tourism impacts and community attitudes, with significant indirect effects for economic (B =.2006, Boot CI [.1212, .2894]), environmental (B = -.0780, Boot CI [-.1271, -.0304]), and socio-cultural impacts (B =.2442, Boot CI [.1617, .3311]). The qualitative findings showed that Rimoi residents are willing to participate in local tourism development, and involvement in tourism decision-making. They acknowledged the positive economic and socio-cultural impacts of tourism but expressed worries about potential environmental degradation. The study concluded that community participation mediates the relationship between tourism impacts and community attitudes. The study recommends promoting sustainable tourism through prioritizing economic benefits, environmental conservation, socio-cultural exchange, community engagement, and ongoing monitoring residents' attitudes.

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OPERATIONAL DEFINITION OF TERMS

The following terms and their operational definitions are used consistently throughout this study:

Attitudes: An individual's subjective feeling of favor or dislike toward a person, object, behavior, issues, event. They encompass positive, negative, or neutral sentiments and can influence behavior. (Adams, & White, 2023).

Perceptions: Perceptions involve the way individuals interpret and make sense of sensory information, experiences, or stimuli from the environment. Perceptions shape how individuals understand and interpret the world around them (Gannon, Rasoolimanesh, & Taheri, 2021.

Change: Any perceivable changes within the host community that has occurred during the course of development (Roberts & Anderson, 2023; Doh, 2010; Gannon, Rasoolimanesh, & Taheri, 2021).

Community: A social group of individuals who identify with a shared place, set of interests, or values, and who interact with each other on a regular basis (Choi, & Jang, 2023; MacKenzie & Gannon, 2019; Adams, & White, 2023).

Residents: They are individuals who live in and are physically present within the community. They are members of the community by virtue of their residence, however not all members of a community are necessarily residents if they

	do not physically reside within the area (MacKenzie & Gannon, 2019).
Growth:	A process of expanding economic, cultural, and social opportunities for locals to empower themselves by building the capacity to control their own lives, thereby creating a more fulfilling existence and improving the quality of life in their communities (Sharpley, 2014; Choi, & Jang, 2023).
Household head	The individual, often the eldest or most responsible member of the family, often the family patriarch or matriarch, who is recognized as the primary decision-maker and bears responsibility for the overall well-being of the household. This designation is typically determined by factors such as age, responsibility, authority, and recognition within the household (Roberts & Anderson, 2023; Gannon, Rasoolimanesh, & Taheri, 2021).
Local Community:	A neighboring, adjacent, or host village, often rural in nature, that serves as an entry point to a national park or reserve and provides essential infrastructure and services for park visitors and operations. These villages often play a crucial role in managing the influx of visitors, facilitating tourism activities, and supporting the sustainable development of the protected area (Choi & Jang, 2023; Gannon et al., 2021; Doh, 2010).

Mediating Variable: A third variable that intervenes in the relationship between two or more other variables, explaining how one variable's influence is transmitted to another (Hayes, 2022).

Participation: This implies that all members actively engage in the decision-making process, participate in resource mobilization, monitor the implementation of jointly made decisions, and hold the power to influence the outcomes of these decisions. Their involvement is voluntary and stems from a desire to contribute to the collective well-being of the community (Tosun, 2006; Sharpley, 2014; Roberts & Anderson, 2023).

Tourism Impacts (Tourism Induced Changes): The net changes, alterations, or modifications (within the host community) that arise during the course of tourism development. These impacts can encompass a wide range of aspects, including economic, social, environmental, cultural, and infrastructural changes (Choi & Jang, 2023; Gannon, Rasoolimanesh, & Taheri, 202; Doh, 2010).

Tourism Development: The process of promoting and improving the tourism potential of a destination in order to attract visitors and establish it as a popular tourist destination.

Sustainable/Well-balanced/Successful Development: Development that meets the needs of the present (United Nations World Commission on the Environment and Development, 1987)

Sustainable Tourism Development: Tourism that considers its present and future economic, social, and environmental impacts, balancing the needs of visitors, the industry, the environment, and host communities, ensures sustainability without compromising the ability of future generations to meet their own needs (UNEP, UNWTO, 2005).

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

This chapter presents the background to the study, the statement of the problem, the purpose of the study, the objectives, the hypotheses, the significance, assumptions, and the scope of the study.

1.1 Background of the Study

Tourism has emerged as one of the largest and fastest-growing industries worldwide, representing a significant social and economic phenomenon (Sharpley, 2002; UNWTO, 2010; WTTC, 2018). It serves as a catalyst for economic growth, inclusive development, and environmental sustainability. Additionally, tourism plays a pivotal role in achieving the Sustainable Development Goals (SDGs), particularly in areas such as poverty eradication, gender equality, job creation, economic growth stimulation, and the reduction of inequalities (UNWTO, 2010; WTTC, 2018). The expansion of tourism has demonstrated its potential to bring various benefits to the communities where it is developed, including economic revival, improved quality of life, and preservation of natural and cultural resources (Gursoy & Rutherford, 2004; Jurowski et al., 1997; Smith & Krannich, 1998; Doh, 2010). Beyond being a direct and indirect source of livelihood for millions, tourism creates local jobs and promotes cultural exchange. However, tourism also leads to socio-cultural, economic, and demographic transformations that can sometimes trigger resistance, conflicts, and negative perceptions among local communities (Howe et al., 1997; Mason & Cheyne, 2000; Durant & Christian, 2006; Deery et al., 2012; Gursoy et al., 2018).

Community attitudes are critical in sustainable tourism development (Egresi & Kara, 2018; Gursoy et al., 2002; Algassim et al., 2021; Rasoolimanesh et al., 2019; Adams &

White, 2023). Residents are generally more supportive of tourism when they are actively involved in decision-making and perceive its benefits positively (Jaafar et al., 2017; MacKenzie & Gannon, 2019; Tosun & Timothy, 2003). Effective tourism planning requires continuous monitoring of tourism impacts to enhance benefits, mitigate negative effects, and implement corrective measures where necessary (Sharpley, 2014; Sakhile & Tembi, 2017; Choi & Jang, 2023). Sustainable tourism development relies on informed participation from all stakeholders, including political leadership, to build broad consensus (Tuso, 2006; Tosun & Timothy, 2003; Lee & Garcia, 2023; Roberts & Anderson, 2023). Community participation ensures equitable distribution of tourism benefits, improves quality of life, and enhances tourism planning outcomes (Tosun, 2001; Doh, 2010). Participatory approaches lead to more efficient use of resources, higher resident tolerance for tourism, and better public service delivery (Alalouch & Al-Smadi, 2023; Tosun, 2006; Rasoolimanesh et al., 2017).

In Tanzania, the top-down approach to tourism development has occasionally sparked resistance. For instance, in Loliondo, Ngorongoro District, an attempt by police and game wardens to demarcate 1,500 hectares of village land as a trophy hunting game reserve led to violent conflicts as residents' resisted eviction (Abulu & Sutherland, 2022). Such cases underscore the need for inclusive community participation in tourism planning. Similarly, in Kenya, the Maasai community residing in Amboseli, Maasai Mara, and Lake Bogoria National Reserves has consistently opposed tourism projects due to land encroachment and unilateral annexation, which they perceive as a threat to their culture and livelihoods (Akama, 1999; Abulu & Sutherland, 2022). However, Kenya's policy framework, including the Constitution of Kenya (2010), the Tourism Act (2011), Vision 2030, and the Wildlife Management and Conservation Act (2013),

advocates for public participation as a fundamental principle in community development and tourism management (GoK, 2010).

Tourism plays a crucial role in rural development, particularly in national parks and reserves, by driving economic growth and shaping community life (Machlis & Field, 2000; Doh, 2010). Vision 2030 positions tourism as a key sector in Kenya's economic transformation, aiming to establish Kenya as a top global long-haul tourism destination. A critical component of this vision is the involvement of devolved county governments in developing attractive tourism sites. As part of Kenya's decentralization, the management of National Reserves has been devolved to County Governments, granting them authority over tourism development within their jurisdictions (GoK, 2010). This shift has increased the need for research into how community participation mediates the relationship between tourism impacts and local attitudes.

Thus, this study seeks to investigate the mediating effect of community participation on the relationship between tourism impacts and community attitudes towards tourism development in Rimoi National Reserve, Elgeyo Marakwet County. Given Kenya's devolved governance framework, understanding how community participation influences tourism sustainability is essential for improving policy implementation and ensuring equitable tourism benefits at the local level.

1.2 Statement of the Problem

The success and sustainability of tourism development in any community depend largely on residents' attitudes and perceptions (Choi & Jang, 2023; MacKenzie & Gannon, 2019; Gannon et al., 2021). Positive community attitudes foster harmonious relationships, align tourism initiatives with local needs, and enhance long-term viability. However, these attitudes are dynamic, shaped by residents' experiences and

interactions with tourism. Early and meaningful community engagement is essential for integrating local concerns and priorities into tourism planning.

Despite this, in many emerging destinations, residents' voices and concerns are often marginalized in planning and implementation processes. Rimoi National Reserve, rebranded as a nature-based tourism destination in 2015, exemplifies this challenge, as local residents' attitudes toward tourism development were largely overlooked in both pre-implementation assessments and subsequent planning stages (MacKenzie & Gannon, 2019; Adams & White, 2023). As a result, there is limited understanding of how community attitudes toward Rimoi's development are shaped by their perceptions of tourism impacts. While research on tourism development in Kenya has explored community participation, it has predominantly focused on well-established destinations, leaving emerging reserves underexplored. This oversight is particularly significant, as understanding community attitudes is a critical factor in ensuring the acceptance and sustainability of tourism initiatives.

Existing literature has largely overlooked the interplay between tourism impacts, community participation, and residents' attitudes in emerging destinations like Rimoi National Reserve (Egresi & Kara, 2018; Gannon et al., 2021; Adams & White, 2023). Although studies highlight limited community involvement in tourism planning within Kenyan reserves, little attention has been given to how participatory practices influence residents' perceptions of tourism impacts and development (Gursoy et al., 2018; Roberts & Anderson, 2023; Gannon et al., 2021). The mediating role of community participation in shaping attitudes remains underexplored, presenting a critical knowledge gap.

This study addresses these gaps by examining the mediating role of community participation in shaping residents' attitudes toward tourism development in Rimoi National Reserve. It also explores how economic, environmental, and socio-cultural tourism impacts influence community perceptions. Methodologically, the study advances tourism research by adopting a mixed-methods approach, integrating both quantitative and qualitative techniques for a comprehensive analysis (Gursoy et al., 2018; Abulu & Sutherland, 2022). Additionally, demographic variables such as age, gender, and education are statistically controlled to enhance the robustness of the findings (Roberts & Anderson, 2023; Gannon et al., 2021).

By placing community attitudes at the forefront, this study contributes to the broader discourse on inclusive and sustainable tourism planning. It provides valuable insights for policymakers, tourism developers, and local communities to ensure that tourism development in Rimoi National Reserve is both sustainable and equitable, fostering long-term benefits for all stakeholders.

1.3 Objectives of the Study

The main and specific objectives of the study were as follows:

1.3.1 General Objective of the Study

This study assessed the mediating effect of community participation on the relationship between tourism impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya.

1.3.2 Specific Objectives of the Study

This research study was guided by the following four specific objectives:

i. To determine the effect of tourism economic impacts on community attitudes towards tourism development in Rimoi National Reserve, Kenya.

ii. To analyze the effect of tourism environmental impacts on community attitudes towards tourism development in Rimoi National Reserve, Kenya.

iii. To assess the effect of tourism sociocultural impacts on community attitudes towards tourism development in Rimoi National Reserve, Kenya.

iv. To assess the mediating effect of community participation on the relationship between tourism impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya.

v. To explore residents' perception of tourism impacts, community participation, and their effects on community attitudes towards tourism development in Rimoi National Reserve, Kenya.

1.4 Research Hypotheses

The following hypotheses were tested after controlling for age, gender, and education covariates.

i. **H_{01}**: There is no significant relationship between tourism economic impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya.

ii. **H_{02}:** There is no significant relationship between tourism environmental impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya.

iii. **H_{03}**: There is no significant relationship between tourism socio-cultural impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya.

iv. **H_{04}:** Community participation has no significant mediating effect on the relationship between tourism impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya.

1.5 Qualitative Research question

How do local residents' perceptions of tourism impacts and their participation influence their attitudes towards tourism development in Rimoi National Reserve?

1.6 Significance of the Study

The study findings provide valuable insights for tourism planners, practitioners, and conservation managers to develop holistic, community-inclusive tourism development strategies that promote sustainable tourism in rural destinations.

The results inform the development of robust tourism policies by key entities such as the Ministry of Tourism and Wildlife (MOTW), the Kenya Wildlife Service (KWS), and the Kenya Tourism Board (KTB). This is achieved by highlighting the impact of tourism development on destination communities and emphasizing the crucial role of resident participation in planning and development.

Furthermore, this study clarifies the constructs under investigation, offering tourism planners, community-based organizations, County Government officials, residents, and other stakeholder’s insights into the most effective measures to promote the overall well-being of communities in tourism destination areas. It also contributes to resolving conflicts between conservation and human use of tourism destinations in rural areas.

From an academic standpoint, this study adds to the limited body of literature on tourism impacts, community participation, and community attitudes towards tourism development in Kenya. It advances our understanding of the mediating role of attitudes towards local participation in the relationship between residents' perceptions of tourism impacts and their attitudes towards tourism development. The study's findings benefit tourism scholars and practitioners by generating new knowledge and informing future research.

1.7 Assumptions of the Study

To enhance the reliability of the findings, minimize potential biases, and foster a deeper understanding of the intricate relationship between tourism impacts, community participation, and community attitudes towards development, this study is grounded in the following assumptions:

The researcher anticipated respondents' willingness to participate, cooperate, and provide honest information. To encourage participation, assurances of anonymity and confidentiality were provided. Rapport and trust were established during the reconnaissance visit and fieldwork through the demonstration of empathy, respect, and understanding. The involvement of community-based research assistants further facilitated positive relationships and encouraged participation.

The assumption was that respondents fully understood the questions, and the research instruments produced reliable and valid responses. The instruments underwent a pilot test with a similar sample, not from the target population, to identify and address potential issues that could lead to biased results. Subsequently, the instruments were revised and, when necessary, translated into Kiswahili or Kalenjin languages for administration by research assistants. Ambiguous questions were rephrased for clarity, using simple language without jargon. Research assistants underwent training to effectively administer the instruments, provide examples for complex concepts, and address questions from respondents.

The study operated under the assumption that community residents possess a clear understanding of their community and the potential impacts of tourism. It was believed that community participation serves as an effective means to influence tourism development for the community's benefit. Consequently, the study engaged household

heads because they are the primary decision-makers and providers experiencing direct impacts. Utilizing a mixed-method approach, including focus group discussions, provided a platform for community residents to express their perspectives, fostering a clearer and more in-depth understanding of community dynamics, feelings, and views. This approach also aimed to dispel potential misconceptions or misunderstandings about the study's purpose

1.8 Scope of the Study

This study investigated the mediating effect of community participation on the relationship between tourism impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya. The research was guided by the Social Exchange Theory (SET) and the Normative Model of Community Participation (NMCP) in tourism development.

The study adopted a mixed-methods research methodological framework underpinned by the pragmatist paradigm worldview and a complementary mixed-methods convergent one-phase research design. It was conducted at Rimoi National Reserve, a nature-based destination in Elgeyo Marakwet County, Kenya, rebranded as a National Reserve from a Game Reserve in 2015.

The target population from which the sample was drawn consisted of 548 household heads in the community adjacent to Rimoi National Reserve, identified based on the 2019 Kenya Population and Housing Census (GoK, 2019; EMCK, 2018). Additionally, a maximum of 10 key informants were included for qualitative focus group interviews. Data collection spanned a period of two months, from mid-August to mid-October 2023. The study hypotheses were tested using Hierarchical multiple linear regression analysis.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter discusses the concepts of attitude towards tourism development, impacts in tourism development, community participation, and reviews pertinent literature on attitudes towards tourism development, tourism impacts, community participation, presents the summary of literature and identified research gaps, the theoretical framework, model of community participation in tourism development, and conceptual framework.

2.1 The Concept of Attitudes in Tourism Development

The term attitudes can be defined as readiness to act; mental posture, guide for conduct, feelings, desires, fears, convictions, a state of readiness, a cumulative perception; a tendency to act for or against an object in the environment; frames of reference that influence behavior (Li, & Qi, 2023; Adams, & White, 2023). The term originates from the Latin word aptus, which refers to a mental or psychological state of readiness for action. Attitude reflects how an individual feel about something and provides a predetermined set of responses, so that a person's behavior or opinions can often be forecast in specific circumstances. It is based on the individual's experience and interpretation of it and leads to certain behaviors or opinions (Alqasa *et al*., 2014; Adams, & White, 2023).

Attitude affects the behavior of a person or an organization. It has been associated with the notion of 'liking' or 'disliking' someone or something. Attitudes are inner expression or feelings that reflect whether a person is favorably or unfavorably predisposed to a product or brand or establishment (Ajzen, 2013; Ajzen, 2015). One of the earliest and notable psychologists, Allport (1935) defined attitudes, as "learned

predispositions to respond to an object or class of objects in a consistently favorable or unfavorable way". Alqasa et al. (2014) state that an individual's attitude toward a behavior indicates whether they view the conduct as positive or unfavorable. People who have a strong positive disposition towards a task are more likely to react positively, whereas people who have a negative disposition are more likely to react adversely (Li, & Qi, 2023). Therefore, in a tourism context community attitude towards tourism impacts, community participation and tourism development can create a positive or a negative perception which may influence community resident's support for tourism development in their areas.

Fishbein & Ajzen (1975) defined attitude as an individual's ongoing assessments, sentiments, and approval or disapproval of a certain good, person, or thing. It is a comprehensive assessment of a very particular behavior that is specified with regard to action, goal, context, and time (Vishnumolakala *et al*., 2017). The implication is that attitudes are learned based on some experience with or information about the object, are generalized predispositions and reside in the mind of the individual and precede and produce behavior. This is the conceptual meaning of attitude.

In a tourism context, when the community has the authority to shape projects and engage in the decision-making process of tourism development, they gain insight into community affairs, fostering more positive attitudes toward tourism development. The operational definition of attitude depends on questionnaires for measurement. Thus, tourism impacts, community participation, and community attitudes toward tourism development are assessed using questionnaires employing five-point Likert and staple scales, respectively. Affective and cognitive components can be inferred through these scales.

Measurement of attitudes is generally based on the expressions of opinions (Asiegbu *et al*. 2012, Látková & Vogt, 2011; Cardoso & Silva 2018; Adams, & White, 2023). For example, in this study residents were requested to indicate whether they are generally in favour of or opposed to tourism development in their area by circling an appropriate number (1 = strongly disagree, 2=disagree, 3= neutral, 4= agree, 5 = strongly agree); rate how their feel about community participation the following statements by circling the appropriate response in the questionnaire. According to Ajzen, (2015) people have attitudes toward almost everything: institutions, persons, religion, politics, food, music, clothes, and others. Generally, attitudes are identified by their distinct characteristics. For example, if a researcher in a tourism study is interested in knowing about resident's attitudes towards tourism development in rural communities (object) then the study could include the various nature attractions and their influence on the destination community. This is referred to as the attitude object. Individual may strongly or weakly hold an attitude based on evaluation and continuous assessment.

Attitudes are acquired in the same way culture is acquired, through classical and operant conditioning and social interaction (Li, & Qi, 2023). In marketing just as in tourism attitudes may be formed (or learned) through direct experience with the product, word-of-mouth, from mass media advertising, from retail outlet leaflet, and internet.

Alqasa *et al*., (2014) and Fishbein & Ajzen, (1975) argue that attitudes are dynamic and can change. Individuals do not hold the same attitudes now like they did when they were younger. Individuals are constantly modifying attitudes based on their experiences and acquiring new attitudes as they encounter new attitude objects. Sometimes, attitudes are affected by events or circumstances at a particular point of time which can influence the relationship between an attitude and behaviour. While some attitudes are more and more resistant to change and may stay with an individual throughout their

lives, while others may change from week to week (Vishnumolakala *et al*. 2017; Asiegbu *et al*. 2012). And it is for this reason that impact studies and community attitudes in tourism destination areas need to be analyzed to see how the development of tourism influences the attitudes of the local community not only for the overall success of tourism development but also to assess the long-term benefits to the host community (Kihima, 2015; Almeida-García, Peláez- Fernández, Balbuena-Vazquez & Cortes-Macias, 2016).

Tourism development and corresponding impacts result in changes in the community values, residents' behavior, lifestyles, perception, and attitude. The attitude of the community towards tourism development is critical in the management of both the desirable and undesirable effects of the numerous and diverse induced impacts on the growth and sustainability of tourism. Tourism impact analysis of tourism development outcomes and attitude of the community prior to new or further development of any rural tourism destinations is critical as attitudes are dynamic and can change. No community resident can hold the same attitudes now like they did when they were younger (Vishnumolakala *et al*., 2017; Asiegbu *et al*. 2012; Cardoso & Silva, 2018).

A family has a profound influence on the attitudes of individuals. Anything that an individual learns about the world, including attitude formation is from their mother through the process of socialization (Ajzen, 2011; Li, & Qi, 2023). Furthermore, the family has certain attitudes and values, which are shared by all other persons. In addition, family mediates the influence of larger social systems on the individual's attitudes, values, and personality characteristics. The reference group influences learning of behaviour alternatives, values, norms, attitudes, opinions, and beliefs of the members of the group. The social factors transmit cultural behaviour patterns and expectations to specific groups, families, and individuals. While social classes have

important influence on individual’s attitudes between individuals of differing social classes.

Fishbein and Ajzen (1975) suggest that attitudes essentially stem from various values, indicating that value serves as a crucial determinant of attitude. Some scholars, such as Jurowski et al. (1997) and Li and Qi (2023), have proposed that individuals' concerns regarding the environment, culture, and economics directly influence community attitudes. It has been posited, for instance, that those who prioritize nature are less tolerant of environmental impacts compared to those with lower levels of concern. Values represent the core of an individual's belief system and are interconnected with numerous other beliefs and attitudes. While individuals sharing similar social and cultural backgrounds often have similar values, variations in their attitudes and behaviors can arise due to differences in their value orientations (Fishbein & Ajzen, 1975).

2.2 The Concept of Tourism Impacts

Successful tourism development necessitates the consideration of current and future economic, social, cultural, and environmental impacts. It should strive to maintain a high level of tourist satisfaction, provide meaningful experiences for tourists, and address the needs of the industry, the environment, and host communities (Moghavvemi et al., 2017; Sakhile & Tembi, 2017; Thompson et al., 2018; Choi & Jang, 2023; Cardoso & Silva, 2018).

The effects of tourism extend beyond the immediate outcomes of a particular tourist activity or facility (Almeida-García et al., 2016; Olya & Gavilyan, 2017). They arise from ongoing processes of transformation. These effects evolve over time in response to shifting preferences among tourists and structural changes within destination areas.

Algassim et al. (2021) assert that these impacts manifest as changes in human attitudes and behaviors, resulting from the interaction between catalysts of change and the systems they disrupt (Olya & Gavilyan, 2017). Consequently, the impacts of tourism stem from intricate interactions among tourists, host communities, and destination environments.

The expansion of tourism, whether in urban or rural settings, is frequently advocated as a means to revitalize the local economy and foster additional economic expansion (Lee & McCormick, 2012; Nicholas, Thapa, & Ko, 2009). Research indicates that community members often turn to the tourism and hospitality sector to address their economic, social, and psychological requirements, thereby enhancing their overall quality of life (Kumar, 2007).

Studies in sustainable tourism development research have identified a variety of distinct yet interconnected factors that influence community attitude towards tourism and tourism development among community residents (Látková & Vogt 2012; Rasoolimanesh *et al*. 2015). They noted that a developing tourism industry induces changes that either individually or often in combination influence the support of tourism in destination communities (Choi, 2003; Almeida-García, *et al*., 2016). They noted that changes included community attitude towards participation, environmental and cultural attitudes, residents' sense of community attachment and the effect of economic gain (Besculides, Lee, & McCormick 2012; Nicholas, Thapa, & Ko 2009; Látková & Vogt 2012; Olya & Gavilyan 2017; Dyer, Aberdeen & Schuler, 2007). Tourism impacts varied based on the attitude and perception generated from the development.

Aside from its positive effects like bolstering local economies, creating job opportunities, generating foreign exchange, and increasing local income, tourism

development can also lead to negative consequences (Ko & Steward, 2002). Depending on the individual benefits experienced by the local community, some residents may perceive tourism as having adverse social and cultural effects, while others may view it positively for its economic, social, and cultural contributions. These perceptions significantly influence how residents perceive the impacts of a burgeoning tourism industry and can play a crucial role in fostering a harmonious relationship between residents and the expanding tourism sector (McCool & Martin, 1994; Almeida-García et al., 2016; Olya & Gavilyan, 2017). Nevertheless, it is generally observed that as the level of tourism in a community rises, residents' attitudes toward its impacts tend to become less favorable (Allen et al., 1998; Sharpley, 2014).

Tourism induced changes or impacts are the costs and benefits that are generated by tourism development. They are also considered to be the negative and positive changes within the community, brought about by the influence of tourism development (Moscardo, 2015). As tourism increases, so too, are the induced impacts on the surrounding communities.

According to Sharpley, (2014) & Rasoolimanesh, Jaafar, Kock & Ahmad, (2017) tourism development and corresponding impacts result in changes in the community values, residents' behavior, lifestyles, perception, and attitude. Tourism development offers a pathway to relatively modest yet sustainable economic growth for locally owned businesses, presenting an alternative avenue to traditional rural activities and employment for rural workers (Long & Lane, 2000; Jason et al., 2020). Furthermore, tourism can influence social dynamics by encouraging in-migration and attracting urban entrepreneurs (Machlis & Field, 2000), which in turn may have ramifications for the environment and rural ecosystems.

As previously noted, tourism development manifests a dual nature, yielding both positive and negative impacts on a destination, thereby directly shaping the trajectory of the tourism industry. Consequently, the active engagement and participation of the local community are imperative for the efficacy of tourism development strategies. Favorable attitudes from locals can amplify tourist satisfaction and foster positive word-of-mouth promotion (Lee & McCormick, 2012; Nicholas, Thapa, & Ko, 2009; Rasoolimanesh, Jaafar, Kock & Ahmad, 2017).

Moreover, tourism has the potential to improve quality of life by generating direct and indirect employment opportunities across various sectors, leading to a multiplier effect. This occurs as local residents spend their wages within the community, further stimulating the local economy and creating additional employment prospects (Frechtling & Horváth, 1999; Vosssoughi, Khani, Langroodi, & Rahnamaee, 2012).

Past studies into the impacts of tourism primarily emphasized its economic incentives and advantages, often overlooking or minimizing the environmental deterioration and cultural or social disruptions frequently associated with its continual expansion. When tourism development is examined within economic, environmental, and socio-cultural frameworks, it poses challenges that local residents must confront. Consequently, as communities experience unforeseen social, economic, cultural, and environmental shifts due to tourism, the analysis of tourism's impact gradually gained prominence in subsequent studies related to the industry (Látková & Vogt, 2012; Olya & Gavilyan, 2017; Almeida-García et al., 2016).

2.3 The Concept of Community Participation

Participation is a very broad concept that means different things to different people with a contested meaning and application (World Bank, 1995, Roberts, & Anderson, 2023;

Kely, 2001; Lee, & Garcia, 2023). And often used by people with different ideological positions (Alalouch, & Al-Smadi, 2023: Pelling, 1998; Roberts, & Anderson, 2023). Participation is described as encompassing actions such as contributing, influencing, sharing, or redistributing power, as well as controlling resources, benefits, knowledge, and skills, which beneficiaries gain through their involvement in decision-making processes (Li & Qi, 2023; Alalouch & Al-Smadi, 2023).

At the most basic level, participation means people being involved in decisions that affect their lives (Kely 2001; Alalouch, & Al-Smadi, 2023; Lee, & Garcia, 2023). The underlying commonality to all the definitions is the role of community in decision making. Hence, participation is often referred to as community participation (Ndekha, *et al*., 2003; Roberts, & Anderson, 2023).

Questions abound as to whether participation is a means or an end, or both (World Bank 1995; Alalouch, & Al-Smadi, 2023; Lee, & Garcia, 2023; Roberts, & Anderson, 2023). Conceptually participation is considered as a means to defined ends, not as an end. Meaningful participation is about optimizing participation to achieve the desired project goals and not maximization of participation. Alalouch, & Al-Smadi, (2023) point out that the overall objective or goal of community participation is twofold. As a mechanism to empower and facilitate improvement in the lives of the world's poor people and disadvantaged. For example, the desired goals in a tourism development context in rural communities could include: assisting the community to have a better grasp, understanding and a more positive attitude towards tourism development, be able offer solutions to tourism impact related issues, enhancing community support and agreeable attitudes toward tourism development, reduce resistance, hostility, negative perception, conflict and feelings of dependency by the host community to change (Durant & Christian 2006; Li, & Qi, 2023; Lee, & Garcia, 2023), economically

empower residents with entrepreneurial knowledge and skills to benefit from tourism, promoting the economic, social, environmental and infrastructural development of the residents but also better meeting the needs of tourists (Park & Oh, 2019; Thongma, Leelapattana & Hung, 2011; Lee, & Garcia, 2023), and developing the human, organizational, and management capacity to address challenges as they arise to sustain development.

In a tourism context, community participation is understood to mean a voluntary process by which people influence or control the decisions that affect them. In other words, the principle underlying participation is giving the community the voice and opportunity to exercise choices.

Sustainability of participation relies on reducing transaction costs in both horizontal and vertical interactions (World Bank, 1995; Lee & Garcia, 2023). Bramwell and Sharman (1999) delineate participation in development along a continuum, from passive engagement where individuals are simply informed about projects, to self-mobilization where they independently initiate actions without external influence. The authors advocate for functional participation, wherein local communities organize into groups to accomplish specific goals related to development endeavors. This type of engagement promotes fairness, guarantees improved living standards for all, and diminishes disparities in exchange.

Therefore, to devise more pragmatic and effective strategies for sustainable tourism development, particularly in rural areas, managers and planners must acknowledge and manage the impacts of tourism associated with development (Burns & Holden, 1995; Alalouch & Al-Smadi, 2023; Li & Qi, 2023; Nozick, 1993; Owen et al., 1993; Lee & Garcia, 2023). Participation occurs across various levels, including global, national,

subnational, community, and household levels (Li & Qi, 2023; Roberts & Anderson, 2023).

In a tourism context, the focus is on the participation of the community residents who are beneficiaries of the change brought about by local tourism development projects. Hence, the characteristics of the residents are important because they influence the type of participation that occurs. Participation is associated with financial, social, and psychological costs as well as benefits. Individuals or beneficiaries are liable to participate when benefits outweigh costs (Alalouch, & Al-Smadi, 2023; Li, & Qi, 2023; Lee, & Garcia, 2023).

In addition, participation is associated with four main objectives namely: effectiveness; efficiency; empowerment; and equity. Participation facilitates effective resource mobilization, site selection, better project design, implementation, and maintenance of facilities beyond the life of the development project (Li, & Qi, 2023; Owen *et al*., 1993; Roberts, & Anderson, 2023; Lee, & Garcia, 2023). Efficiency is about the relationship between cost and inputs of a given output. Participation engenders discussion, consultation, and information sharing and is likely to produce greater clarity about roles, authority, and ownership than would otherwise be possible (Ndekha, *et al*., 2003; Kelly, 2001; Lee, & Garcia, 2023; Roberts, & Anderson, 2023). In the context of this study it implies there will be less conflicts and delays, resulting in smoother implementation and lower overall costs of development. The spin over effects will be quick identification of land ownership rights and timely acquisition of land permit, quick construction, and completion of intended tourism development projects (Thongma, *et al*., 2011). This will stem conflicts like those that have been witnessed in the Amboseli and Maasai Mara game reserves where the local community resisted the development of Tourism projects (Alalouch, & Al-Smadi, 2023; Abulu & Sutherland

2022; Lee, & Garcia, 2023; Roberts, & Anderson, 2023). Others have been fatal like the case at Loliondo, Ngorongoro District, Tanzania where police and game wardens attempted to demarcate a 1,500 hectares of village land as a game reserve for trophy hunting and the community resisted eviction resulting in violence, loss of life and property.

2.4 Attitudes towards Tourism Development

The concept of attitudes toward tourism development has been extensively examined within the field of tourism studies. In this context, attitude refers to the beliefs held by individuals, which can either be supportive or opposed to a particular object (Choi & Jang, 2023; Kanouse, 1984; Adams & White, 2023). These attitudes serve as reflections of individual values (Rokeach, 1973; Dillette et al., 2017; Algassim et al., 2021). Values aid individuals in adapting to society and in protecting their self-esteem amidst conflicts between their inner selves and the external world, as posited by Katz (1960).

Tourism development encompasses economic, environmental, socio-cultural, and infrastructural dimensions, all of which can potentially influence the attitudes of local residents toward tourism development in tourism-related areas, either positively or negatively (Alrwajfah et al., 2019; Dillette et al., 2017; Rivera et al., 2016; Choi & Jang, 2023; Zamani-Farahani & Musa, 2012).

Empirical studies have underscored the significance of a favorable community stance toward tourism to secure the long-term sustainability of the industry across commercial, socio-cultural, psychological, political, and economic dimensions (Dillette et al., 2017; Rivera et al., 2016; Sharpley, 2014). The involvement of the host community is pivotal in shaping tourism development endeavors, necessitating collaboration with governmental bodies and other stakeholders to foster growth and advancement within

destination regions (Hadinejad *et al*., 2019; Egresi & Kara, 2018; Othman & Awang, 2009; Adams, & White, 2023). Most tourism literature have consistently argued that it is important to promote positive attitudes and perceptions among residents of destination communities as this affects their support for tourism development based on their perception of the benefit generated from the development (Li, & Qi, 2023; Nchor, Ebu, & Odey, 2021; Runya, et al., 2022). Algassim et al. (2021) claim that perceptions of future trade-offs between variables affecting a host community's future have an impact on community sentiments. It is therefore important to understand, for a sustainable tourism industry, communities' awareness, views, opinions and attitudes about tourism, its related benefits and costs and their support for tourism development in their areas.

Numerous factors, including community attachment, the local economic condition, community interests, participation levels, eco-centric attitudes, and environmental concerns regarding the utilization of tourism resources by locals, have been recognized as influential in shaping residents' attitudes toward tourism, its growth, and community backing for tourism (Gursoy and Rutherford, 2004; Ko & Stewart, 2002; Rasoolimanesh et al., 2015; Adams & White, 2023).

This study also included some contextual factors as they have been found to influence residents' attitudes towards tourism development. These factors range from place of residence, demographic factors or personal factors such as level of education to working experience. In their study Algassim, *et al*., (2021; Adams, & White, 2023) residents' attitude were influenced because some saw tourism development as an opportunity to find a job while others as an opportunity to invest and conduct joint ventures with foreign companies. In the current study gender, level of education and age are being controlled because they are confounding variables that can affect the effect size of the

predictors in this case tourism impacts and community participation. Rivera et al. (2016); Choi & Jang (2023) state that a number of frameworks, including as compensation, play, conflict, the "intrinsic/extrinsic" dichotomy, and dependency theories, have been utilized to investigate local community views regarding tourism growth. Recent reviews (Hadinejad et al., 2019; Egresi & Kara, 2018; Gursoy et al., 2002; Nunkoo and Gursoy, 2012; Nunkoo & Ramkissoon, 201; Kieti, et al., 2013 Almeida-García, Peláez-Fernández, Balbuena-Vazquez & Cortes-Macias, 2016) have revealed that the most widely used framework is based on social exchange theory.

In order to comprehend and investigate the significance of interactions between different groups, the host, and the visitor, tourism academics have employed set theory (SET) (Boley et al., 2014; Sharpley, 2014; Látková & Vogt 2012; Rasoolimanesh et al. 2015; Adams & White, 2023). to explain a communication process that takes place between locals and other tourism industry stakeholders (Thompson, et al., 2018). Additionally, to gauge locals' opinions of the growth of the tourism industry (Moghavvemi, et al., 2017; Tosun, 2001; Rasoolimanesh, et al., 2019).

Actors in a relationship try to get the most out of their interactions with other people while minimizing their expenses. When locals in destination areas believe that the advantages of tourism growth outweigh the drawbacks, they are more inclined to get involved. People who see more benefits from tourism will be in favor of it, whereas people who see fewer benefits from tourism are less likely to be in favor of it (Choi & Jang, 2023; Rasoolimanesh et al., 2019; Adams & White, 2023). SET offers a framework for comprehending tourism relationships, interactions, and transactions in the context of tourism development (Sharpley, 2014; Látková & Vogt 2012).

In accordance with SET the ability to profit from an exchange depends on the exchange resources that the actors bring to the exchange (Li, & Qi, 2023). A mutually satisfying interdependence may emerge when resources are reasonably equal. On the contrary if one of the actors has substantially fewer exchange resources, then the actor's ability to profit from the exchange can be sharply restricted. Exchange relations that get too far out of balance may lead to unstable relationships that could have negative consequences to the individuals or between tourist and host. In the context of tourism development this could lead to resistance, hostility, negative perception by the host community to change, conflict and feelings of dependency (Durant & Christian 2006; Adams, & White, 2023).

SET has been widely utilized to study destination communities' perceptions of tourist development (Rasoolimanesh et al., Látková & Vogt 2012). Some academics, however, have taken issue with SET's emphasis on comparing relationships to financial transactions (Boley et al. 2014; Sharpley 2014; Gannon, Rasoolimanesh, & Taheri, 2021). They contend that the combination of factors influencing locals' opinions of tourist development cannot be adequately explained by SET alone (Rasoolimanesh et al. 2015; Adams & White, 2023).

A number of local community features, such as the specific groups that gain from the development, have an impact on attitudes regarding tourism development. Locals who perceive no personal gain from tourist development in their area are inclined to be against it (Latkova & Vogt, 2012; Saufi et al., 2014). Consequently, they might actively assist social tourism enterprises that produce tangible or perceived advantages for local residents (Choi & Jang, 2023; Khanom et al., 2019).

Another further factor impacting the opinions of locals is the ability to direct how tourism resources are used or developed. Host communities may be prepared to share their tourism resources with domestic or foreign visitors if they are involved in the development decision-making process (Gursoy et al., 2002; Gursoy & Rutherford, 2004; Nchor, Ebu, & Odey, 2021). Tourist participation and advantages are more likely to accrue to empowered citizens (Boley et al., 2014; Khanom et al., 2019; Sakitri, 2018). Economic, social, psychological, or political empowerment are all possible (Khanom et al., 2019). Saufi et al. (2018) state that in order for locals to gain from tourism and experience economic empowerment, they must possess entrepreneurial knowledge and abilities. Residents can create unique goods and services, as well as a unique positioning and identity, with the aid of social unity (Bennett & Gordon, 2007; Dahles, 2001; Sakitri, 2018). Political empowerment can result from social and economic empowerment (Khanom et al., 2019; Adams & White, 2023).

However, certain host communities perceive tourism as having adverse effects on their local culture and resource distribution with visitors (Gursoy & Rutherford, 2004; Jason et al., 2020; Adams & White, 2023). Latkova & Vogt (2012) argue that the level of engagement in the tourism industry does not significantly predict the impacts of tourism. These discrepancies in attitude may stem from diverse expectations of benefits within the population (Andereck et al., 2005; Gursoy & Rutherford, 2004) or anticipation of enhancements in local public services.

The perceived power of residents relative to industrial power influences local sentiments toward development. If the community believes it wields influence over the direction and extent of industry growth, it is more inclined to express interest in and hold a positive attitude toward tourism and its development initiatives (Lindberg & Johnson, 1997; Sakitri, 2018; Khanom et al., 2019). Similarly, Gannon, Rasoolimanesh,

and Taheri (2021) suggest that attitudes toward tourism are associated with the local population's ability to shape decisions regarding future tourism development.

Resistance by the host community to change often occurs when there is a feeling that there are no longer in control of their local life, their autonomy is threatened, the environmental and socio-cultural costs outweigh their economic benefit and realize that they are receiving limited and unequal benefits from tourism although they must live with its negative consequences (Tosun, 2001; Ravikumar, Al Subhi, & Meesala, 2022; Rasoolimanesh, *et al*., 2019). However, they demonstrate interest and a more positive attitude toward tourism development when they perceive that there are benefiting.

In order to manage both the desired and unfavorable effects of the many and varied induced influences on the expansion and sustainability of tourist development in the destination towns, the attitude of the community is essential. Examining how tourism development affects local perceptions might help the host community in the long run as well as contribute to the success of tourist development overall (Kihima, 2015; Almeida-García, Peláez-Fernández, Balbuena-Vazquez & Cortes-Macias, 2016). And makes the tourism planning process more effective, equitable and legitimate (Sebele, 2010; Adams, & White, 2023). Before any real tourism development strategy can be further formed in this area, examination of the results of tourism development in communities must proceed. As tourism development advances it causes negative perceptions in the host community making the residents oppose further development in their areas (Gursoy & Rutherford, 2004; Mason & Cheyne, 2000; Snaith & Haley, 1999; Adams, & White, 2023).

The collaboration and goodwill of the local populace are essential for the tourism industry to succeed in a given location, particularly when sustainability is considered

(Yoon et al., 2001; Adams & White, 2023). For any tourism venture to be deemed successful, it is imperative to ascertain the attitudes of the local community towards tourist-related trade. The level of excitement with which citizens participate in tourism has been cited as a critical component of sustainable tourism development (Okazaki 2008).

2.5 Tourism Impacts

As mentioned earlier, tourism's influence on local communities typically spans three main dimensions: environmental, sociocultural, and economic. Research has delved into both the positive and negative impacts of the tourism industry, as well as its role in shaping the perspectives of local residents engaged in tourism activities. There is an increasing awareness of how these three factors impact and shape host communities and their inhabitants (Alamineh, Hussein, Endaweke, & Taddesse, 2023; Halim, Mawa, Deb, & Nafi, 2022). Figure 2.1 illustrates an example of the impacts of tourism development on the local community.

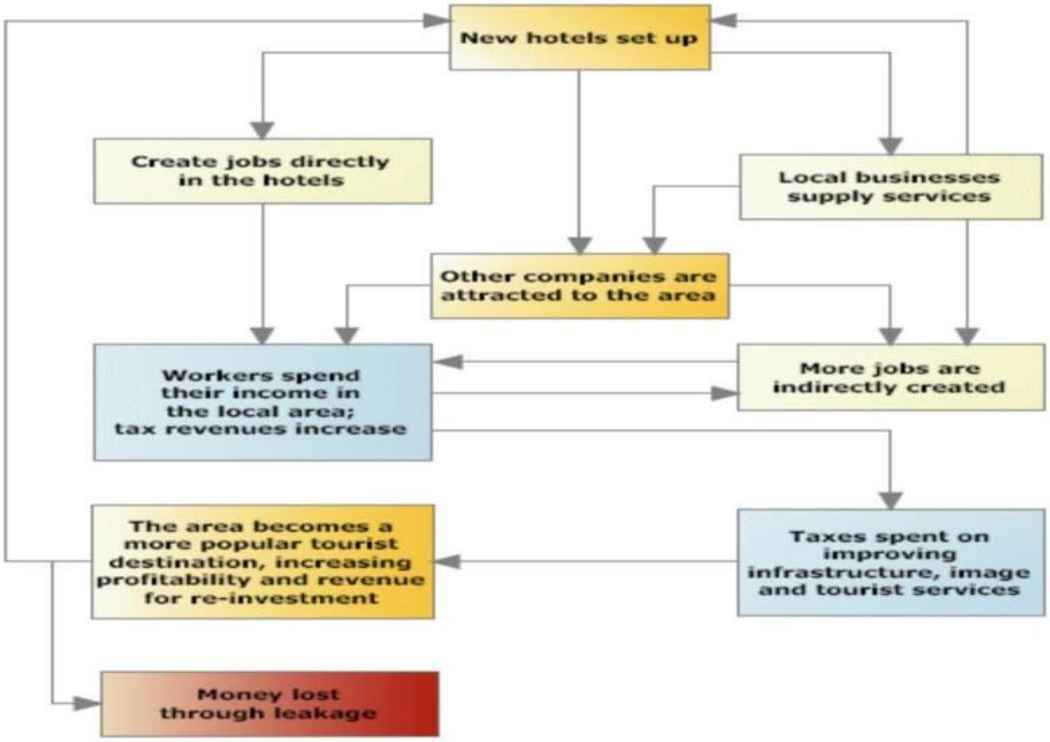


Figure 2.1: Tourism development impacts on the local community

Source: Adopted from Briedenhann & Wickens (2014)

2.5.1 Economic Tourism Impacts

There are many different and extensive ways that tourism affects a host community's economy. Both favorable and unfavorable economic effects exist. According to studies (Briedenhann & Wickens, 2004; Ghaderia et al., 2020; Zamani-Farahani & Musa, 2012), employment opportunities are generated both directly and indirectly, at both macro and micro levels, by hotels, resorts, entertainment establishments, and through the provision of goods and services by the host community to other indirect and informal businesses associated with tourism. Other job opportunities that are created include transportation, tourist guides, and tourism security. Outside the sector, job opportunities are also created in agriculture, food, and health care services. For instance, in Kenya, the Ol Pejeta Conservancy provides employment opportunities through wildlife conservation and ecotourism, which directly benefits local

communities and supports conservation efforts (Letoluo, & Wangombe, 2018; KIPRA, 2021).

Hanafiah, Jamaluddin, and Muhammad's (2013) study on the attitudes and support of the local community towards the growth of tourism on Tioman Island, Malaysia, revealed a significant beneficial economic impact of tourism on the local community. They centered on the burgeoning local tourism-related enterprises, the effective establishment of numerous job possibilities for the island's populace, the improvement of the economic climate, and the rise in living standards. The residents acknowledged, however, that their living costs had increased due to the development of tourism. This is a negative economic impact. However, they agreed that economic benefits outweighed its costs. Residents of the destination reported that there would be direct revenue from tourism and that they could engage as employees or business owners in a study by Algassim et al. (2021).

The local and national economies are also strengthened by foreign exchange revenues. Kenya, for instance, reported a substantial increase in tourism-related revenues, reaching 268.09 billion Kenyan shillings ($2.13 billion) in 2022. These earnings contribute to the country’s GDP and support the growth of various sectors, including hospitality, transport, and retail (GOK, 2022). All sectors are encouraged to improve their infrastructure, and the money raised is utilized to support the expansion of other industries (Bauer, 1999; Hadinejad et al., 2019; Vosssoughi et al., 2012). Taxes imposed on goods and services provided to visitors also help the government raise money, which is then utilized to build infrastructure, including water and sewage systems, transportation networks, and other utilities, as well as the local economy (USIP, 2009). Kenya has successfully leveraged tourism to develop infrastructure, such as the expansion of Moi International Airport and the construction of the New Nyali

Bridge, which has facilitated increased tourist arrivals and boosted business activities in the coastal region (Ondieki et al., 2024; KIPRA, 2021).

Because of the obvious and advantageous economic benefits, many developing nations and the local communities within them work hard to market themselves as tourist destinations. According to Rasoolimanesh et al. (2019), the growth of tourism in rural regions brings in additional revenue for the community, which they may use to fund plans for future tourism development and the preservation of the area's tourist assets, thereby ensuring the area's sustainability. In Kenya, regenerative safari tourism has emerged as a sustainable economic model. Safaris in northern Kenya, particularly in conservation-focused establishments like Sasaab and Lengishu, generate revenue that supports black rhino conservation, reforestation, and community development projects. This ensures long-term economic and environmental benefits (Ondieki et al., 2024). Studies also reveal that local communities do not always benefit economically, which has a direct bearing on the opinions that the public has about the sector. According to Konadu-Agyemang (2001), developing countries frequently depend on foreign investment to support the growth of the tourism industry. As a result, a large portion of the generated income leaves the developing world and goes to the foreign investor. Known as "leakage," this phenomenon accounts for as much as half of the tourism industry's earnings from sites in poor nations. Leakage is unavoidable as a result of globalization and developing nations' incapacity to provide the infrastructure required for the development of tourism (UNCTAD, 2010); the more dependent an economy is on tourism, the greater the leakage (Weaver & Lawton, 2002; Jason et al., 2020). Stronger locally oriented tourist development that promotes community involvement can help stop leakage (Honey, 1999; Burns, 1999; Brohman, 1996; Lee & Garcia, 2023; Roberts & Anderson, 2023). In Kenya, community-owned tourism enterprises, such as

those supported by the Kenya Wildlife Conservancies Association (KWCA), help ensure that revenue remains within local communities. The Maasai Mara conservancies, for example, have established land leasing programs that compensate local landowners while promoting sustainable tourism (Letoluo, & Wangombe, 2018).

Since local communities, particularly those in rural areas, frequently lack the resources to invest in tourism development, cooperatives that pool funds from a large number of members of the public help acquire the necessary capital. Consequently, funds stay within the community, and the ensuing multiplier effect guarantees that the local community continues to benefit economically from tourism (Letoluo & Wangombe, 2018). The resultant increased hands-on participation encourages the host community to have positive attitudes regarding tourism.

Despite this, the people's financial gains from tourism growth are constantly fluctuating and impacted by circumstances that are frequently beyond their control. Economic downturns, like the one that occurred in 2008, have been demonstrated to directly affect inbound tourism flows in developing nations, which has led to a sharp decline in tourists visiting these destinations globally (Ritchie et al., 2010; Vossoughi et al., 2012). The tourism industry is also particularly susceptible to shifts in global demand, and a downturn can have a catastrophic impact on the local economy. Because employment is frequently not guaranteed from one season to the next, seasonality in tourism adds to the volatility of the tourist industry in developing nations (Marcouiller, 2008; Olya & Gavilyan, 2017). This results in job and income insecurity.

2.5.2 Environmental Tourism Impacts

Any given area's growth and development of tourism depends heavily on its natural and man-made environments. As a result, the tourism industry and the environment have a

complex interaction because of the various activities that continue as a result of tourism commerce (Cheng et al., 2019; Doh, 2010; Boley et al., 2014; Sharpley, 2014; Látková & Vogt 2012). Depletion of natural resources, which frequently results from tourism development, is one such effect. The physical effects of their removal and transportation are substantially increased by the extraction of these resources for the construction and upkeep of tourism resorts and all accompanying amenities (Crouch & Ritchie, 1999; Ritchie et al., 2010).

Furthermore, because tourism is a seasonal industry, local people may experience difficulties in getting access to these resources during peak season due to limited or nonexistent availability (Rasoolimanesh et al. 2015; Thompson et al., 2018). The expectations held by visitors regarding the tourist destinations they visit, coupled with prevailing trends, can worsen the problem and impose significant strain on local resources. Water is often needed for swimming pools, golf courses, and hotels, which raises wastewater output, deteriorates the local water supply, and frequently results in shortages that impact the community (Rasoolimanesh, et al., 2019).

The average visitor to hot climates is thought to use ten times as much water as they do at home, which frequently surpasses the amount used by locals and tends to disadvantage them because excessive water use and the resulting runoff have a detrimental effect on the water supply (Thompson, et al., 2018; Doh, 2010; Ritchie et al., 2010).

The expansion of land clearing and construction for new hotels and infrastructure such as airports and entertainment centers also impact the surrounding flora and fauna. At times, the very resources that initially attract tourists may be lost or degraded due to deforestation, wetland loss, and the encroachment upon protected areas resulting from

tourism development. The host community's perception of tourism is influenced by various forms of pollution, including solid waste from resorts and entertainment venues, littering in protected areas, and urban sprawl stemming from the growth of the tourism industry (Ritchie et al., 2010; Rasoolimanesh et al., 2019).

Other negative effects contributed by tourism in the destination communities that have been cited by the host communities are pollution, negative effects on vegetation and loss of meadows and green space (Hanafiah, Jamaluddin, & Zulkifly, 2013). Other negative products of tourism noted were noise, large quantities of wastes, deterioration of the ecological. Destination communities viewed the negative effects of tourism on the environment, as evidenced by the increased amount of human traffic, litter and other trash in the area, the appearance of the area, the number of man-made structures developed there, and waste management issues (Sharpley, 2014; Hanafiah, Jamaluddin, & Muhammad, 2013; Kihima, 2015; Almeida-García, Peláez-Fernández, Balbuena-Vazquez & Cortes-Macias, 2016).

Most of them concurred that tourism causes pollution in the regions that attract tourists. On the other hand, tourism can support efforts to conserve natural resources and species. Moreover, admission and guide fees provide revenue for the upkeep of animal and marine parks (MacKenzie & Gannon, 2019).

2.5.3 Socio-Cultural Tourism Impact

It is inevitable that there will be cross-cultural interaction because the tourism industry depends on both direct and indirect relationships between visitors and the host communities (Deery et al., 2012; Gursoy et al., 2018). Local residents are frequently the weaker party in these interactions, but it can be difficult to measure because these relationships are indirect, difficult to pinpoint, and not always obvious. One of the many

reasons why indigenous identities are lost or transformed is the commercialization of regional culture. Reconstructed ethnicity is the outcome of simplifying and sanitizing ethnic traditions, festivals, and religious rites to appeal to visitors (Dean, 1984; Doh, 2010; Handinejad et al., 2019).

When a place is promoted as a travel destination, the local population is influenced by the demand for crafts, entertainment, and other commodities, which changes their indigenous identity and culture. Important pieces of cultural heritage and holy items eventually undergo alterations when they are examined from the outside and turned into commodities to be purchased by tourists. (May 1977; Rasoolimanesh et al., 2019; Algassim et al., 2021). The phenomenon of staged ethnicity arises from the brief duration of tourists' visits, allowing them only a superficial glimpse into local ways of life. With the exchange of money between visitors and residents, staging becomes inevitable, often resulting in the commercialization and dilution of local culture. Local adaptation to tourist preferences necessitates changes across various aspects of daily life.

While the sale of souvenirs and crafts benefits the local economy and generates employment opportunities, it can also contribute to cultural erosion. This happens because these items may not authentically reflect local heritage but are instead designed to cater to tourist demands. This creates a tension between preserving cultural authenticity and meeting the economic needs of tourism. When crafts are made primarily to attract tourists rather than to reflect local traditions, they may lose their cultural significance. As a result, their value as cultural artifacts diminishes (Gursoy et al., 2018; Algassim et al., 2021). In other words, there is a conflict between maintaining cultural traditions and generating income from tourism. When local crafts are altered to please tourists instead of staying true to the community's traditions, it can result in the

loss of cultural identity. These crafts, once rich in meaning and history, become less valuable as authentic cultural symbols and more like mere souvenirs. This shift can weaken the cultural heritage they were meant to represent.

Although catering to tourists' desires for familiarity enhances their sense of adventure, there is a delicate balance to maintain, as excessive standardization may detract from the authentic experience sought by visitors. While tourists seek novelty, they also prefer some degree of familiarity to align with their lifestyles, albeit in a different setting (May, 1977; Doh, 2010; Gursoy et al., 2018; Alrwajfah et al., 2019).

Tourists' lifestyles often contrast starkly with those of local residents, characterized by differences in culture and consumerism. These disparities in values, lifestyles, and prosperity can sometimes lead to cultural clashes, which may strain the relationship between visiting tourists and the host community (Aziz, 1995; Gossling, 2002; Rasoolimanesh et al., 2019).

According to Algassim, *et al*., (2021) residents pinioned that tourism development in their area will cause social disturbance, impact on local values and beliefs. Workers and investors coming to their area will create competition with local residents. Mass tourism will also attract crowding, congestion, beggars, smugglers, drugs, alcohol problems, prostitution and criminals (Algassim, *et al*., 202; Rasoolimanesh, *et al*., 2019). They further noted that such impacts will require prevention activities from government.

Other social impacts include theft and displacement and replacement of cultural sites and shrines by tourist facilities such hotels, restaurants, and buildings for public services (Jaafar, *et al*., 2017; Rasoolimanesh, *et al*., 2019; Nchor, Ebu, & Odey, 2021). Despite the negative socio-cultural impacts associated with tourism, there are also positive outcomes stemming from interactions between tourists and local residents.

Tourism often serves as a catalyst for the rejuvenation of local culture, igniting a renewed interest in traditional ways of life and fostering a sense of unity among community members (Jaafar et al., 2017; Rasoolimanesh et al., 2019). This revitalization of local culture and traditions encourages active efforts to preserve heritage assets and natural resources, instilling residents with confidence and pride in their way of life (Chhabra, 2009).

According to Taheri et al. (2018), residents with strong cultural and environmental attitudes are more likely to support tourism development, believing it can promote and sustain local traditions and customs. They may endorse tourism initiatives with the expectation that their heritage will be safeguarded throughout the development process (He, He, & Xu, 2018). Consequently, residents holding robust cultural and environmental attitudes tend to exhibit more positive perceptions of tourism's impacts (Stylidis et al., 2014; Woosnam et al., 2018).

It's noteworthy that interactions between communities and tourists can yield positive outcomes such as creating opportunities, fostering societal harmony, and promoting cultural integration, alongside negative aspects in the form of associated challenges. Tourism provides residents with opportunities to meet diverse people, forge friendships, gain insights into the world, and embrace new perspectives (Kumar et al., 2009). Additionally, tourism boosts local pride in culture and encourages a diverse range of cultural activities among residents.

However, other studies show that residents in the destination communities do not believe that tourism brings unpleasant overcrowding issues and contributes to negative social problems (Hanafiah, Jamaluddin, & Muhammad, 2013; Almeida-García, Peláez-Fernández, Balbuena-Vazquez & Cortes-Macias, 2016; Jaafar, *et al*., 2017).

2.6 Community Participation in Tourism Development

Community involvement is essential for ensuring the sustainability of any development initiative, as emphasized by Mak (2012) and Lee, & Garcia (2023). It encompasses various forms of engagement (direct, indirect, active, passive) at different levels (local, regional, national), contingent upon specific circumstances. The public should have the opportunity to engage in planning activities directly affecting their daily lives, as highlighted by Mak (2012) and Sakitri (2018). Community participation has been extensively discussed in tourism literature, particularly regarding sustainable tourism in local areas, and it plays a crucial role in the recovery and sustainable development of local communities, as underscored by Tosun & Jenkins (1999), and Lee, & Garcia (2023).

Enabling residents to participate in tourism development facilitates the integration of their perspectives and ideas, thereby assisting in meeting their expectations, as noted by Jaafar, Rasoolimanesh & Lonik (2015) and Roberts, & Anderson (2023). A community-centric approach to tourism development emphasizes the involvement of all community members in tourist destination areas in management and planning, not just those directly involved in the tourism industry, as discussed by Garrod (2003), and Roberts, & Anderson (2023). However, there is often an unclear delineation of local communities' roles and how their perspectives are incorporated into tourism planning and development processes, as observed by Alalouch, & Al-Smadi (2023). This gap between communities' perceived roles and the literature suggests a need for educating and sensitizing residents about their critical role as major stakeholders in the tourism industry, as argued by Thesane (2019).

Furthermore, the involvement of the community in tourism development and management significantly contributes to the economic development and overall quality

of life of residents, as emphasized by Thongma, Leelapattana & Hung (2011), and Lee, & Garcia (2023). This participation not only promotes the economic, social, environmental, and infrastructural development of residents but also better caters to the needs of tourists, as suggested by Thongma, Leelapattana & Hung (2011), and Lee, & Garcia (2023). Additionally, engaging local community members in decision-making processes enhances their support for tourism development and reinforces their willingness to preserve their traditional lifestyle and values, as proposed by Roberts, & Anderson (2023). Participating in the tourism development process also helps communities comprehend the costs and benefits of tourism, thus influencing their support for it, as argued by Roberts, & Anderson (2023).

Local community participation empowers residents to control activities in and around their community, which may affect their livelihoods due to tourism activities, as discussed by Bonimy (2008), and Khanom et al. (2019). Particularly, involvement in decision-making processes benefits the local community and fosters respect for their lifestyle and values, as noted by Alalouch, & Al-Smadi (2023). Expanding communication channels for community participation and encouraging residents to participate in decision-making processes are crucial for garnering community support for tourism, as highlighted by Lee, & Garcia (2023). Additionally, involving various social groups representing diverse interests in the tourism development process leads to positive support for tourism, as observed by Woosnam et al. (2018), and Lee, & Garcia (2023).

It's worth noting that the age variable yields different conclusions in various studies, with some showing older persons favoring tourism development and others showing unfavorable attitudes, as indicated by Cavus & Tanrisevdi (2002), and Roberts, & Anderson (2023). Overall, reviewed literature underscores the importance of

community participation in achieving sustainable tourism development, as emphasized by Bonimy (2008), and Roberts, & Anderson (2023). Allowing the community to participate in decision-making processes is one way to garner support from the local community for tourism. Therefore, this study assumes that community participation has a positive effect on tourism development support. And communities have a legitimate and democratic right to participate in decisions that might affect their livelihoods (Tuson & Timothy 2003; Roberts, & Anderson, 2023). As opposed to a school of thought where the community participation is assumed to be voluntary process and may or may not choose to participate. The alternative perspective involves stakeholders, government entities, and other participants in the tourism industry tending to diminish the involvement of the community in decision-making processes, as highlighted by Rasoolimanesh, Jaafar, et al. (2017) and Woosnam et al. (2018). According to research conducted by Gannon, Rasoolimanesh, & Taheri (2020), which utilized structural equation modeling to evaluate the mediating role of residents' perceptions toward tourism development, increasing the engagement of residents in the tourism development and heritage conservation processes may enhance their support for tourism development.

The engagement and participation of the public are vital elements of effective development initiatives. Collaborative planning aims to shift decision-making power from government officials to citizens and stakeholders (Tuson & Timothy, 2003; Tuson, 2001; 2006).

Collaborative decisions result in better and longer-lasting outcomes that are easier to implement, utilize resources more efficiently, prevent conflicts, and ultimately serve the public better. This means that when people work together to make decisions, the results are generally more effective and beneficial for everyone involved (Doh, 2010;

Tuson, 2003). Studies have shown that when people work together using collaborative methods, they often create a long-lasting "network dynamic" defined by the sharing of knowledge, stronger personal connections, and better problem-solving abilities over time (Lee, & Garcia, 2023; Roberts, & Anderson, 2023). Collaborative efforts can mitigate issues by fostering strong, creative, high-quality, and responsive communication among stakeholders.

Research in tourism has explored the direct impacts of various factors including community attachment, environmental attitudes, cultural attitudes, economic gains, and community involvement on residents' attitudes toward tourism development (Nunkoo & Ramkissoon, 2011; Stylidis et al., 2014; Rasoolimanesh et al., 2017). Numerous empirical studies have investigated how community participation (Kieti et al., 2013; Lee, & Garcia, 2023), environmental attitudes (Gursoy, Jurowski, & Uysal, 2002; Nicholas, Thapa, & Ko, 2009), cultural attitudes (Rasoolimanesh, Jaafar, et al., 2017), and economic gains (Rasoolimanesh et al., 2015) influence residents' attitudes toward tourism development in local communities. Despite previous studies underscoring the importance of community participation in sustainable tourism development (Jaldesa, 2017; Lee, & Garcia, 2023), few studies have explored the mediating role of community participation, particularly in Kenyan research studies. According to Gannon, Rasoolimanesh, & Taheri (2021), mediation in tourism studies remains underexplored. Integrating a mediator in this study is expected to enhance understanding of how tourism impacts affect community attitudes via community participation.

In their investigation on community participation as a mediator of residents' attitudes toward sustainable tourism development and personal environmentally responsible behavior, Cheng et al. (2019) discovered a positive and significant association between attitudes toward sustainable tourism development and community participation. This

implies that residents actively involve themselves in community organizations and public affairs, aiming for both personal and collective advantages to enhance their quality of life within the local community. Consequently, they contribute to providing tourists with a satisfying, high-quality experience while fostering a sustainable attitude toward the environment.

Moreover, the authors emphasized a correlation between the degree of resident involvement in community tourism affairs and their attitudes toward tourism development (Lee, & Garcia, 2023; Roberts, & Anderson, 2023). Engaging the community in tourism planning through consultations, focus groups, and committees may aid in addressing resistance or opposition and prevent decisions that could lead to conflicts (Garrod, 2003; Rasoolimanesh, Jaafar, et al., 2017). The long-term sustainability of tourism may be jeopardized if communities are not involved in its planning and management (Small and Edwards, 2005).

The recent incident at Loliondo, Ngorongoro District, Tanzania bordering the Serengeti National Park is an example of a conflict that was caused because the community were not involved and did not participate in the decision-making process (Abulu & Sutherland 2022; Roberts, & Anderson, 2023). And the community did not have the autonomy to influence decision-making. Consequently, the community resisted the abrupt change and subsequent eviction resulting in violence and the loss of property. The game wardens and the police attempted to demarcate a 1,500 hectares of village land as a game reserve for trophy hunting without the full knowledge of the community. This is an example of a top-down approach to tourism development as opposed to bottom-up grassroots participatory approach proposed by Tuson, 2006 and Tuson & Timothy 2003.

In Kenya the best example can be drawn from the Amboseli and Maasai Mara game reserves where the local community, the Maasai, have more than once resisted the development of Tourism projects (Abulu & Sutherland, 2022) Whereas some communities like the Maasai have co-existed with the wildlife in harmony from time immemorial the encroachment and annexation of their land for tourism projects leave the feeling insecure, an assault on their culture, unfair land tenure and degradation of natural resources in the community. Policy makers should involve local communities in the planning and development of tourism within national reserves to mitigate conflicts and promote sustainable tourism development.

In a study examining local community participation in tourism development in Katse villages in Lesotho, Thetsane (2019) suggests that residents should participate in crucial project planning and decision-making activities through the organization of public meetings. This involvement empowers them to determine the types of tourism they wish to develop in their communities and how the costs and benefits of tourism are distributed among various stakeholders. Furthermore, the researcher advocates for increased participation of destination communities in tourism development by establishing tourism-related associations or committees to represent their interests in decision-making bodies. Since communities are the custodians of tourism attractions, they should have a say in decisions concerning their resources (Rasoolimanesh, Jaafar, et al., 2017; Woosnam et al., 2018).

The findings of the study by Cheng et al. (2019) further underscore the role and significance of community participation in sustainable tourism development. They utilized sustainable tourism development attitude (STA) as the independent variable, comprising six observed variables: perceived social costs (STA1), environmental sustainability (STA2), long-term planning (STA3), perceived economic benefits

(STA4), community-centered economy (STA5), and ensuring visitor satisfaction (STA6).

The dependent variable in the model was environmentally responsible (ERB). Community participation (CP) was the mediating variable (MV), which was reflected by two observed variables multidimensional variable factor of organizational participation (CP1) and citizen participation.

The current study which examines the effect of tourism impacts, community participation and community attitudes in a nature-based attraction in Kenya, uses a uni-dimensional mediating variable, community participation reflected by six indicators. The tourism development impacts comprise three variables namely economic, environmental, and sociocultural variables as is commonly used in most tourism impact studies, and the dependent variable is attitudes of the destination community. Whereas Cheng *et al*., (2019) used a structural equation model (SEM) to analyze the relationships among the research variables, and the AMOS statistical software to estimate the causal relationships between variables in the model this study used regression analysis model using PROCESS (Haye, 2022; Hayes, 2022).

Tosun (2006) asserts that employing a participatory approach to tourism offers local communities enhanced opportunities to attain greater and more equitable benefits from sustainable tourism development occurring within their regions. Additionally, he contends that this approach fosters more favorable attitudes toward tourism endeavors and facilitates the preservation of local resources, consequently augmenting local communities' acceptance of tourism. These outcomes have the potential to enhance visitor satisfaction while simultaneously delivering enduring advantages to residents in destination areas.

2.7 Tourism Impacts versus Community Attitudes

Tourism development has both positive and negative effects on host communities, influencing residents' attitudes toward the industry (Jaafar, et al., 2017; Rasoolimanesh, et al., 2019). These attitudes are shaped by a complex interplay of economic, environmental, socio-cultural impacts and the level of community participations. The relationship between tourism impacts and community attitudes is critical for understanding sustainable tourism development and ensuring the alignment of industry growth with the interests of local communities (Lee, & Garcia, 2023; Roberts, & Anderson, 2023).

2.7.1 Economic Impacts and Community Attitudes

Economic benefits are often the primary motivators for communities to support tourism. Studies show that tourism contributes significantly to job creation, infrastructure development, and local revenue generation (Gursoy et al., 2010; Nunkoo & Ramkissoon, 2011). For example, the development of nature-based tourism in protected areas has been linked to improved economic conditions for host communities (Tosun, 2001; Rasoolimanesh et al., 2017). Residents who directly benefit from tourism, such as those employed in tourism-related businesses, are more likely to hold positive attitudes toward its development (Nunkoo & Gursoy, 2012).

However, economic disparities can lead to negative perceptions. Inequitable distribution of tourism revenues, inflation, and rising costs of living are common concerns in many destinations (Sharpley, 2014; Gannon et al., 2021). Residents excluded from tourism benefits often view the industry as exploitative, fostering resistance and opposition to further development. Economic seasonality also influences attitudes, as communities reliant on tourism may experience financial instability during off-peak seasons (Andereck et al., 2005).

2.7.2 Environmental Impacts and Community Attitudes

The environmental consequences of tourism are a double-edged sword. On the one hand, tourism can promote environmental conservation, particularly in eco-tourism initiatives, by providing financial incentives for protecting natural resources (Buckley, 2012; Rasoolimanesh et al., 2019). In regions like national parks, tourism has supported biodiversity conservation and environmental education for visitors and locals alike (López-Guzmán et al., 2011).

On the other hand, unchecked tourism development can lead to environmental degradation, including pollution, habitat destruction, and resource depletion (Koens et al., 2009). Such negative impacts often result in resentment among residents, particularly when the degradation threatens their livelihoods or quality of life (Garrod & Fyall, 2015). For example, coastal communities have reported frustrations with tourism's role in exacerbating erosion and water shortages (Egresi & Kara, 2018). Residents' attitudes toward tourism are thus shaped by the balance between conservation benefits and environmental costs.

2.7.3 Socio-Cultural Impacts and Community Attitudes

Tourism's socio-cultural impacts are multifaceted and deeply tied to the preservation or transformation of local culture. Positive effects include cultural exchange, the revitalization of traditions, and increased community pride (Gursoy et al., 2010; Látková & Vogt, 2012). For example, tourism initiatives that celebrate indigenous art and traditions often foster positive attitudes by providing economic and cultural incentives for preservation (Su & Wall, 2014).

However, tourism can also lead to cultural commodification, loss of authenticity, and increased tensions between tourists and residents (MacCannell, 1976; Nunkoo &

Ramkissoon, 2011). Communities often view tourism as intrusive when it disrupts social norms or introduces behaviors that conflict with local values (Sharpley, 2014). Additionally, the perception of "otherness" between tourists and hosts can exacerbate cultural misunderstandings and resistance to tourism (Ap, 1992).

2.7.4 The Role of Community Participation and Community Attitudes

Community participation is widely regarded as a key mediator in the relationship between tourism impacts and residents' attitudes. According to Tosun (2006), involving residents in tourism planning and decision-making ensures that their concerns are addressed and benefits are equitably distributed. This participatory approach not only improves attitudes but also fosters a sense of ownership and responsibility for tourism development (Nunkoo & Gursoy, 2012).

Studies have highlighted the importance of transparency, communication, and trust in facilitating meaningful community engagement (Boley & McGehee, 2014; Rasoolimanesh et al., 2017). For example, collaborative tourism models in Kenya's national reserves have demonstrated success in balancing economic, environmental, and socio-cultural interests, resulting in more positive attitudes among residents (Adams & White, 2023).

2.8 Summary of Literature and Research Gaps

From the foregoing summary of literature review, it is evident that there are some conceptual, contextual, and methodological gaps. Typically, past research has applied traditional statistical methods to focus only on direct relationships and ignore mediating effects completely. Very few studies have mediated these relationships and rarely so in Kenyan research studies. In this study community participation is a mediator. The study tourism impacts, integrates community participation as a mediate and community

attitudes towards tourism development as a uni-dimensional dependent variable in one study making it possible for the results to be more accurate.

Very few studies have examined the direct effects of tourism impacts on community attitude towards tourism development and their indirect effects through community participation (Gannon et al., 2021; MacKenzie & Gannon, 2019; Lee & Garcia, 2023; Roberts & Anderson, 2023; Kieti et al., 2013; Alalouch & Al-Smadi, 2023). Previous attempts to model community attitudes towards tourism development have often been oversimplified (MacKenzie & Gannon, 2019; Alalouch & Al-Smadi, 2023; Rasoolimanesh et al., 2019), lacking the depth needed to contribute substantially to our understanding.

Simple or unqualified multivariate associations, as noted by Hayes (2022) lack the rigor and fall short of providing robust insights into this complex interplay. Hence, there is a critical need for mediation analysis to explore the intricate relationships between tourism impacts, community participation, and community attitudes towards tourism development. Such analysis aims to bridge conceptual gaps, offering a more nuanced understanding. By unraveling the complex web of interactions, mediation analysis can shed light on how community participation shapes the attitudes of the Rimoi National Reserve community toward tourism development. These insights hold significant potential for guiding the formulation of effective strategies to promote sustainable tourism not only within the Rimoi National Reserve but also in other similar destination areas.

To address the methodological gap, a mixed-methods approach has been employed instead of a single research method. This approach integrates both quantitative and qualitative data collection and analysis techniques using a pragmatist approach for a

comprehensive understanding of the research question (Hadinejad et al., 2019; Egresi & Kara, 2018).

Further, the study statistically controlled for respondents' age, gender, and education, factors often excluded in many studies but can influence research outcomes (Roberts & Anderson, 2023; Gannon, Rasoolimanesh, & Taheri, 2021). Controlling for covariates helps ensure that the study's results are robust, precise, and unbiased, enhancing the credibility and reliability of the findings.

Also, the study employed a staple measurement scale, an underutilized tool in tourism impact studies (Gursoy et al., 2018; Hadinejad et al., 2019; Abulu & Sutherland, 2022), to assess respondents' perceptions of the current state of each impact item and how they anticipate tourism development in Rimoi National Reserve would affect each item. Therefore, this study attempts to fill the gaps in knowledge identified as indicated in Table 2.1.

Table 2.1: Summary of Empirical Review and Gaps in Knowledge Identified

Authors	Topic	Methodology	Findings	Knowledge Gaps
Choi, & Jang,(2023)	Residents' attitudes towards tourism: The mediating role of perceived impacts, perceived benefits, and community participation.	Used multiple regression analysis to examine the Residents' attitudes towards tourism: The mediating role of perceived impacts, perceived benefits, and community participation	Most people perceived both positive and negative impacts of tourism. Resisted Increased tourism in their area. Worried about divided class due to tourism	Current study adopted mixed method research using staple scale. Community participation was used to mediate the relationship between tourism impacts and community attitudes towards tourism development.
Vosssoughi, *et al.,* (2012).	Evaluating Rural Community Attitude towards Tourism Development, according to Structural Equation Model(case study: Mountain areas of Roodbar Ghasran, Shemiran)	A case study of 10 villages with 270 questionnaires; Quantitative; used SET theory, analysed data using structural Equational Modelling methodology	Study confirms the usefulness of SET theory principles in explain residents attitude towards tourism. Rejected perceived negative tourism impacts and overall community satisfaction. Further research required of attitude towards tourism development.	The current study used sample size of 231 respondents, using staple scale questionnaires. Used hierarchical multiple linear regression model and control for gender, age level of education and community participation as the mediator using Process Macro software and Hayes Model 4. The study also used SET Theory and Community Participation Model(NMCPTD)
Jason *et al.,(*2020)	The moderating Impact of local communities' attitudes on Tourism Attributes Towards Destination competitiveness of Cat Museum in Kuching.	A case of Museum in Malaysia Peninsula, Used pr-set questionnaire conducted by interviewer to respondents face- to-face, sample size 150, used Structural Equation Modelling for analysis using SPSS version 23.	Community attitude moderated the relationships and are proud of their surroundings and ready to promote the environmental factor.	Current study was undertaken in a Nature-based attraction in Kenya, using sample of 231 respondents, used hierarchical multiple linear regression model, controlling for gender, age level of education and community participation as the mediator using Process Macro software and Hayes Model 4.
Nchor, Ebu, & Odey, (2021)	Attitudes of Local Communities Towards Tourism Development in Obudu Ranch Resort	Survey Research design, using structured questionnaire and interviews; 208 respondents residents of five villages; used Chi-square descriptive statistics	Community appreciated impacts on the environment, preservation of historic sites, artifacts, and ecotourism resources; management of crowd was effective	Current study is mixed method convergent design with a sample of 231 residents of Rimoi community, using staple scale questionnaires, and mediating with community participation the relationship between tourism impacts and community attitude towards tourism development in Nature Based Attraction in Kenya.
Algassim**,** *et al.,* (2021**)**	Residents' attitudes toward tourism development at Al-Juhfa, Saudi Arabia	Qualitative study used purposive interviewing to recruit informants. Data was collected using semi-structured interview and open-ended questions.	Residents' attitudes were generally positive with residents expecting to receive economic, social and environmental benefits. And	The reviewed study was done in Saudi Arabia. The study was qualitative and used purposive sampling technique. The current study used mixed method , using staple scale questionnaires, with Community participation as a mediator, gender,

			were aware of potential positive and negative impacts of tourism development and appeared to balance these in developing their attitudes.	level of education, and age were controlled and study to be done in nature-based attractions in Kenya focusing on tourism Impacts on community attitude towards tourism development.
Gannon *et al.,* (2021)	Assessing the Mediating Role of Residents' Perceptions toward Tourism Development	The study used systematic cluster sampling with a sample size of 915 residents. Undertaken in the cultural and historic city of Tabriz and Kashan in Iran. Residents perception used as a mediator. Results analysed using structural equation modelling (SEM)	Residents' perceptions of tourism impacts play a significant mediating role in shaping the relationships between community attachment, environmental attitudes, and economic gain on support for tourism development	The reviewed study was done in Iran with a sample size of 915.The study adopted quantitative research design. The study used SET theory and Weber's theory of substantive and formal rationality. Used, factor analysis and structural equation modelling. The current study was done in a nature based attractions in Kenya, gender, level of education and age was controlled. Community participation was the mediator. The current study used SET principles and community participation Model NMCPTD.
Wang, *et al.,* (2021)	Community Participation and Residents' Support for Tourism Development in Ancient Villages: The Mediating Role of Perceptions of Conflicts in the Tourism Community	The analysis was based on the structural equation model (SEM) Used the bootstrap method to test the mediating effect	Community participation in tourism development has a positive influence on residents' support for tourism development, and this relationship is mediated by the perceptions of conflicts in the tourism community.	The reviewed study only used SET while this study used both SET Theory and NMCPTD model. The study was done in China while this study was done in nature based attractions in Kenya. The study also focused on conflict in tourism but this study is focusing on community attitudes towards tourism development and mediating with community participation
Cheng *et al*., (2019)	Community Participation as a mediating factor on residents' attitudes towards sustainable tourism development and their personal environmentally responsible behaviour.	Used a survey of 362 residents from 5 eco-tourism communities in Taiwan. Data analysed using structural equation modelling (SEM) using AMOS software.	Residents' attitudes towards sustainable tourism development positively and significantly affect both community participation and environmentally responsible behaviour. Community participation also positively affects environmentally responsible behaviour via the mediator.	The reviewed study was done in Taiwan on 5 Eco-tourism communities using purposive sampling technique and descriptive analysis. The current study was done in Kenya with focus being on rural resident's attitude of Rimoi community at Rimoi National Reserve a nature-based attraction. Participation mediated the relationships. And age, gender and level of education was controlled.

Eshliki, & Kaboudi, (2012)	Community Perception of Tourism Impacts and Their Participation in Tourism Planning: A Case Study of Ramsar, Iran	The study used stratified random sampling. The survey instrument used in the study was a structured questionnaire with a sample size of 186 residents.	Portion of community members have a disinclination to tourism effects e.g. disturbance, water pollution, some social and cultural effects is significant. Negative effects of tourism on community cause a lower inclination to participate in tourism development.	The current study was done in a nature based attraction in Kenya with 231 residents selected using purposive sample technique from 231 systematically sampled households in the Rimoi community. Community Participation is mediator. SET theory and Community Participation NMCPTD model was used. Hierarchical multiple regression model and Hayes model 4 and Process macro was used to analyse mediation.
Thetsane, (2019)	Local Community Participation in Tourism Development: The Case of Katse Villages in Lesotho	The study used a combination of stratified and convenience sampling approaches was used for sample selection of 500 households. Used inferential statistics	Local communities want to be involved when tourism policies. They also want to be part of tourism development decisions to ensure their needs are incorporated. The local leaders should be educated on tourism development and participation so that they will able to transfer acquired knowledge to the communities	The reviewed study was done in Lesotho with a sample size of 500 households. The study used a combination of stratified and convenience sampling. The current study used systematic random sampling to select 231 household heads. Respondents demographic; age, gender and level of education were controlled. Hierarchical multiple linear regression model and Hayes model 4 were used to analyse mediation using Process macro.
Jansri, W. (2019).	Perception of Residents, Community Participation and Support for Tourism Development in the Old Town Muang Songkhla, Thailand	Used systematic random sampling, questionnaire. Sample size was 222 residents. The Partial Least Squares Structural Equation Modelling (PLS-SEM) techniques were applied to analyze the data.	Community participation is influenced by both positive perceptions and negative perception of the residents. Moreover, the finding supports the effect of community participation on support for Tourism Development. The role of the residence is important to support tourism development and maintain its robust growth.	Reviewed study was done in Thailand in an urban area with focus on the effects of perceptions among residents on community participation and explores the impacts of community participation on Support for Tourism Development. The current study focused on the tourism impacts, community participation as a mediator and community attitudes towards tourism development while controlling for demographic factors. Hierarchical multiple linear regression Model was used with Hayes model 4 for mediation analysis.
Li, & Qi, 2023;	"Community participation and residents' attitudes towards tourism development in rural	The study was done in rural China. Used multiple regression analysis, one way ANOVA to examine the relationship community participation	Residents of three distinct rural county-level areas were supportive of tourism development, and little	Current study was undertaken in a Nature-based attraction in Kenya, use mixed method and examine local community attitudes towards current and future tourism development using

	China": A mediating role of perceived benefits.	and residents' attitudes towards tourism development	evidence was found that suggests that attitudes toward tourism become negative with higher levels of tourism	tourism impacts. The study used community participation as a mediating variable, Controlling for covariates and community participation as the mediator.
Cardoso, C., & Silva, M. (2018).	Residents' perceptions and attitudes towards future tourism development.	Quantitative Survey, Study area Porto city in Portugal.	The majority of Porto residents consider that tourism brings significant economic benefits and supports the wider social and cultural development of the city, and they consider the overall impact of tourism to be beneficial	Current study used mixed method. It examined the impacts of tourism development on local community attitudes towards current and future tourism development in a rural community.
Nchor, Ebu, & Odey, (2021)	Attitudes of Local Communities Towards Tourism Development in Obudu Ranch Resort	Survey Research design, using structured questionnaire and interviews; 208 respondents' residents of five villages; used Chi-square descriptive statistics	Community appreciated impacts on the environment, preservation of historic sites, artifacts, and ecotourism resources; management of crowd was effective	Current study is mixed method convergent design with a sample of 231 residents of Rimoi community, using staple scale questionnaires, and mediating with community participation the relationship between tourism impacts and community attitude towards tourism development in Nature Based Attraction in Kenya.
Gannon *et al.*, (2021)	Assessing the Mediating Role of Residents' Perceptions toward Tourism Development	The study used systematic cluster sampling with a sample size of 915 residents. Undertaken in the cultural and historic city of Tabriz and Kashan in Iran. Residents' perception used as a mediator. Results analysed using structural equation modelling (SEM)	Residents' perceptions of tourism impacts play a significant mediating role in shaping the relationships between community attachment, environmental attitudes, and economic gain on support for tourism development	The reviewed study was done in Iran with a sample size of 915.The study adopted quantitative research design. The study used SET theory and Weber's theory of substantive and formal rationality. Used, factor analysis and structural equation modelling. The current study was done in nature based attractions in Kenya, gender, level of education and age were be controlled. Community participation was the mediator. The current study used SET principles and community participation Model NMCPTD.

2.9 Theoretical Framework

A theory, as defined by Kerlinger (1979, p. 64), is a comprehensive and systematic explanation of a natural phenomenon. It is composed of interrelated constructs (Cohen et al., 2018), which are abstract representations of the phenomenon, and propositions, which are statements specifying the causal relationships between these constructs. These propositions synthesize researchers' ideas, providing a framework for understanding the phenomenon and generating research questions and objectives (Creswell, 2023). Theories also enable predictions, allowing researchers to make informed forecasts about future events or outcomes (Onwuegbuzie, 2007). Additionally, theories serve as a starting point for further research, guiding investigation and data analysis. Ultimately, theories play a critical role in clarifying and explaining complex phenomena (Cohen et al., 2018).

Tourism impact studies often rely on various theoretical frameworks to explore community attitudes and the effects of tourism, with three prominent theories being Social Exchange Theory (SET), Dependency Theory, and Stakeholder Theory.

Social Exchange Theory (SET), developed by Emerson (1976), is widely used to understand how individuals assess the costs and benefits of tourism. It posits that residents support tourism when perceived benefits (e.g., economic growth, job creation) outweigh the costs (e.g., environmental degradation, cultural loss) (Emerson, 1976; Ap, 1992). This framework has been pivotal in explaining why residents with access to tourism benefits tend to be more supportive, while those affected by negative impacts may resist (Rasoolimanesh et al., 2017). SET is particularly useful for its focus on the balance of perceived costs and benefits and its ability to incorporate community participation in tourism decision-making, influencing attitudes positively when the benefits are perceived to outweigh the costs (Sharpley, 2014).

Dependency Theory (Frank, 1967) critiques the unequal distribution of tourism benefits, highlighting how local communities may remain economically dependent on external entities, such as multinational corporations. Although it provides valuable insights into the exploitation inherent in tourism, it overlooks community-level psychological factors and does not address the complexity of individual perceptions of tourism impacts (Frank, 1967). This makes it less effective than SET for understanding community attitudes at the individual or local level (Rasoolimanesh et al., 2017).

Stakeholder Theory (Freeman, 1984) emphasizes the need for inclusive decision-making in tourism planning. It argues that involving local communities in tourism development leads to better community attitudes and more sustainable outcomes (Freeman, 1984). However, Stakeholder Theory assumes equal influence among stakeholders, which often isn't the case in practice, as external entities may have more power (Tosun & Timothy, 2003). While it underscores the importance of community participation, it lacks the depth that SET provides in addressing how perceived costs and benefits shape attitudes (Freeman, 1984).

SET's comprehensive approach, integrating individual and collective perspectives on community attitudes, makes it ideal for this study. Its focus on perceived costs and benefits is particularly relevant for tourism impact studies. Furthermore, SET's consideration of economic, environmental, and socio-cultural tourism dimensions provides a nuanced framework for analyzing community engagement and attitudes toward tourism development (Emerson, 1976; Ap, 1992).

In the context of this study, Social Exchange Theory (SET) has been employed as the theoretical framework. SET, first formulated by Homans (1962), has emerged as the predominant framework in tourism development research, offering valuable insights

into the dynamics of local communities and the factors shaping their attitudes towards tourism (Sharpley, 2014; Alalouch & Al-Smadi, 2023; Gannon, Rasoolimanesh, & Taheri, 2021; Rasoolimanesh et al., 2015). The application of SET within this study is vital, as it explores how community participation mediates the relationship between tourism impacts and local attitudes toward tourism development in Rimoi National Reserve.

Social Exchange Theory (SET) offers a valuable framework for understanding how tourism impacts influence community attitudes. According to SET, individuals assess their support for tourism based on a cost-benefit analysis, favoring development when perceived benefits outweigh the costs (Emerson, 1976; Ap, 1992). This theory has been instrumental in explaining why residents with greater access to tourism benefits tend to be more supportive, while those disproportionately affected by its costs often resist (Rasoolimanesh et al., 2017).

SET conceptualizes the interactions between two parties in an exchange relationship, where individuals or groups weigh the costs and benefits of participation (Homans, 1962). In the context of tourism development, SET suggests that community residents engage with tourism by comparing perceived rewards, such as economic benefits, with costs, such as environmental degradation or cultural erosion (Rasoolimanesh et al., 2017). For example, in Rimoi National Reserve, residents may support tourism development if it brings economic benefits like job creation, but may resist if it causes cultural disruptions or environmental harm. This balance of perceived costs and benefits plays a crucial role in shaping community attitudes toward tourism, making SET a suitable framework for analyzing these dynamics.

Furthermore, SET's applicability in this study extends to its role in identifying the research gaps. Existing literature has often overlooked the mediating role of community participation, especially in emerging tourism areas like Rimoi, where tourism impacts are less studied (Rasoolimanesh et al., 2017). SET helps address these gaps by emphasizing how the perceived benefits of tourism development can be influenced by the level of community involvement in the decision-making process (Tosun & Timothy, 2003). It is hypothesized that communities with higher levels of participation in tourism planning will perceive more benefits and, consequently, have more positive attitudes toward tourism development. In contrast, those with limited participation may feel exploited or excluded, leading to negative attitudes (Rasoolimanesh et al., 2017). This research fills a gap in the literature by focusing on how community participation can mediate the relationship between tourism impacts and community perceptions, particularly in underexplored areas like Rimoi.

In terms of the study's methodology, SET guided the formulation of research questions, the selection of data collection techniques, and the data analysis process. A mixed-methods approach was employed, integrating both quantitative and qualitative techniques. Quantitative surveys were used to measure residents' perceptions of the economic, environmental, and socio-cultural impacts of tourism, while qualitative interviews provided deeper insights into the reasons behind these perceptions (Creswell, 2023). SET informed the structure of these instruments by focusing on the perceived costs and benefits associated with tourism development (Sharpley, 2014). For example, survey questions were designed to assess how residents perceived the economic advantages of tourism (such as increased employment or infrastructure improvements) and whether these benefits outweighed the social and environmental costs (such as loss of cultural identity or environmental degradation). Qualitative

interviews explored these themes further, providing context for the quantitative findings.

The conceptual framework developed in this study, guided by SET, positions community participation as a key mediating variable. SET's assumption that individuals engage in exchanges based on mutual benefits is critical in understanding how tourism development affects community attitudes (Emerson, 1976). By analyzing the interaction between tourism impacts and community participation, this study hypothesizes that greater involvement in tourism planning and decision-making can mitigate negative perceptions of tourism and enhance support for sustainable tourism practices (Tosun & Timothy, 2003). The framework suggests that positive attitudes toward tourism are more likely when residents perceive that the benefits of tourism, such as improved infrastructure or local economic growth, outweigh the costs, such as environmental harm or cultural disruption (Rasoolimanesh et al., 2017).

Moreover, the research design and data analysis were directly influenced by SET's focus on the reciprocity of exchanges. The study employed statistical techniques to analyze the relationships between perceived tourism impacts, community participation, and resident attitudes. For instance, regression analysis was used to test whether higher levels of community participation predicted more positive attitudes toward tourism (Creswell, 2023). The results of this analysis are then interpreted within the context of SET, exploring how the balance of perceived costs and benefits influences residents' attitudes toward tourism development. In this way, SET not only guided the design and execution of the study but also provided a robust framework for interpreting the findings.

In conclusion, Social Exchange Theory (SET) underpinned this study by providing a comprehensive framework for understanding the complex relationships between tourism impacts, community participation, and residents' attitudes. Through its focus on the costs and benefits of social exchanges, SET offered valuable insights into how community participation mediates the effects of tourism development on local attitudes. This theory guided the research design, hypothesis formulation, data collection, and analysis, ensuring a rigorous examination of the interplay between tourism impacts and community perceptions in Rimoi National Reserve. The application of SET to this study contributes to the existing body of knowledge on tourism development and offers a more nuanced understanding of how community participation can shape the success of tourism initiatives in emerging destinations.

2.10 The Normative Model of Community Participation in Tourism Development (NMCPTD)

This study utilized the normative Model of Community Participation in Tourism Development (NMCPTD) as proposed by Tosun and Timothy (2003). In addition to the NMCPTD, two other frequently employed models in tourism development research were considered: Arnstein's "ladder of citizen participation" (Arnstein, 1969) and Pretty's typology of participation (Pretty, 1995). Arnstein's model highlights citizen empowerment in decision-making processes, while Pretty's typology underscores the significance of local community involvement in development initiatives and programs facilitated by NGOs and governmental bodies (Jaafar et al., 2017; Rasoolimanesh et al., 2019; MacKenzie & Gannon, 2019). Tosun's model of community participatory approach offers a framework for comprehending participatory tourism development and grassroots engagement in the tourism process.

Utilizing the Normative Model of Community Participation in Tourism Development (NMCP), Tosun and Timothy (2003) advocate that community involvement and participation are integral components of successful tourism development initiatives in destination communities. This model emphasizes the shift of decision-making power from government officials to citizens and stakeholders. The overarching objective of participation is to empower community residents, enabling them to have a substantive influence on projects and decision-making within their own areas.

In contrast, coercive participation in tourism development represents an approach wherein the priorities for sustainable tourism are heavily skewed towards fulfilling the needs and desires of decision-makers, tourism operators, and tourists, often at the expense of the host community (Lee & Garcia, 2023; Roberts & Anderson, 2023).

Tuson (2006) proposes a bottom-up, grassroots, spontaneous participatory approach, or an induced participation approach, for sustainable tourism development. This approach is characterized by shared benefits rather than creating winners and losers. The community retains autonomy in influencing decision-making, and local values and perspectives are accorded due respect.

This model is particularly relevant to fostering community participation in tourism development initiatives. In this study, community participation serves as a mediator between tourism impacts and community attitudes towards tourism development in Rimoi national reserve, a nature-based destination. Tosun and Timothy (2003) explored community participation from various perspectives, including political, geographical, bureaucratic, management, and tourism development (Guun, 1988; Haywood, 1988; Reed, 1997; Simmons 1994; Tosun, 1999, 2000). They observed that terms such as public participation, citizen participation, or stakeholder participation have been used

interchangeably to represent the concepts of engagement, consultation, public consultation, or stakeholder engagement, sharing similar underlying concepts and principles.

Models serve as simplified representations of complex phenomena, aiding in comprehension, eliminating extraneous details, and providing a clearer picture (Creswell & Creswell, 2023; Cohen, et al., 2018). They are descriptive in nature, encapsulating only the essential elements required for understanding. The primary purpose of models is to enhance one's understanding of the world and to facilitate predictions about future occurrences. The model employed in this study aims to simplify the explanation of the concept of community participation and to simulate real-world scenarios.

Tosun (2006) refined the New Model of Community Participation in Development (NMCPTD) by incorporating aspects of Arnstein's Ladder of Citizen Participation (1969) and Pretty's typology of participation (1995). Tosun proposed a three-tiered typology of community participation in tourism, encompassing spontaneous, induced, and coercive forms as depicted in figure 2.2 below.

It is important to note that public participation in economic and human development was enshrined in the 1990 African Charter for Popular Participation in Development and Transformation (Arusha, 1990). This charter recognizes that "the people are the main actors in their own development" and that "their full participation is essential for the achievement of the objectives of development" (Preamble). The public is entitled to participate in planning activities that impact their daily lives (Tuson, 2006; Sakhile & Tembi, 2017).

In Kenya, for example, public participation is one of the key guiding principles in community development. This principle is anchored in the philosophy of a devolved system of government, which is enshrined in the Constitution of Kenya 2010 (GOK, 2010). Under this system, power and authority are decentralized from the national government to county governments. This has given communities a greater say in decisions that affect their lives.

National Reserves were also devolved to County Governments as part of the decentralization process. This means that communities now have more control over the management of these important natural resources.

Other policy documents that support community participation in tourism development include the Tourism Act 2011 (GoK, 2011), Vision 2030 (GoK, 2007), and the Wildlife Management and Conservation Act 2013 (GoK, 2013). These documents all recognize the importance of involving local communities in tourism decision-making.

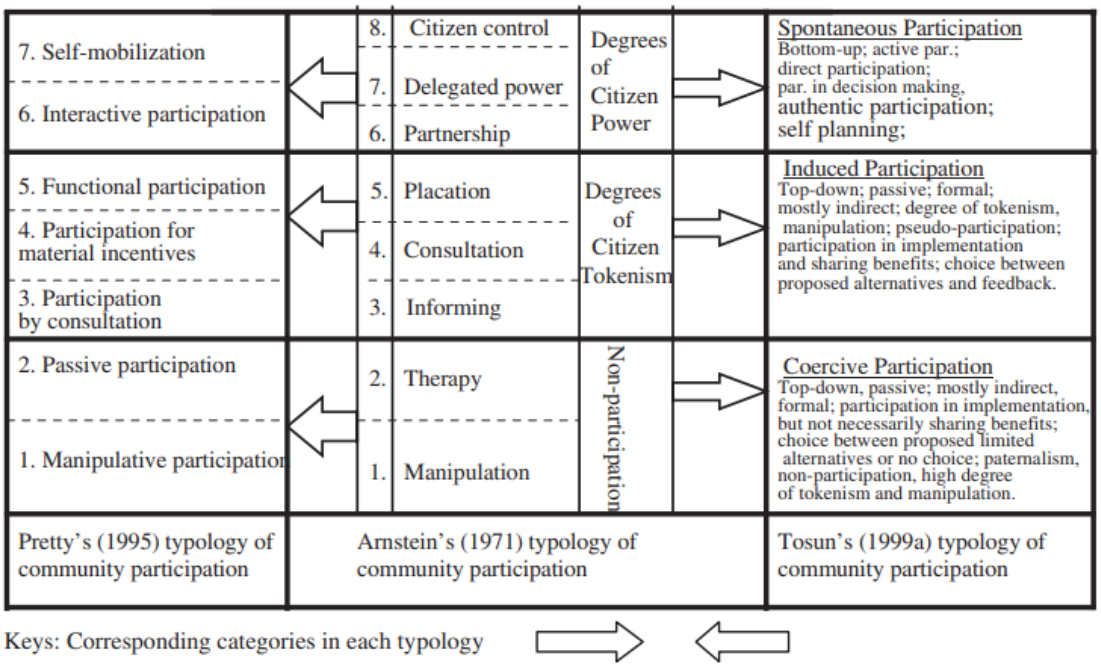


Figure 2.2: Normative Typologies of Community Participation

Source: (Tosun, 2006)

Firstly, according to Tuson (2006), spontaneous participation is considered the most desirable form of local community involvement, wherein the community retains full control and authority over decision-making processes.

Secondly, induced community participation involves allowing the local community to voice their opinions in the sustainable tourism development process, although they lack the power to ensure that their perspectives are prioritized over those of more influential stakeholders such as governmental bodies, multinational corporations, and international tour operators (Tuson, 2006; Sakhile & Tembi, 2017). This form of participation often reflects a tokenistic approach commonly observed in developing countries, where the local community merely endorses decisions regarding tourism development rather than actively shaping them (Tosun, 2006; 1999a). Induced community participation typically follows a top-down, passive approach, with the local community having limited autonomy to influence decision-making processes.

Lastly, coercive participation in tourism development entails addressing a few basic needs of the local community in order to mitigate socio-political risks associated with sustainable tourism development (Sakhile & Tembi, 2017). In this approach, the priorities for sustainable tourism development are often skewed heavily towards satisfying the interests of decision-makers, tourism operators, and tourists, rather than addressing the needs and desires of the host community.

Tourism scholars consistently highlight the significance of grassroots participation, particularly spontaneous engagement, in achieving effective and sustainable tourism development (Tosun, 2006; Sharpley, 2014; Rasoolimanesh, Jaafar, Kock & Ahmad, 2017). This approach fosters high-quality, durable outcomes that are more manageable, efficient, and effective in utilizing available resources. Local community involvement

in tourism development at the grassroots level fosters more favorable attitudes toward tourism activities and the preservation of local resources. It also enhances the tolerance of local communities towards tourism. Additionally, this approach has the potential to mitigate the long-term costs associated with resolving conflicts among stakeholders and to better serve the public.

Simmons (1994) & Tosun, (1999, 2006) point out that it also stimulates implementable policies, is perquisite to sustainable tourism as limits to local tolerance can be increased, residents become more hospitable and enhance tourist satisfaction. Further, it does not create winners and losers among the locals because there is a fair distribution of costs and benefits among residents and facilitates communication among stakeholders (Cortner & Moote, 1999; Healy, 1998).

In this study, the Normative Model of Community Participation in Tourism Development (NMCPTD) was utilized to explore the correlation between tourism impacts, community involvement, and attitudes toward tourism development in Rimoi National Reserve, Kenya. Utilization of this model serves as a valuable tool for guiding, planning, and interpreting data, thereby enabling the researcher to uncover the underlying mechanisms that connect these variables. Moreover, this approach provides valuable insights into the attitudes towards tourism development.

2.11 Conceptual Framework

Figure 2.3 illustrates a conceptual framework for a convergent mixed methods one-phase research design adopted in this study, which investigated the effects and explores residents' perceptions of tourism impacts, community participation, and community attitudes toward tourism development in Rimoi National Reserve.

The mixed methods conceptual framework serves an a priori guide, illustrating the interconnection among all constructs, variables, and factors under study, and depicting the possible relationships. It provides context and rationale for the study, detailing its conception as an equal status study and its anticipated contribution to knowledge, while also linking to the study design and interpretations. Additionally, this framework acts as an overarching model that directs both quantitative and qualitative phases of the research, facilitating the integration and interpretation that leads to the study's conclusion (Creswell & Plano Clark 2018).

A conceptual framework is a system of concepts, assumptions, expectations, beliefs, and theories that supports and informs research, serving as a key part of research design (Creswell & Creswell, 2018; Creswell & Creswell, 2023; Cohen et al., 2018; Cohen & West, 2023). It represents the actual understanding of the element's researchers plan to study and guides the formulation of objectives and the development of research instruments (Walliman, 2017).

This conceptual framework connects the problem statement, objectives, theory, research process and methodology, data analysis, and communication of findings (Asiamah & Oteng-Abayie, 2017; Saunders, Lewis, & Thornhill, 2020). According to Sekaran & Bougie (2022), a conceptual framework elevates our level of conceptual thinking about research. These relationships are often visually presented in a flowchart, web diagram, or other types of schemata.

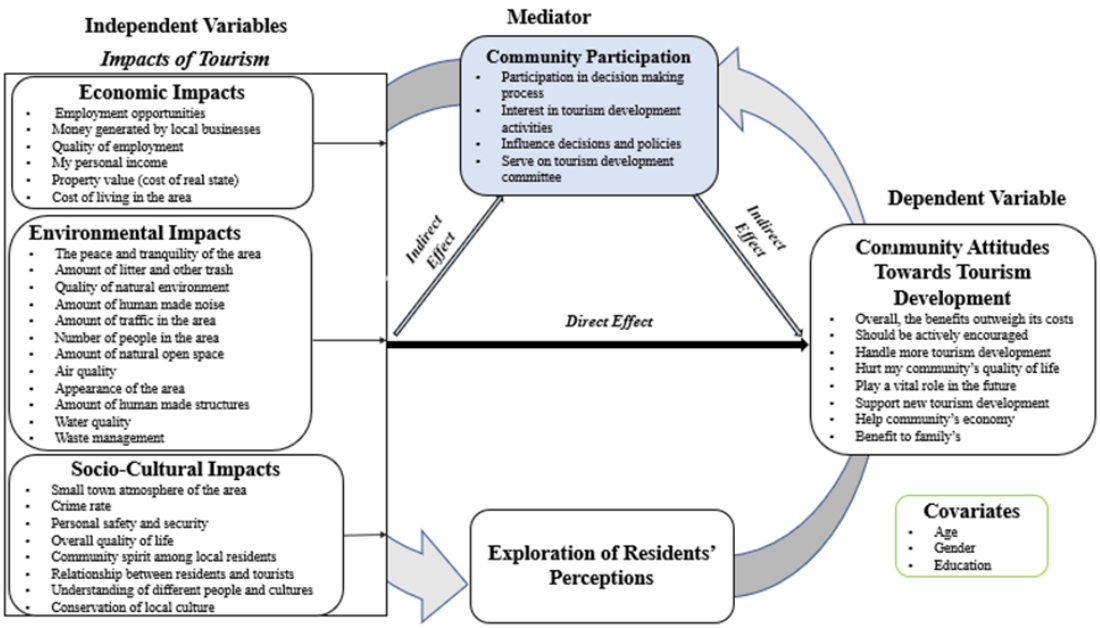


Figure 2.3: The Conceptual Framework

Source: Developed by the researcher 2024

This conceptual framework hypothesizes that tourism impacts (economic, environmental, and socio-cultural) have a direct effect on the attitudes of the destination community as well an indirect effect through community participation. For instance, positive economic impacts like increased income may lead to favorable attitudes, while negative environmental impacts such as pollution may result in negative attitudes.

Community participation is posited as a mediating variable that intervenes in the relationship between tourism impacts and community attitudes. This suggests that the level of community involvement in tourism decision-making and activities influences how tourism impacts are perceived and, consequently, shapes community attitudes. By participating in tourism-related processes, community members may gain a better understanding of the benefits and drawbacks of tourism, leading to more informed attitudes. Additionally, active involvement may empower communities to address negative impacts or leverage positive ones, affecting overall attitudes towards tourism development.

In this study, residents' perceptions of tourism impacts, community participation, and their influence on community attitudes towards tourism development in the Rimoi community were explored using focus group discussions. This investigation aimed to deepen our understanding of the multifaceted relationship between how residents perceive the benefits and drawbacks of tourism, their active or passive roles in tourism-related activities, and how these factors collectively shape their overall attitudes toward further tourism development in the community. By analyzing these perceptions and participation dynamics, the study sought to provide a comprehensive understanding of the social and cultural dimensions that drive community support or opposition to tourism development initiatives. This, in turn, offers valuable insights for policymakers and stakeholders in sustainable tourism planning and community engagement strategies in the Rimoi area.

Including control variables such as age, gender, and level of education serves to mitigate potential confounding factors that might otherwise influence community attitudes apart from the impacts of tourism and community participation. These covariates were incorporated into the study primarily for statistical control rather than as subjects of theoretical interest or as a primary focus. Consequently, no specific objectives were formulated concerning these covariates. As stated in the hypothesis section, the hypotheses were tested while accounting for the influence of these covariates.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter presents a description of the study area in terms of its position, size, and key geographical features. It also provides insights into the philosophical underpinnings of the study, the research design, the target population, and the research methodology. Furthermore, the chapter details the determination of the sample size and the sampling design, along with the types of data, data sources, and data collection instruments employed. Additionally, it addresses the measurement variables, reliability, validity, and trustworthiness of the research instruments. Finally, the chapter explains in detail the processes of data collection, analysis, and ethical considerations.

3.1 Study Area

The study was conducted in Rimoi National Reserve, located in Elgeyo Marakwet County, Kenya. Elgeyo Marakwet County, situated in the former Rift Valley Province of Kenya, lies between latitudes 0° 20′ and 1° 30′ north and longitudes 35° 0′ and 35° 45′ east. It shares borders with West Pokot County to the north, Baringo County to the east, Trans Nzoia County to the northwest, and Uasin Gishu County to the west, covering an area of 3,029.6 square kilometers. Rimoi National Reserve, established in February 1983 as a game reserve, spans 190 square kilometers and is nestled in the western Kerio Valley, about 13 kilometers off the Iten-Kabarnet road. The reserve boasts a rich variety of wildlife, including elephants, warthogs, and antelopes, as well as indigenous plants such as acacia trees. The climate in Rimoi National Reserve ranges from humid and cold to semi-arid and arid, with an average annual rainfall of slightly below 1000 mm. Plans for camping sites on numerous hills within the reserve aim to

provide opportunities for visitors to observe wildlife, particularly elephants along the Kerio River.

Rimoi National Reserve was branded in 2015 to conserve nature and provide alternative sources of income for local communities, particularly those residing nearby. Residents of the surrounding area engage in a variety of activities, including subsistence farming, livestock keeping, and small retail businesses, with additional income generated from tourism-related activities such as guiding services, selling traditional crafts, and participating in cultural performances. Despite being in the early stages of development, the reserve is positioned to attract tourists, benefiting from its proximity to Eldoret town, a significant resident population, and the popularity of nearby Iten Town as a training hub for local and international athletes (CIDP; 2018; EMCK, 2018).

The selection of Rimoi National Reserve as the study area was driven by several key factors. Firstly, as an emerging tourism destination with limited prior research compared to established reserves like Maasai Mara and Amboseli (Western & Wright, 1994, 2004), Rimoi presented a unique opportunity to study the early dynamics of community engagement and the evolving impacts of tourism development. Secondly, hosting a significant elephant population (KWS, 2020) and undergoing rehabilitation efforts, Rimoi offered a critical context for examining the interplay between wildlife conservation, community livelihoods, and tourism development, emphasizing community participation and co-management (Wells, 1999). This context allowed for an in-depth investigation of how community involvement could mediate the impacts of tourism and shape attitudes towards sustainable development. Thirdly, the reserve's proximity to the Tugen and Marakwet communities, with their rich cultural traditions, provided an ideal setting to explore the socio-economic and cultural dimensions of tourism development while addressing challenges like human-wildlife conflict (Stylidis

et al., 2014). Finally, the study aligned with broader research and policy goals, aiming to contribute to the growing body of literature on community-based conservation and sustainable tourism development in Africa (Woosnam et al., 2018; Nunkoo & Ramkissoon, 2011) and supporting the objectives of Kenya Vision 2030.

By focusing on Rimoi, the study aims to provide valuable insights for policymakers, conservation practitioners, and local communities in Elgeyo Marakwet County and other regions facing similar challenges. Rimoi's combination of emerging tourism potential, significant conservation challenges, and a rich socio-cultural landscape provided a valuable opportunity to investigate the complex interplay between tourism impacts, community participation, and community attitudes towards tourism development. See the map in Appendix 3.

3.2 Philosophical Underpinnings of the Study

This study is grounded in the pragmatist paradigm and employs a mixed methods research methodology (Cohen et al., 2023; Creswell & Creswell, 2023; Akhtar, 2016). The pragmatist paradigm, a philosophical foundation for research, recognizes that the world is complex and dynamic, with multiple realities that can be comprehended through diverse perspectives (Cohen et al., 2023; Saunders et al., 2023; Sekaran & Bougie, 2022). In contrast to the traditional positivist paradigm that seeks objective truth, pragmatism embraces the notion that knowledge is constructed through experiences and interactions with the environment (Creswell & Creswell, 2023; Saunders et al., 2023).

In line with the pragmatist paradigm, this study adopted a mixed methods approach, synergistically combining the strengths of both quantitative and qualitative data collection methods. This approach facilitated the simultaneous collection and analysis

of both types of data, enabling a more comprehensive and multifaceted understanding of the research question (Saunders et al., 2023; Creswell & Creswell, 2023; Cohen et al., 2023).

Quantitative data, gathered through a survey, provided a broad overview of respondents' attitudes towards tourism development in Rimoi National Reserve, Kenya. Simultaneously, qualitative data acquired through focus group discussions delved into the deeper, more sensitive perspectives of participants on this complex issue.

This integrated approach, informed by the pragmatist philosophy, enabled the researcher to gain a more comprehensive understanding of the research question than would have been possible with a mono-method approach that solely employed either quantitative or qualitative data (Creswell & Creswell, 2023; Cohen et al., 2023). By utilizing both methodologies, the study gained insights that were not readily accessible through either method alone.

The survey provided quantitative measures of attitudes and opinions, facilitating statistical analysis and generalization of findings to a broader population. The focus group discussions, on the other hand, facilitated in-depth exploration of participants' experiences, beliefs, and motivations, offering richer descriptions and contextual understanding of their perspectives on tourism development (Cohen et al., 2023 Saunders et al., 2023; Creswell & Creswell, 2023).

3.3 Research Design

The researcher employed a convergent mixed methods one-phase research design to simultaneously collect and analyze quantitative and qualitative data, allowing for a comprehensive understanding of the research question (Creswell, 2018; Saunders, et al., 2020). The intent of a convergent design is to merge the results of the quantitative

and qualitative data analysis in order to see the research problem from multiple angles and multiple perspectives (Zhou, 2020). This approach enabled the researcher to gather and analyze two distinct datasets—quantitative and qualitative—before integrating them to compare or combine the findings (Creswell & Clark, 2018). By synthesizing these findings, the researcher gained a holistic understanding of the research problem, providing nuanced and integrated results and interpretations (Cohen et al., 2018; Cohen et al., 2023; Creswell & Creswell, 2023). Equal weight was given to both quantitative and qualitative strands (Cohen, 2018; Zhou, 2020).

The collection and analysis of quantitative and qualitative data were conducted concurrently (Creswell & Clark, 2018; Creswell & Creswell, 2023). Quantitative data were collected through a survey of residents and qualitative data through focus group discussions with key informants in Rimoi village community. The subsequent analysis involved conducting a concurrent analysis of both quantitative and qualitative data, identifying patterns and themes from both sources concurrently (Creswell & Clark, 2018; Creswell & Creswell, 2023).

After separately analyzing the quantitative and qualitative data, the researcher synthesized the findings to gain a more comprehensive understanding of the research problem. This process aimed to identify areas of convergence or divergence between the two data sources, providing a more nuanced and multifaceted perspective on the research question (Creswell & Clark, 2018; Creswell & Creswell, 2023). Integration, which involves merging findings from both quantitative and qualitative data sets in the interpretation phase, is a cornerstone of mixed methods research, distinguishing it from other research approaches that merely employ both quantitative and qualitative data without fully integrating them (Creswell & Clark, 2018; Saunders et al., 2023; Walliman, 2017). This integrative approach allows researchers to delve deeper into the

relationships between the data and how they can be used to address the research questions more effectively.

The side-by-side narrative method, a strategy that juxtaposes quantitative and qualitative findings, was employed to comprehensively explore the research question from multiple perspectives (Cohen, 2018; Zhou, 2020; Creswell & Creswell, 2023). This weaving approach involves writing both qualitative and quantitative findings together on a theme-by-theme or concept-by-concept basis (Creswell & Clark, 2018). This approach emphasizes the collaborative nature of quantitative and qualitative methodologies. By concurrently presenting results from both approaches, the researcher was able to conduct a comparative analysis to discern similarities and dissimilarities, resulting in a deeper understanding of the research question. Contrasting findings from different paradigms enabled the identification of patterns and inconsistencies that would otherwise been overlooked. These insights can stimulate novel perspectives and contribute to theoretical advancements. This method is a prevalent approach commonly used in mixed methods research (Cohen et al., 2018; Creswell & Creswell, 2018; Cohen et al., 2023).

The adoption of the research design played a crucial role in mitigating the risk of misinterpretation of data and drawing incorrect causal inferences from the data (Saunders et al., 2023; Walliman, 2017). Further, it ensured that the evidence collected directly addressed the research question and enabled the researcher to achieve the stated objectives with the utmost clarity (Saunders et al., 2023; Walliman, 2017).

The convergent design was chosen to comprehensively capture respondents' opinions, feelings, views, preferences, and attitudes related to the study's constructs from both quantitative and qualitative perspectives (Saunders et al., 2023; Creswell & Creswell,

2023; Roberts & Anderson, 2023). This was crucial as the study aimed to understand participants' attitudes, opinions, feelings, and views on the impact of tourism on community attitudes toward tourism development in Rimoi National Reserve, a nature-based attraction, and how community participation mediates this relationship. The selection of this design aligned with the study's purpose statement, research objectives, research philosophy, available time, cost considerations, the research setting, and the analytical skills required for data analysis.

3.4 Target Population

In this study, the target population comprises 548 household heads residing in the Rimoi community, directly affected by tourist activities and future tourism developments within Rimoi National Reserve (GoK, 2019; EMCK, 2018). Household heads were chosen due to their recognized status as knowledgeable members, offering insights into both household and community-level impacts (Sun et al., 2022). This aligns with established practices in tourism impact studies (Smith, 2023; Jones & Brown, 2022).

Households are fundamental economic and social units in rural communities and are often most affected by tourism-related changes (Sun, Qiu, & Li, 2022; Smith, 2023; Sharpley, 2014; Asiamah & Oteng-Abayie, 2017). Additionally, collecting data from household heads is often a more practical and feasible approach compared to attempting to gather information from randomly selected individuals in a community.

The ideal sampling frame for this research would have been a comprehensive database or list of all residents in the Rimoi community. However, trying to create a sampling frame in the case of Rimoi community, where there are 2251 residents according to the 2019 Kenya Population and Housing Census, would have posed great logistical challenges, inaccuracies, and demanded significant resources.

Focusing on household heads offered a holistic understanding of tourism's impact on the community, covering economic, social, environmental, and cultural aspects. While household heads provide valuable insights, their perspectives may not fully represent the diverse community views, particularly those of younger residents (Jones & Brown, 2022; Asiamah & Oteng-Abayie, 2017). To ensure inclusivity, a focus group discussion was conducted with 10 youths aged 18-34, purposively selected to represent all resident youths of the Rimoi community each bringing unique experiences. This approach complemented household head perspectives (Lee & Garcia, 2023; Roberts & Anderson, 2023), providing a comprehensive view of tourism impacts and attitudes toward development in Rimoi National Reserve.

3.5 Sample Size Determination and Sampling Design

3.5.1 Sample size Determination

A sample, representing a subset of the target population, was selected for the study due to practical constraints such as expense, time, and accessibility, making it impractical to gather information from the entire population (Denscombe, 2014; Saunders et al., 2023; Akhtar, 2016).

To garner insights into the characteristics of the target population, the researcher employed a systematic sampling technique to carefully select a representative sample. This approach enabled the researcher to draw meaningful inferences or generalizations about the population's characteristics (Saunders et al., 2020). To ensure the representativeness of the sample, a comprehensive sampling frame was compiled, consisting of an up-to-date list of all household heads within the Rimoi National Reserve community (Creswell & Creswell, 2018; Cohen et al., 2018).

To determine an appropriate sample size for this study, the researcher utilized Yamane's formula (1967), a method for estimating sample size based on the population size, the desired confidence level, and the margin of error (Yamane, 1967). Data were collected from household heads, and the study's findings were extrapolated to the population of household heads residing in the Rimoi National Reserve community.

The sample size for this study was calculated using Yamane's formula (1967), which is:

$$n = \frac{N}{(1 + Ne^2)}$$

Where:

n is the sample size required

N is the population size (548 households)

e is the level of precision (0.05)

Plugging these values into the formula, we get:

$$n = \frac{548}{(1 + 548\ x\ (0.05)^2)} = 231\ respondents$$

Therefore, the sample size for the study was be 231 household heads.

3.5.2 Sampling Technique

To obtain a representative sample, a systematic random sampling technique was adopted. This technique was selected due to its versatility in accommodating various sample sizes, applicability across large geographical areas, cost-effectiveness, ease of implementation, ability to facilitate in-depth data collection, effectiveness in ensuring

even sampling across the population, and clarity in explaining the procedure to research assistants (Saunders et al., 2023; Creswell & Creswell, 2023; Creswell & Clark, 2018).

The researcher acknowledged potential drawbacks of systematic sampling, such as the risk of systematic bias arising from pre-existing patterns within the population and the challenge of achieving a truly representative sample when the population is relatively small or heterogeneous (Asiamah & Oteng-Abayie, 2017). However, these drawbacks were not encountered in this study. As a result, the researcher did not face any significant risks in obtaining an accurate and representative sample.

The sampling frame for this study comprised a comprehensive and up-to-date list of all 548 household heads residing in the Rimoi National Reserve community. This sampling frame ensured full coverage, minimizing the risk of omissions and guaranteeing equal participation opportunities, thereby reducing selection bias

3.5.3 Sampling Procedure

To initiate the sampling process, a random number was generated between 1 and the total population size (548). This randomly selected number served as the starting point for the systematic sampling procedure, identifying the first household head to be included in the sample. The sampling fraction was calculated by dividing the total population (548) by the desired sample size (231), yielding a value of 2.37. Since a sampling interval must be a whole number, this value was rounded down to 2, establishing the sampling interval (k). Consequently, every second (k-th) household head, starting from the randomly selected point, was systematically included in the sample.

Beginning with the randomly selected starting point, the researcher systematically identified and included every second household head until the entire sampling frame

was exhausted. Research assistants strictly adhered to the sampling procedure, sequentially visiting each selected household. If a household head was unavailable at the time of the visit, the research assistant recorded the household and returned later to administer the questionnaire. This ensured that no eligible household head was excluded due to temporary unavailability.

By following this systematic sampling procedure, the study minimized selection biases and ensured that each household had an equal and independent chance of being selected. As a result, the predetermined sample size of 231 household heads was successfully achieved, ensuring a representative sample and enhancing the reliability of study findings (Asiamah & Oteng-Abayie, 2017).

3.6 Types of data, Sources and Collection Instruments

To gather primary data, the researcher employed a closed-ended survey questionnaire and a focus group interview guide. These instruments were developed, drawing upon the study's objectives and relevant empirical literature. Quantitative data were collected from individuals in randomly selected households, while qualitative data were obtained through focus group discussions with a purposefully chosen group of key informants from the Rimoi National Reserve community.

3.7 Data Collection Instruments

3.7.1 Questionnaire

A survey questionnaire served as the primary instrument for data collection. Questionnaires are a widely employed method of data gathering, particularly in survey research, but their application extends beyond this specific research approach (Creswell & Creswell, 2018; Walliman, 2017). Their popularity stems from their ease of

administration and affordability, enabling researchers to gather large amounts of data efficiently (Saunders et al., 2020).

The survey questionnaire was methodically developed to align with the study's research objectives. Scales for tourism impacts, community participation, and community attitudes were carefully reviewed and adapted from existing literature with minor modifications, to suit the local context. To gauge the respondents' attitudes and perceptions, the Stapel scale, a type of rating scale, was employed drawing on previous studies (Rasoolimanesh et al., 2019, 2017; Bonimy, 2008; Khanom et al., 2019). Given that the study was designed to measure potential tourism impacts respondents may not as yet experienced, it was essential to inquire about their feelings regarding the current condition. This was meant to assist the respondents in relating their current experience, providing a basis for projecting these experiences into the future, especially in the context of further tourism development in the Rimoi National Reserve. To ensure the questionnaire's clarity, relevance, and appropriateness, it was subjected to rigorous scrutiny by supervisors, departmental faculty, and school faculty.

The survey questionnaire (Appendix 1) comprised six sections, with Section 1 collecting socio-demographic data (age, gender, education level, marital status, and occupation). This data was used to control for potential influences on community attitudes and to describe the characteristics of the respondents. However, no further statistical analysis, such as group comparisons or regression, was conducted. Section 2 delved into respondents' perceptions of tourism development in their area, employing a Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree) measured on interval scale. For instance, participants were asked to rate their level of agreement or disagreement with the statement: "Overall, the benefits of tourism development in my community will outweigh its costs."

Sections 3, 4, and 5 explored respondents' attitudes towards the impacts of tourism development on the community by employing a Stapel scale. A Stapel scale is a five-point rating scale measured on interval scale that features an adjective positioned at the center, flanked by evenly spaced numerical values on either side (Saunders et al., 2023; Walliman, 2017). Respondents were asked to evaluate each item twice, first indicating their perceptions of the current state of affairs in the community and then expressing their anticipated perceptions under the hypothetical scenario of increased tourism development. The ratings ranged from 1 to 5, with 1 representing "poor" and 5 representing "excellent."

Section 6 explored respondents' perspectives on participation in tourism development and engagement in local matters, employing a five-point Likert scale measured on interval scale. For instance, participants were asked to express their level of agreement or disagreement with the statement: "I, as a resident, should be able to participate in local decision-making processes."

3.7.2 Interview Guide

The interview guide for focus group discussion (FGD) was designed to facilitate an in-depth exploration of community perspectives on the mediating role of community participation in the relationship between tourism impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya. The guide ensured that discussions remained open yet structured, allowing participants to freely express their views while addressing key thematic areas systematically.

Developed based on the research objective and literature, the interview guide featured open-ended questions to capture participants' experiences, attitudes, and opinions. It was reviewed for clarity and relevance to ensure meaningful responses and a natural

conversational flow. The guide was particularly suitable for this study as it comprehensively examined the complex interplay between tourism impacts, community attitudes, and participation.

The guide began with broad inquiries into whether residents supported or opposed tourism development, establishing a foundation for understanding their general sentiments. It then explored how tourism development had shaped local attitudes, both positively and negatively. To assess the perceived impacts of tourism, participants reflected on economic, environmental, and socio-cultural changes following the re-branding of Rimoi National Reserve. Economic considerations included income changes, employment opportunities, and business growth; environmental concerns focused on noise, traffic, litter, and landscape changes; while socio-cultural aspects addressed safety, crime, community cohesion, and local traditions.

The role of community participation was also examined, particularly how residents' engagement in decision-making influenced their attitudes towards tourism. Finally, the guide explored the link between tourism impacts and participation, offering insights into whether tourism-induced changes motivated or discouraged community involvement in tourism development. This structured approach ensured a comprehensive understanding of the dynamics between tourism impacts, community attitudes, and participation.

3.7.3 Focus Group Discussion

To gain in-depth insights into the perceptions and experiences of the Rimoi National Reserve community, this study utilized focus group discussions (FGDs) with 10 purposively selected resident youths aged 18 to 34 years. This age group was chosen because youths represent a dynamic segment of the community, actively engaging with

tourism through employment, entrepreneurship, conservation efforts, and social initiatives. Their perspectives were crucial in understanding evolving attitudes toward tourism development and its impacts.

Focus group discussions were chosen over other qualitative methods because they capture collective perspectives, encourage interactive discussions, and generate rich narrative data that might not emerge through individual interviews or surveys. This method enabled participants to build on each other's ideas, facilitating a deeper exploration of community attitudes and participation in tourism.

3.8 Measurement of Variables

The study collected data on four distinct types of variables that were employed in the analysis: Dependent variable, Independent variables, Mediating variable and Control variables. This categorization of variables helps structure the analysis and facilitates a comprehensive understanding of the causal relationships between the factors examined in the study.

3.8.1 Dependent Variable

The community attitudes toward the development of tourism in Rimoi National Reserve was the primary focus of the study. This was the aspect the investigation aimed to address, to provide a solution (Saunders, et al., 2023). The dependent variable, also known as the outcome variable or criterion variable, was measured using a five-point Likert scale ranging from strongly disagree to strongly agree, with the middle value indicating neither agree nor disagree.

3.8.2 Independent Variable

Tourism impacts, encompassing economic, socio-cultural, and environmental dimensions, served as the independent variable, representing the factor presumed to

influence or manipulate the dependent variable (Walliman, 2017; Creswell & Creswell, 2018; Cohen et al., 2018). It was hypothesized that any variation in these impacts would correspond to changes in the dependent variable. As such, tourism impacts functioned as a driving force behind the observed outcomes. The measurement of tourism impacts was conducted using a five-point Likert scale, ranging from 1 (strong disagreement) to 5 (strong agreement).

3.8.3 Mediator Variable

The study introduced community participation as the mediator, bridging the gap between the predictor (independent variable) and the outcome variable (dependent variable). A mediator acts as an intermediary variable that elucidates how the predictor variable influences the outcome variable (Haye, 2022; Saunders et al., 2023).

The incorporation of a mediator was anticipated to offer a more comprehensive understanding of how or why an independent variable is linked to a dependent variable. Mediation can help mitigate interpretation biases when a variable lacks a direct impact due to its mediating effect on another variable (Hayes & Preacher, 2013; Preacher & Kelley, 2011; Haye, 2022).

The researcher postulated that community participation (M) would mediate the relationship between tourism impacts (X) and community attitudes toward tourism development (Y). In other words, the researcher hypothesized that community participation would serve as the underlying mechanism through which tourism impacts exert their influence on community attitudes toward tourism development. This implies that community participation would elucidate the causal pathway by which tourism impacts manifest in changes in community attitudes.

The researcher employed a statistical technique known as mediation analysis to evaluate this hypothesis. Mediation analysis enabled the researcher to quantify the direct and indirect effects of tourism impacts on community attitudes toward tourism development. Additionally, it facilitated the estimation of the proportion of the indirect effect that was mediated by community participation.

3.8.4 Control Variables

The study controlled for demographic factors, including age, gender, and education level, as covariates. This approach aimed to minimize their potential influence on the dependent variable (community attitude towards tourism development) in a manner unrelated to the independent variable (tourism impacts).

Disregarding covariates, also known as lurking variables, can introduce bias into study results, potentially leading to erroneous conclusions (Hayes, 2022; Hair et al., 2019). Therefore, the researcher controlled for the potential influence of all pertinent covariates, regardless of their direct relevance to the study, to safeguard the validity and reliability of the findings.

Hayes (2023) defines confounding variables as factors that exhibit associations with both the independent and dependent variables, potentially obscuring the true relationship between them. By controlling for these variables, the researcher enhanced the credibility of the study findings, ensuring that they were not distorted by confounding influences. Drawing conclusions from aggregate data without such control could have resulted in erroneous interpretations.

The researcher implemented covariance analysis to integrate demographic variables into the analysis. This statistical technique facilitated the estimation of the independent variable's (tourism impacts) and mediating variable's (community participation) effects

on the dependent variable (community attitude towards tourism development), while simultaneously accounting for the influence of demographic variables. This approach safeguarded the accuracy of the results and bolstered confidence in the study's conclusions.

3.9 Reliability and Validity of Research Instruments

3.9.1 Validity

The validity of the questionnaire items was scrutinized to ascertain whether they accurately represented the theoretical constructs they were intended to measure. Validity fundamentally concerns whether a test effectively measures what it is designed to assess (Hair et al., 2019; Hair et al., 2018).

This study evaluated several types of validity, encompassing construct validity, convergent validity, discriminant validity, content validity, and face validity (Cohen et al., 2018; Creswell & Creswell, 2018; Creswell & Creswell, 2023).

3.9.1.1 Construct Validity

This study utilized exploratory factor analysis (EFA) to evaluate the construct validity of survey items measuring the impacts of tourism, community involvement, and community perceptions. Construct validity refers to the degree to which a set of measured items accurately reflects the underlying theoretical construct they are designed to assess (Hair et al., 2019; Hayes, 2022; Hair et al., 2018). Unlike a single definitive test, construct validity is a multifaceted concept that is evaluated using multiple methods (Hair et al., 2019; Hayes, 2022; Hair et al., 2018). Assessing construct validity is crucial for ensuring the trustworthiness and accuracy of research findings. Several methods are commonly employed to evaluate construct validity, each

addressing different aspects of the concept: convergent validity, discriminant validity, content validity, and face validity (Hair et al., 2019; Cohen et al., 2023).

3.9.1.2 Convergent Validity

To evaluate convergent validity, factor analysis was employed. Convergent validity refers to the extent to which measures of the same construct exhibit strong correlations and load onto a single factor or construct (Mohajan et al., 2018; et al., 2019; Hair et al., 2018). According to Hair et al. (2019), satisfactory convergent validity among questionnaire items is indicated by factor loadings on a construct that are statistically significant at a coefficient value of 0.5 or higher, ideally reaching 0.7. Additionally, the reliability estimate for the construct should be 0.7 or higher (Hair et al., 2019; Cohen, et al., 2023). This implies that the scale items are converging, sharing a high proportion of variance in common, which suggests that they are measuring the same underlying construct.

3.9.1.3 Discriminant validity

The factor analysis was also utilized to assess discriminant validity, which refers to the degree to which measures of different constructs are unrelated to each other (Mohajan et al., 2018; Hair et al., 2013). In the context of this study, the items that measure tourism impacts, community attitudes towards tourism development, and community participation loaded onto distinct factors (Cohen et al., 2018; Hair et al., 2019).

3.9.1.1.3 Content Validity

Content validity refers to the extent to which a questionnaire's items adequately represent the research question being addressed (Mohajan et al., 2018; Hair et al., 2018; Hair et al., 2019). Unlike other types of validity, there is no statistical test to definitively determine whether questions sufficiently cover the content area. Therefore, content

validity is typically assessed qualitatively by a panel of experts in the relevant field (Hair et al., 2019).

In this study, to ensure that the questionnaire items comprehensively addressed the research question, a panel of experts from the Moi University School of Tourism, Hospitality, and Events Management evaluated the items for their usefulness, essentiality, and necessity. Additionally, they provided feedback on the items' clarity, comprehensibility, relevance, comprehensiveness, and freedom from bias. If two items were identical or could not be agreed upon by the panel, one was eliminated.

The feedback from the panel of experts was instrumental in refining the questionnaire items before the survey was conducted. The revisions focused on key aspects, including clarity and cultural sensitivity, relevance, avoidance of jargon, and ensuring that terms were easily understood by the target respondents. One of the clarifications addressed the rationale behind employing a staple measurement scale instead of the more conventional Likert scale. The response explained the objective of gauging residents' perceptions of the current tourism situation and how further tourism development would influence their attitudes towards it.

In essence, the panel of experts' feedback guided the revision of the questionnaire items prior to survey administration. These revisions focused on ensuring that the items were clear, culturally sensitive, relevant, and relatable, free of jargon, and used easily understood terms. These adjustments aimed to align the questionnaire with ethical considerations, enhancing its suitability for field use in data collection.

3.9.1.4 Face Validity

Face validity is a straightforward approach to assess whether the survey items measure the intended concept (Seema, 2018; Khanom et al., 2019). It is a subjective evaluation,

rather than a statistical measure, of whether the items appear to be relevant and understandable (Hair et al., 2018; Mohajan et al., 2018; Seema, 2018).

In this study, supervisors evaluated the face validity of the questionnaire items based on their relevance to the research objectives, clarity, comprehensibility, feasibility, consistency in style and formatting, and language clarity (Hair et al., 2019). Feedback from the supervisors informed revisions to the questionnaire items before survey administration, ensuring that their expert insights were incorporated.

3.9.2 Reliability

The questionnaire's reliability was assessed using Cronbach's alpha, a measure of internal consistency. Internal consistency refers to the extent to which the questionnaire's items measure the same underlying construct. A reliability estimate of 0.7 or higher is considered satisfactory (Hair et al., 2018; Taber, 2018; Cronbach, 1951). A higher reliability coefficient indicates that the questionnaire's questions consistently represent the same underlying concept.

Cronbach's alpha is the most widely used reliability test in social science research due to its robustness and versatility compared to other methods such as test-retest, split-half, or parallel forms (Rasoolimanesh & Ismail, 2017; Bonimy, 2008; Khanom et al., 2019). Therefore, this study employed Cronbach's alpha with a reliability threshold of 0.7 to evaluate the reliability of the measurement items for the study constructs.

This study utilized existing survey questions that had been validated and demonstrated reliability and effectiveness in measuring the intended concepts. Survey questions from the scale previously used by other authors, including Rasoolimanesh et al. (2019), Rasoolimanesh and Ismail (2017), Bonimy (2008), and Khanom et al. (2019), with high Cronbach's alpha values (0.7 to 0.87), were adopted, adapted, and modified in terms of

phrasing and question wording to align with the target population's level of understanding and the study's research objectives of assessing tourism impacts, community participation, and local communities' attitudes toward tourism development.

3.9.3 Trustworthiness

Trustworthiness, a cornerstone of qualitative research, is comparable to validity and reliability in quantitative studies (Creswell & Creswell, 2018; Nowell, Norris, White, & Moules, 2017; Schurink, Fouché, & De Vos, 2014). It ensures the rigor and quality of both the research process and its findings. In this study, trustworthiness was achieved by addressing the four key criteria: credibility, transferability, dependability, and confirmability, using specific activities to enhance the quality of the research and provide confidence in its conclusions.

Credibility was achieved by ensuring the findings accurately reflected the community's perceptions and experiences. For example, participants were asked about the perceived benefits of tourism development, such as increased employment opportunities or improved infrastructure, and any associated challenges, such as environmental degradation or cultural erosion. To ensure accurate representation, direct quotes such as, "Tourism has brought more jobs, but the noise from tourist vehicles affects our wildlife," were used to substantiate themes. The researcher also employed member checking, where participants reviewed preliminary findings to confirm that the interpretations accurately reflected their experiences. Additionally, the researcher meticulously documented every step of the data analysis process, involving careful coding and categorization of responses to identify patterns while cross-checking the findings with raw data to maintain alignment with the participants' narratives (Schurink, Fouché, & De Vos, 2014).

Transferability was enhanced by providing detailed descriptions of the research context, participants, and methods. The study outlined the characteristics of Rimoi National Reserve, including its geographical location, key tourist attractions, and the socio-economic profile of the surrounding communities. For instance, the study noted that most community members relied on subsistence farming and small-scale businesses, making tourism a potential source of supplementary income. These detailed contextual descriptions allow readers to assess whether the findings might apply to other similar communities near protected areas (Lincoln & Guba, 1985; Creswell & Creswell, 2018; Creswell & Creswell, 2023).

Dependability was ensured by documenting all aspects of the research process to promote consistency and explicability. The study provided a clear outline of how participants were identified and recruited, how interviews and focus groups were conducted, and how data were analyzed. For example, purposeful sampling was used to include community youth members actively engaged in tourism activities as well as those who were not, to capture a broad range of perspectives. An audit trail was maintained, including raw data such as interview transcripts, field notes, and coding frameworks. This allows future researchers to replicate the study and assess whether similar findings emerge in other tourism contexts (Schurink, Fouché, & De Vos, 2014).

Confirmability, the extent to which findings are objective and not influenced by the researcher's biases, was ensured by maintaining an audit trail of all raw data, transcripts, and field notes (Nowell, Norris, White, & Moules, 2017). This allows other researchers to review the data and assess the researcher’s interpretations and conclusions. Reflexivity was also incorporated, with the researcher maintaining reflective journals to document how personal assumptions, such as the belief in the benefits of community participation, were managed to avoid influencing data interpretation. The researcher

was aware of and reflected on how her personal views, experiences, or biases might affect the data collection, interpretation, or analysis process. By doing so, she ensured that her own thoughts and feelings did not unduly shape the research results.

By addressing credibility, transferability, dependability, and confirmability, this study ensured the trustworthiness of its findings (Creswell & Creswell, 2018; Nowell, Norris, White, & Moules, 2017; Creswell & Creswell, 2023).These measures established confidence in the study's conclusions about how community participation mediates tourism impacts and attitudes toward tourism development in Rimoi National Reserve.

3.10 Pre-testing of Instruments

Pretesting, the practice of evaluating a research instrument on a small group of respondents before administering it to the entire sample, was conducted to pinpoint potential issues with the instrument, such as unclear questions, ambiguous wording, or biased questions (Nowell et al., 2017; Creswell & Creswell, 2023). Pretesting can also contribute to enhancing the instrument's reliability and validity (Schurink, et al., 2014).

The pilot study was conducted over a two-week period from July 3 to 17, 2023, at the Samburu National Reserve with a sample of 50 randomly selected respondents from the community who closely resembled the target population for the full-scale study. The pilot study sample size fell within the recommended range of 30 to 60 respondents, as suggested in the research literature (Hair et al., 2023; Hair et al., 2019; Cohen et al., 2023; Creswell & Clark, 2018; Creswell & Creswell, 2023).

The pilot study served to evaluate the survey questionnaire, assessing its validity and reliability, minimizing errors and reducing noise, assessing clarity, understandability, ease of use, question wording, and layout, and identifying any potential issues or areas for improvement. The results of the pilot study were analyzed, and the findings were

subjected to the expert judgment of the supervisors to identify items that were considered sensitive, confusing, or biased and could undermine the study's validity and reliability. These items were then deleted, corrected, or modified.

Mohajan et al. (2018) advocated for pretesting, highlighting its potential to improve the clarity, ease of use, question wording, instrument design or layout, completion time, and effectiveness across a diverse range of respondents. Additionally, they emphasized pretesting's ability to reduce random errors. Saunders et al. (2023) and Cohen et al. (2018) further supported the use of pretesting, emphasizing its contribution to enhancing the instrument's reliability and validity, as well as reducing noise and error.

Data collected from participants were coded and entered into Statistical Package for the Social Sciences (SPSS) version 27 for analysis. The pilot study yielded positive outcomes, with participants indicating clarity and ease in comprehending the questionnaire. The average completion time was 30 minutes for the interviewer-administered questionnaire and 70 minutes for the focus group discussion. Item and reliability analyses confirmed that scale questions aligned with constructs and exhibited high internal consistency, indicating the instrument's reliability. Cronbach's alpha coefficients for each factor ranged from 0.73 to 0.84, exceeding the recommended threshold of 0.7. Specific values included 0.78 for community attitude, 0.803 for economic impact, and 0.73 for environmental impact, 0.84 for sociocultural impact, and 0.78 for community participation items. The pilot study report is attached as Appendix 4.

However, two demographic survey questions were refined to enhance clarity. The question inquiring about marital status was modified from "Are you married or married with children, single or single with children?" to "Are you married or single?"

Additionally, the question about the highest level of education was revised from "What is the highest level of education you have completed? A. Primary B. Secondary C. A-level category education D. College or university" to "What is the highest level of education you have completed? A. Primary B. Secondary C. University (postsecondary education).

3.11 Data Collection Procedure

This section outlines the procedures used for obtaining research authorization and collecting quantitative and qualitative data from participants in the field. The study employed a household survey questionnaire for quantitative data collection and focus group discussions (FGDs) for qualitative data collection.

3.11.1 Research Authorization

Before data collection, the researcher obtained an introductory letter from Moi University, which facilitated securing a research permit from the National Commission for Science, Technology, and Innovation (NACOSTI). Additionally, permission to conduct research in Rimoi National Reserve was sought and granted by the County Government of Elgeyo Marakwet, with authorization letters attached as Appendix 5.

3.11.2 Quantitative Data Collection

A household interviewer-administered survey questionnaire was used to collect quantitative data from sampled household heads in the Rimoi National Reserve community.

To ensure a smooth data collection process, the researcher conducted a reconnaissance visit to familiarize with the study area, build rapport with local administration, and obtain verbal consent from community members. Three research assistants were

identified and trained on data collection procedures, emphasizing ethical considerations and proper questionnaire administration.

During data collection, participants provided verbal consent before completing the survey. Research assistants assisted respondents who had difficulty reading by reading the questions aloud in Kiswahili or Kalenjin and recording their responses. Each questionnaire was assigned a unique identifier (1–231) for tracking.

To ensure data quality, completed questionnaires were screened for accuracy and completeness before being entered into a database for analysis. Ethical guidelines by Saunders et al. (2023) and Mohajan et al. (2018) were strictly followed, ensuring voluntary participation, confidentiality, and protection from harm.

3.11.3 Qualitative Data Collection

For the qualitative component, focus group discussions (FGDs) were conducted using a structured interview guide (Appendix 2). Participants were purposively sampled based on firsthand experience or awareness of tourism-related activities. The inclusion criteria targeted individuals aged 18–34 residing in the Rimoi National Reserve community with some involvement or awareness of tourism development. Research assistants identified participants through community networks, youth groups, and key informant referrals to ensure diverse perspectives.

To enhance participation, the researcher arranged transportation and flexible scheduling based on participants' availability. The 90-minute discussions followed an open-ended prompt question format, aligned with the study’s objective. The FGDs were conducted in English and Kiswahili, ensuring inclusivity and equal participation, particularly encouraging quieter individuals to contribute.

With participant consent, the discussions were audio-recorded to enable accurate transcription and thematic analysis. This ensured the study captured authentic, nuanced perspectives on the interplay between community participation, tourism impacts, and attitudes toward tourism development. The FGDs provided valuable insights into community engagement in tourism and its broader implications.

3.12 Data Analyses

This study employed a mixed-methods research approach, integrating quantitative analysis of survey data with qualitative exploration of focus group data. These two sets of findings were independently analyzed and then juxtaposed to evaluate the mediating role of community participation in the relationship between tourism impacts and community attitudes towards tourism development in Rimoi National Reserve. This methodological strategy aligns with the recommendations of Creswell and Clark (2018) and Creswell and Creswell (2023).

3.12.1 Quantitative Data Analysis

This research employed descriptive statistics, correlation analysis, exploratory factor analysis, and regression analysis to effectively test hypotheses and ensure the validity and credibility of the research outcomes, aligning with the study's objectives.

Descriptive statistics were employed to provide a summary of the characteristics of the respondents and the individual variables being studied. This allowed for the identification of patterns and trends within the datasets and helped the researcher gain a better understanding of the data (Sekaran & Bougie, 2022; Hayes, 2022; Hair et. al; 2023). This analysis revealed both shared and unique variances within the study (Creswell & Creswell, 2023; Hayes, 2022; Hair et al., 2023).

Analysis of demographic data provided valuable insights into the characteristics and trends of the target population of this study. Examining demographic data assists in identifying patterns and disparities, reveals group differences, contextualizes findings, and contributes to the development of more targeted and effective interventions and strategies leading to richer, more impactful conclusions (Field, 2018; Ridzuan & Wan Zainon, 2019; Hair, et al., 2019).

Exploratory factor analysis (EFA) was employed to identify variables that should be grouped under a common factor and to evaluate the dimensional structure of the items used to measure the constructs. This assessment aimed to determine the extent to which the items effectively captured the same underlying concept (Hair et al., 2019; Samuels, 2016; Sekaran & Bougie, 2022). In this study, five constructs comprising multiple items were considered: tourism development, economic impacts, environmental impacts, socio-cultural impacts, and community participation.

Items with a factor loading threshold of an r value greater than 0.5 and accompanied by eigenvalues exceeding 1 were retained for analysis. Conversely, items falling below this threshold were excluded. This procedure ensured that scales measuring the study constructs achieved acceptable levels of construct validity, discriminant validity, and convergent validity, facilitating accurate statistical inferences (Seema, 2018; Hayes, 2022; Hair et al., 2019; Sekaran & Bougie, 2022).

As highlighted by Hair et al. (2023), EFA served not only as a statistical technique for assessing correlations within a dataset but also as a tool for crafting a questionnaire that effectively aligned with the intended construct measurement. Exploratory Factor Analysis enabled researchers to gauge variable correlations and to reduce the study dataset into a smaller number of meaningful factors.

Correlation analysis was conducted to measure the strength and direction of linear relationships between independent, dependent, and mediating scale variables (Hayes, 2022; Hair et al., 2023). This analysis provided insights into the underlying patterns and associations within the data, enabling the researcher to identify potential causal relationships (Hair et al., 2022; Sekaran & Bougie, 2022). This statistical method is well-suited for examining connections between variables, which aligns with the study's goal of establishing causal relationships.

Subsequently, hierarchical linear regressions was conducted, employing a multivariate analysis approach, to rigorously examine hypotheses and extrapolate the study's conclusions to the target population, using a significance level of 0.05. Hierarchical linear regression is a statistical method used to analyze the relationship between a dependent variable and multiple independent variables, taking into account the hierarchical structure of the data (Tranmer, Murphy, Elliot, & Pampaka, (2020). Validating hypotheses and assessing model fitness are instrumental in ensuring the authenticity and dependability of findings, safeguarding against coincidental occurrences (Seema, 2018; Senavirathna & Cooray, 2019; Saunders et al., 2023).

In line with the recommendations set forth by Hayes (2023) and Hair et al. (2023), the hierarchical multiple regression approach was employed to control for covariates and examine the mediation effect of community participation on the relationship between tourism impacts and community attitudes toward tourism development. This approach aims to determine whether the observed primary effects in this study were transmitted to the dependent variable through mediation or otherwise.

Prior to conducting hypothesis tests, a range of diagnostic statistical tests, including scatterplots, box plots, tolerance, VIF (variance inflation factor), Durbin-Watson test,

and Mahalanobis distance, were conducted to scrutinize assumptions pertaining to linearity, normality, homoscedasticity, Test for Independence of Errors, multicollinearity, and multivariate outliers (Turner, 2018. 2023; Sekaran & Bougie, 2022).

The rationale behind these tests, as emphasized by Senavirathna and Cooray (2019) and Hair et al. (2023), is to ensure that statistical assumptions are met, preventing researchers from introducing biases and errors, and ultimately ensuring the validity of drawn conclusions and inferences (Hair et al., 2023; Hair et al., 2018; Yang, Tu, & Chen, 2019). Hayes, 2022). These tests serve as safeguards against researchers drawing conclusions based on flawed, subjective, or inaccurate information. Failure to satisfy these assumptions can lead to unreliable or imprecise results, potentially resulting in overestimation or underestimation of significance, effect sizes, or the occurrence of Type I or Type II errors (Senavirathna & Cooray, 2019; Cohen et al., 2018; Hayes, 2022).

3.12.1.1 Model Specification

The purpose of this study was twofold:

i. To evaluate the effect of tourism impacts on community attitudes toward tourism development while controlling for the covariates of respondents' age, gender, and level of education.
ii. To assess the mediating effect of community participation on the relationship between tourism impacts and community attitudes toward tourism development, examining the direct and/or indirect causal effects of tourism impacts on residents' attitudes toward tourism development.

To address the first purpose, a hierarchical regression model was employed. This model is considered particularly useful because, according to Hair et al. (2023), it allows researchers to specify a fixed order of entry for variables, enabling them to control for the effects of covariates or to test the effects of certain predictors independent of the influence of others.

3.12.1.2 Hierarchical Regression Model

The hierarchical regression model was used to test hypothesis $H_{01,}$ $H_{02,}$ and H_{03} (equations i and ii). In each model, the predictors were grouped into two sets; the covariates and the main predictors. All the predictor variables were added to model at once without any stepwise addition or selection process to explain the variance in the outcome variable (community attitudes towards tourism development) at α=0.05 level of significance.

$$Y = \beta_0 + \beta_1 C + \varepsilon$$

The baseline regression model of the covariates predicting the dependent variable.

$$Y = \beta_0 + C + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \ldots\ldots\ldots\ldots (H_{01} - H_{03})$$

The hierarchical multiple linear regression model of the independent variables (economic, environmental and social-cultural impacts) predicting the dependent variable while controlling for the covariates.

Where;

Y= Dependent variable, (X_1- X_3) = Independent variables, C= Covariates, β_0= Constant, (β_1 - β_3) = Coefficient of the independent variables and ε= Error term.

To address the second purpose, Hayes's (2022) model 4 was utilized to evaluate the mediating effect. The product of effects approach was employed to test the indirect

effect using a percentile bootstrap estimation method. Bootstrapping is a preferred approach to testing for mediation and is gaining increasing popularity (Hayes, 2022; MacKinnon, 2012; Cohen, et al., 2023; Hayes, 2022). It treats the sample in the dataset as a quasi-population (with replacement). The bootstrapping procedure allows users to request 1,000 to 5,000 different samples. This study utilized 5,000 samples, which is a common number used in mediation studies in social research (Cohen, et al., 2023; Sekaran & Bougie, 2022; MacKinnon, 2012).

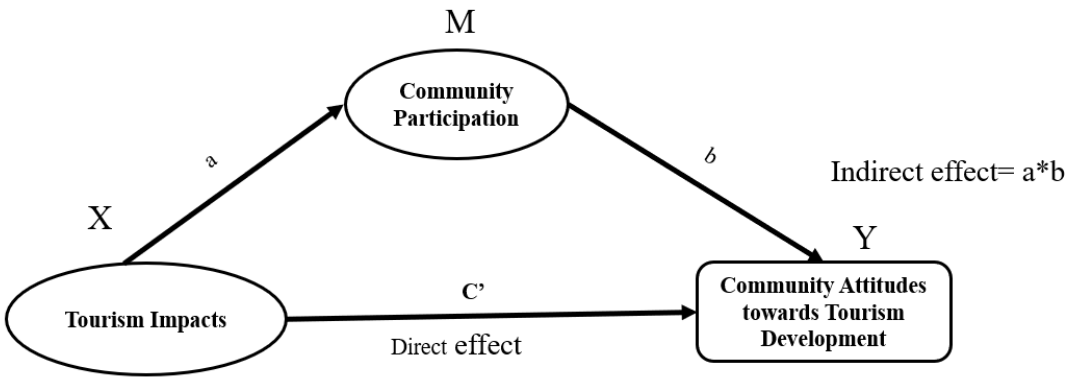


Figure 3.1 Simple Mediation Model

Source: (Hayes, 2013)

For mediation to occur, the following conditions must be met (Mackinnon, 2012);

Tourism impacts (X) must have an effect on community attitudes towards tourism development (Y)

The effect of tourism impacts (X) on community attitudes towards tourism development (Y) shrinks upon the addition of community participation (M) to the model.

If the predicted directions for both direct and indirect effects hold true, indicating significance in initial conditions, a partial mediation is indicated. A full mediation is reported when the independent variable no longer conveys its effect to the dependent

variable when accounting for the mediator. Conversely, if the mediator does not exert a significant influence on the dependent variable, no mediation is reported.

Considering these conditions, the researcher employed the simplified Hayes PROCESS macro (version 4.2) to produce output, facilitating an understanding of the resulting mediation nature and its significance (Hayes, 2022). Bootstrapping, involving 5,000 samples, was conducted to yield point estimates and confidence intervals for evaluating the potential significance of the indirect effect (Hayes & Preacher, 2011). The decision criterion was based on the confidence intervals from bootstrapping; if they excluded zero, it would be deemed evidence of a significant indirect impact.

Mediation was determined by simply obtaining the product of the coefficients “a” and “b” (a*b) or (Total effect – Direct effect) as shown in equation i.

Mediation = a*b……..……..……(H_{04})

Therefore, Total effect was obtained by calculating the sum of indirect and the direct effect as shown in equation ii.

Total effect (C) = (a*b) + C’

Where; X= Independent Variable, Y= Dependent Variable, M= Mediating Variable, C = Total effect, C’= Direct effect, and (a*b) = Indirect effect.

3.12.2 Qualitative Data Analysis

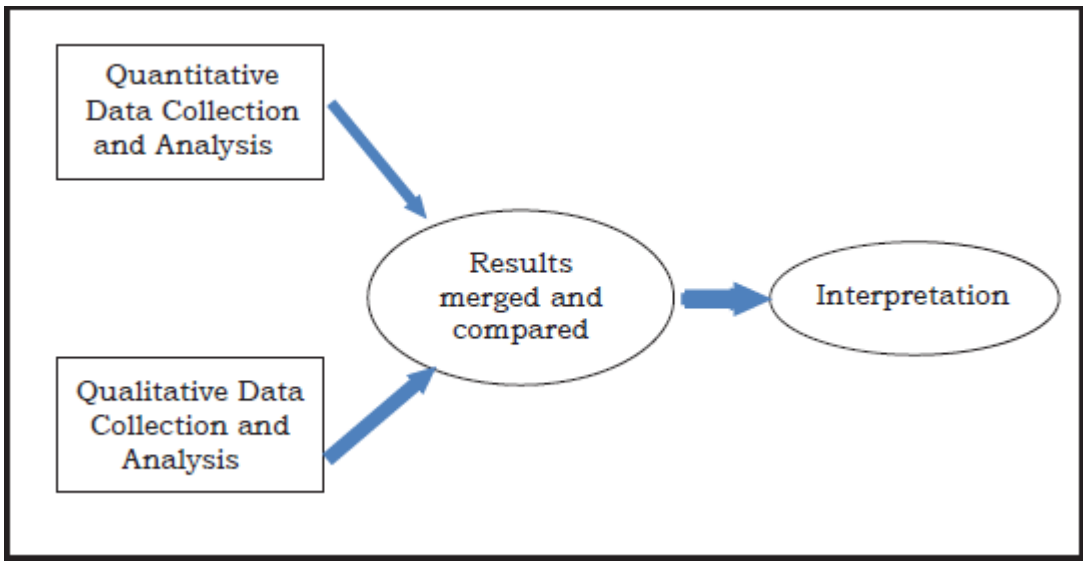
The data collected through focus group discussions (Creswell & Creswell, 2023; Saunders et al., 2023; Cohen et al., 2018) were analyzed using thematic analysis to explore community perceptions of tourism impacts and the influence of community participation on attitudes toward tourism development in Rimoi National Reserve, Kenya. Thematic analysis was chosen due to its flexibility and interpretive nature,

which allowed for a deeper understanding of participants' experiences and meanings (Mohajan et al., 2018; Creswell & Creswell, 2023; Saunders et al., 2023). Unlike content analysis, which often focuses on quantifying patterns, thematic analysis is more suited to identifying and interpreting themes within textual data, providing insights into the complexities of participants' perspectives (Walliman, 2017; Zhou, 2020).

The process of thematic analysis commenced with data familiarization, where the researcher immersed herself in the transcripts by repeatedly reading them. This allowed for a comprehensive understanding of the nuances in the participants' discussions. The next step involved identifying and coding emergent themes, ensuring that the identified patterns aligned with the study's objectives and research questions. This phase of coding was critical to organizing the data and structuring it in a way that would facilitate further interpretation.

Once the themes were identified, they were refined and synthesized into clear, coherent, and non-repetitive narratives, in line with the methodologies outlined by Creswell (2023), Saunders et al. (2023), and Hair et al. (2023). These refined themes were presented as illustrative excerpts to highlight the relationship between community perceptions, tourism impacts, and the influence of community participation on attitudes toward tourism development in the region.

In addition, the study adopted a convergent research design (Creswell & Clark, 2018; Zhou, 2020), which involved comparing findings from both qualitative and quantitative strands to evaluate areas of convergence and divergence (see Figure 3.2). The findings were presented using a side-by-side narrative method, organizing them thematically and conceptually, to provide a coherent and comprehensive understanding of the research outcomes.



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Figure 3.2: Merging process of quantitative and qualitative results in a convergent one-phase research design

Source: Adapted from Creswell and Clark (2018)

Table 3.1 presents a summary of the steps for the data analysis, while Table 3.2 shows the statistical techniques that were used to analyze the data and test the hypotheses stated in Chapter One.

Table 3.1: Steps for the Data Analyses

Step 1	Demographic profile and characteristics of the respondents
Step 2	Descriptive analysis of the study variables
Step 3	Factor Analysis
Step 4	Correlation Analysis
Step 5	Hypothesis Testing
Step 6	Mediation analysis

Table 3.2: Data Analysis Plan

Analysis	Statistics	Decision Point
Descriptive Statistics		
Demographic Profile and characteristics of the respondents	frequencies, percentages, mean using SPSS	N/A
Data Reduction: Independent variables	Principal component factor analysis with varimax rotation using SPSS	KMO Bartlett's Test >.5 Eigen value greater than 1,
Summarizing data: Descriptive analysis	frequency, means, standard deviation, mean differences using SPSS	In relation to the lower and upper bound values and the average value.
Factor Analysis		
Data Reduction and to test for construct, convergent and discriminant validity of variables	Exploratory factor Analysis(EFA)using Principal component factor analysis(PCA) with varimax rotation using SPSS	KMO Bartlett's Test >.5 Eigen value greater than 1, Threshold of .3 and above, and eigen values greater than one for factor extraction
Correlation Analysis		
Degree and strength of relationships between tourism impact variables, community participation variables and community attitude toward tourism development variables	Pearson's product moment correlation coefficient Pearson's r using SPSS	R value +1 to -1
Hypothesis testing		
Testing for Covariates (control variables)	Multiple regression model	Sign. at $p \leq .05$,
$H_0$1 There is no significant relationship between economic impact and the community attitude toward tourism development.	Hierarchical Regression model using SPSS	Sign. at $p \leq .05$,
$H_0$2 There is no significant relationship between environmental impact and the community attitude toward tourism development.	Hierarchical Regression model using SPSS	Sign. at $p \leq .05$,
$H_0$3 There is no significant relationship between socio-cultural impact and the community attitude toward tourism development.	Hierarchical Regression model using, SPSS	Sign. at $p \leq .05$,
$H_0$4 Community participation has no significant mediating effect on the relationship between tourism impacts and community attitudes toward tourism development.	Regression model using PROCESS MACRO	Sign. at $p \leq .05$, No zero between LLCI & ULC
Perceptions, feelings, opinions, views of community residents on the influence of tourism impacts and community participation on the community attitudes toward tourism development	Thematic analysis	Responses collected within 90 minutes and saturation to draw participants' experiences, perceptions feelings and attitudes restricted to the study constructs.

3.13 Ethical Considerations

This study adhered strictly to ethical guidelines governing social research (Creswell & Creswell, 2023; Saunders et al., 2023). Participants were assured that the information they provided would be used solely for academic purposes, with unwavering confidentiality (Cohen et al., 2023; Nowell et al., 2017). Participants were clearly informed of their right to voluntary participation and the freedom to withdraw from the study at any point.

Throughout the research process, the researcher and assistants maintained the utmost ethical standards, upholding values such as sincerity, honesty, integrity, courtesy, informed consent, and confidentiality (Saunders et al., 2023). To safeguard anonymity, survey questionnaires did not include respondents' names.

Data collection adhered to principles of objectivity, ensuring that no misrepresentation occurred. The researcher's strict adherence to ethical guidelines ensured the trustworthiness and integrity of the study, aligning with established research ethics principles (Cohen et al., 2018; Creswell & Creswell, 2023; Sekaran & Bougie, 2022).

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

This chapter provides an overview of data analysis, interpretation, and presentation of the study's findings on the mediating effect of community participation on the relationship between tourism impacts and community attitudes toward tourism development. The researcher collected both qualitative and quantitative for the study.

The qualitative strand of the study answered the question;

i. How do local residents' perceptions of tourism impacts and their participation influence their attitudes towards tourism development in Rimoi National Reserve?

Additionally, the following hypotheses were tested for the quantitative strand, while controlling for age, gender, and the level of education covariates.

i. **H_{01}:** There is no significant relationship between tourism economic impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya.
ii. **H_{02}:** There is no significant relationship between tourism environmental impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya.
iii. **H_{03}:** There is no significant relationship between tourism socio-cultural impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya.

iv. **H_{04}:** Community participation does not significantly mediate the relationship between tourism impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya.

After separately analyzing the quantitative and qualitative data, the findings were compared to assess their convergence and divergence, adhering to the convergent one–phase research design strategy. The presentation adopts the side-by-side narrative method, also known as the weaving approach, which is a fundamental aspect of mixed methods research. This approach distinguishes it from other research methodologies that merely incorporate both quantitative and qualitative data without fully integrating them. The side-by-side narrative involves presenting both qualitative and quantitative findings together, organized on a theme-by-theme or concept-by-concept basis, as opposed to separate presentations. This method, endorsed by researchers such as Creswell and Clark (2018) and Creswell and Creswell (2023), aims to ensure a coherent and comprehensive understanding of the research outcomes.

4.1 Pre-Data Analysis Screening

Pre-data analysis screening involves the preliminary steps and considerations undertaken before exploring the actual analysis of the dataset. This phase encompassed data cleaning and organization and establishing a clear understanding of the data's context and relevance. It sets the foundation for the entire data analysis workflow. It acts as the gateway through which data is transformed from its raw state into a format conducive to meaningful exploration and interpretation (Ridzuan & Wan Zainon, 2019). This process aimed to ensure the data's quality, integrity, and usability, paving the way for more accurate and reliable analytical analysis.

4.1.1 Data Processing, Preparation, and Screening

After data collection, all the 231 interview-administered questionnaires were returned. The questionnaires were organized and coded, and the data was entered into the SPSS statistical software version 27. Before coding, questionnaires were checked for completeness, and as a result, all questionnaires were complete; thus, none were excluded from further analysis. The data file was counter-checked against the original data on the questionnaire to establish whether it was entered correctly. Moreover, the researcher conducted spot checks on the entered data to screen for accuracy. Lastly, the data file was examined for missing data, entry errors, and values outside the expected range.

4.1.2 Examining the Missing Data

The researcher assessed the presence of missing data by scrutinizing each variable and case through frequency analysis in the descriptive statistics. The examination revealed a complete absence of missing data in the dataset, as every variable contained no observations with missing values. Consequently, the entire dataset was deemed suitable for subsequent analysis.

As a common practice, if a single column in the SPSS file exhibits more than 5% missing values, a common approach is to impute these values. For Likert scale variables, the missing values are typically replaced with the median of nearby points, while for continuous variables, the series mean is often employed. However, if the proportion of missing data exceeds 10%, researchers frequently opt to exclude those cases from the analysis (Ridzuan & Wan Zainon, 2019; Hair et al., 2019).

Missing data in quantitative research presents various challenges, potentially introducing bias or inaccuracies in results. This is particularly true due to the reduction

in the effective sample size due to deletion of respondents or cases with large missing data, which can lead to inaccurate conclusions drawn about relationships or effects in the population (Field, 2018; Kline, 2016).

4.1.3 Unengaged Respondents

Unengaged respondents provide similar answers for all the questionnaire items, either 11111, 22222, 33333, 44444, or 55555, in a five-point Likert scale leading to insufficient responding (Hong, Steedle, & Cheng, 2020; Hair et al., 2019). Meaning that they answered the same value for every question and therefore there is a zero variance on that row for that particular respondent or case in the SPSS file. The researcher visually inspected the data file and obtained the standard deviation across the respondents to identify any unengaged responses in the dataset. As a result, there were no respondents whose responses had a standard deviation equal to 0 or less than 0.25 (Collier, 2020). Therefore, the data set was considered free from unengaged respondents.

4.1.4 Analysis of Univariate Outliers

The researcher first explored the data set for the existence of univariate outliers (i.e., outliers in a single variable) before subjecting the data to further parametric tests that only work with a normal distribution. The result of the frequency tables showed the non-existence of univariate outliers arising out of errors in data entry. Graphically, the results of Stem-and-Leaf box plots revealed some cases with outliers (both extremely high-5 and extremely low-1 observations). The researcher obtained the standardized values (z-scores) for every case, and all cases with Z-scores lying outside the +2.5 and -2.5 were considered univariate outliers (Field, 2018). Apart from environmental and socio-cultural impacts, all the other study variables were associated with some cases of outlier values (Appendix 6). There were five outliers associated with economic impacts,

seven with community participation, and eight with community attitudes towards tourism development. Consequently, all outliers were corrected to the nearest high value under each variable (Field, 2018). The stem and leaf Box plots (Appendix 7) showed that after the correction all the study variables were confirmed clean from univariate outliers.

4.2 Response Rate

The respondents responded to all 231 questionnaires. Therefore, the overall response rate for the survey questionnaire was 100%. The response rate was adequate for subsequent analysis because it exceeds the acceptable rate of at least 70% for survey research in research studies (Draugalis, Coons, & Plaza, 2008).

4.3 Demographic Characteristics of the Respondents

The demographic characteristics of respondents were collected in the categorical form and summarized using a frequency distribution table as shown in Table 4.1.

Table 4.1 Demographic characteristics

Variable		Frequency	Percentage (%)
Gender	Female	123	53.20
	Male	108	46.80
	Total	**231**	**100**
Age	Below 30 years	68	29.40
	30-40 years	86	37.30
	40-50 years	47	20.30
	50-60 years	19	8.20
	Above 60 years	11	4.80
	Total	**231**	**100**
Level of Education	No formal education	21	9.00
	Primary	33	14.30
	Secondary	84	36.40
	College/University	93	40.30
	Total	**231**	**100**
Family	Single	76	32.90
	Married	129	55.80
	Widowed	26	11.30
	Total	**231**	**100**
Current Occupation	Farmer	77	33.30
	Civil servant	39	16.90
	Business woman/man	115	49.80
	Total	**231**	**100**

Source: Field data (2023)

The demographic information presented in Table 4.1 provides insight into the composition of residents within the Rimoi area community, serving as a foundational understanding for assessing the potential effects of tourism and the significance of community involvement in guiding tourism development. Notably, the data indicates a slight majority of female respondents (53.20%) compared to male respondents (46.80%), reflecting a relatively equitable gender distribution within the sample. This balance facilitates a thorough analysis that incorporates perspectives from both males and females.

The variation in gender representation among respondents suggests that women in the Rimoi area have sufficient empowerment to engage in tourism development endeavors. These findings contrast with the assertions made by Mensah (2016), who proposed that men were more involved in tourism development activities than women.

Examining the economic aspect, the distribution of occupations is noteworthy. The prevalence of business owners (49.80%) indicates the entrepreneurial spirit within the community, offering prospects for local businesses to cater to the needs of tourists, thereby contributing to economic growth. Moreover, significant proportion of community residents engaged in farming (33.30%), there exists an opportunity for economic diversification through tourism-related ventures, such as local produce markets and agro-tourism.

The majority of respondents have attained a college/university education (40.30%); this indicates a skilled workforce that can play a pivotal role in developing and managing tourism-related services. Moreover, this educated population may actively engage in cultural exchanges with tourists, enriching the tourism experience and fostering positive cross-cultural interactions. Hence fostering economic growth through tourism. However, 14.30% had attained primary education, with 9% having no formal indication.

Therefore, leveraging the education levels of community residents would facilitate active participation in decision-making processes related to tourism. Although educated community residents may contribute more effectively to sustainable development initiatives, the uneducated often possess invaluable indigenous knowledge about local ecosystems, customs, and community dynamics.

The age distribution, with a concentration of younger individuals below 30 years (29.4%), presents an opportunity to engage this demographic in eco-friendly initiatives, contributing to a more sustainable tourism model. This also implies that involving individuals from different age groups in tourism planning can ensure a holistic approach to sustainable tourism practices. Younger individuals may bring fresh perspectives, while the elderly may provide valuable insights into preserving cultural heritage.

Turning to the socio-cultural sphere, understanding the family structure in the Rimoi area is crucial for tourism development. For instance, advancing tourism development through family-friendly activities may be more appealing to most married residents (55.80%). However, the remaining composition of singles (32.90%) may seek different experiences.

In general, the demographic profile of the respondents highlights the need to encourage community participation from various age groups, education levels, family structures, and occupations. For instance, including farmers and business owners in tourism development decision-making ensures a broad representation of community interests. This would lead to a more inclusive and sustainable tourism development plan that has economic benefits, is culturally sensitive, and resonates with the community.

4.4 Descriptive Statistics of the Study Variables

Means and standard deviations described study variables. Quantitative and qualitative findings were compared using the side-by-side narrative method, a key aspect of the mixed methods convergent design that facilitated a comprehensive interpretation by integrating both data sets (Creswell &Clark, 2018; Creswell and Creswell, 2023).

4.4.1 Descriptive Statistics for the Dependent Variable

The dependent variable in the study was the community's attitudes toward tourism development, assessed using a five-point Likert scale where 5 represented "Strongly Agree," 4 denoted "Agree," 3 indicated "Neutral," 2 signified "Disagree," and 1 represented "Strongly Disagree." The outcomes are presented in Table 4.2.

Table 4.2 Descriptive Statistics on Community Attitudes towards Tourism Development

Item Code	Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
TD1	Overall, the benefits of tourism development in my community outweigh its costs.	10 (4.3%)	16 (6.9%)	38 (16.5%)	85 (36.8)	82 (35.5%)	3.922	1.089
TD2	In general, new tourism development should be actively encouraged in my community.	2 (0.9%)	14 (6.1%)	30 (13.0%)	95 (41.1%)	90 (39.0%)	4.113	0.911
TD3	My community can handle more tourism development.	14 (6.1%)	16 (6.9%)	33 (14.3%)	73 (31.6%)	95 (41.1%)	3.948	1.175
TD4	Increased tourism would not hurt my community's quality of life.	13 (5.6%)	36 (15.6%)	31 (13.4%)	75 (32.5%)	76 (32.9%)	3.714	1.232
TD5	Tourism development contributes to the conservation and preservation of our local heritage.	1 (0.1%)	14 (6.10%)	31 (13.40%)	127 (55.0%)	58 (25.1%)	3.983	0.818
TD6	I support new tourism development in my community	2 (0.9%)	6 (2.6%)	48 (20.8%)	69 (29.9%)	106 (45.9%)	4.178	0.913
TD7	I believe tourism development enhances the overall quality of life for residents of our community.	5 (2.2%)	10 (4.3%)	21 (9.1%)	113 (48.9%)	82 (35.5%)	4.113	0.897
TD8	I feel that tourism development supports the growth and diversification of local businesses.	3 (1.3%)	11 (4.8%)	22 (9.5%)	65 (28.1%)	130 (56.30%)	4.333	0.926
	Valid N=231							
	Grand Mean						**4.038**	**0.995**

The findings presented in Table 4.2 offer significant insights into the community's perspectives on tourism development, which could guide future planning and decision-making regarding tourism initiatives in the region. Beginning with item TD1, a notable majority (72.3%) expressed the belief that the advantages of tourism development in their community outweighed its drawbacks. This aligns with previous research indicating that residents in destination communities generally perceive tourism development to have more benefits than costs (Rasoolimanesh et al., 2015; Adams & White, 2023). Notably, 35.5% strongly asserted this view, while 36.8% agreed. However, a significant portion, constituting 27.2%, indicated disagreement or strong disagreement, reflecting a difference of opinions regarding the impact of tourism.

Moving on to item TD2, a considerable 80.1% of respondents advocated actively encouraging new tourism development in their community. This sentiment was driven by 39.0% who strongly agreed and 41.1% who agreed. Nevertheless, a noteworthy 7.0% held a contrasting view, suggesting a fraction of the community was not fully aligned with the push for increased tourism.

The community's perceived capacity to handle more tourism development, as measured by item TD3, was met with mixed sentiments. While 72.7% expressed confidence in their community's ability to manage additional tourism, 13.0% signaled reservations or doubts about such capacity. Item TD4 had the highest standard deviation (1.232) and a mean (3.714), exploring the potential impact on the community's quality of life due to increased tourism.

A majority, accounting for 65.4%, was optimistic, asserting that such development would not harm their quality of life. However, 21.2% expressed concerns, indicating a segment of the community that anticipated adverse effects. For instance, a participant

in the focus discussions expressed a concern that increased tourism might erode the fabric of their rich traditions and culture.

> *"I am opposed to it…although tourism brings more benefits, we cautiously need safeguards to protect our cultural heritage, our environment, and our peace and tranquility.* [PP4]

Item TD5 explored the role of tourism in heritage conservation. Most, 80.1%, believed that tourism development contributed to preserving local heritage. However, 6.2% disagreed, suggesting differing opinions on the relationship between tourism and heritage conservation.

The community's collective support for new tourism development, as revealed by item TD6, was evident in the responses of 75.8% of respondents. A noteworthy 45.9% strongly supported, and 29.9% expressed general support, indicating an overall positive stance.

Item TD7 addressed the perception that tourism development enhances residents' overall quality of life. The majority, totaling 84.4%, held this view. However, 6.5% disagreed, emphasizing the importance of addressing concerns to ensure a unified perspective.

Item TD8 (mean=4.333, SD=0.926) examined the belief that tourism development supports local business growth and diversification. A majority of the respondents, 84.4%, affirmed this belief, while 6.1% expressed disagreement, indicating a prevailing positive outlook on the economic benefits associated with tourism. Similar findings were reported in the focus group discussions, where participants expressed mixed reactions to their views on support for tourism development in the Rimoi area. The majority of the residents viewed tourism development in a positive light, believing it brought economic benefits and opportunities.

> *"For me, I support. Tourism will bring more tangible benefits. Employment opportunities will increase, and existing businesses will expand, and more will open."* [PP6]
>
> *"The majority here supports tourism. It is seen as a lifeline for our community, bringing in revenue and opportunities. We need to ensure it is sustainable"* [PP2]

The higher grand mean (4.038) and low standard deviation (0.995) in tourism development items indicate that the residents had an overall more positive attitude of tourism development with little variations within the Rimoi National Reserve community residents. This collective positivity suggested that, on average, respondents viewed tourism development as beneficial across various dimensions. Participants revealed that tourism development in Rimoi National Reserve positively and negatively influenced the local community's attitudes toward tourism.

While some residents noted a positive influence, such as increased economic benefits, improved infrastructure, and community pride in showcasing their local culture, others expressed concerns about overwhelming changes eroding local traditions in the area. The verbatim quotes from the participants capture a complex relationship between tourism impacts and the local community attitudes towards tourism development, recognizing tourism development as a force for both positive transformation and potential challenges to community values and way of life.

> *"Tourism has brought opportunities for our youth, and there is a sense of pride in showcasing our beautiful culture and wildlife. This has made our Rimoi national reserve known to the world as a tourist destination"* [PP5]
>
> *"Tourism development has impacted this area positively; we have improved infrastructure and job opportunities. On the negative side, our original natural environment is slowly disappearing"* [PP1]
>
> *"On the positive side, tourism has boosted our businesses around. On the negative side, it feels like we are losing control of our community. Our traditional culture and mannerisms are fading away"*[PP9]

In general, the data revealed that Rimoi community residents expressed support for and encouraged tourism development in their area. They characterized the ongoing discussion on conservation tourism as a blend of positive (contribution to local heritage conservation, enhancement of overall quality of life, and support for local businesses) and negative perspectives (community's perceived capacity for additional tourism and the potential impact on the quality of life.), shaping an ongoing dialogue about how tourism impacts their community and sustainability in its future benefits.

4.4.2 Descriptive Statistics for the Independent Variables

Tourism impacts, encompassing economic, environmental, and socio-cultural dimensions, formed the independent variable of the study. Respondents were asked to assess their perceptions of the current state of tourism impacts and how they anticipated these impacts might change with the additional development of tourism in Rimoi National Reserve. This assessment was conducted using a staple scale (Tables 4.4, 4.5, and 4.6).

Given that the study was designed to measure potential tourism impacts on community attitudes towards tourism development at Rimoi National Reserve, it was essential to inquire about their feelings regarding the current conditions using the Stapel rating scale. This approach was meant to help respondents understand the concept of potential tourism impacts and relate their current experiences, providing a basis for projecting these experiences into the future, especially in the context of further tourism development in the Rimoi National Reserve. As tourism development advances in destination communities, residents are inevitably affected by its outcomes.

The respondents rated each survey item twice: first for their current experience or feeling regarding the tourism impact items and then how the same things might change,

for better or for worse, if additional tourism develops at Rimoi National Reserve. The anticipated impact was calculated by finding the difference between scores for current conditions (Mean (C)) and scores for additional tourism development impact (Mean (W)). A negative mean difference (W-C) indicates a negative impact, while a positive mean difference indicates a positive impact for each item. These net impact scores were then used to compute two grand means. The first grand mean indicates the overall impact of the current state of tourism development on the community, and the second grand mean indicates the anticipated overall impact of further tourism development in Rimoi National Reserve for that specific factor. After subtracting the two-grand means (W-C), a positive grand mean difference signifies an overall positive impact, while a negative grand mean difference suggests an overall negative impact. These differences were summarized as mean scores.

Tables 4.3, 4.4, and 4.5 display descriptive results, presenting percentages, means, and mean differences for economic, environmental, and socio-cultural impact items. These tables assess how the Rimoi National Reserve community perceives the current state of tourism impacts and anticipated changes with the development of Rimoi National Reserve.

Table 4.3 Descriptive Statistics on Economic Impacts

Item Code	Item	Current Condition					Mean (C)	Tourism Development Will					Mean (W)	Mean Difference (W-C)
		Poor	Below Average	Moderate	Above Average	Excellent		Worsen	Slightly Worsen	Not Change	Slightly Improve	Improve		
ECO1	Employment opportunities	37 (16%)	135 (58.4%)	44 (19.0%)	9 (3.9%)	6 (2.6%)	2.19	4 (1.7%)	20 (8.7%)	54 (23.4%)	70 (30.3%)	83 (35.9%)	3.90	1.71
ECO2	Money generated by local businesses	37 (16%)	84 (36.4%)	93 (40.3%)	16 (6.9%)	1 (0.4%)	2.39	5 (2.2%)	24 (10.4%)	37 (16.0%)	92 (39.8%)	73 (31.6%)	3.88	1.49
ECO3	Quality of employment	28 (12.1%)	105 (45.5%)	83 (35.9%)	13 (5.6%)	2 (0.9%)	2.38	4 (1.7%)	14 (6.1%)	39 (16.9%)	105 (45.5%)	69 (29.9%)	3.96	1.58
ECO4	My personal income	14 (6.1%)	96 (41.6%)	109 (47.2%)	11 (4.8%)	1 (0.4)	2.52	5 (2.2%)	14 (6.1%)	44 (19.0%)	90 (39.0%)	78 (33.8%)	3.96	1.44
ECO5	Property value (cost of real state)	19 (8.2%)	89 (38.5%)	101 (43.7%)	20 (8.7%)	2 (0.9%)	2.55	5 (2.2%)	14 (14.30%)	33 (14.30%)	80 (34.6%)	99 (42.9%)	4.10	1.55
ECO6	Cost of living in the area	31 (13.4%)	93 (40.3%)	96 (41.6%)	9 (3.9%)	2 (0.9%)	2.39	8 (3.5%)	17 (7.4%)	42 (18.2%)	86 (37.2%)	78 (33.8%)	3.90	1.51
	Valid N=231													
	Grand Mean						**2.40**						**3.95**	**1.55**

The data presented in Table 4.3 offered comprehensive insight into the community's views regarding current conditions in Rimoi and their expectations for change with the potential tourism development in Rimoi National Reserve. Each economic aspect was analyzed individually, shedding light on the community's perceptions and anticipated shifts with additional tourism.

Starting with employment opportunities (ECO1), 58.4% of respondents expressed dissatisfaction with the current state, perceiving employment opportunities as below average. While 35.9% were optimistic about improvements in tourism development, a notable 8.7% anticipated a worsening scenario, emphasizing the importance of addressing challenges in the job market.

> *"Finding a job here is quite challenging, and opportunities are below average. It is tough for the youth. I believe that with more tourism, there is a chance for improvement. We might see new job opportunities coming in."* [PP10]

The analysis of money generated by local businesses (ECO2) revealed a dominant 'moderate' category at 40.3%, suggesting a moderate economic scenario for local businesses in the community. With 39.8% foreseeing improvement due to tourism development and 31.6% anticipating a slightly worsening scenario, uncertainty and potential trade-offs associated with future economic changes existed.

> *"Our local businesses are doing okay, not great. It is a moderate situation, and we need more income. We are hopeful that more tourism will bring more customers to our businesses"*[PP5]

> *"We have shops coming up, and we believe even more will open with the increased tourism activities in the area*" [PP8]

In assessing the quality of employment (ECO3), a significant 45.5% perceived the current job quality as below average. While an equal percentage believed that tourism development would enhance job quality, 6.1% expected a slight worsening, showcasing the complexity of predicting the impact on employment standards.

> *"The quality of jobs available is below average. Many are struggling with temporary and low-paying jobs. Tourism might elevate the job standards. We can expect better opportunities and conditions."* [PP7]

Regarding personal income (ECO4), the data indicated that almost half (47.2%) of respondents currently considered personal income to be at a moderate level. Anticipation for improved personal income with tourism development was expressed by 39.0%, accompanied by 6.1% expecting a slight worsening. This called for a closer examination of the factors influencing income dynamics.

> *"Our personal income is just moderate. It is not great, but we get by. I am optimistic that tourism can boost our income. We might see a positive change in our financial situation."* [PP2]

The community held a complex view of property value (ECO5), with 43.7% perceiving property values as moderate. While 42.9% anticipated improvement with tourism development, policymakers should address concerns of the 14.3% foreseeing a slight worsening, underscoring potential challenges in the local real estate market.

> *"Property values are okay, not high or low. It is a moderate situation in the real estate market. With additional tourism, property values could go up. However, there are concerns about potential downsides."* [PP6]

Regarding the cost of living in the area (ECO6), the data revealed affordability challenges, with 40.3% perceiving the cost of living as below average. While 37.2% anticipated an improved cost of living with tourism development, the concerns of the 13.4% expecting a slight worsening highlighted the need for comprehensive planning to ensure equitable benefits. The mean difference of 1.51 shows that the respondents perceived a better cost of living with further development of Rimoi National Reserve due to economies of scale and business competitions that will make goods and services widely available and at lower costs.

> *"The cost of living here is challenging. It is below average, and many struggle to afford necessities. I hope more tourism will bring improvements, more money into people's pockets, making living costs more manageable for everyone. There will be competition among*

> *businesses and a variety of goods and services will be easily available and cheaper due to economies of scale as opposed with fewer shops"* [PP9]

The overall insights, as indicated by the grand mean difference of 1.55, reflect a positive rating for all economic aspects of tourism development and demonstrate a positive attitude among the residents of the Rimoi National Reserve community toward tourism development in general. This suggests strong support for tourism development in their area. The diverse Mean Differences observed across different economic indicators, with the highest for employment opportunities (1.71) and the lowest for personal income (1.44), suggest varied economic expectations of the benefits that tourism development will bring to their life and the community.

Table 4.4 Descriptive Statistics on Environmental Impacts

Item Code	Item	Current Condition					Mean (C)	Tourism Development Will					Mean	Mean Difference (W-C)
		Poor	Below Average	Moderate	Above Average	Excellent		Worsen	Slightly Worsen	Not Change	Slightly Improve	Improve		
ENV1	The peace and tranquility of the area	12 (5.2%)	41 (17.7%)	43 (18.6%)	65 (28.1%)	70 (30.3%)	3.61	31 (13.4%)	48 (20.8%)	55 (23.2%)	35 (15.2%)	62 (26.8%)	3.21	-0.40
ENV2	Amount of litter and other trash	23 (10%)	22 (9.5%)	50 (21.6%)	89 (38.5%)	47 (20.3%)	3.50	36 (15.6%)	65 (28.1%)	36 (15.6%)	43 (18.6%)	51 (22.1%)	3.03	-0.47
ENV3	Quality of natural environment	16 (6.9%)	20 (8.7%)	63 (27.3%)	89 (38.5%)	43 (18.6%)	3.53	31 (13.4%)	64 (27.7%)	39 (16.9%)	33 (14.3%)	64 (27.7%)	3.15	-0.38
ENV4	Amount of human made noise	22 (9.5%)	17 (7.4%)	51 (22.1%)	99 (42.9%)	42 (18.2%)	3.53	47 (20.3%)	58 (25.1%)	38 (16.5%)	45 (19.5%)	43 (18.6%)	2.91	-0.62
ENV5	Amount of traffic in the area	10 (4.3%)	26 (11.3%)	48 (20.8%)	74 (32.0%)	73 (31.6%)	3.75	51 (22.1%)	53 (22.9%)	28 (12.1%)	55 (23.8%)	44 (19.0%)	2.95	-0.80
ENV6	Number of people in the area	7 (3.0%)	16 (6.9%)	58 (25.1%)	101 (43.7%)	49 (21.2%)	3.73	29 (12.6%)	53 (22.9%)	52 (22.5%)	51 (22.1%)	46 (19.9%)	3.14	-0.59
ENV7	Amount of natural open space	5 (2.2%)	21 (9.1%)	49 (21.2%)	103 (44.6%)	53 (22.9%)	3.77	21 (9.1%)	80 (34.6%)	38 (16.5%)	35 (15.2%)	57 (24.7%)	3.12	-0.65
ENV8	Air quality	11 (4.8%)	14 (6.1%)	60 (26.0%)	84 (36.4%)	62 (26.8%)	3.74	34 (14.7%)	60 (26.0%)	45 (19.5%)	33 (14.3%)	59 (25.5%)	3.10	-0.64
ENV9	Appearance of the area	8 (3.5%)	23 (10.0%)	53 (22.9%)	87 (37.7%)	60 (26.0%)	3.73	26 (11.3%)	53 (22.9%)	50 (21.6%)	49 (21.2%)	53 (22.9%)	3.22	-0.51
ENV10	Amount of human made structures	6 (2.6%)	10 (4.3%)	62 (26.8%)	109 (47.2%)	44 (19.0%)	3.76	23 (10.0%)	56 (24.2%)	53 (22.9%	46 (19.9%)	53 (22.9%)	3.22	-0.54
ENV11	Water quality	11 (4.8%)	21 (9.1%)	53 (22.9%)	81 (35.1%)	65 (28.1%)	3.73	28 (12.1%)	71 (30.7%)	34 (14.7%)	50 (21.6%)	48 (20.8%)	3.08	-0.65
ENV12	Waste management	18 (7.8%)	23 (10.0%)	51 (22.1%)	64 (27.7%)	75 (32.5%)	3.67	56 (24.2%)	46 (19.9%)	31 (13.4%)	47 (20.3%)	51 (22.1%)	2.96	-0.71
	Valid N=231													
	Grand Mean						**3.67**						**3.09**	**-0.58**

The results in Table 4.4 shows an assessment of environmental impacts in Rimoi National Reserve, focusing on factors such as peace and tranquility, litter and trash, natural environment quality, human-made noise, traffic, people in the area, natural open space, air quality, the appearance of the area, human-made structures, water quality, and waste management.

The community's views reflected a prevailing sense of peace and tranquility (ENV1), with 58.4% of respondents expressing satisfaction. However, there were concerns over the potential impact of tourism development, as 34.2% anticipated a decline in the serene atmosphere. Similar reflections were reported from a focus group discussion, where participants expressed fears of losing the area's therapeutic and peaceful ambiance with an influx of tourists.

> *"This place has always been our sanctuary of peace and very therapeutic. However, with talk of more tourists, I fear we might lose that. More people mean more noise, and I worry this place will turn into just another bustling spot."* [PP6]

This implied that Understanding the factors contributing to this apprehension was crucial in crafting strategies that balanced tourism growth with preserving the area's peaceful ambiance. A significant portion (50.4%) of the community voiced concerns about the existing state of litter and trash (ENV2), in the reserve indicating an ongoing environmental issue. Alarmingly, 43.7% anticipated a worsening of this situation with additional tourism development. A similar reflection was echoed by the community residents participating in the focus group discussion.

> *"Look around; you can already see some trash in some areas. It is like they come, enjoy, and leave their mess behind. We must figure out a way to manage this before it worsens."* [PP3]

> *"It's a shame. This place is a gem, but the increasing litter makes it hard to appreciate. If tourism means sacrificing our environment, I do not know if it is worth it. We need strict rules and education for visitors to respect our home."* [PP1]

These observations shed light on the pressing need for a thoughtful and sustainable approach to tourism to ensure the preservation of the natural environment in the Rimoi area by implementing robust waste management practices and instilling a culture of responsible tourism to address these concerns.

Regarding the current quality of the natural environment (ENV3), 66% of respondents held a favorable view, with 64.6% foreseeing either no change or an improvement. Preserving and enhancing the natural setting was prioritized in any sustainable tourism strategy.

Over half of the community (51.3%) perceived human-made noise levels (ENV4) as above average to excellent, but 41.1% anticipated an increase due to tourism. Mitigating this impact was deemed essential, requiring careful planning and fostering a culture of responsible tourism behavior.

Traffic conditions (ENV5) were viewed favorably by 84.4% of respondents, yet 42.8% anticipated an increase with tourism development. Balancing economic benefits with sustainable transportation solutions was crucial in preserving the positive perception of traffic.

84.4% of respondents viewed Rimoi National Reserve traffic conditions as favorable. Nevertheless, a significant 42.8% anticipated increased traffic with additional tourism development. 65.8% of the community felt that the current number of people in the area (ENV6), was moderate to excellent. Opinions on the potential impact of tourism development were divided, reflecting the community's concerns about overcrowding and the need to maintain a sense of space. Striking a balance to prevent overcrowding and keep the community's understanding of space is imperative, as reflected in the focus group discussion.

> *"I am torn about more people coming in. On the one hand, it might mean more business for us locals. On the other, I worry about overcrowding."* [PP4]
>
> *"I have seen how some places get ruined when they become too popular. I love this community and would hate to see it lose its charm. Maybe controlled tourism could work, where we benefit without losing our sense of space."* [PP8]

A significant portion (67.5%) appreciated the current natural open space (ENV 7), with 57.6% expecting either no change or an improvement. Preserving these open spaces became vital for environmental conservation and sustaining the area's aesthetic appeal.

Air quality (ENV8) was positively perceived by 63.2% of respondents, and 51.5% expected either no change or an improvement in tourism development. Therefore, maintaining and monitoring air quality standards was essential in the Rimoi area.

Regarding the appearance (ENV9) of Rimoi National Reserve, 64.1% of community residents rated it as moderate to excellent. Expectations for additional tourism development were balanced, with 44.5% anticipating no change and 44.1% expecting improvement. Similarly, participants highlighted that preserving the area's visual appeal was vital to sustaining the community's positive perception.

> *"The appearance matters; it is what draws people in. If we let it go downhill, tourists won't want to come. We need regulations on construction and maintenance to keep the place looking good."* [PP6]
>
> *"Appearance is key, but we must balance it with the community's needs. Maybe there should be guidelines for construction that respect the natural landscape. We can have development without sacrificing the aesthetics of the area."* [PP2]

A significant portion (69.3%) felt that the current amount of human-made structures (ENV 10), was moderate to excellent. Opinions on the potential economic impacts of additional tourism development were divided, emphasizing the need to balance tourism development and the preservation of the natural landscape.

The perception of water quality (ENV 11), was positive, with 64.1% rating it as above average to excellent. Expectations for tourism development were balanced, with 47.6% expecting no change and 42.4% anticipating improvement; therefore, ensuring sustainable water management practices in the Rimoi area was crucial.

A substantial 60.1% of respondents felt that waste management (ENV12), was moderate to excellent, with 50.2% expecting no change and 36.3% anticipating improvement with tourism development. Strengthening waste management infrastructure and practices was considered vital for the long-term environmental health of Rimoi National Reserve.

The overall grand mean for perceived environmental impact was 3.67 for the current condition and 3.09 for additional tourism. Notably, all the environmental impact items exhibited a negative mean difference when the score ratings of current conditions were subtracted from the tourism impact ratings. The consistent negative mean differences (-0.58) imply a potential decline in environmental quality associated with additional tourism development activities in the area.

Table 4.5 Descriptive Statistics on Socio-cultural Impacts

Item Code	Item	Current Condition					Mean (C)	Tourism Development Will					Mean	Mean Difference (W-C)
		Poor	Below Average	Moderate	Above Average	Excellent		Worsen	Slightly Worsen	Not Change	Slightly Improve	Improve		
SOC1	Small town atmosphere of the area	23 (10.0%)	56 (24.2%)	53 (22.9%)	46 (19.9%)	53 (22.9%)	3.22	16 (6.9%)	57 (24.7%)	43 (18.6%)	56 (24.2%)	59 (25.5%)	3.37	0.15
SOC2	Crime rate	11 (4.8%)	21 (9.1%)	53 (22.9%)	81 (35.1%)	65 (28.1%)	3.73	30 (13.0%)	26 (11.3%)	44 (19.0%)	74 (32.2%)	57 (24.7%)	3.44	-0.29
SOC3	Personal safety and security	18 (7.8%)	23 (10.0%)	51 (22.1%)	64 (27.7%)	75 (32.5%)	3.67	20 (8.7%)	23 (10.0%)	57 (24.7%)	86 (37.2%)	45 (19.5%)	3.49	-0.18
SOC4	Overall quality of life	47 (20.3%)	58 (25.1%)	38 (16.5%)	45 (19.5%)	43 (18.6%)	2.91	8 (3.5%)	37 (16.0%)	72 (31.2%)	66 (28.6%)	48 (20.8%)	3.47	0.56
SOC5	Community spirit among local residents	28 (12.1%)	71 (30.7%)	34 (14.7%)	50 (21.6%)	48 (20.8%)	3.08	7 (3.0%)	21 (9.1%)	65 (28.1%)	82 (35.5%)	56 (24.2%)	3.69	0.61
SOC6	Relationship between residents and tourists	29 (12.6%)	53 (22.9%)	52 (22.5%)	51 (22.1%)	46 (19.9%)	3.14	5 (2.2%)	27 (11.7%)	62 (26.8%)	98 (42.4%)	39 (16.9%)	3.6	0.46
SOC7	Understanding of different people and cultures	36 (15.6%)	65 (28.1%)	36 (15.6%)	43 (18.6%)	51 (22.1%)	3.03	5 (2.2%)	22 (9.5%)	87 (37.7%)	87 (37.7%)	30 (13.0%)	3.5	0.47
SOC8	Conservation of local culture	8 (3.5%)	23 (10.0%)	53 (22.9%)	87 (37.7%)	60 (26.0%)	3.73	22 (9.5%)	49 (21.2%)	44 (19.0%)	53 (22.9%)	63 (27.3%)	3.37	-0.36
	Valid N=231													
	Grand Mean						**3.36**						**3.49**	**0.13**

The results presented in Table 4.5 on socio-cultural impacts on community attitudes were measured in terms of a small-town atmosphere, crime rate, personal safety, overall quality of life, community spirit, the relationship between residents and tourists, understanding of different people and cultures, and conservation of local culture.

In assessing the small-town atmosphere (SOC1), in Rimoi National Reserve, the opinions were diverse, with 47.1% expressing it as either below average or moderate. Regarding the potential impact of additional tourism development, 31.6% anticipated a slight worsening or no change, while a significant portion (49.7%) held optimism for an improved small-town atmosphere. The community appeared poised between cautious concerns and hopeful anticipation regarding the potential shifts in the atmosphere brought about by increased tourism.

> *"The atmosphere is just okay right now. I think some tourism could bring in some excitement and improvements."* [PP3]
>
> *"I love the small-town feel we have now. It is cozy and close-knit. I am worried that more tourists might change that."* [PP7]

Within the community, there was a prevailing concern about the current high positive perception of crime rates (SOC2), with 63.2% categorizing it as above average or excellent. However, as additional tourism development was considered, a notable divide in expectations emerged. While 24.3% expressed worry about a potential increase in crime, a substantial majority (56.9%) envisioned a positive change, anticipating an improvement in the current crime rate reduction. This dichotomy suggested a complex interplay of apprehension and optimism regarding the impact of tourism on crime within the community.

> *"I fear more tourists might attract the wrong crowd and worsen the situation."* [PP5]
>
> *"I have seen much improvement in safety lately. I believe tourism can help maintain this positive trend."* [PP10]

> *"More tourism activities might bring more security measures and make it safer for everyone."*

The community felt relatively secure, with 60.2% assessing personal safety and security (SOC3), as above average or excellent. As additional tourism development was considered, 18.7% expressed concerns about potentially worsening safety conditions. In comparison, a significant portion (56.7%) foresaw an enhancement in personal safety and security, indicating a balanced mix of confidence and cautious optimism within the community.

> *"I feel safe here but worry about personal security with more tourists. We need to ensure our safety is a priority."* [PP7]
>
> *"Tourism can bring in resources to enhance security and make our community even safer."*
>
> *"I've always felt secure here. I do not see how tourism could negatively impact our safety; it might even enhance it."* [PP4]

In evaluating the overall quality of life (SOC4), in Rimoi National Reserve, 41.6% categorized it as below average or moderate. With the promise of tourism development, 19.5% expressed concerns about a slight worsening. Still, a substantial majority (49.4%) believed in the potential for positive changes, signaling a collective hope for an enhanced quality of life within the community.

> *"Our quality of life is not the best. Tourism might inject new life and opportunities into our community."* [PP1]
>
> *"I'm concerned that more tourists might lead to overcrowding and a decline in our quality of life."* [PP6]

The current community spirit (SOC5) was perceived with a mixture of below-average and moderate sentiments by 45.4% of the community residents. As tourism development became a prospect, there was a prevailing optimism that community spirit would not only be maintained but might witness a considerable improvement. Despite 12.1% expressing worries about a potential decline, the community's collective vision leaned strongly towards an augmented and more vibrant local spirit.

> *"Our community spirit is strong, and I fear an influx of many tourists might dilute our sense of community."* [PP2]

> *"Tourism is a chance to showcase our community spirit to the world. It's an opportunity for positive change."* [PP8]

The current relationship dynamics between residents and tourists (SOC6), in Rimoi National Reserve were varied, with 45.4% perceiving it as either below average or moderate. The introduction of additional tourism development was met with a noteworthy expectation of improvement (59.3%). Despite concerns about a possible worsening (13.9%), most anticipated positive changes in the relationship dynamics between residents and tourists, reflecting a community hopeful for enhanced interactions.

> *"The relationship between us and tourists is strained. More efforts are needed to ensure a positive interaction."* [PP6]

> *"I think a better relationship with tourists can open up economic opportunities for us. We need to manage it well. Residents and tourists need to understand each other better. Tourism might be the bridge that connects us positively."* [PP3]

The current understanding of different people and cultures (SOC7), within the community was seen as moderate to below average by 43.7%. The prospect of tourism development, however, was met with substantial optimism. The community envisioned a significant improvement in cultural understanding (75.4%), with expectations outweighing concerns about potential negative impacts. This reflected a collective aspiration for increased cultural awareness and harmony within the community.

> *"Our understanding of different cultures is limited. Tourism could be an enriching experience for everyone."* [PP1]

> *"I am concerned about cultural clashes with more tourists. We need education programs to foster understanding. Tourism can open our minds to different cultures and make our community more inclusive."* [PP5]

The current perception of the conservation of local culture (SOC8), was largely positive, with 63.7% considering it as above average or excellent. With the potential for additional tourism development, there was a mixed perspective within the

community. While 30.7% had concerns about a potential decline in cultural conservation, there was also a notable expectation of improvement (50.2%). The participants seemed torn between preserving its rich cultural heritage and embracing positive changes that tourism might bring.

> *"The visitors around here come with skimpy skirts; we fear they might teach our children bad morals"* [PP5]
>
> *"Our culture has changed. Before, our women never used to wear short dresses; we fear now that some walk to the center nearly naked at night. If this area attracts more tourists, I feel we might have more prostitution."* [PP7]
>
> *"Our culture is unique, and we must preserve it. I worry that tourism might overshadow our local traditions. Tourism should be an opportunity to showcase and preserve our local culture. We need to find a balance."* [PP2]
>
> *"Although our culture is at risk. Tourism might be the key to preserving and celebrating our local heritage. I believe it has also revived our culture. Every time visitors come, we showcase our cultural heritage, and they buy our traditional ornaments; the pride of our culture improves."* [PP8]

The positive mean difference (w-c) of 0.13 suggests that the residents of Rimoi National Reserve community generally held positive attitudes toward tourism development in general, and were supportive of its development in their area although marginally. The most substantial positive mean difference was observed in the aspect of community spirit among local residents (0.61). Nevertheless, certain factors, such as crime rate (-0.29), personal safety (-0.18), and conservation of local culture (-0.36), received negative ratings.

4.4.3 Descriptive Statistics for the Mediating Variable

Community participation formed the mediating variable in the study and was measured on a five-point Likert scale (5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, and 1=Strongly Disagree). The descriptive statistics results are shown in Table 4.6.

Table 4.6 Descriptive Statistics on Community Participation in Tourism Development Activities

Item Code	Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
PAR1	As resident, I am willing to actively participate in tourism-related events or festivals organized in my community	6 (2.6%)	10 (4.3%)	41 (17.7%)	86 (37.2%)	88 (38.1%)	4.039	0.984
PAR2	I am willing to actively support initiatives for new tourism development in my community.	6 (2.6%)	18 (7.8%)	22 (9.5%)	89 (38.5%)	96 (41.6%)	4.087	1.026
PAR3	As a resident, I am willing to be involved in local tourism-decision making process	8 (3.5%)	13 (5.6%)	38 (16.5%)	72 (31.2%)	100 (43.3%)	4.052	1.066
PAR4	I am interested in local tourism development activities.	2 (0.9%)	12 (5.2%)	35 (15.2%)	89 (38.5%)	93 (40.3%)	4.121	0.91
PAR5	I would like to serve on a committee involved in local tourism development activities.	12 (5.2%)	14 (6.1%)	29 (12.6%)	83 (35.9%)	93 (40.3%)	4	1.115
PAR6	In the past 12 months, I have been actively participating in public meetings or forums about possible local tourism development.	22 (9.5%)	26 (11.3%)	23 (10.0%)	81 (35.1%)	79 (34.2%)	3.732	1.298
	Valid N=231							
	Grand Mean						**4.005**	**1.067**

The data presented in Table 4.6 revealed insights into residents' community attitudes and willingness towards tourism-related activities and development in the Rimoi National Reserve. Starting with item PAR1, which assessed residents' willingness to participate actively in tourism-related events or festivals, 75.3% expressed a positive inclination, falling into the agree and strongly agree categories. Notably, the Neutral category stood out at 17.7%, suggesting that some residents may have been open to participation but required encouragement or additional information on participating in tourism development activities.

Moving on to item PAR2, which explored support for new tourism development initiatives, an overwhelming 80.1% of respondents expressed support (agree and strongly agree). The lower percentage in the neutral category (9.5%) indicated a more decisive stance than item PAR1, highlighting a greater consensus among residents in favor of new tourism endeavors. Item PAR3 explored residents' willingness to be involved in local tourism decision-making processes. The results showcased a notable 74.5% expressing a positive inclination (agree and strongly agree). This indicated that a substantial portion of the community was open to actively participating in shaping the direction of local tourism.

Examining item PAR4, which assessed interest in local tourism development activities, nearly 79% of respondents expressed interest (agree and strongly agree). The relatively lower percentage in the neutral category (15.2%) implied that most residents were keen on participating in and supporting local tourism initiatives. Item PAR5 focused on the residents' willingness to serve on a committee involved in local tourism development activities. The results indicated that 76.2% of the community residents were open to such roles (agree and strongly agree), suggesting a potential pool of community

residents willing to take on more active roles in the planning and executing of tourism initiatives.

PAR6 examined residents' participation in public meetings or forums about possible local tourism development. The results showed a fairly even distribution across categories, with 69.3% expressing willingness to engage actively in discussions or forums on local tourism development. Lastly, the overall grand mean (4.005) and standard deviation (1.067) reflected positive attitudes among the community residents with little variability in the attitudes among them.

This suggested that the majority of participants were in favor of participation in tourism development activities in the area. Notably, residents expressed a high willingness to actively engage in events and festivals, as indicated by item PAR1 (mean=4.039, SD=0.984), and an interest in local tourism development activities, as indicated by item PAR4 (mean=4.121, SD=0.91). However, they mentioned the necessity of being informed about the tourism development activities occurring in Rimoi and community engagement to motivate their participation.

> *"I feel a strong sense of community when we engage in tourism events and festivals. I attended the official launch of Rimoi National Reserve, and the event was a fantastic experience. I met neighbors, learned more about our local culture, and felt a real connection. I look forward to more of these events; they bring us together."* [PP8]
>
> *"Participating in tourism events in this area is something I am open to, but sometimes, I need more information. It is not that I am not interested, but having clear details about what is happening would encourage me to participate more"*[PP5]
>
> *"I believe in the power of community engagement. It is not just about interest but about actively participating and supporting initiatives contributing to our community's well-being."* [PP1]

Item PAR2 (mean=4.087, SD=1.026) indicated that community residents actively expressed willingness to support initiatives for new tourism development in the area. The data further highlighted that the community was positively inclined towards

involvement in local tourism decision-making processes (PAR3: mean=4.052, SD=1.066) and a readiness to serve on committees associated with tourism development (PAR5: mean=4.000, SD=1.115). The above findings were not different from the findings arising from the focus group discussions. The majority of the community residents expressed their willingness to participate in tourism development activities; however, they expressed concerns that their views should be considered in the decision-making process.

> *"I am a big supporter of new tourism initiatives. I believe they bring in fresh opportunities for everyone. Our community has so much potential; embracing new developments will only add to the charm. I am excited about the possibilities."* [PP3]
>
> *"Supporting new tourism ideas is crucial for our community's growth. It is not just about attracting visitors but about making our home a better place for all of us. I am on board with positive changes that can enhance our community."* [PP6]
>
> *"I believe we should all have a say in how tourism develops in our area. Count me in for decision-making processes. It is our community, and our input matters. I want to actively participate in shaping the direction of our local tourism."* [PP2]
>
> *"Being involved in local tourism decision-making is important to me. I have seen other communities benefit from the active engagement of residents, and I want the same for us. I am open to being part of the discussions that will shape our tourism future."* [PP1]

However, item PAR6 (mean=3.732, SD=1.298) had the lowest mean and the highest standard deviation. This suggests a comparatively lower level of active participation among community residents in public meetings or forums related to local tourism development in the past 12 months. This is irrespective of the fact that the participants had positive attitudes towards tourism development and were aware of their ability to participate and influence decisions and policies in their area a indicated by Par3 item with mean=4.052, SD=1.066. The participants in the focus group discussions had this to say:

> *"I rarely attend meetings to discuss local tourism. I believe that even if we participate in such forums and meetings, our opinions and our community's voice are never heard."* [PP7]
>
> *"Forums are a great way to express opinions about local tourism development. We are willing to actively engage in these discussions and attend meetings only when we feel we are included in the conversation about tourism in our area."* [PP5]

The data on community participation in tourism development activities generally portrays a community mainly supportive of tourism-related initiatives. Despite a consensus in favor of such endeavors, the varying degrees of willingness and engagement underscores the importance of tailored strategies to address the diverse perspectives within the community.

4.5 Data Reduction Analysis

Researchers primarily undertake data reduction in quantitative research before multivariate analysis, such as regression analysis or structural equation modeling, to simplify analysis, improve analysis clarity, reveal hidden patterns and relationships, enhance efficiency, increase accuracy, address redundancy between variables (overlapping information), mitigate multicollinearity, address missing data and outliers, and ensure data meets statistical assumptions (Hair et al., 2019; Saunders, et. al., 2019).

It makes research more manageable and yields meaningful insights into the investigated phenomenon. Data reduction empowers researchers to manage the inherent complexity of quantitative datasets and to concentrate their efforts on the most pertinent aspects of their findings (Pituch, & Stevens, 2016; Tranmer, et al., 2020).

Exploratory factor analysis (EFA) was used in this study to identify and extract underlying factors from a large set of 26 interrelated variables. EFA is a powerful tool used for reducing dimensionality of data in quantitative research, providing researchers with a more concise and interpretable representation of their data (Hair et al., 2019;

Kline, 2016). Prior to conducting factor analysis, the following assumptions which also apply to other multivariate techniques such as regression analysis were checked.

4.5.1 Sample to Variable Ratio

For Factor Analysis to yield reliable results, the sample size valid for factor analysis should be greater than 100. meeting the criterion of a 15:1 (sample to variable ratio) for acceptable sample sizes.(Hair et al., 2019; Saunders, 2019). In this study, the sample size was 231 and 3 variables hence an impressive ratio of 77:1, a figure which was way behold the threshold the established threshold of 15:1 affirming the adequacy of the sample size for conducting Factor Analysis in accordance with recommended guidelines.

4.5.2 Assessment of Multivariate outliers

While factor analysis does not exhibit explicit sensitivity to outliers, their existence can indeed impact the robustness and validity of the results. This impact includes the potential distortion of factor loadings, leading to a possible misrepresentation of the underlying factor structure (Zygmont & Smith, 2014)

Although the dataset was clean of univariate outliers (earlier explained in this chapter), it is not a sufficient condition for detecting multivariate outliers. This assumption holds that data must be free from significant outliers across variables. When these outliers are not cleaned, they affect statistical coefficient estimates, causing Type I or II errors (Tabachnick & Fidell, 2013; Kline, 2016; Pituch, & Stevens, 2016). While univariate normality alone is not considered a sufficient condition for multivariate normality, Pituch and Stevens (2016) contend that evaluating univariate normality is often practical and effective in identifying significant violations of the multivariate normality assumption. This becomes particularly valuable when coupled with an examination of

bivariate normality, which they propose can be assessed through the use of bivariate scatterplots.

The researcher explored the dataset for multivariate outliers by calculating Mahalanobis Distance (D2) measures using the linear regression method to develop Mahalanobis D2 scores. The results (Appendix 8) show that all cases had Mahalanobis D2 scores ranging from .131 (minimum) to 17.088 (maximum), Mean= 2.897, Std. Dev. =2.095 and N=231.

To identify which specific Mahalanobis D2 score(s) could be associated with multivariate outliers, the researcher computed probability Mahalanobis D2 Chi-square value distribution using 4 degrees of freedom since the hypothesized model in this study had four (4) predictor variables and one (1) outcome variable. Hair et al. (2019); Kline (2016); Tabachnick and Fidell (2013) all suggest that a probability Mahalanobis D2 test value of less than .001 ($p<.001$) shows the presence of multivariate outliers and, therefore, should be deleted from the dataset. As a result, all probabilities of Mahalanobis D2 were greater than .001. Therefore, the dataset did not contain any multivariate outliers.

4.5.3 Multicollinearity and Singularity

Multicollinearity arises when two or more predictor variables within a multiple regression model are highly correlated ($r>0.8$). This makes it difficult for the researcher to establish the unique contribution associated with each independent variable on the dependent variable as collinearity increases the standard error, which in turn affects the size of regression coefficients and limits the size of multiple squared correlations (Field, 2018). While singularity occurs when there is a perfect linear relationship between two or more independent variables, making the correlation matrix non-invertible

(Tabachnick & Fidell, 2013). Adverse effect often associated with Multicollinearity and Singularity include difficulties for factor analysis to find a distinct solution. Hence compromising the reliability of the analysis and the clear identification of underlying factors (Ernst & Albers, 2017).

A correlation analysis was used to assess the connection between two variables, denoted by the coefficient symbol *"r."* The resulting coefficient in this analysis falls within the range of -1 to +1. Pearson Product-Moment Correlation Test was used to assess bivariate associations between independent variables and the dependent variable in the study, as shown in Table 4.7

Table 4.7 Correlation Analysis for the Study Variables

		1	2	3	4	5
1	Environmental Impacts	1				
	Sig. (2-tailed)					
2	Socio-cultural Impacts	-.217**	1			
	Sig. (2-tailed)	0.001				
3	Economic Impacts	0.086	.405**	1		
	Sig. (2-tailed)	0.190	.000			
4	Community Participation	-.177**	.687**	.364**	1	
	Sig. (2-tailed)	0.007	.000	.000		
5	Attitudes towards Tourism Development	-.186**	.578**	.358**	.666**	1
	Sig. (2-tailed)	0.005	.000	.000	.000	

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

Correlation results (Table 4.7) showed a negative and significant association between perceived tourism environmental impact and community attitudes towards support for tourism development (r = -0.186, $p<0.05$). Further, perceived tourism socio-cultural impact depicted a solid positive significant relationship with community attitudes towards tourism development (r =0.578, $p<0.05$). The relationship between perceived tourism economic impact and community attitudes towards tourism development was positive and significant (r = 0.3584, $p<0.05$). Finally, a strong positive and significant

association existed between community participation and community attitudes towards tourism development (r = 0.666, $p<0.05$). This implied that, the variables were not highly correlated ($r > 0.8$) or singularity ($r = 1$).

Further to confirm this assumption, Tolerance and Variance Inflation Factor (VIF) were employed. Acceptable Tolerance values should exceed 0.1, while the VIF should be less than 10 (O'Brien, 2007). Table 4.8 shows that Tolerance values exceeded 0.1 and VIF was below 10, implying that the dataset lacked Multicollinearity.

Table 4.8 Test for Multicollinearity

Variable	Collinearity Statistics	
	Tolerance	**VIF**
Environmental Impact	0.913	1.096
Socio-cultural Impact	0.484	2.066
Economic Impact	0.789	1.268
Community Participation	0.516	1.937

Source: Field data (2023)

Although the dataset shows no presence of Multicollinearity from the VIF and Tolerance statistics, it is essential to interpret the condition index and variance proportions to avoid misleading statistical results (Kim, 2019). Condition Index Values exceeding 15 may serve as an indicator of potential multicollinearity issues, while values surpassing 30 strongly suggest the presence of severe multicollinearity problems. When assessing the condition index for each row, look for values exceeding 0.90 in the Variance Proportions.

If two or more values exceed 0.90 in the same row, it suggests the presence of collinearity issues among those predictors. If only one predictor in a row is above 0.90, this does not indicate Multicollinearity (Tabachnick & Fidell, 2013).

The analysis of collinearity diagnostics (Table 4.9) revealed that none of the rows contained a variance proportion exceeding 0.90. Therefore, the assumption of Multicollinearity was not violated, implying no collinearity problems in the model.

Table 4.9 Collinearity Diagnostics

				Variance Proportions			
Dimension	**Eigen value**	**Condition Index**	(Constant)	Environ-mental Impact	Socio-cultural Impact	Eco-nomic Impact	Community Participation
1	4.801	1	0.00	0.00	0.00	0.00	0.00
2	0.143	5.804	0.00	0.61	0.04	0.00	0.01
3	0.028	13.002	0.17	0.36	0.49	0.17	0.00
4	0.016	17.105	0.07	0.00	0.21	0.48	0.54
5	0.011	20.605	0.76	0.02	0.25	0.35	0.44

4.5.4 Normality of the Study Variables

The researcher examined the normality of the data distribution to investigate whether each of the individual variables was normally distributed. This analysis was first done by analyzing the skewness and kurtosis coefficients of the variables under study. The test statistic holds that a skewness and kurtosis value close to zero signifies the normality of the data distribution (Orcan, 2020). Although other authorities recommend the threshold of -3 to +3 in absolute value (Kline, 2016; Pituch, & Stevens, 2016).

Results in Table 4.10 show that apart from the environmental impacts variable, skewness and kurtosis statistical coefficients of other study variables were relatively distant from zero. This indicates that the variable scores showed a slightly moderate negatively skewed distribution (Mertler & Reinhart, 2017). Therefore, data needed to undergo some form of transformation to ensure the normality of the distribution (Field, 2018).

Table 4.10: Skewness and Kurtosis Test for Normality

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Environmental Impact	0.194	0.16	-1.407	0.319
Socio-cultural Impact	-0.273	0.16	-1.194	0.319
Economic Impact	-0.619	0.16	-0.453	0.319
Community Participation	-0.998	0.16	-0.165	0.319
Attitudes towards Tourism Development	-0.986	0.16	0.145	0.319

The researcher employed a two-step approach to transform the data for the main variables to achieve normality. This was done by modifying scores using fractional rank and *Idf. Normal (fractional rank, mean, Standard. deviation)* (Templeton, 2011). The skewness and kurtosis of the transformed variables were close to zero and the absolute values of the skewness and kurtosis less than three times the respective standard errors, as indicated in Appendix 9, suggesting that the data was approximately normally distributed. Additionally, normal Q-Q plots and histograms of the individual study variables—environmental, socio-cultural, economic, and community attitude towards tourism development—are presented in Appendix 10.

4.6 Data Reduction Using Exploratory Factor Analysis (EFA)

After meeting the criteria for factor analysis, the number of survey items was reduced and the construct validity was assessed using exploratory factor analysis (EFA). EFA is a valuable technique in quantitative research for uncovering hidden structures, simplifying data, generating hypotheses, and contributing to the development of valid and reliable measurement instruments (Hair et al., 2022; Hayes, 2019; Saunders, 2020). Factors were extracted using Principal Component Analysis (PCA) with the aid of an orthogonal rotation method (Varimax) to identify the underlying factor structure and assess the extent to which items loaded onto these factors.

PCA was chosen due to its ability to establish linear components in the data set and align a set of factors that account for common and unique variance in a set of measured variables. The orthogonal rotation (Varimax) method was chosen because it maximizes the dispersion of loadings within factors. Hair et al. (2019) supported by Samuels, (2016), Kline, (2016); Pituch, & Stevens, (2016) suggest that at least three (3) to five (5) and no more than ten observed variables should load on each component without cross-loadings for it to be identifiable, provided the least factor loading in every extracted factor or component above the 0.5 cut-offs. Furthermore, the extracted factors or components should have eigenvalues more significant than one (1) to sufficiently account for the expected variance in a given set of measured variables (Samuels, 2016). Before conducting the statistical tests, the responses to individual items significantly loading on each construct were summed, averaging the scores from individual items, to create a composite score and treated as indicator variables in order to facilitate analysis and interpretation of the results (Hair et al. 2019; Samuels, 2016; Kline, 2016).

4.6.1 Exploratory Factor Analysis for Tourism Impacts

Tourism impacts were operationalized as a tri-dimensional construct measured using 26 items anchored on a 5-point Likert scale. Exploratory Factor Analysis (EFA) was used to extract the most critical factors that account for more significant common variance in tourism impacts (Appendix 11). The results in Table 4.11 indicate a KMO value of .904, indicating that the sample was adequate to facilitate factor analysis (Field, 2018). Further still, Bartlett's test of Sphericity produced Approx. Chi-Square=3309.50, DF=300, Sig=.000. This result indicates that correlations between items were sufficiently significant for factor analysis to be executed (Hair et al., 2019).

Table 4.11 KMO and Bartlett's Test for Tourism Impacts

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.904
Bartlett's Test of Sphericity	Approx. Chi-Square	3309.50
	Df	300
	Sig.	.000

Source: Field Data (2023)

The rotated component matrix for items measuring tourism impacts was run using a Varimax rotation method with Kaiser Normalization; 23 items out of the initial 26 items were extracted to measure the primary variable of tourism impacts (Table 4.12). These were clustered along three (3) dimensions: environmental, social-cultural, and economic impacts. The items which were excluded from the matrix were: ECOW6-cost of living in the area, SOCW7-understanding of different people and cultures, and SOCW 8- conservation of local culture. These items were not further analyzed in subsequent analysis models.

Notably, all tourism impacts loaded perfectly onto their respective factors, without any cross-loading being observed, confirming the achievement of convergent and discriminatory validity. This result also strongly indicates construct validity, affirming that the items effectively measured the intended constructs. Furthermore, the Cronbach's alpha coefficients (**α**) for each factor exceeded the recommended threshold of 0.7. This indicates high internal consistency within each factor, signifying that the items within each construct were highly correlated and reliable (Taber, 2018). These individual impact item loadings are interpreted as correlation coefficients.

Table 4.12 Exploratory Factor Analysis Results for Tourism Impacts

Rotated Component Matrix					
		Component			Cronbach α
Code	**Items**	**Environmental impacts**	**Socio-cultural impacts**	**Economic impacts**	
ENVW7	Amount of natural open space	0.842			0.906
ENVW5	Amount of traffic in the area	0.825			
ENVW6	Number of people in the area	0.820			
ENVW8	Air quality	0.811			
ENVW4	Amount of human made noise	0.807			
ENVW12	Waste management	0.803			
ENVW2	Amount of litter and other trash	0.796			
ENVW11	Water quality	0.794			
ENVW1	Peace and tranquility of the area	0.750			
ENVW10	Amount of human made structures	0.750			
ENVW3	Quality of natural environment	0.744			
ENVW9	Appearance of the area	0.713			
SOCW1	Small town atmosphere of the area		0.856		0.857
SOCW2	Crime rate		0.767		
SOCW3	Personal safety and security		0.750		
SOCW4	Overall quality of life		0.734		
SOCW5	Community spirit among local residents		0.689		
SOCW6	Relationship between residents and tourists		0.650		
ECOW4	My personal income			0.821	0.774
ECOW3	Quality of employment			0.717	
ECOW2	Money generated by local businesses			0.672	
ECOW5	Property value (cost of real state)			0.663	
ECOW1	Employment opportunities			0.633	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 5 iterations.

The three components accounted for **57.082%** of the total variance in tourism impacts (Table 4.13). Comparatively, environmental impacts contributed **32.211%,** socio-cultural impacts contributed up to **17.718%** of the total variance in tourism impacts, and economic impact emerged as the most minor contributor **(7.154%).** All three components had significant Eigen values (>1). The three extracted components formed the three reflective constructs of tourism impacts, forming the study's independent variables.

Table 4.13 Total Variance Explained for Tourism Impacts

Total Variance Explained

Component	Initial Eigen Value			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1.Environmental impacts	8.053	32.211	32.211	7.678	30.711	30.711
2.Socio-cultural impacts	4.429	17.718	49.928	3.924	15.695	46.406
3.Economic impacts	1.788	7.154	57.082	2.669	10.676	57.082

Extraction Method: Principal Component Analysis

4.6.2 Exploratory Factor Analysis for Community Participation

Community Participation, which formed the mediating variable in the study, was a unidimensional construct measured using six items anchored on a 5-point Likert scale (Appendix 12). The EFA results presented in Table 4.14 indicate a KMO value of .833, which indicates that the sample was adequate to facilitate factor analysis (Field, 2018).

Further still, Bartlett's test of Sphericity produced Approx. Chi-Square =514.176, df =15, Sig. = .000. This result indicates that the correlation matrix was not an identity matrix. Therefore, item correlations were sufficiently significant for factor analysis (Hair et al., 2019).

Table 4.14: KMO and Bartlett's Test for Community Participation

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.833
Bartlett's Test of Sphericity	Approx. Chi-Square	514.176
	Df	15
	Sig.	.000

Source: Field Data (2023)

Exploratory factor analysis extracted the essential factor for the most significant common variance in community participation. A unidimensional factor comprising six (6) items with loadings ranging between 0.675 and 0.803 (Table 4.15) was obtained. Furthermore, the Cronbach's alpha coefficient (**α)** for the extracted factor was 0.833, well above the recommended threshold of 0.7. This indicates a high internal consistency, meaning that the items within the construct were highly correlated and reliable confirming construct validity (Hair et al., 2019).

Table 4.15 Exploratory Factor Analysis Results for Community Participation

Rotated Component Matrix

		Component	
Code	**Items**	**Community Participation**	**A**
PAR5	I am interested in local tourism development activities	0.803	0.833
PAR6	I have been actively participating in forums on local TD	0.777	
PAR3	I am willing to participate in local tourism-decision making process	0.772	
PAR2	I actively support initiatives for new TD in my community	0.749	
PAR1	I actively participate in tourism-related events in my community	0.721	
PAR4	I am interested in local tourism development activities.	0.675	

Extraction Method: Principal Component Analysis.

1 component extracted.

4.6.3 Exploratory Factor Analysis for Community Attitudes towards Tourism Development

Community attitudes towards tourism development, which formed the dependent variable in the study, was a unidimensional construct measured using eight items anchored on a 5-point Likert scale (Appendix 13). The EFA results in Table 4.16 indicate a KMO value of .813, indicating that the sample was adequate to facilitate factor analysis (Field, 2018). Further still, Bartlett's test of Sphericity produced Approx. Chi-Square =464.652, df =28, Sig. = .000. This result indicates that item correlations were sufficiently significant for factor analysis (Taber, 2018).

Table 4.16 KMO and Bartlett's Test for Community Attitudes towards Tourism Development

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.813
Bartlett's Test of Sphericity	Approx. Chi-Square	464.652
	Df	28
	Sig.	.000

Source: Field Data (2023)

Exploratory Factor Analysis was used to extract a unidimensional factor comprising seven (7) items with loadings ranging between 0.605 and 0.754, as shown in Table 4.17. TD4-“increased tourism will not hurt my community’s quality of life”, which was initially reverse recorded was, nevertheless excluded from the analysis due to its failure to meet the factor loading threshold. Suggesting that it did not contribute significantly to the measured construct or dimension of community attitudes towards tourism development in this research study. Moreover, the Cronbach's alpha coefficient (α) for the extracted factor was 0.773, surpassing the recommended threshold of 0.7. This signifies strong internal consistency, indicating high correlation and reliability among the items within the construct (Hair et al., 2019).

Table 4.17 EFA results for Community Attitudes towards Tourism Development

Rotated Component Matrix

Code	Items	Component: Tourism Development	α
TD1	Overall, benefits of TD in my community outweigh its costs.	0.754	0.773
TD3	My community can handle more tourism development.	0.717	
TD2	New TD should be actively encouraged in my community.	0.71	
TD6	I support new tourism development in my community	0.651	
TD5	TD contributes to preservation of our local heritage.	0.632	
TD7	I believe TD enhances the overall quality of life for residents of our community	0.613	
TD8	I feel that TD supports the growth and diversification of local businesses	0.605	

Extraction Method: Principal Component Analysis.

1 component extracted.

4.7 Test for Statistical Assumptions

Before testing of the study's hypotheses, the researcher first examined the underlying statistical assumptions for regression analysis of the aggregated variables obtained from factor analysis.

4.7.1 Normality of Residuals

Multiple linear regression assumes that the residuals (errors between the actual and predicted values) should be normally distributed. This can be verified by plotting a histogram or a Q-Q plot (Schmidt, & Finan, 2018). The histogram in Figure 4.1 shows an approximate normal curve, which implies that the data fits well and that the normality of residuals assumption was met. Q-Q plots for tourism impacts and community participation are attached as appendix 10.

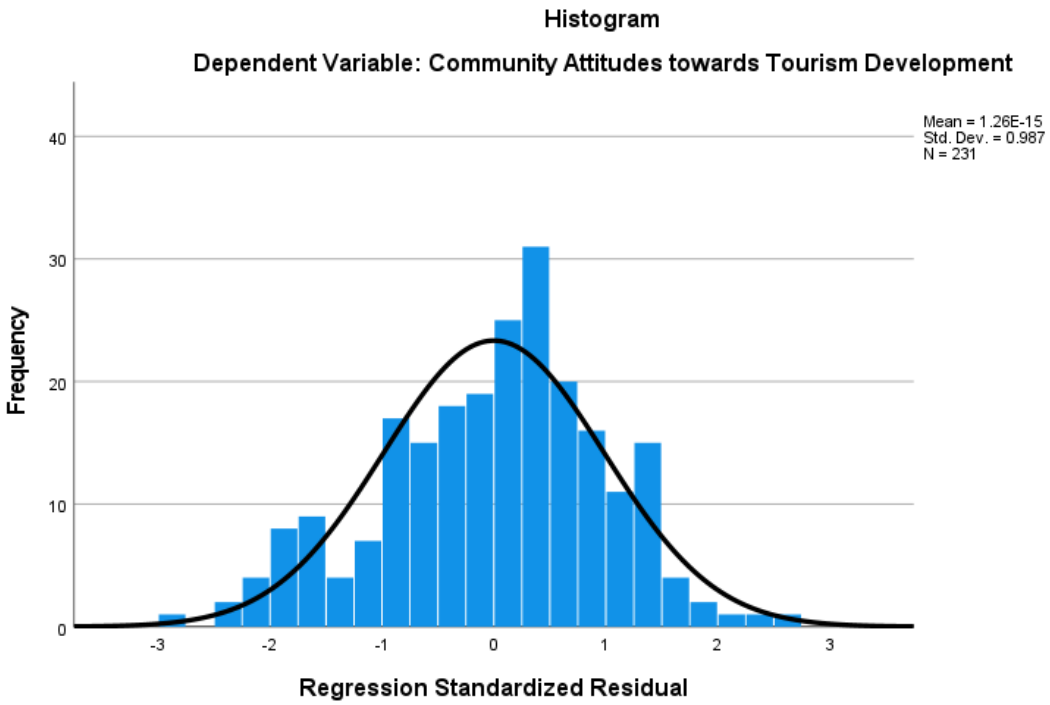


Figure 4.1 Histogram with Normal Curve

Source: Field data (2023)

4.7.2 Linearity of the Residuals

Linearity is the assumption that a straight-line relationship exists between two variables in a statistical regression model: the dependent and independent variables. It assumes that a change in one variable corresponds to a proportional change in another (Casson & Farmer, 2014).

The researcher conducted the linearity test by inspecting the normal probability-probability (P-P) plots. When the expected cumulative probabilities were plotted against the observed cumulative probabilities, the regression standardized residual data points (Figure 4.2) closely followed a straight line. This linear alignment indicated a linear association between the predicted and the observed variables. Hence, the linearity assumption was met, allowing multiple regression to establish the associations between the study variables (Ernst & Albers, 2017). Figure 4.2 shows the Normal P-P plot of the regression standardized residual.

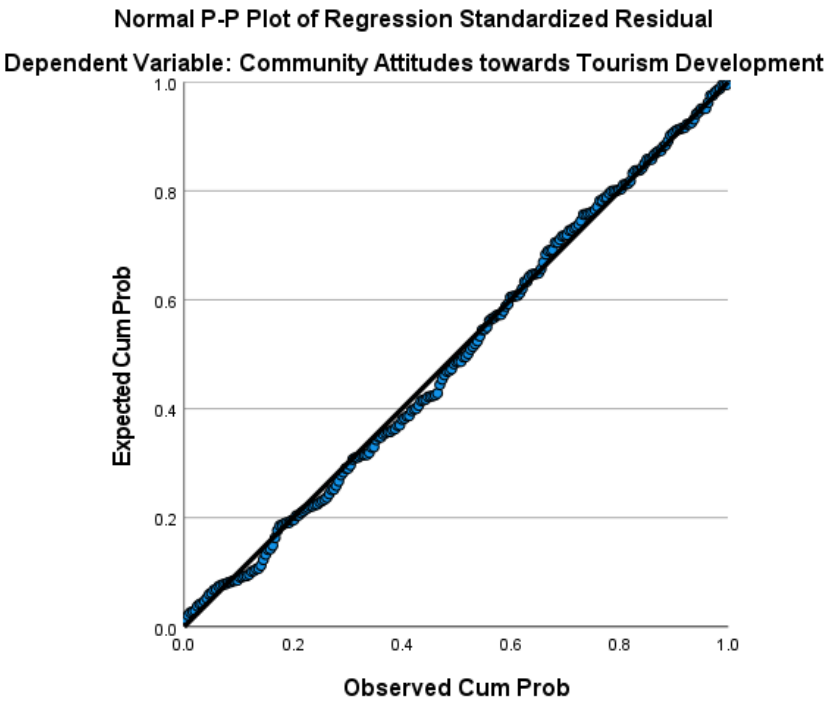


Figure 4.2 Linearity Normal P-P Plot

Source: Field data (2023)

4.7.3 Homoscedasticity

Homoscedasticity assumes that the variance is equal for all values of the predicted dependent variable (Yang et al., 2019). When this assumption is violated, it can result in biased and unreliable estimates of regression coefficients, leading to incorrect conclusions about the statistical significance of the predictors (Tranmer et al., 2020). Homoscedasticity was checked by plotting a scatter plot of the dependent variable (Community attitudes towards tourism development) against the standardized residual to determine if the variance of errors in the regression model remained constant across all levels of the predictor variables. Figure 4.3 shows that the spread of variances remained constant along the line of best fit across all levels of predictor variables. Hence, the dataset was homoscedastic.

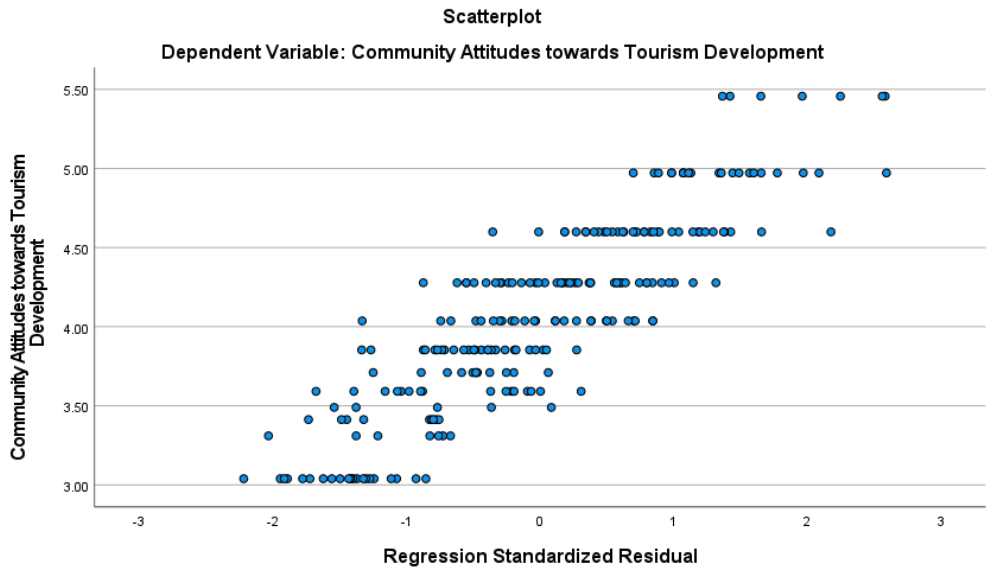


Figure 4.3 Homoscedasticity Scatter Plot

Source: Field data (2023)

4.7.4 Test for Independence of Errors

The researcher conducted the Durbin-Watson test for independence of errors (Table 4.18) to establish if the residuals were serially correlated. When the residuals or error terms correlate (ε1 and ε2), it biases the statistical estimates of the predictor variable (s) on the criterion variable (Field, 2018). Hair et al. (2019) define independence of errors as an assumption that the errors or residuals in a statistical model are unrelated to each other. This means that the error for one observation does not depend on or influence the errors of other observations. Durbin-Watson's values between 1.5 and 2.5 indicate that the error terms are independent; hence, there is no autocorrelation (Turner, 2018). Table 4.18 shows that the overall Durbin-Watson test statistic was 2.283. Therefore, the residuals were not auto correlated. Ensuring the independence of errors is essential for the validity and reliability of statistical analyses. Therefore, researchers routinely assess this assumption as part of their model diagnostics to ensure that the residuals in

prediction do not follow a pattern from case to case (Hair et al., 2019; Ernst & Albers, 2017).

Table 4.18: Test for Independence of Errors

Model	Std. Error of the Estimate	Durbin Watson
Environmental Impact	0.67101	1.991
Socio-cultural Impact	0.55719	2.039
Economic Impact	0.63759	2.029
Community Participation	0.5092	2.276
Overall	**0.49393**	**2.283**

Dependent Variable: Community Attitudes towards Tourism Development

4.8 Testing Effects of Covariates on the Dependent Variable

Three demographic variables, namely age, gender, and level of education, were conceptualized as control variables in the study to account for their confounding effects on community attitudes toward support for tourism development (Appendix 14). The multiple regression model revealed an R^2 value of 0.084 (Table 4.19), indicating that these covariates explained only 8.4% of the variation in community attitudes towards tourism development among residents of Rimoi National Reserve.

Table 4.19 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig. F Change
1	$.289^a$	0.084	0.072	0.65659	.000

a Predictors: (Constant) Age, Gender, Level of education

b Dependent Variable: Community Attitudes towards Tourism Development

The ANOVA test results for the covariates (Table 4.20) were statistically significant, $F(3, 227) = 6.912$, $p < 0.05$. This indicates that the model for the covariates is statistically significant and demonstrates a relatively good fit.

Table 4.20 Model Fitness

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.94	3	2.98	6.912	$.000^{b}$
	Residual	97.861	227	0.431		
	Total	106.801	230			

a Dependent Variable: Community Attitudes towards Tourism Development
b Predictors: (Constant), Age Gender, Level of education

The regression weights associated with the covariates, as presented in Table 4.21, indicated that age and gender covariates had no significant effect on community attitudes towards tourism development. However, residents' education level had a significant positive effect on community attitudes towards tourism development (β=.233, $p<0.05$). Although age, gender, and level of education covariates accounted for a significant variation in the dependent variable, they were incorporated into the study primarily for statistical control rather than as subjects of theoretical interest or as a primary focus of the study. Therefore, in order to accurately estimate the effects of tourism impacts on community attitudes towards tourism development and to enhance the credibility of the study findings, it was necessary to statistically control for these covariates to avoid distortion by confounding influences. Drawing conclusions from aggregate data without such control can result in erroneous interpretations (Saunders et.al. 2019; Creswell, 2018; Pituch, & Stevens, 2016). Thus, the coefficients of these covariates generally do not have a causal interpretation in the context of the study.

Table 4.21 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	**Std. Error**	**Beta (β)**	**t**	**Sig.**
1	(Constant)	3.439	0.257		13.39	.000
	Age	-0.041	0.045	-0.067	-0.915	.361
	Gender	0.123	0.087	0.09	1.414	.159
	Level of Education	0.167	0.052	0.233	3.199	.002

b Dependent Variable: Community Attitudes towards Tourism Development

The optimal model associated with the covariates was, therefore, as follows.

$$\mathbf{TD = 3.439 - 0.067AG + 0.09GE + 0.233LE}$$

Where **TD** = community attitudes towards tourism development, **Ag** = age of the community residents, **GE** = gender of the community residents, and **LE** = level of education of community residents.

4.9 Hypothesis Testing

Three hypotheses were formulated to test the conceptualized relationships (direct effects) between the three tourism impacts (environmental, socio-cultural, and economic) and community attitudes toward support for tourism development in Rimoi National Reserve. Hierarchical multiple regression analysis (Appendix 15) was used to test the study's null hypotheses (**H_{01}, H_{02}**, and **H_{03}**). The change in the coefficient of determination (R^2), standardized beta coefficient (β), and the p-value test statistics were computed at α=0.05 level of significance, while controlling for respondents' age, gender, and level of education as covariates. The decision rule for testing these hypotheses was to reject **H_0** if $p<0.05$ or not reject it otherwise.

4.9.1 Relationship between Tourism Economic Impacts and Community Attitudes towards Tourism Development

Hypothesis **H_{01}** proposed that no significant relationship exists between tourism economic impacts and community attitudes toward tourism development in Rimoi National Reserve, Kenya. To test this hypothesis, the tourism economic impacts variable was regressed on the community attitudes toward tourism development variable. The results are presented in Tables 4.22, 4.23, and 4.24.

The model summary results in Table 4.22 indicate that the addition of the tourism economic impacts variable significantly increased the predictive capacity of the model by 0.085, or approximately 8.5%, over and beyond the effects of the covariates.

Table 4.22 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Sig. F Change
1	$.289^a$	0.084	0.072	0.65659	0.084	.000
2	$.410^b$	0.169	0.154	0.62685	0.085	.000

a Predictors: (Constant) Age, Gender, Level of education
b Predictors: (Constant), Age, Gender, Level of education, Economic Impacts
c Dependent Variable: Community Attitudes towards Tourism Development

The ANOVA test results (Table 4.20) show that the overall model, $F(4, 226) = 11.45$, $p < 0.05$, was statistically significant. This indicates that both model one (the covariates) and model two (tourism economic impacts) can effectively predict respondents' attitudes towards tourism development. The significant results demonstrate a relatively good model fit, making the coefficients interpretable.

Table 4.23 Model Fitness

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.94	3	2.98	6.912	$.000^{a}$
	Residual	97.861	227	0.431		
	Total	106.801	230			
2	Regression	17.997	4	4.499	11.45	$.000^{c}$
	Residual	88.804	226	0.393		
	Total	106.801	230			

a Dependent Variable: Community Attitudes towards Tourism Development
b Predictors: (Constant), Age, Gender, Level of education
c Predictors: (Constant), Age, Gender, Level of education, Economic Impacts

The standardized regression coefficients (**β**) and p-values associated with the independent variables (Table 4.24) showed that, while controlling for age, gender, and level of education covariates, economic impacts positively and significantly affected community attitudes towards tourism development.

Table 4.24 Regression Coefficients

Model		**Unstandardized Coefficients**		**Standardized Coefficients**		
		B	**Std. Error**	**Beta (β)**	**T**	**Sig.**
1	(Constant)	3.439	0.257		13.39	.000
	Age	-0.041	0.045	-0.067	-0.915	.361
	Gender	0.123	0.087	0.09	1.414	.159
	Level of Education	0.167	0.052	0.233	3.199	.002
2	(Constant)	2.278	0.344		6.614	.000
	Age	-0.011	0.044	-0.018	-0.251	.802
	Gender	0.09	0.083	0.066	1.088	.278
	Level of Education	0.132	0.05	0.185	2.629	.009
	Economic Impacts	0.313	0.065	0.304	4.801	.000

a Dependent Variable: Community Attitudes towards Tourism Development

The results showed that tourism economic impacts positively affected community attitudes towards tourism development **(β=0.304, p<0.05**), indicating a positive relationship between the two variables. Since p<0.05, we reject the proposed null hypothesis (**H01**) and conclude that tourism economic impacts significantly and positively influence community attitudes towards tourism development.

As tourism economic impacts increase, community attitudes towards tourism development will likely exhibit a corresponding positive trend. Hence, an increase of 1 standard deviation unit in tourism economic impacts indicates that community attitudes towards tourism development are likely to increase by 0.304 standard deviation units. In other words, for every one standard deviation increase in tourism economic impacts, there is a predicted 30.4% increase in community attitude towards tourism development.

The optimal model for regressing community attitudes towards tourism development on tourism economic impacts was therefore found to be:

$$\mathbf{TD = 2.278 - 0.018AG + 0.066GE + 0.185LE + 0.304ECO}$$

Where **TD** = community attitudes towards Tourism Development, **AG** = age of the community residents, **GE** = gender of the community residents, **LE** = level of education of community residents, and **ECO** = perceived economic impacts.

4.9.2 Relationship between Tourism Environmental Impacts and Community Attitudes towards Tourism Development

Hypothesis $\mathbf{H_{02}}$ proposed that no significant relationship exists between tourism environmental impacts and community attitudes toward tourism development in Rimoi National Reserve, Kenya. To test this hypothesis, the tourism environmental impact variable was regressed on the community attitudes toward tourism development variable. The results are presented in Tables 4.25, 4.26, and 4.27.

The model summary results in Table 4.25 indicate that the addition of the tourism environmental impacts variable significantly increased the predictive capacity of the model by 0.056, or approximately 5.6 %, over and beyond the effects of the covariates.

Table 4.25 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Sig. F Change
1	$.289^a$	0.084	0.072	0.65659	0.084	.000
2	$.374^b$	0.140	0.125	0.63752	0.056	.000

a Predictors: (Constant) Age, Gender, Level of education
b Predictors: (Constant), Age, Gender, Level of education, Environment Impacts
c Dependent Variable: Community Attitudes towards Tourism Development

The ANOVA test results (Table 4.26) show that the overall model, F (4, 226) = 9.194, $p < 0.05$, was statistically significant. This indicates that both model one (the covariates) and model two (tourism environmental impacts) can effectively predict respondents' attitudes towards tourism development. The significant results demonstrate a relatively good model fit, making the coefficients interpretable.

Table 4.26 Model Fitness

		ANOVA				
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.94	3	2.98	6.912	$.000^a$
	Residual	97.861	227	0.431		
	Total	106.801	230			
2	Regression	14.947	4	3.737	9.194	$.000^c$
	Residual	91.855	226	0.406		
	Total	106.801	230			

a Dependent Variable: Community Attitudes towards Tourism Development
b Predictors: (Constant), Age, Gender, Level of education
c Predictors: (Constant), Age, Gender, Level of education, Environmental Impacts

The standardized regression coefficients (**β**) and p-values associated with the independent variables (Table 4.27) showed that while controlling for age, gender, and level of education covariates, environmental impacts negatively and significantly affected community attitudes towards tourism development.

Table 4.27 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	**Std. Error**	**Beta (β)**	**T**	**Sig.**
1	(Constant)	3.439	0.257		13.39	.000
	Age	-0.041	0.045	-0.067	-0.915	.361
	Gender	0.123	0.087	0.09	1.414	.159
	Level of Education	0.167	0.052	0.233	3.199	.002
2	(Constant)	3.945	0.282		13.992	.000
	Age	-0.083	0.045	-0.135	-1.848	.066
	Gender	0.158	0.085	0.116	1.87	.063
	Level of Education	0.156	0.051	0.217	3.063	.002
	Environmental Impacts	-0.141	0.037	-0.246	-3.844	.000

a Dependent Variable: Community Attitudes towards Tourism Development

The results showed that tourism environmental impacts negatively affected community attitudes towards tourism development **(β= -0.246, p<0.05).** Since p<0.05, we reject the proposed null hypothesis (**H_{02}**) and conclude that tourism environmental impacts negatively influence community attitudes towards tourism development.

The negative beta coefficient suggests that as tourism environmental impacts increase, community attitudes toward tourism development are likely to decrease correspondingly. Specifically, an increase of 1 standard deviation in tourism environmental impacts predicts a decrease of 0.246 standard deviations in community attitudes toward tourism development. In other words, for every one standard deviation increase in tourism environmental impacts, there is an expected 24.6% decrease in community attitude toward tourism development.

The optimal model for regressing community attitudes towards tourism development on tourism environmental impacts was therefore found to be:

$$\mathbf{TD = 3.945 - 0.135 + 0.116GE + 0.217LE - 0.246ENV}$$

Where **TD** = community attitudes towards Tourism Development, **AG** = age of the community residents, **GE** = gender of the community residents, **LE** = level of education of community residents, and **ENV** = perceived environmental impacts.

4.9.3 Relationship between Tourism Socio-cultural Impacts and Community Attitudes towards Tourism Development

Hypothesis $\mathbf{H_{03}}$ proposed that no significant relationship exists between tourism socio-cultural impacts and community attitudes toward tourism development in Rimoi National Reserve, Kenya. To test this hypothesis, the tourism socio-cultural impacts variable was regressed on the community attitudes toward tourism development variable. The results can be found in Tables 4.28, 4.29, and 4.30.

The model summary results in Table 4.28 indicate that the addition of the tourism socio-cultural impacts variable significantly increased the predictive capacity of the model by 0.265, or approximately 26.5 %, over and beyond the effects of the covariates.

Table 4.28 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Sig. F Change
1	$.289^a$	0.084	0.072	0.65659	0.084	.000
2	$.591^b$	0.349	0.338	0.55460	0.265	.000

a Predictors: (Constant) Age, Gender, Level of education
b Predictors: (Constant), Age, Gender, Level of education, Socio-Cultural Impacts
c Dependent Variable: Community Attitudes towards Tourism Development

The ANOVA test results (Table 4.29) show that the overall model, $F(4, 226) = 30.306$, $p < 0.05$, was statistically significant. This indicates that both model one (the covariates) and model two (tourism socio-cultural impacts) can effectively predict respondents' attitudes towards tourism development. The significant results demonstrate a relatively good model fit, making the coefficients interpretable.

Table 4.29 Model Fitness

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.94	3	2.98	6.912	$.000^{a}$
	Residual	97.861	227	0.431		
	Total	106.801	230			
2	Regression	37.287	4	9.322	30.306	$.000^{c}$
	Residual	69.514	226	0.308		
	Total	106.801	230			

a Dependent Variable: Community Attitudes towards Tourism Development
b Predictors: (Constant), Age, Gender, Level of education
c Predictors: (Constant), Age, Gender, Level of education, Socio-Cultural Impacts

The standardized regression coefficients (**β**) and p-values associated with the independent variables (Table 4.30) showed that while controlling for age, gender, and level of education covariates, economic impacts positively and significantly affected community attitudes towards tourism development.

Table 4.30 Regression Coefficients

Model		**Unstandardized Coefficients**		**Standardized Coefficients**		
		B	**Std. Error**	**Beta (β)**	**T**	**Sig.**
1	(Constant)	3.439	0.257		13.39	.000
	Age	-0.041	0.045	-0.067	-0.915	.361
	Gender	0.123	0.087	0.09	1.414	.159
	Level of Education	0.167	0.052	0.233	3.199	.002
2	(Constant)	2.443	0.24		10.158	.000
	Age	-0.025	0.038	-0.04	-0.646	.519
	Gender	0.06	0.074	0.044	0.819	.413
	Level of Education	0.067	0.045	0.094	1.48	.140
	Socio-Cultural Impacts	0.389	0.041	0.540	9.6	.000

a Dependent Variable: Community Attitudes towards Tourism Development

The results indicated that tourism socio-cultural impacts have a positive effect on community attitudes toward tourism development ($\beta = 0.540$, $p < 0.05$). Since $p < 0.05$, we reject the null hypothesis (H03) and conclude that socio-cultural impacts positively influence community attitudes toward tourism development.

The positive beta coefficient suggests that as tourism's socio-cultural impacts increase, community attitudes are likely to increase correspondingly. Specifically, an increase of 1 standard deviation in tourism socio-cultural impacts predicts a 0.540 standard deviation increase in community attitudes toward tourism development. In other words, for every standard deviation increase in tourism's socio-cultural impacts, there is an expected 54.0% increase in community attitude toward tourism development.

4.9.4 Mediating Effect of Community Participation on the relationship between Tourism Impacts and Community Attitudes towards Tourism Development

Hypothesis **H_{04}** proposed that community participation has no significant mediating effect on the relationship between tourism impacts and community attitudes toward tourism development in Rimoi National Reserve, Kenya.

To test this hypothesis, mediation analysis using the Hayes PROCESS macro (Model 4) was conducted (Appendix 16-18) to establish the mediating effect of community participation on the relationship between each of the tourism impacts (economic, environmental, and social-cultural) and community attitudes towards tourism development (Hayes, 2013). The analysis controlled for the confounding effects of the respondents' age, gender, and level of education covariates. The PROCESS Macro uses bootstrapping, which does not require the data to be normally distributed (Hayes 2018). The bootstrap samples used in this analysis were 5000.

Hayes's process approach detects mediation using a bias-corrected bootstrapping of the sampling distribution (with replacement) of the indirect effect to aid in understanding the resulting nature of mediation and its statistical significance (Hayes, 2022). A statistically significant indirect effect (t-value > 1.96, two-tailed, $p < 0.05$) is an evidence for mediation. Additionally, if the confidence interval for the indirect effect

does not straddle a zero in between, this supports the presence of the mediation effect and vice versa (Hayes, 2018).

The central consideration of mediation analysis is that there is a significant relationship between the independent (X) and dependent variable (Y) through the mediator (M). Figure 4.3 presents Hayes' simple mediation model (Model 4) showing direct, indirect, and total effects between tourism impacts (X) and community attitudes towards tourism development (Y) through community participation (M).

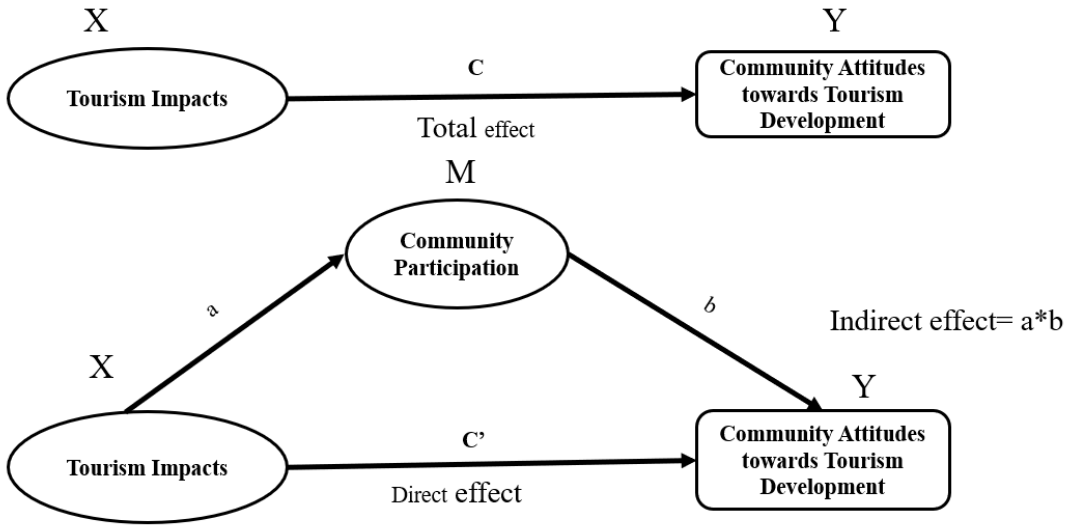


Figure 4.4 Simple Mediation Model Effects

Source: (Hayes, 2013)

This study reported an unstandardized (raw) coefficient (**B**) for the mediation analysis to reflect the actual change in the outcome variable corresponding to the actual change in the predictor variables, based on the original state of the data (Hayes, 2022).

4.9.4.1 Mediating Effect of Community Participation on the relationship between Tourism Economic Impacts and Community Attitudes towards Tourism Development

H_{04a} proposed that community participation has no significant mediating effect on the relationship between tourism economic impacts and community attitudes toward tourism development in Rimoi National Reserve, Kenya. To test this hypothesis, mediation analysis using Hayes PROCESS macro version 4.2 with bootstrapping was conducted, and the results are presented in Tables 4.31 and 4.32.

Table 4.31 Path Estimates

				95%Confidence Interval			
Path		**Coefficient (B)**	**SE**	**Lower**	**Upper**	**T**	**P**
a	Effect of X on M	0.3906	0.0767	0.2394	0.5417	5.0919	.000
b	Effect of M on Y	0.5136	0.0452	0.4245	0.6028	11.3526	.000
c	Total Effect of X on Y	0.3134	0.0653	0.1848	0.4421	4.8009	.000

Source: Field data (2023)

In Table 4.31, the path estimates reveal significant findings: tourism economic impacts (X) had a significant positive effect on community participation (M) ($B = 0.3906$, $p < 0.05$). Additionally, community participation (M) significantly influenced community attitudes toward tourism development (Y) positively ($B = 0.5136$, $p < 0.05$). Moreover, tourism economic impacts (X) had a significant positive effect on community attitudes toward tourism development (Y) ($B = 0.3134$, $p < 0.05$). These results indicate that paths a, b, and c in the mediation model were significant and positive, controlling for the covariates.

Bootstrapping analysis, conducted with 5,000 bootstrap samples as shown in Table 4.32, was employed to assess the significance of the indirect effect. This process

generated mediation estimates and confidence intervals, providing insights into the nature and strength of the mediation effects.

Table 4.32 Mediation Estimates

			95% Confidence Interval				
Effect	**B**	**SE**	**Lower**	**Upper**	**t**	**p**	**% Mediation**
Indirect (a*b)	0.2006	0.0430	0.1212	0.2894			64
Direct (C')	0.1128	0.0551	0.0043	0.2214	2.0480	.0417	36
Total (C)	0.3134	0.0653	0.1848	0.4421	4.8009	.0000	100

**Performed at 5,000 Bootstrap Samples for percentile Bootstrap Confidence Intervals (BCI)*

In Table 4.32, mediation estimates indicate that both the direct effect (B = 0.1128, 95% CI [0.0043, 0.2214], $p < 0.05$) and the indirect effect (B = 0.2006, Boot CI [0.1212, 0.2894]) in the model are statistically significant. Community participation partially mediates the positive relationship between tourism economic impacts and community attitudes toward tourism development. The positive beta coefficients suggest that higher community participation enhances the positive impact of tourism on community attitudes. Additionally, the bootstrap confidence intervals for both the lower and upper limits exclude zero, providing robust support for the observed significant effects.

The results also indicated that 64% of the total effect of tourism economic impacts on community attitudes toward tourism development was mediated by community participation, with the remaining 36% as a direct effect not explained by the mediating variable. This suggests that community participation partially mediates the relationship between tourism's economic impact and community attitudes toward tourism development.

Therefore, we reject the null hypothesis (**H_{04a}**) and conclude that community participation significantly mediates the relationship between tourism's economic impact and community attitudes toward tourism development.

4.9.4.2 Mediating Effect of Community Participation on the relationship between Tourism Environmental Impacts and Community Attitudes towards Tourism Development

H_{04b} proposed that community participation does not significantly mediate the relationship between tourism environmental impacts and community attitudes toward tourism development in Rimoi National Reserve, Kenya. To test this hypothesis, mediation analysis was conducted using Hayes PROCESS macro version 4.2 with bootstrapping, and the results are presented in Tables 4.33 and 4.34.

Table 4.33 Path Estimates

				95%Confidence Interval			
Path		**Coefficient (B)**	**SE**	**Lower**	**Upper**	**T**	**p**
A	Effect of X on M	-0.1492	0.0437	-0.2353	-0.0632	-3.4168	.0008
B	Effect of M on Y	0.5226	0.0439	0.4360	0.6091	11.9009	.0000
C	Total Effect of X on Y	-0.1411	0.0367	-0.2135	-0.0688	-3.8443	.0002

Source: Field data (2023)

The path estimates in Table 4.33 reveal significant findings: tourism environmental impacts (X) had a significant negative effect on community participation (M) ($B = -0.1492$, $p < 0.05$). Additionally, community participation (M) significantly influenced community attitudes toward tourism development (Y) positively ($B = 0.5226$, $p < 0.05$). Moreover, tourism environmental impacts (X) had a significant negative effect on community attitudes toward tourism development (Y) ($B = -0.1411$, $p < 0.05$). These results indicate that paths a, b, and c in the mediation model were significant when controlling for the covariates.

Bootstrapping analysis, conducted with 5,000 bootstrap samples as shown in Table 4.34, was employed to assess the significance of the indirect effect. This process generated mediation estimates and confidence intervals, providing insights into the nature and strength of the mediation effects.

Table 4.34 Mediation Estimates

			95%Confidence Interval				
Effect	**B**	**SE**	**Lower**	**Upper**	**t**	**P**	**% Mediation**
Indirect (a*b)	-.0780	.0246	-.1271	-.0304			**55.3**
Direct (C')	-.0632	.0296	-.1214	-.0049	-2.1370	.0337	**44.7**
Total (C)	-.1411	.0367	-.2135	0.4421	-3.8443	.0002	**100**

**Performed at 5,000 Bootstrap Samples for percentile Bootstrap Confidence Intervals (BCI)*

The mediation estimates in Table 4.34 indicate significant findings: the direct effect (B = -0.0632, 95% CI [-0.1214, -0.0049], $p < 0.05$) and the indirect effect (B = -0.0780, Boot CI [-0.1271, -0.0304]) in the model are both negatively and statistically significant. Furthermore, the bootstrap confidence intervals for both the lower and upper limits do not include zero.

Community participation partially mediates the negative relationship between tourism environmental impacts and community attitudes toward tourism development. This suggests that while tourism still negatively impacts the environment, the severity of that impact is reduced when community participation is higher. Higher community participation decreases the negative effects of tourism environmental impacts on community attitudes.

Moreover, the results reveal that 55.3% of the total effect of tourism environmental impacts on community attitudes toward tourism development is mediated by community participation, with the remaining 44.7% as a direct effect not explained by the mediating variable. This reinforces that community participation partially mediates

the relationship between tourism environmental impacts and community attitudes toward tourism development.

Therefore, we reject the null hypothesis **(H_{04b})** and conclude that community participation significantly mediates the relationship between tourism environmental impacts and community attitudes toward tourism development.

4.9.4.3 Mediating Effect of Community Participation on the Relationship between Tourism Socio-Cultural Impacts and Community Attitudes towards Tourism Development

H_{04c} proposed that community participation has no significant mediating effect on the relationship between tourism socio-cultural impacts and community attitudes toward tourism development in Rimoi National Reserve, Kenya. To test this hypothesis, mediation analysis was conducted using Hayes PROCESS macro version 4.2 with bootstrapping, and the results are presented in Tables 4.35 and 4.36.

Table 4.35 Path Estimates

				95%Confidence Interval			
Path		**Coefficient (B)**	**SE**	**Lower**	**Upper**	**t**	**p**
A	Effect of X on M	0.5668	0.0425	0.4830	0.6506	13.3335	.000
B	Effect of M on Y	0.4308	0.0567	0.3191	0.5426	7.5995	.000
C	Total Effect of X on Y	0.3890	0.0405	0.3092	0.4689	9.6000	.000

Source: Field data (2023)

The path estimates in Table 4.35 reveal significant findings: tourism socio-cultural impacts (X) had a significant positive effect on community participation (M) ($B = 0.5668$, $p < 0.05$). Additionally, community participation (M) significantly influenced community attitudes toward tourism development (Y) positively ($B = 0.4308$, $p < 0.05$). Moreover, tourism socio-cultural impacts (X) had a significant positive effect on community attitudes toward tourism development (Y) ($B = 0.3890$, $p < 0.05$). These

results indicate that paths a, b, and c in the mediation model were significant and positive when controlling for the covariates.

Bootstrapping analysis, conducted with 5,000 bootstrap samples as shown in Table 4.36, was employed to assess the potential significance of the indirect effect. This process generated mediation estimates and confidence intervals, providing insights into the nature and strength of the mediation effects.

Table 4.36 Mediation Estimates

			95%Confidence Interval				
Effect	**B**	**SE**	**Lower**	**Upper**	**T**	**p**	**% Mediation**
Indirect (a*b)	0.2442	.0423	.1617	.3311			62.8
Direct (C')	0.1448	.0484	.0494	.2403	2.9908	.0031	37.2
Total (C)	0.3890	0.0405	0.3092	0.4689	9.6000	.000	100

**Performed at 5,000 Bootstrap Samples for percentile Bootstrap Confidence Intervals (BCI)*

The mediation estimates in Table 4.36 indicated that both direct effect (*B* =.1448, CI [.0494, .2403], p< 0.05) and indirect effect **(*B* =.2442, Boot CI [.1617, .3311])** of the model were found to be statistically significant. Additionally, the lower and upper limits bootstrap confidence intervals did not contain a zero in between. This positive indirect effect value suggests that higher community participation weakens the direct relationship between tourism sociocultural impacts and community attitudes. Meaning that community participation partially mediates the positive relationship between tourism sociocultural impacts and community attitude towards tourism development, in other words, when communities are more involved in tourism development, sociocultural impacts (e.g., personal safety and security and crime rate) are perceived less severely by the community.

The results also indicate that 62.8% of the total effect of tourism socio-cultural impacts on community attitudes toward tourism development is mediated by community participation, with the remaining 37.2% as a direct effect not explained by the mediating variable. This underscores the critical role of community involvement in mitigating any negative socio-cultural impacts and fostering positive attitudes toward tourism development.

Therefore, we reject the null hypothesis (**H_{04c}**) and conclude that community participation significantly mediates the relationship between tourism's socio-cultural impacts and community attitudes toward tourism development.

Table 4.37 illustrates the crucial role of community participation in influencing community attitudes toward tourism development. It reveals that community participation mediates a substantial portion of the total effect of tourism impacts on these attitudes: 64.0% for economic impacts, 62.8% for socio-cultural impacts, and 55.3% for environmental impacts. This underscores the profound influence of community involvement in shaping how local residents perceive and respond to tourism development. Direct pathways, though significant, account for smaller portions: 36.0% for economic impacts, 44.7% for environmental impacts, and 37.2% for socio-cultural impacts.

These findings highlights the importance of considering both direct and indirect influences for a comprehensive understanding of how tourism development affects local communities. The indirect pathways via community participation reveal complex relationships among economic, environmental, and socio-cultural factors, providing insights that conventional statistical methods focusing solely on direct relationships might overlook.

Table 4.37 Comparative Mediation Estimates

Effect	% Mediation		
	Economic Impacts	**Environmental Impacts**	**Socio-cultural Impacts**
Indirect (a*b)	64	55.3	62.8
Direct (C')	36	44.7	37.2
Total	100	100	100

Dependent Variable: Community Attitudes towards Tourism Development, Mediator: Community Participation.

Overall, the findings suggest that fostering active community participation is vital for mitigating negative impacts, maximizing positive outcomes, and ensuring sustainable tourism development (Roberts & Anderson, 2023; Jaldesa, 2017; Lee & Garcia, 2023).

4.9.4.4 Comparative Direct Effects between Unmediated and Mediated Model

Table 4.38 compares the unstandardized or raw coefficients in both the unmediated and mediated models, shedding light on the relationship between tourism impacts and community attitudes towards tourism development without and with the presence of the mediator (community participation).

Table 4.38 Comparative Direct Effects between Unmediated and Mediated Model

Tourism Impacts	Unstandardized (B) Coefficients of Direct Effect		
	Unmediated Model	**Mediated Model**	**Change Due to the Mediator (indirect effects/ overestimation)**
Economic Impacts	0.313	0.113	0.200
Environmental Impacts	-0.141	-0.063	-0.078
Socio-cultural Impacts	0.389	0.145	0.244

Dependent Variable: Community Attitudes Towards Tourism Development, Mediator: Community Participation.

The results in Table 4.38 offer valuable insights into the interplay between tourism impacts, community attitudes towards tourism development, and the mediating factor of community participation.

It highlights the impact of community participation on community attitudes toward tourism development. Without community participation, economic impacts positively affect community attitudes (coefficient 0.313), but this effect weakens to 0.113 when community participation is considered, indicating a moderation effect of 0.200. Environmental impacts show a negative effect (-0.141), which lessens to -0.063 with community participation, mitigating the negative influence by 0.078. Socio-cultural impacts have a strong positive effect (0.389), which reduces to 0.145 with community participation, showing a mediation effect of 0.244.

These findings underscore the critical role of community participation in moderating both the positive and negative impacts of tourism. When community participation is high, economic and socio-cultural benefits are significantly enhanced, and negative environmental effects are mitigated. This indicates that the direct effects of tourism's economic, environmental, and socio-cultural impacts on community attitudes towards tourism development were inflated by 0.200, -0.078, and 0.244, respectively, before introducing community participation as a mediator. Ignoring this mediating role could lead to overestimations of tourism impacts as shown in the table, resulting in flawed policies and recommendations.

4.10 Summary of the Hypotheses Test Results

Table 4.39 summarizes the hypotheses tested in the results and their statistical significance.

Table 4.39 Summary of the Hypotheses Test Results

	Statement	Decision point	Results
H_{01}	There is no significant relationship between tourism economic impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya.	P<.05	**Rejected**
H_{02}	There is no significant relationship between tourism environmental impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya.	P<.05	**Rejected**
H_{03}	There is no significant relationship between tourism socio-cultural impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya.	P<.05	**Rejected**
H_{04a}	Community participation does not significantly mediate the relationship between tourism's economic impacts and community attitudes toward tourism development in Rimoi National Reserve, Kenya.	P<.05 no Zero in between Boot LCI-UCI	**Rejected**
H_{04b}	Community participation does not significantly mediate the relationship between tourism's environmental impacts and community attitudes toward tourism development in Rimoi National Reserve, Kenya.	P<.05 no Zero in between Boot LCI-UCI	**Rejected**
H_{04c}	Community participation does not significantly mediate the relationship between tourism's socio-cultural impacts and community attitudes toward tourism development in Rimoi National Reserve, Kenya.	P<.05 no Zero in between Boot LCI-UCI	**Rejected**

Source: Field data (2023)

4.11 Chapter Summary

The chapter presented an analysis of quantitative results from the community residents' survey questionnaire and qualitative findings (verbatim) from the focus group discussion with the community residents' youths. The analysis led to the rejection of all

the four null hypotheses examined. The subsequent chapter summarizes the findings, presents conclusions, offers recommendations, and suggests areas for further research.

CHAPTER FIVE

DISCUSSION, SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.0 Introduction

This study examined the mediating effect of community participation on the relationship between tourism impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya. The following objectives guided the study: to determine the effect of tourism economic impacts on community attitudes towards tourism development, to analyze the effect of tourism environmental impacts on community attitudes towards tourism development, to assess the effect of tourism socio-cultural impacts on community attitudes towards tourism development, to assess the mediating effect of community participation on the relationship between tourism impacts and community attitudes towards tourism development and to explore residents' perception of tourism impacts, community participation, and their effects on community attitudes towards tourism development in Rimoi community. This chapter presents a discussion and summary of the findings, conclusions, recommendations, and suggestions for further research.

5.1 Discussion of the Findings

The following is the discussion of the study findings presented as per the study objectives:

5.1.1 Effect of Tourism Economic Impacts on Community Attitudes towards Tourism Development

Objective 1 aimed to determine the effect of tourism economic impacts on community attitudes towards tourism development in Rimoi National Reserve, Kenya. The results (**H_{01}**) showed that tourism economic impacts positively affected community attitudes

towards tourism development **(β=0.304, p<0.05).** The economic impact of tourism on host communities has been widely studied, with research highlighting both positive and negative outcomes. Studies such as those by Halim et al. (2022), Algassim et al. (2021), and Hadinejad et al. (2019) demonstrate a positive correlation between tourism's economic benefits and local community attitudes. Residents in various destinations have reported favorable views of tourism's impacts on employment opportunities, local business revenue, employment quality, personal income, and property values (Lee & Garcia, 2023; Roberts & Anderson, 2023). These findings align with Social Exchange Theory (SET), which suggests that communities are more likely to have positive perceptions of tourism when they perceive the rewards (e.g., economic benefits) outweigh the costs. The reciprocity emphasized by SET suggests that positive economic impacts encourage local communities to support and welcome tourism development.

Moreover, these results suggest that tourism's economic impacts significantly shape the perceptions and receptivity of the local community, highlighting the importance of sustainable tourism practices that enhance economic growth while maintaining community well-being. Such practices can inform the development of tourism policies and strategies that aim to maximize positive economic outcomes while minimizing potential negative consequences.

However, these positive findings contrast with those presented by Letoluo and Wangombe (2018), who identified both positive and negative effects of tourism on local communities. They highlighted issues such as price hikes, income disparity, and seasonal fluctuations in employment. Interestingly, these specific socio-economic challenges were not reported by residents of the Rimoi National Reserve community during focus group discussions or in their responses to specific survey items. This discrepancy raises the possibility that these impacts might be underreported or

overlooked in the community, suggesting a potential area for further exploration in future research.

In light of these contrasting findings, the socio-economic impacts of tourism, particularly in the context of Rimoi National Reserve, warrant further investigation to better understand the full spectrum of tourism's effects. Future studies could explore the reasons behind the absence of reports on issues such as price hikes and employment fluctuations, which have been significant in other destinations, and consider whether these are emerging concerns or aspects yet to be fully recognized by the community.

5.1.2 Effect of Tourism Environmental Impacts on Community Attitudes towards Tourism Development

Objective 2 aimed to analyze the effect of tourism's environmental impacts on community attitudes toward tourism development in Rimoi National Reserve, Kenya. The results **(H_{02})** indicated that tourism's environmental impacts negatively affected community attitudes (β= -0.246, $p<0.05$). These findings align with previous research highlighting the detrimental effects of environmental impacts on local attitudes toward tourism. For instance, Ravikumar et al. (2022) and Sharpley (2014) reported negative perceptions of tourism-related environmental impacts in destination communities. Similarly, studies by Hanafiah, Jamaluddin, and Muhammad (2013), Kihima (2015), and Almeida-García et al. (2016) also support this view, demonstrating that environmental degradation tends to reduce local support for tourism development.

These findings are consistent with Social Exchange Theory (SET), which posits that human behavior is influenced by the comparison of perceived costs and benefits. In this case, residents of Rimoi National Reserve did not perceive significant benefits from tourism development, particularly due to the environmental costs. Alrwajfah et al.

(2019) further support this, noting that social-environmental impacts negatively affect residents' perceptions and satisfaction with tourism development.

The study's results emphasize the importance of adopting environmentally conscious tourism practices to sustain community support. This highlights the need for strategies such as responsible tourism planning, conservation initiatives, and active community engagement to mitigate environmental impacts. Addressing concerns related to waste, noise, traffic, and landscape disruption is crucial for fostering positive community perceptions and ensuring the long-term sustainability of tourism initiatives in the region.

5.1.3 Effect of Tourism Socio-cultural Impacts on Community Attitudes towards Tourism Development

Objective 3 aimed to assess the effect of tourism's socio-cultural impacts on community attitudes toward tourism development in Rimoi National Reserve, Kenya. The results (H_{03}) indicated a significant positive influence of socio-cultural impacts on community attitudes ($\beta=0.540$, $p<0.05$). This finding is consistent with Peters et al. (2018), who argued that positive socio-cultural impacts often outweigh negative ones, significantly influencing local attitudes. This aligns with Social Exchange Theory (SET), where the dynamics of interactions are shaped by perceived costs and benefits.

The positive socio-cultural impacts reflect the community's trade-off between perceived benefits and costs of tourism development. While residents acknowledged potential negative effects, such as increased crime, security concerns, and cultural erosion, they generally maintained a positive outlook. Tourism was seen as revitalizing local cultures, fostering unity, and renewing interest in traditions. This resonates with

Taheri et al. (2018), who found that residents with strong cultural values tend to support tourism because it helps preserve and promote local traditions and heritage.

The positive influence of socio-cultural impacts underscores the importance of prioritizing cultural factors in tourism development. In Rimoi, tourism can contribute to preserving the area's cultural heritage, fostering further support for tourism initiatives. To achieve sustainable tourism development, it is essential to engage stakeholders, including local cultural authorities and community leaders, to align tourism activities with local cultural values.

To capitalize on these positive socio-cultural impacts, it is crucial to implement cultural education programs and sensitization efforts. These initiatives can deepen tourists' understanding and respect for the local culture, further enhancing the community's positive attitude toward tourism. The strong connection between tourism, culture, and community well-being in Rimoi highlights the need for a holistic approach to tourism that supports economic benefits while preserving and celebrating the region's rich cultural heritage.

5.1.4 Mediating effect of community participation on the relationship between Tourism impacts and Community attitudes towards tourism development

Objective 4 aimed to assess the mediating effect of community participation on the relationship between tourism impacts and community attitudes towards tourism development in Rimoi National Reserve, Kenya. The mediation analysis ($\mathbf{H_{04a}}$, $\mathbf{H_{04b}}$, and $\mathbf{H_{04c}}$) revealed that community participation partially and significantly mediates the relationship between tourism impacts (economic, environmental, and socio-cultural) and community attitudes towards tourism development.

The findings emphasize the critical role of community participation in shaping attitudes toward tourism development. When residents are actively engaged in tourism activities, it significantly contributes to fostering positive attitudes. Despite concerns such as increased crime, security risks, and cultural erosion, the community generally holds a positive outlook on tourism development, largely due to the perceived benefits. This highlights the need to understand the diverse and sometimes contradictory opinions of the Rimoi National Reserve residents regarding tourism.

The study shows that when community members perceive tourism impacts as beneficial or minimal, they are more likely to support future tourism projects. This underscores the importance of addressing community concerns and involving residents in planning and decision-making to ensure sustainable and mutually beneficial tourism development. However, the current findings slightly diverge from Gannon et al. (2021), who found that community involvement mediated the relationship between economic and environmental impacts and tourism support but not between socio-cultural attitudes and support. This difference could be attributed to the rural context, different socio-economic backgrounds, and the early-stage development of Rimoi National Reserve, compared to more established destinations like Tabriz and Kashan, Iran.

While the findings align with studies by Jaldesa (2017), Tosun & Jenkins (1999), and others, who argue that local participation in tourism activities can help mitigate conflicts and promote preservation, they also fill an important gap in the literature by focusing on a less mature destination. These results confirm that community participation positively influences support for tourism development in Rimoi, in line with Social Exchange Theory (SET).

Both direct and indirect effects shape community attitudes. Direct economic, environmental, and socio-cultural impacts influence initial perceptions, but it is through community participation that these attitudes are refined. The study supports the notion that active participation in tourism development helps mitigate negative impacts and enhances positive perceptions, particularly regarding economic benefits and socio-cultural preservation. These findings echo previous calls for meaningful community engagement in tourism planning (Alalouch & Al-Smadi, 2023; Khanom et al., 2019).

The mediation effect reveals that community participation significantly influences how tourism impacts are perceived. For instance, the indirect effect of socio-cultural tourism impacts on community attitudes (B = 0.2442) is more substantial than the direct effect (B = 0.1448), indicating the importance of community involvement in shaping perceptions. This finding highlights the need for a collaborative, community-based approach to tourism development that considers all facets of tourism's impact.

The results also underscore the importance of active community participation in tourism decision-making. As proposed by the Normative Model of Community Participation in Tourism Development (NMCPTD) by Tosun and Timothy (2003), grassroots participation leads to more positive attitudes and greater tolerance toward tourism, while tokenism or coercive participation undermines sustainability. This study suggests that empowering residents to actively participate in decision-making processes fosters a more informed, engaged community that can better navigate the complexities of tourism development.

By engaging the local community, tourism development in Rimoi can better align with residents' values, resulting in more sustainable outcomes. The study advocates for a holistic approach that addresses economic, environmental, and socio-cultural concerns,

ultimately securing long-term community support. These findings offer a blueprint for sustainable tourism development that respects local communities while safeguarding cultural and ecological integrity, applicable not only to Rimoi but to other tourism destinations as well.

In conclusion, the mediating role of community participation is crucial in shaping the relationship between tourism impacts and community attitudes. By empowering local residents and integrating their voices in tourism development, both the community and the tourism industry can achieve sustainable and mutually beneficial outcomes.

5.1.5 Community Residents' Perception of Tourism Impacts, Community participation, and their Effects on Community Attitudes towards Tourism Development

Objective 5 sought to explore residents' perception of tourism impacts, community participation, and their effects on community attitudes towards tourism development in Rimoi National Reserve, Kenya. The findings were as follows:

5.1.5.1 Community Residents' Perception of Tourism Economic Impacts

The findings of the study underscore a generally positive attitude among residents of the Rimoi National Reserve community towards tourism development, particularly concerning its economic aspects, indicating strong local endorsement for furthering tourism initiatives within their vicinity. This sentiment resonates with existing research highlighting the broad economic benefits associated with tourism for host communities, as exemplified by studies such as Hanafiah, Jamaluddin, & Muhammad's (2013) investigation into Tioman Island, Malaysia. Empirical evidence suggests that tourism development fosters the proliferation of local tourism-related enterprises, generating numerous employment opportunities, thus improving economic conditions and

enhancing living standards within the community (Algassim et al., 2021; Hadinejad et al., 2019). Furthermore, the expansion of attractions, recreational facilities, and services enriches the community's appeal as a destination.

However, despite the positive outlook towards tourism, residents express concerns regarding the current economic landscape, particularly challenges in employment opportunities, especially for the youth. One participant highlighted, *"Finding a job here is quite challenging, and opportunities are below average. It is tough for the youth. I believe that with more tourism, there is a chance for improvement. We might see new job opportunities coming in"* [PP10]. Nevertheless, there is optimism that increased tourism could address these issues by ushering in new job prospects.

Additionally, residents highlighted the existing difficulties in meeting the cost of living, which is notably below average, posing a significant challenge for many. One participant stated, *"The cost of living here is challenging. It is below average, and many struggles to afford necessities. I hope more tourism will bring improvements, more money into people's pockets, making living costs more manageable for everyone. There will be competition among businesses and a variety of goods and services will be easily available and cheaper due to economies of scale as opposed with fewer shops"* [PP9].

They expressed hope that tourism development will inject more money into the local economy, thereby making essential living expenses more manageable for all. Furthermore, the anticipation of heightened competition among businesses and the potential for economies of scale driving down prices indicates an expectation of broader economic benefits from tourism expansion.

This finding contrasts with other studies where residents acknowledged experiencing increased living costs due to tourism development in their area, typically seen as a

negative economic impact (Algassim et al., 2021; Ghaderi et al., 2020; Hadinejad et al., 2019). The discrepancy could be attributed to the specific context of this study, emphasizing the nuanced nature of tourism impacts. It underscores that conclusions drawn from one destination may not necessarily apply universally, highlighting the complexity and context-specific nature of tourism impacts.

For example, Rimoi National Reserve is a nature-based rural destination in the early stages of development, characterized by emerging tourism infrastructure and services. In contrast, other destinations may be more mature and fully developed, with well-established tourism industries. This distinction underscores the importance of considering unique contextual factors, such as the stage of tourism development and the characteristics of the local community, when examining how tourism influences community attitudes. Early-stage destinations may experience different economic and social impacts compared to mature destinations, which can significantly shape residents' perceptions and responses to tourism development.

In light of these findings, it becomes evident that while there is an overall positive perception of tourism development, there exists a nuanced understanding of its potential impacts within the Rimoi National Reserve community. It is crucial to recognize and address the diverse economic challenges faced by residents while simultaneously leveraging the opportunities presented by tourism growth.

Hence, prioritizing inclusive economic development, ensuring job quality, and mitigating potential drawbacks are imperative for fostering equitable distribution of benefits across the community. This highlights the necessity for a comprehensive approach to future tourism development in the Rimoi area, one that considers the

holistic well-being of its residents and seeks to maximize positive outcomes for all stakeholders involved.

5.1.5.2 Community Residents' Perception of Tourism Environmental Impacts

The findings of the study unveiled an overarching pessimistic sentiment and viewpoint among residents of the Rimoi National Reserve community towards the prospect of heightened tourism development in their locality. This observation resonates with the outcomes of numerous research endeavors, which have consistently illustrated that destination communities often harbor unfavorable perceptions regarding the environmental ramifications of tourism (Sharpley, 2014; Hanafiah, Jamaluddin, & Muhammad, 2013; Kihima, 2015; Almeida-García, Peláez-Fernández, Balbuena-Vazquez, & Cortes-Macias, 2016).

These studies have highlighted various adverse consequences associated with tourism activities, including noise pollution, accumulation of substantial amounts of waste, ecological degradation, increased traffic congestion, proliferation of human footfall, heightened littering, visual clutter due to human-made structures, and challenges in waste management. A prevailing consensus among participants was that tourism inevitably brings pollution to destination areas.

Participants articulated their concerns regarding the visual appeal of the area. One individual emphasized, *"The appearance matters; it is what draws people in. If we let it go downhill, tourists won't want to come. We need regulations on construction and maintenance to keep the place looking good"* [PP6]. Another participant echoed this sentiment, stating, *"Appearance is key, but we must balance it with the community's needs. Maybe there should be guidelines for construction that respect the natural*

landscape. We can have development without sacrificing the aesthetics of the area" [PP2].

Addressing these negative impacts necessitates meticulous planning, incorporating sustainable and community-oriented tourism strategies, and nurturing a culture of responsible tourism within the Rimoi National Reserve. By adopting approaches that prioritize environmental preservation, respect local customs and traditions, and engage with the community in decision-making processes, it becomes feasible to mitigate the adverse effects of tourism while simultaneously fostering its benefits. Hence, fostering a harmonious coexistence between tourism development and environmental conservation is imperative for ensuring the long-term sustainability and well-being of the Rimoi National Reserve community.

5.1.5.3 Community Residents' Perception of Tourism Socio-Cultural Impacts

The findings showed that Rimoi National Reserve community residents exhibited mixed feelings and uncertainty regarding the socio-cultural impacts of the reserve's development. While there is an overall positive inclination toward tourism development, specific concerns about crime, safety, and cultural preservation make their view more complex and varied. Some residents expressed worries about potential negative consequences, as one of the participants stated, *"I fear more tourists might attract the wrong crowd and worsen the situation"* [PP5]. Similarly, another participant alluded that, *"I'm concerned that more tourists might lead to overcrowding and a decline in our quality of life."* [PP6].

These findings are consistent with Alamineh et al. (2023), who observed adverse social impacts from additional tourism development in the Amhara regional state in Ethiopia. These impacts included the expansion of prostitution, persistent theft, and illicit trade

in heritage, as well as the random adoption of tourists' lifestyles by residents. Several scholars (Rasoolimanesh et al., 2019; Gursoy et al., 2018; Algassim et al., 2021; Nchor, Ebu, & Odey, 2021) argue that positive socio-cultural impacts tend to outweigh negative ones, influencing local attitudes positively, as reflected in the marginal positive grand mean difference observed in this study.

Despite acknowledging potential negative effects of socio-cultural impacts of tourism development, such as increased crime, personal security concerns *"I feel safe here but worry about personal security with more tourists. We need to ensure our safety is a priority"* [PP7], and cultural erosion, the residents of Rimoi National Reserve community generally held a positive view on tourism development due to the benefits it brings to the community. This positive outlook is evident in statements such as, *"Tourism is a chance to showcase our community spirit to the world. It's an opportunity for positive change"* [PP8].

This positivity aligns with the Social Exchange Theory (SET) framework, which posits that individuals, including residents in destination communities, seek to maximize rewards and minimize costs in their interactions. In this context, residents are more inclined to support tourism when they perceive that the overall benefits to the community outweigh the costs. This concurs with the views of Jaafar et al. (2017) and Peters et al. (2018), who argue that human decisions and behaviors are influenced by a comparison between perceived costs and rewards. SET provides a theoretical lens for understanding the decision-making processes of community residents regarding tourism development.

Therefore, promoting tourism at Rimoi National Reserve is essential as it fosters direct and indirect interactions between tourists and community residents, leading to cross-

cultural engagement. While negative socio-cultural impacts do exist, it is crucial to recognize the positive outcomes that emerge from the dynamic interaction between tourists and local residents.

5.1.5.4 Community Residents' Perception of Community Participation

The findings revealed that residents of the Rimoi National Reserve community have positive attitudes towards community participation in tourism development activities. For instance, as one of the participants stated that; *"I feel a strong sense of community when we engage in tourism events and festivals. I attended the official launch of Rimoi National Reserve, and the event was a fantastic experience. I met neighbors, learned more about our local culture, and felt a real connection. I look forward to more of these events; they bring us together."* [PP8]

Although residents highlighted positive experiences and willingness to engage in tourism events and community initiatives, they pointed out the need for clearer communication and more inclusive decision-making processes as one of the participants stated; *"Participating in tourism events in this area is something I am open to, but sometimes, I need more information. It is not that I am not interested, but having clear details about what is happening would encourage me to participate more"* [PP5]

Residents also emphasized the importance of genuine community involvement in shaping the direction of local tourism development. For instance, one of the participants alluded that; *"I believe in the power of community engagement. It is not just about interest but about actively participating and supporting initiatives contributing to our community's well-being."* [PP1]

The findings of this study align with previous research emphasizing the need for meaningful participation of local communities in tourism development. As noted by

Mwawaza and Shirandula (2019), current forms of community participation in tourism in East Africa are often coercive and limit residents' opportunities to engage in key policy and decision-making processes. Similarly, Vodeb et al. (2023) stress the importance of inclusive and participatory approaches that actively involve local communities in shaping sustainable tourism strategies.

Therefore, increased community involvement is needed to foster active participation in discussions and decisions related to local tourism development. This implies that the low participation of Rimoi local community residents in tourism development could easily hinder the implementation of sustainable tourism practices in the area. Thus, it is crucial to foster genuine spontaneous community engagement in tourism development efforts amongst Rimoi National Reserve community residents.

5.1.5.5 Community Residents' Attitudes towards Tourism Development

The findings revealed that Rimoi community residents expressed support for and encouraged tourism development in their area. For instance, one of the participants stated that; "*For me, I support. Tourism will bring more tangible benefits. Employment opportunities will increase, and existing businesses will expand, and more will open."* [PP6]. Similarly, another one reported that; *"The majority here supports tourism. It is seen as a lifeline for our community, bringing in revenue and opportunities. We need to ensure it is sustainable*." [PP2].

Rimoi National Reserve community residents characterized the ongoing discussion on conservation tourism as a blend of positive and negative perspectives, shaping an ongoing dialogue about how tourism impacts their community and sustainability in its future benefits as one of the participants stated that; *"On the positive side, tourism has*

boosted our businesses around. On the negative side, it feels like we are losing control of our community. Our traditional culture and mannerisms are fading away." [PP9]

The positive perceptions extended to the contribution to local heritage conservation, the enhancement of overall quality of life, and the support for local businesses as one of the participants stated that; *"Tourism has brought opportunities for our youth, and there is a sense of pride in showcasing our beautiful culture and wildlife. This has made our Rimoi national reserve known to the world as a tourist destination."* [PP5] Similarly, another participant alluded that; *"Tourism development has impacted this area positively; we have improved infrastructure and job opportunities. On the negative side, our original natural environment is slowly disappearing."* [PP1]

However, some variability existed, particularly regarding the community's perceived capacity for additional tourism and the potential impact on the quality of life as one of the participants stated that; *"I am opposed to it…although tourism brings more benefits, we cautiously need safeguards to protect our cultural heritage, our environment, and our peace and tranquility."* [PP4]

This confirms studies that have shown that local communities generally have a positive outlook on tourism development (Choi, & Jang, 2023; Dillette et al., 2017; Algassim, et al., 2021). A study by Bermingham et al. (2021) found that most community residents believed the overall benefits of tourism outweighed the drawbacks. Similarly, Chandralal (2010) indicated that community members held favorable perceptions of tourism development and anticipated further growth in the industry.

However, the results of this study differed from previous research, which had indicated that people's attitudes towards tourism become more negative as the level of tourism increases (Gannon et al., 2021; MacKenzie & Gannon, 2019; Lee & Garcia, 2023).

Nevertheless, Chandralal emphasized the importance of effective communication and consideration of local interests in order to address potential challenges and gain support for tourism projects.

Therefore, to effectively harness the benefits of tourism and minimize potential negative impacts, it is crucial to foster open communication and collaboration with the local community at Rimoi National Reserve. By involving local residents in decision-making processes and addressing their concerns, tourism development can become a mutually beneficial endeavor that enhances the well-being of both the community and the environment.

5.2 Summary of the Findings

The findings of this mixed-method study, which integrates both quantitative and qualitative analyses, are summarized as follows as per the study objectives:

5.2.1 Effect of Tourism Economic Impacts on Community Attitudes towards Tourism Development

Tourism economic impacts positively and significantly influenced the community attitudes towards tourism development (**β=0.304, $p<0.05$**) among Rimoi National Reserve community. As tourism economic impacts increase, community attitudes towards tourism development will likely exhibit a corresponding positive trend. The positive economic impact suggests that the Rimoi National Reserve community view tourism as a source of economic development, potentially leading to increased employment opportunities, income, and overall economic well-being. The positive influence of tourism economic impacts emphasizes the need for sustainable tourism practices that drive economic growth in the Rimoi area and enhance the overall well-being and attitudes of the local community.

5.2.2 Effect of Tourism Environmental Impacts on Community Attitudes towards Tourism Development

Environmental impacts negatively and significantly influenced the community attitudes towards tourism development (**β= -0.246, p<0.05**) among Rimoi community. As tourism environmental impacts increase, community attitudes will likely exhibit a corresponding decrease. This implies that environmental degradation or disturbances caused by tourism development in the Rimoi area could lead to a decline in local support for additional tourism development, potentially affecting the sustainability of tourism initiatives. Thus, implementing strategies to enhance environmental sustainability in tandem with tourism development, such as responsible tourism planning, conservation initiatives, and community engagement, is crucial to addressing environmental concerns and fostering positive community perceptions.

5.2.3 Effect of Tourism Socio-cultural Impacts on Community Attitudes towards Tourism Development

Tourism socio-cultural impacts positively and significantly influenced the community attitudes towards tourism development **(β=0.540, p<0.05)** among Rimoi national Reserve community. As tourism's socio-cultural impacts increase, community attitudes will likely exhibit a corresponding increase. A significant positive influence of tourism's socio-cultural impacts on community attitudes also underscores the intricate connection between tourism, culture, and community well-being. Thus, it emphasizes the importance of fostering a holistic approach to tourism that contributes positively to improving and preserving their rich cultural heritage of the Rimoi National Reserve community.

5.2.4 Mediating Effect of Community Participation on the Relationship between Tourism Impacts and Community Attitudes towards Tourism Development

Community participation mediated the direct effects of tourism impacts on community attitudes towards tourism development. Specifically, the mediation effect is evident in the relationship between tourism's economic impact and community attitudes (B=.2006, Boot CI [.1212, .2894]), as well as in the relationships involving environmental impacts (B=-.0780, Boot CI [-.1271, -.0304]) and socio-cultural impacts (B=.2442, Boot CI [.1617, .3311]).

The significant indirect effects highlight the importance of community participation as a critical factor in shaping residents' attitudes and perceptions towards tourism development in Rimoi National Reserve. Notably, the economic impacts of tourism demonstrate the highest indirect effect (64%), followed by socio-cultural impacts (62%), and environmental impacts with the lowest (55.3%).

These findings highlight community participation's complex and multifaceted influence in shaping residents' perspectives on tourism development. It underscores the importance of community involvement, not only in economic considerations but also in understanding tourism's environmental and socio-cultural impacts. This mediation role suggests that residents' active engagement can mitigate negative impacts and enhance positive ones, emphasizing the need for a collaborative community-based approach to achieve sustainable tourism development in Rimoi National Reserve.

The study advocates for a collaborative, community-based approach that transcends economic considerations to embrace a comprehensive understanding of environmental and socio-cultural impacts. This approach positions community members as active contributors rather than passive recipients, capable of mitigating negative impacts and

enhancing positive ones. The mediation role of community participation underscores the necessity of involving residents in decision-making processes to influence their perceptions and attitudes toward tourism development. Actively involving residents in decision-making can lead to positive outcomes for the community and the environment, fostering a harmonious relationship with tourism development in Rimoi National Reserve. Therefore, by actively involving residents in decision-making, the community and the environment can benefit from tourism development.

These findings suggest that while all three types of tourism impacts substantially indirectly influence community attitudes through community participation, economic factors exert the most significant indirect impact. The findings emphasize the importance of tailored strategies to address diverse perspectives and enhance community involvement in decision-making processes. Effective communication, collaboration, and addressing local concerns are crucial for ensuring sustainable and mutually beneficial tourism development. Therefore, the study emphasizes the importance of developing a holistic strategy that acknowledges the diverse nature of tourism impacts and recognizes the pivotal role of community participation for effective, sustainable tourism development in the Rimoi area.

5.2.5 Community Residents' Perception of Tourism Impacts, Community Participation, and their Effects on Community Attitudes towards Tourism Development

The study objective sought explore residents' perception of tourism impacts, community participation, and their effects on community attitudes towards tourism development in Rimoi National Reserve, Kenya. The summary of the findings is as follows:

5.2.5.1 Community Residents' Perception of Tourism Economic Impacts.

The Rimoi National reserve community residents displays a complex mix of optimism and concerns across tourism economic impacts. For instance, there is dissatisfaction with current employment, yet an anticipation of new job opportunities. The study underscores the complexity of predicting employment impact, with varying perceptions of job quality and personal income.

Despite concerns about potential negative impacts, the community anticipates positive changes in property values, cost of living, and overall economic aspects with increased tourism development. Similarly, the qualitative data showed that residents were hopeful that more tourism would bring improvements, making living costs more manageable for everyone. The respondents perceived a better cost of living with the further development of Rimoi National Reserve due to economies of scale and business competitions that will make goods and services widely available and at lower costs.

Therefore, the community anticipates potential positive economic impacts with additional tourism development. This implies that effective strategies for future tourism development in the Rimoi area should prioritize inclusive economic growth and job quality and address potential challenges to ensure the entire community shares the benefits.

5.2.5.2 Community Residents' Perception of Tourism Environmental Impacts

Environmentally, the Rimoi National Reserve community residents value the prevailing sense of peace and tranquility, highlighting the need for a sustainable approach to tourism. However, concerns about potential declines in this serene atmosphere and ongoing issues with litter and trash underscore the importance of careful and sustainable tourism planning to balance economic growth with environmental preservation. This

was evident also in qualitative findings where residents highlighted dissatisfaction with the current condition in the area with increased trash and litter.

Therefore, emphasized the need to find a solution to manage this issue before it deteriorated further. This implies that mitigating this negative impact requires careful planning, including sustainable and community-friendly tourism strategies and fostering a culture of responsible tourism in Rimoi National Reserve.

5.2.5.3 Community Residents' Perception of Tourism Socio-Cultural Impacts

Socio-culturally, opinions on small-town atmosphere, crime rates, personal safety, and overall quality of life were varied. While there was cautious concern, there was also hopeful anticipation regarding potential shifts brought about by increased tourism. Similarly, the qualitative data showed that the residents were optimistic that more tourism could broaden their understanding of different cultures and contribute to making the community more inclusive.

This suggests that while additional tourism development in the Rimoi National Reserve can bring about positive socio-cultural impacts, there is also a risk of minor adverse socio-cultural effects. These adverse impacts may include concerns such as crime rates, personal safety, and the conservation of local culture, including the potential adoption of tourists' lifestyles and manners by the community residents.

5.2.5.4 Community Residents' Perception of Community Participation in Tourism Development

Community participation in tourism development activities reflect positive attitudes toward tourism development activities among the participants of Rimoi National Reserve community. This generally portrays a community mainly supportive of tourism-related initiatives, indicating a widespread willingness among residents to

actively participate in local tourism development, with strong support for local tourism events, new tourism development initiatives, and engagement in decision-making.

However, most of the community residents expressed varied opinions and lower levels of active participation in public meetings or forums related to local tourism development in the past 12 months. Similarly, qualitative data from the FGD showed that, even if residents participate in such forums, their voices are never heard. The lower willingness to attend public meetings or forums suggests a need for improved community engagement strategies.

The overall, positive outlook underscores the potential for successful collaboration between the community and tourism stakeholders. Therefore, it is imperative to develop a carefully tailored and inclusive approach to tourism planning that acknowledges the community's multifaceted expectations and emphasizes sustainability to ensure the well-being of both the residents and the natural environment in the Rimoi National Reserve community.

5.2.5.5 Community Residents' Attitudes towards Tourism Development

The Rimoi National Reserve community residents revealed an overall positive attitude towards tourism development. A significant majority perceived that the overall benefits of tourism development outweigh the costs, with strong support for encouraging new tourism initiatives in the community. Similarly, the community residents believed that it can handle increased tourism without compromising its quality of life.

Furthermore, there was widespread agreement that tourism development contributes positively to heritage conservation, enhances residents' overall quality of life, and supports local businesses' growth and diversification. Despite some variation in responses, generally the community residents have favorable attitude towards tourism

development. These insights highlight the community's openness to further tourism development initiatives.

5.3 Conclusion of the Study

The study sought to examine the mediating effect of community participation on the relationship between tourism economic impacts and community attitudes towards tourism development. The study adopted a mixed-methods approach and employed a convergent parallel research design. Both quantitative and qualitative data types were collected and analyzed concurrently but separately. The two data types were integrated using the weaving strategy of a concept-by-concept or theme-by-theme for better understanding of the research problem. The following are the conclusions of the study:

The residents of the Rimoi National Reserve generally exhibit a favorable attitude towards tourism development, expressing robust support for its expansion and recognizing its positive impacts on various facet of community life. This optimistic view regarding potential tourism development is linked to residents' expectations of favorable economic gains and the enhancement of socio-cultural conditions.

It's worth noting that a considerable portion of the overall effect of tourism impacts on community attitudes towards tourism development stems from indirect pathways, notably through economic, socio-cultural, and environmental factors. In essence, the indirect effects of community engagement in tourism exert a more significant influence on the community compared to the direct impacts of tourism alone.

Additionally, the respondents exhibited diverse attitudes toward economic, environmental, and socio-cultural tourism impacts. This highlights the multi-dimensional nature of tourism and its impacts on various facets of society and the environment, underscoring the importance of recognizing that tourism can have both

positive and negative effects on communities. Particularly, the residents of the Rimoi community were worried and expressed concern about the environmental harm additional tourism development might cause to their area. The more the residents felt that tourism would bring in negative environmental changes, the more they had a negative attitude and were less willing to support tourism development.

Likewise, support for specific sociocultural aspects diminished as residents perceived potential negative impacts on the community. However, despite the recognition of the benefits of tourism development it is imperative to promptly address and mitigate potential adverse impacts to ensure a positive and sustainable influence on environmental conservation and sociocultural concerns. Hence, collective interests of all the residents must be taken into consideration for sustainable tourism development of Rimoi National Reserve.

The positive influence of the economic impacts of tourism on community attitudes towards tourism development in the Rimoi National Reserve community suggests that these impacts play a significant role in shaping local perceptions and attitudes. Therefore, prioritizing sustainable tourism practices that emphasize economic benefits and enhance the overall well-being of the community can foster increased support and cooperation from residents for further tourism development in the Rimoi National Reserve.

The negative influence of tourism environmental impacts on community attitudes towards tourism development in the Rimoi community suggests that environmental disturbances and degradation caused by tourism activities could diminish local support for further development. This indicates that the residents of the Rimoi National Reserve community are conscious of the significance of natural resources and recognize the

negative environmental impacts attributed to tourism, influencing their attitudes toward future development. Hence, it is imperative to implement sustainable tourism development strategies that prioritize environmental sustainability alongside tourism growth. These strategies may include responsible tourism planning, conservation initiatives, and active community engagement.

Addressing environmental concerns through these measures is crucial for fostering positive community perceptions. By prioritizing environmental conservation and minimizing the potential adverse impacts of tourism on the environment, these strategies contribute to the overall well-being of the community and ensure a sustainable and harmonious coexistence with tourism development in the Rimoi National Reserve community.

The Rimoi National Reserve community residents perceive the sociocultural impacts of tourism development as having both favorable and unfavorable aspects, aligning with Social Exchange Theory (SET). However, the positive effects were found to outweigh the negative ones. When tourism activities positively contribute to the local culture, traditions, and socio-cultural dynamics, residents were more likely to favour tourism development. On the contrary, when tourism activities lead to increased crime rates, decreased personal safety and security, and erosion of the fabric of the local culture, the residents less favored tourism development.

Therefore, adopting sustainable and culturally sensitive tourism practices becomes imperative. These practices are designed to strike a balance between the positive and adverse socio-cultural impacts of tourism. By making such efforts, there is a significant opportunity to improve the overall welfare of the community, creating a positive

atmosphere that supports the growth of tourism in the Rimoi National Reserve community.

Community participation was found to mediate the relationship between tourism impacts (economic, environmental, and socio-cultural) and community attitudes towards tourism development. Fostering active community participation is vital for mitigating negative impacts, maximizing positive outcomes, and ensuring sustainable tourism development. The incorporation of community participation as a mediator has offered a more comprehensive understanding of how and why tourism impacts influence the community attitudes towards tourism development of Rimoi National Reserve.

Community participation acts as a buffer, potentially mitigating negative tourism impacts and amplifying positive ones. Therefore, developing a holistic and collaborative community-based approach to tourism development that goes beyond economic considerations, acknowledges the multifaceted nature of tourism impacts, and places community participation at the core can lead to the achievement of sustainable tourism development solutions. Such an approach would resonate with the values and priorities of the Rimoi National Reserve community residents, ensuring a balanced and inclusive approach to tourism development in Rimoi National Reserve.

The current study apart from demonstrating that tourism development is well accepted it gives important information about how residents of Rimoi National Reserve community feel about tourism before it's fully developed. This study underscores the significance of conducting thorough study before initiating tourism activities in the destination community. And that local authorities, tourism policy makers, planners and other tourism stakeholders in the tourism industry should carefully consider impact

factors such as economic, environmental, socio-cultural, and community participation to effectively increase support for tourism development in destination communities.

5.4 Implications of the Study

The findings from the current study have several theoretical, policy, and practical implications. These implications offer a comprehensive understanding of how the study's insights extend beyond the immediate research context by offering actionable measures and considerations that inform sustainable tourism policies, practices, and academic perspectives.

5.4.1 Theoretical Implications

Theoretically, this study reinforces findings from previous research and provides deeper insights into the relationships between tourism impacts, community participation, and community attitudes toward tourism development. Prior studies have applied various theories and frameworks, such as dependency Theory (Frank, 1967) and Stakeholder Theory (Freeman, 1984), to examine the challenges faced by destination communities and the factors influencing resident attitudes (Rasoolimanesh et al., 2019; Sakhile & Tembi, 2017; Sharpley, 2014). Among these, Social Exchange Theory (SET) has emerged as a dominant framework for understanding the dynamics of tourism development and its impact on local communities (Alalouch & Al-Smadi, 2023; Gannon et al., 2021; Thompson et al., 2018).

This study confirms the principles of Social Exchange Theory (SET) and demonstrates its effectiveness in explaining how residents in the Rimoi National Reserve community respond to tourism development. SET suggests that individuals engage in tourism-related activities based on their perceived benefits and costs. When benefits outweigh

costs, residents are more likely to support tourism; conversely, when costs are higher, they may resist participation.

To capture the complexities of residents' participation in tourism development, this study integrates SET with the Normative Model of Community Participation in Tourism Development (NMCPTD). This combination provides a more comprehensive framework for understanding how tourism impacts influence community participation and, in turn, shape residents' attitudes toward tourism. While SET explains why communities engage in tourism (based on expected rewards and costs), NMCPTD explains how participation should be structured to foster sustainable tourism development. The interplay between these frameworks offers richer insights into the mechanisms driving community involvement in Rimoi National Reserve.

The study's theoretical contributions significantly advance the application and adaptability of SET in tourism interactions. Through empirical analysis, the research confirms the reciprocity dynamics between tourists and residents, reinforcing the principle that people anticipate receiving something in return for their engagement in social exchanges (Gannon, Rasoolimanesh, & Taheri, 2021; Alalouch & Al-Smadi, 2023; Li & Qi, 2023; Lee & Garcia, 2023). This reciprocity influences how communities perceive tourism impacts—viewing economic and sociocultural benefits positively while being more cautious about potential environmental drawbacks (Boley et al., 2014; Sharpley, 2014; Gannon et al., 2021).

Additionally, this study extends the Normative Model of Community Participation in Tourism Development (NMCPTD) by providing empirical evidence of its effectiveness in guiding community involvement. The findings align with previous research advocating for the transfer of decision-making authority from government officials to

local stakeholders to enhance community engagement in tourism development (Tosun & Timothy, 2003). As Mak, Cheung, and Hui (2017) argue, empowering residents by granting them influence over tourism projects strengthens their commitment to sustainable tourism. Thus, this study not only validates the theoretical constructs of NMCPTD but also lays the groundwork for future research in diverse cultural settings.

Moreover, this research reaffirms the adaptability of SET to empirical testing through various research methods, including surveys, interviews, and mixed-method approaches (Alalouch & Al-Smadi, 2023; Li & Qi, 2023; Lee & Garcia, 2023; Gannon, Rasoolimanesh, & Taheri, 2021). The versatility of SET was instrumental in shaping the study's research design, guiding data collection, analysis, and interpretation.

Finally, the findings reinforce the theoretical and empirical argument that different dimensions of tourism impacts—economic, sociocultural, and environmental—have distinct effects on residents' attitudes toward tourism development. Consistent with previous studies, this research highlights the importance of evaluating these impacts separately rather than as a single entity (Doh, 2010; Gursoy et al., 2002). By doing so, it enhances our understanding of how tourism exchanges function within the SET framework and underscores the necessity of adopting a holistic strategy that acknowledges the diverse nature of tourism impacts.

5.4.2 Policy Implications

The policy implications derived from this study are instrumental in shaping effective frameworks for sustainable tourism development. The study emphasizes the long-term economic viability of tourism, stressing the necessity for adaptive management strategies that regularly assess and adjust practices based on evolving environmental concerns and community feedback.

The study's findings guide policymakers in prioritizing environmental sustainability in tourism planning and implementing and enforcing regulations to minimize ecological impact. These strategies include community engagement and education programs to raise awareness of sustainable tourism practices, encouraging responsible tourism initiatives by tour operators, and fostering collaborations with environmental organizations for enhanced conservation efforts.

The study's findings provide an empirical foundation for policymakers in creating governance structures that facilitate the meaningful involvement of community residents in decision-making processes. Hence, it establishes a conducive environment for sustainable tourism practices that respect and enhance the local community's well-being.

The study's findings also emphasize the need for inclusive decision-making processes in tourism development. Policymakers should build political support and get the community to be actively involved in co-creating strategies for mitigating and enhancing negative impacts. The study underscores the importance of adaptive and context-specific approaches, recognizing that the mediation role of community participation may vary across different regions and cultural contexts. These implications guide policymakers toward fostering sustainable and community-centric tourism initiatives, ensuring effectiveness and long-term success.

5.4.3 Practical Implications

The practical implications of this study are significant, offering insights that can shape sustainable tourism practices in the Rimoi National Reserve and beyond. By understanding the dynamics of social exchange within the community, stakeholders in the tourism sector—such as the Ministry of Tourism and Wildlife (MOTW), Kenya

Wildlife Service (KWS), the County Government of Elgeyo Marakwet, NGOs, and the Kenya Tourism Board—can tailor tourism practices that align with the expectations and needs of local residents. This suggests that successful tourism development should prioritize initiatives that deliver measurable economic, environmental, and socio-cultural benefits to the community. These insights allow practitioners to design programs that foster positive relationships between tourists and local residents, enhancing the overall tourism experience.

Furthermore, acknowledging the role of community participation, as outlined in the Normative Model (NMCPTD), helps develop strategies to engage residents actively in tourism decision-making. This ensures the sustainability of tourism initiatives while contributing to the empowerment and well-being of the local community.

Stakeholders should develop sustainable tourism practices that prioritize economic benefits and the community's overall well-being. Involving local residents in activities like guided tours, artisan workshops, and promoting local products will increase support for tourism development in the Rimoi National Reserve.

KWS and the Directorate of Tourism, Culture, and Wildlife of the Elgeyo Marakwet County government should implement sustainable strategies such as responsible tourism planning, conservation initiatives, and community engagement to enhance environmental sustainability. For example, determining the maximum number of visitors the Rimoi National Reserve can accommodate without damaging the environment, raising awareness among tourists and residents about conservation, and involving locals in activities like tree planting, waste management, and wildlife monitoring. These strategies will minimize tourism's environmental impact while prioritizing conservation.

Additionally, they should implement culturally sensitive tourism practices, including empowering local communities, promoting cultural respect, preserving heritage, and supporting sustainable infrastructure. Encouraging cultural exchange and responsible tourism marketing will reduce negative socio-cultural impacts and promote positive interactions between tourists and local residents.

Ultimately, tourism development strategies should be holistic, adaptive, and community-focused. These should include capacity building, cultural preservation, fostering pride in the community, and encouraging collaborative partnerships among the government, private sector, NGOs, and local residents. These strategies must address economic concerns, prioritize environmental sustainability, and actively involve the community in decision-making, ensuring that tourism development aligns with the values and priorities of the Rimoi National Reserve community. These practices can also guide future tourism initiatives in other destinations within the country.

5.5 Study's Contributions

The study advances the existing scientific knowledge by offering insights into the underlying processes and mechanisms that drive relationships between tourism impacts, community participation and attitudes towards tourism development. Including a mediator variable strengthened the robustness and depth of research findings, contributing to a more comprehensive understanding of the studied phenomena by explaining the mechanism through which the independent variable influences the dependent variable. It is worth mentioning that very few studies have examined the direct effects of tourism impacts factors, such as economic, environmental, and socio-cultural on community attitude towards tourism development

and also their indirect effects through community participation toward tourism development.

For example, in this study where community participation was introduced as a mediating variable in the relationship between tourism impacts and community attitudes towards tourism development; the findings revealed that 64%, 62% and 55.3% of economic, social-cultural and environmental tourism impacts at the Rimoi National Reserve community were mediated by community participation. The findings contribute to the theoretical understanding of the complex pathways through which tourism impacts influences the community attitudes of the community, highlighting the importance of considering both direct and mediated effects.

Therefore, policymakers and practitioners relying solely on the unmediated model might implement interventions or strategies that inadequately account for the mediating influence of community participation. Recognizing and incorporating community participation as a mediator in the mediated model was vital for a precise and comprehensive understanding of the relationships between tourism impacts and community attitudes towards tourism development. The mediated model has captured the intricate relationship between tourism impacts and community attitudes toward tourism development without which it would not have emerged if the study had investigated only direct relationships among the constructs using conventional statistical methods potentially resulting in misleading conclusions and incomplete policy recommendations. For example, without mediating effect of community participation could have led to an overestimation of the direct impact of tourism on community attitudes towards tourism development, specifically inflating economic impacts by 0.200, socio-cultural impacts by 0.244, and environmental impacts by -0.078 (see table 4.38).

The study makes a significant methodological contribution to existing knowledge by utilizing a Stapel scale to systematically evaluate both current and potential future tourism impacts associated with additional development in the Rimoi National Reserve community. The application of the Stapel scale in assessing tourism impacts is an innovative methodological approach and hasn't been widely used in this context before.

Given that the study aimed to gauge potential tourism impacts that respondents may not have experienced yet, it was essential to inquire about their feelings regarding the current conditions. This approach helped respondents relate their current experiences, providing a foundation for projecting these experiences into the future, particularly in the context of further tourism development in the Rimoi National Reserve.

By examining both current and potential future tourism economic, environmental, and socio-cultural impacts, the study went beyond just looking at the typical static assessment of tourism impacts. Understanding how the community perceives the future consequences of tourism development is crucial for formulating sustainable and adaptive tourism strategies. Looking at the impact over time makes the assessment of tourism effects more thorough and aligns with the dynamic nature of community perceptions over time. Noting that individuals continually adjust their attitudes based on experiences and develop new ones as they encounter new attitude objects.

Past studies have suggested that establishing or expanding protected areas, such as national reserves, might adversely impact the livelihoods of nearby residents. Common concerns include potential displacement, restrictions on resource access, and disruptions to traditional economic activities, all of which could contribute to a perceived increase in the overall cost of living for affected communities. However, the current study presents a different viewpoint from past research trends. The Rimoi

National Reserve community residents are actually optimistic about the impact on their cost of living. They believe that the development of the reserve will lead to economies of scale and increased competition, making goods and services more widely available and at lower cost. This finding suggests that the impact of tourism is complex and depends on the specific context, indicating that observations in one location may not apply universally.

This study reveals that community participation mediates the relationship between perceived socio-cultural tourism impacts and community residents' attitudes towards tourism development. This contrasts with the findings of Gannon et al. (2021), who conducted their research in the culturally and historically rich cities of Tabriz and Kashan in Iran. Their results suggest that the maturity and pre-existing cultural landscape of these locations may have influenced their findings. This highlights the complexity and context-specific nature of socio-cultural impacts in tourism. What works in one destination may not apply to another, emphasizing the need to consider unique contextual factors when examining tourism impacts and community attitudes. This finding thus addresses the contextual gap in the literature.

Although relying solely on mono-methods such as purely quantitative surveys or qualitative interviews is acceptable when conducting research and yields valid and reliable findings, it may be limited in developing a comprehensive understanding of the research problem in breadth and depth. The current study adopted a mixed-methods approach and a convergent one-phase research design. The researcher first collected and analyzed the quantitative and qualitative data separately but concurrently. The researcher merged the two separate sets of findings at the interpretation stage and presented both quantitative and qualitative findings together on a theme-by-theme or concept-by-concept basis as opposed to separate presentations to ensure a coherent and

comprehensive understanding of the research outcomes using the side-by-side narrative method, also known as the weaving approach, which is a fundamental aspect of mixed methods research. This provided a platform for community residents to express their perspectives, fostering a more precise and in-depth understanding of community dynamics, feelings, and views on tourism impacts, community participation and community attitudes towards tourism development in the Rimoi National Reserve community.

Finally, another noteworthy methodological contribution of this study was the design's inclusion of statistical control for covariates or confounding variables such as age, gender, and level of education. These variables explained 8.4% of the variation in community attitudes towards support for tourism development among residents of Rimoi National Reserve. Including covariates in the analysis helped to make sure that the conclusions of the study were not based solely on aggregate data. By controlling for these variables, the results are made more robust, precise, and unbiased, thus enhancing the credibility and reliability of the findings.

5.6 Recommendations

The study makes the following recommendations:

i. The Ministry of Tourism and Wildlife (MOTW) and the Kenya Wildlife Service (KWS) should develop sustainable tourism practices which prioritize economic benefits and enhance the overall well-being of the community; this could involve promoting local entrepreneurship, providing training and support for small business owners, and facilitating access to tourism-related opportunities to ensure long-term economic sustainability. This will lead to increased support

and cooperation from the residents for further tourism development in the Rimoi National Reserve.

ii. Kenya Wildlife Service (KWS) and the Directorate of Tourism, culture and Wildlife of Elgeyo Marakwet County government should develop and implement environmental conservation initiatives. This may include strategies to mitigate and manage the environmental impacts of tourism activities in Rimoi National Reserve such as waste management programs, conservation efforts, and sustainable tourism practices to preserve the natural environment and biodiversity of the reserve. This will ensure that environmental conservation is prioritized and that tourism's potential adverse environmental impacts are minimized.

iii. The Ministry of Tourism and Wildlife (MOTW) and the Kenya Wildlife Service (KWS) should promote socio-cultural exchange and understanding by encouraging initiatives that promote cultural exchange and understanding between tourists and the local community in Rimoi National Reserve. Such as cultural heritage preservation projects, community-based tourism initiatives, and educational programs to foster mutual respect and appreciation for diverse cultures. These practices balance tourism's positive and adverse effects by minimizing negative socio-cultural impacts while promoting positive interactions between tourists and residents in the Rimoi National Reserve community.

iv. The Ministry of Tourism and Wildlife (MOTW) and the Kenya Wildlife Service (KWS) should implement holistic, adaptive and sustainable tourism development strategies which enhance community participation in tourism planning and decision-making processes to ensure that local voices are heard

and considered. This may involve establishing community forums, consultation mechanisms, and partnerships between stakeholders to empower residents and facilitate their involvement in shaping the future of tourism development in the reserve. These strategies should address economic concerns, prioritize environmental sustainability, acknowledge socio-cultural dynamics, and actively involve the community in decision-making. This will lead to achieving sustainable tourism development solutions that resonate with the values and priorities of the Rimoi National Reserve community.

v. Kenya Tourism Research Institute should continuously assess residents' perceptions of tourism impacts, community participation, and their effects on community attitudes towards tourism development in Rimoi National Reserve. This could involve conducting regular surveys, engaging in dialogue with community members, and monitoring changes in attitudes over time to inform future decision-making and policy development. This data-driven approach will provide a solid foundation for informed decision-making and policy development, ensuring that the interests and concerns of the local community are effectively addressed. Additionally, the ongoing engagement with residents will foster trust, collaboration, and mutual understanding between stakeholders, ultimately contributing to the sustainable management of tourism in Rimoi National Reserve.

5.7 Suggested Areas of Further Research

The following are the key areas of further research on unexplored issues that emerged from the current study but existed beyond its scope.

i. This study examined the mediating effect of community participation on the relationship between tourism impacts and community attitudes towards tourism

development. Several other mediating and moderating factors could be investigated in future studies for example community attachment, environmental attitudes, cultural attitudes, safety and security.

ii. Future studies should investigate how tourist perceptions of the destination, their behavior, and expectations influence community participation and attitudes towards tourism development.

iii. Future research should be conducted within and across different contexts, both developed and developing nature-based tourism destinations such other National Reserves, National Parks, and cultural heritage sites to provide a more comprehensive understanding of the factors that shape community attitudes towards tourism development ensuring the generalizability of the findings across different settings.

iv. Attitudes change with time, therefore a longitudinal study should be conducted to track changes in community attitudes and participation over an extended period to explore the long-term effects of community participation on community attitudes towards tourism development, as attitudes change over time based on individual experiences and encounters with new attitude objects.

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APPENDICES

Appendix 1: Survey Questionnaire

Susan Boit
Moi University, Kenya
Mobile: 0791680426

Dear Sir/Madam,

RE: REQUEST FOR RESPONDENTS TO PARTICIPATE IN THE STUDY

My name is Susan Boit, currently pursuing a Doctor of Philosophy degree at Moi University. As a requirement to graduate with a PhD in Tourism Management I am required to write a research Thesis. My research topic is Titled "Mediating Effect of Community Participation on the Relationship between Tourism Impacts and Community Attitudes towards Tourism Development in Rimoi National Reserve, Kenya"

The information that is being requested of you will be used purely for academic purposes and will be treated with utmost confidentiality.

I humbly request for a few minutes of your time to answer the following few questions.

Thank you. Regard,

Susan Boit
Email: suzzane.boit@gmail.com
School of Tourism, Hospitality, and Events Management Moi University,
Kenya

SECTION I: DEMOGRAPHIC PROFILE OF THE RESPONDENTS

This section of the survey asks for information about you. The information you provide will be kept confidential and WILL NOT be identified with you personally.

1. What is your age? ___
2. What is your gender? Tick as appropriate Female [ ] Male [ ]
3. What best describes your family situation?
   Single [ ] Married [ ] widowed [ ]
4. What is the highest level of education you have completed?

1	2	3	4
No formal education	Primary	Secondary	College/University

5. What is your current occupation? Tick appropriately
   Farmer [ ] Civil servant [ ] Business woman/man [ ]
   Other (please indicate) …….

SECTION 2: TOURISM DEVELOPMENT

Please indicate your level of agreement with the following statements on tourism development in your community by circling an appropriate number (1 = strongly disagree, 2=disagree, 3= neutral, 4= agree, 5 = strongly agree).

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
TD1. Overall, the benefits of tourism development in my community outweigh its costs.	1	2	3	4	5
TD2. In general, new tourism Development should be actively encouraged in my community.	1	2	3	4	5
TD3. My community can handle more tourism development.	1	2	3	4	5
TD4. Increased tourism would not hurt my community's quality of life.	1	2	3	4	5

TD5. Tourism development contributes to the conservation and preservation of our local heritage.	1	2	3	4	5
TD6. I support new tourism development in my community	1	2	3	4	5
TD7. I believe tourism development enhances the overall quality of life for residents of our community.	1	2	3	4	5
TD8. I feel that tourism development supports the growth and diversification of local businesses.	1	2	3	4	5

SECTION 3: IMPORTANT CONDITIONS FOR YOUR COMMUNITY

On the left, please indicate how you feel about the following things as they exist now in Your Community. On the right side, please indicate how you feel the same things might change (for better or worse) if additional tourism develops in Rimoi National Reserve.

ECONOMIC IMPACTS (ECO)

Current Condition:						**Tourism development will:**				
Poor	**Below Average**	**Average**	**Above Average**	**Excellent**		**Worsen**	**Slightly Worsen**	**Not Change**	**Slightly Improve**	**Improve**
1	2	3	4	5	Employment opportunities	1	2	3	4	5
1	2	3	4	5	Money generated by local businesses	1	2	3	4	5
1	2	3	4	5	Quality of employment	1	2	3	4	5
1	2	3	4	5	My personal income	1	2	3	4	5
1	2	3	4	5	Property value (cost of real state)	1	2	3	4	5
1	2	3	4	5	Cost of living in the area	1	2	3	4	5

SECTION 4: IMPORTANT CONDITIONS FOR YOUR COMMUNITY

On the left, please indicate how you feel about the following things as they exist now in Your Community. On the right side, please indicate how you feel the same things might change (for better or worse) if additional tourism develops in Rimoi National Reserve.

ENVIROMENTAL IMPACTS (ENV)

Current Condition:						**Tourism Development Will:**				
Poor	**Below Average**	**Moderate**	**Above Average**	**Excellent**		**Worsen**	**Slightly Worsen**	**Not Change**	**Slightly Improve**	**Improve**
1	2	3	4	5	The peace and tranquility of the area	1	2	3	4	5
1	2	3	4	5	Amount of litter and other trash	1	2	3	4	5
1	2	3	4	5	Quality of natural environment	1	2	3	4	5
1	2	3	4	5	Amount of human made noise	1	2	3	4	5
1	2	3	4	5	Amount of traffic in the area	1	2	3	4	5
1	2	3	4	5	Number of people in the area	1	2	3	4	5
1	2	3	4	5	Amount of natural open space	1	2	3	4	5
1	2	3	4	5	Air quality	1	2	3	4	5
1	2	3	4	5	Appearance of the area	1	2	3	4	5
1	2	3	4	5	Amount of human made structures developed in the area	1	2	3	4	5
1	2	3	4	5	Water quality	1	2	3	4	5
1	2	3	4	5	Waste management	1	2	3	4	5

SECTION 5: IMPORTANT CONDITIONS FOR YOUR COMMUNITY

On the left, please indicate how you feel about the following things as they exist now in your Community. On the right side, please indicate how you feel the same things might change (for better or worse) if additional tourism develops in Rimoi National Reserve.

SOCIO CULTURAL IMPACTS (SOC)

Current Condition:						**Tourism Development Will:**				
Poor	**Below Average**	**Average**	**Above Average**	**Excellent**		**Worsen**	**Slightly worsen**	**Not Change**	**Slightly Improve**	**Improve**
1	2	3	4	5	Small town atmosphere of the area	1	2	3	4	5
1	2	3	4	5	Crime rate	1	2	3	4	5
1	2	3	4	5	Personal safety and security	1	2	3	4	5
1	2	3	4	5	Overall quality of life	1	2	3	4	5
1	2	3	4	5	Community spirit among local residents	1	2	3	4	5
1	2	3	4	5	Relationship between residents and tourists	1	2	3	4	5
1	2	3	4	5	Understanding of different people and cultures	1	2	3	4	5
1	2	3	4	5	Conservation of local culture	1	2	3	4	5

SECTION 6: PARTICIPATION IN TOURISM DEVELOPMENT

This section is designed to help gain a better understanding of community participation in Tourism Development. Please rate how you feel about the following statements by circling the appropriate response. A simple definition of tourism to keep in mind as you respond is "Any activity or place that brings people into the community as visitors" (1 = strongly disagree, 2=disagree 3 = neutral, 4= agree 5 = strongly agree)

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
PAR1. As resident, I actively participate in tourism-related events or festivals organized in my community	1	2	3	4	5
PAR2. I actively support initiatives for new tourism development in my community.	1	2	3	4	5
PAR3. As a resident, I am willing to be involved in local tourism-decision making process	1	2	3	4	5
PR4. I am interested in local tourism development activities.	1	2	3	4	5
PAR5. I would like to serve on a committee involved in local tourism development activities.	1	2	3	4	5
PAR6. In the past 12 months, I have been actively participating in city/public meetings or forums about possible local tourism development.	1	2	3	4	5

Thank you for your time.

Appendix 2: Focus Group Interview guide.

This is to request you to share freely your experiences, attitudes, opinions feelings and views on the subject regarding Mediating Effect of Community Participation on the Relationship between Tourism Impacts and Community Attitudes towards Tourism Development in Rimoi National Reserve, Kenya.

1. Are the residents generally in favour of or opposed to tourism development in this area and why?
2. In what ways has the development of tourism, Rimoi National Reserve, in this area influenced the attitude of the local community towards tourism? Positively or negatively?
3. How do residents feel about the current tourism impacts or changes that have occurred in this community as result of tourism and particularly following the re-branding of Rimoi National Reserve? In other words, how do residents feel about things as they exist now in your community?

   AND

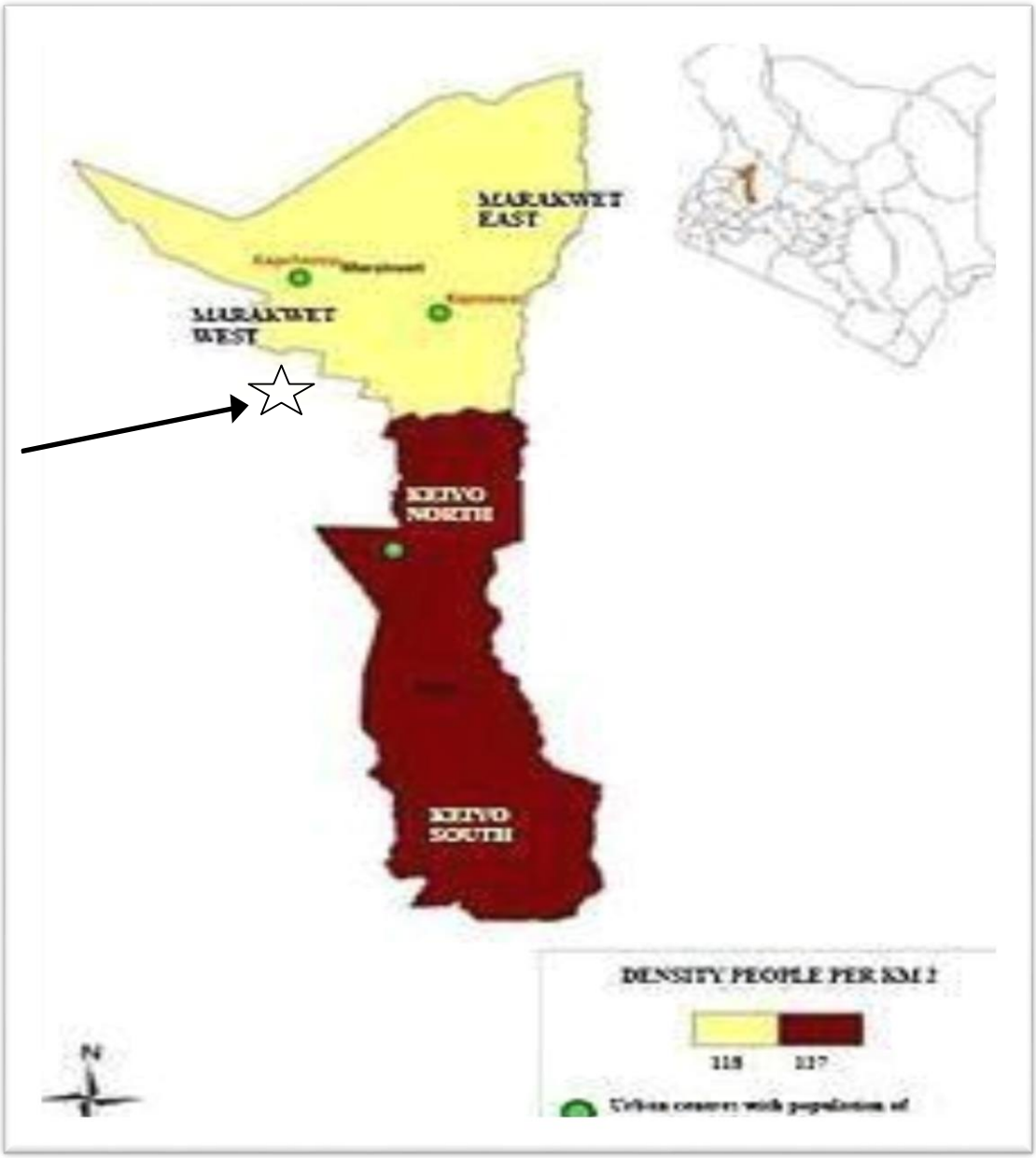
   How they feel the same things might change (for better or worse) if additional tourism develops in Rimoi National Reserve?

   Comment in relations to the following: -

   i. Economic changes such as: Personal income, deployment opportunity, property value, money generated by local businesses etc.
   ii. Environmental changes such as: amount of human noise, traffic, appearance of this area, amount of litter and trash etc.
   iii. Socio-cultural changes such as: rate of crime, your personal safety and security, community spirit, local traditions and customs etc.

4. How does actual participation of residents in community affairs influence resident's attitudes towards tourism development in this area? In what ways?
5. How do tourism impacts/changes as a result of growth and additional development of Rimoi national Reserve influence community desire to participate in tourism development issues in this area?

Appendix 3: Map of Elgeyo-Marakwet County Showing the Location of Rimoi National Reserve



Appendix 4: Pilot Study Report

Results of Pilot Study and Request for Authority to Conduct Full-Scale Field Study.

I am writing to present the findings of a pilot study that I conducted between July 3rd and July 17th, 2023 at the Samburu National Reserve to test the survey questionnaire designed for my PhD research thesis with a sample size of 50 respondents. I received research authorization from NASCOTTI on 30th June, 2023.

Summary of the Pilot Study:

1. The main objective of this pilot study was:

- To assess the validity and reliability of the research instruments aiming at reducing noise and minimizing errors.
- To assess the clarity and understandability, its ease of use, question wording, and layout of the survey questions.
- To identify any potential problems or areas for improvement in the questionnaire.

2. Methodology:

The pilot study was conducted over a two-week period with a sample of 50 randomly selected respondents who closely matched the target population for the full-scale study. The sample size for the pilot was within the range recommended in the research literature of between 30-50 respondents (Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2018). Cohen, L., Manion, L., & Morrison, K. (2018) Creswell, J. W., & Clark, P.V. L. (2018).

The data collected from the respondents were later coded in the Statistical Package for the Social Sciences (SPSS) version 27 for analysis.

3. Results and Key Findings:

a) The results of the pilot study were very positive. The participants found the questions to be clear and easy to understand. The participants also found the questionnaire to be of a reasonable length and completed the questionnaire within 80 minutes on average.

b) The Cronbach's alpha coefficients for each factor/construct were found to be above the recommended threshold of 0.7. This indicates high internal consistency within each factor, meaning that the items within each construct were highly correlated and reliable (Saunders, at el., 2016; Cohen, *et al.*, 2018). See the SPSS output table below.

c) Although some scale items were removed to increase the alpha coefficient to meet the threshold, either because they were overlapping with other items and therefore redundant, the remaining items still exceeded the recommended minimum of 3-5 items for measuring a construct (Hair et al., 2018). The remaining scale items range from six to eight. This is evident in the SPSS output table below

d) However, I plan to retain all of the initial items for now. Once the full-scale fieldwork is completed, I will re-evaluate the items with a larger sample of 231 respondents. I will run a factor analysis to confirm whether they will correlate with the other items. In the event that they do not show correlation, I will exclude them from the analysis, as their contribution is deemed inconsequential to the research results and of no significant benefit to the study.

e) In order to improve clarity and understandability of the survey questions, I have made modifications to the data requested on marital status. I have retained only three attributes:

1. Single [ ]
2. Married [ ]
3. Widowed [ ]

   The options for "Single parent with child (ren)" [ ] and "Married with child (ren)" [ ] have been removed as they do not provide any additional information needed for this study.

Based on the results of the pilot study, I believe that the survey questionnaire is ready to be used in a full-scale field study with a sample size of 231 respondents at Rimoi National Reserve as indicated in the approved proposal.

I am requesting your permission to proceed to the field to conduct the full-scale field study.

I believe that the full-scale field study will provide valuable data that will help me to answer the research questions of my thesis. I am confident that the results of the full-scale field study will make a significant contribution to the field of research.

Thank you for your time and consideration. I look forward to hearing from you soon.

SPSS Output of Reliability Statistics of Survey Scale Items

1. **Tourism development items**

Reliability Statistics

Cronbach's Alpha	N of Items
.782	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TD2	22.00	7.388	.519	.753
TD3	21.90	7.929	.413	.779
TD5	22.24	7.002	.643	.720
TD6	21.86	7.062	.634	.722
TD7	21.74	7.951	.539	.749
TD8	21.76	8.145	.451	.768

*Two TD items were removed to increase the alpha coefficient to meet the threshold. However, because we are using a small sample of 50 respondents, we have retained all of the initial items for now. We will re-evaluate them with a larger sample of 231 respondents after the full-scale field work is complete. If the items are still unrelated to the other items at that time, we will exclude them from the analysis.

Economic impact Items

Reliability Statistics

Cronbach's Alpha	N of Items
.803	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
ECOW1	21.70	11.643	.206	.856
ECOW2	21.20	10.163	.665	.752
ECOW3	21.54	9.600	.572	.770
ECOW4	21.44	9.313	.709	.736
ECOW5	21.22	9.808	.752	.734
ECOW6	21.30	10.010	.575	.768

* The items on this construct all met the required threshold and have been retained.

2. Environmental Impact Items

Reliability Statistics

Cronbach's Alpha	N of Items
.730	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
ENVW1	32.20	5.878	.512	.689
ENVW2	32.20	6.327	.310	.723
ENVW3	32.28	5.675	.557	.678
ENVW4	32.38	5.832	.459	.696
ENVW5	32.46	5.682	.472	.693
ENVW6	32.38	5.424	.638	.661
ENVW7	32.20	6.122	.458	.700
ENVW8	32.48	5.642	.213	.782

* Four ENW items were removed to increase the alpha coefficient to meet the threshold. However, because we are using a small sample of 50 respondents, we have retained all of the initial items for now. We will re-evaluate them with a larger sample of 231 respondents after the full-scale field work is complete. If the items are still unrelated to the other items at that time, we will exclude them from the analysis.

3. Sociocultural impact items

Reliability Statistics

Cronbach's Alpha	N of Items
.874	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach
SOCW1	26.08	13.340	.603	.867
SOCW2	25.74	15.135	.523	.872
SOCW3	25.78	13.196	.735	.845
SOCW4	25.74	14.604	.691	.853
SOCW5	26.00	12.571	.756	.842
SOCW6	25.62	14.567	.682	.854
SOCW7	25.64	15.011	.663	.858

*One item on this construct was deleted to meet the required threshold. However, because we are using a small sample of 50 respondents, we have retained all of the initial items for now. We will re-evaluate them with a larger sample of 231 respondents after the full-scale field work is complete. If the items are still unrelated to the other items at that time, we will exclude them from the analysis.

4. Participation Impact Items

Reliability Statistics

Cronbach's Alpha	N of Items
.786	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PAR1	22.20	6.490	.566	.746
PAR2	22.08	6.728	.496	.763
PAR3	22.00	6.082	.542	.754
PAR4	22.28	5.920	.717	.707
PAR5	21.96	6.978	.480	.767
PAR6	21.98	7.040	.426	.778

* The items on this construct all met the required threshold and have been retained.

Appendix 5: Letters of Authority

Moi University Recommendation letter

MOI UNIVERSITY
OFFICE OF THE DEAN
SCHOOL OF TOURISM, HOSPITALITY & EVENTS MANAGEMENT

Telephone: 0771-296270/020-8001263
Fax: (053) 43047
E-mail: deansthe@mu.ac.ke

Box 3900
ELDORET
Kenya

Ref: MU/STHE/PG/23

2nd June, 2023

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: RECOMMENDATION LETTER FOR – MS. SUSAN BOIT – TOU/5164/21

The above named is a bonafide student of Moi University, School of Tourism, Hospitality and Events Management. She is pursuing a PhD in Tourism Management in the Department of Tourism & Tour Operations Management.

She has successfully completed her course work and has defended her proposal titled **"Mediating effect of Community Participation on Tourism impacts and Community attitudes towards Tourism Development in Rimoi National Reserve, Kenya."**

Ms. Boit has been allowed to proceed to the field for data collection.

Any assistance accorded to her will be appreciated.

Yours faithfully,

DEAN
SCHOOL OF TOURISM, HOSPITALITY
& EVENTS MANAGEMENT
MOI UNIVERSITY

PROF. JACQUELINE KORIR
DEAN, SCHOOL OF TOURISM, HOSPITALITY & EVENTS MANAGEMENT

NACOSTI - Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 938063

Date of Issue: 30/June/2023

RESEARCH LICENSE



This is to Certify that Miss.: Susan Bolt of Moi University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Elgeyo-Marakwet on the topic: MEDIATING EFFECT OF COMMUNITY PARTICIPATION ON TOURISM IMPACTS AND COMMUNITY ATTITUDES TOWARDS TOURISM DEVELOPMENT IN RIMOI NATIONAL RESERVE, KENYA for the period ending : 30/June/2024.

License No: NACOSTI/P/23/26949

938063

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer-generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Authorisation from County Government of Elgeyo Marakwet

COUNTY GOVERNMENT OF ELGEYO MARAKWET
OFFICE OF THE COUNTY SECRETARY

All correspondence to be
Addressed to; County Secretary

P.O BOX 220 – 30700, ITEN
TEL: 05342277
Email: countysecretary@elgeyomarakwet.go.ke

Your Ref...
Our Ref: EMC/ADM 69/III/252.

DATE: 15th August, 2023

Susan Chepchirchir Boit
Moi University
School of Tourism and Events Management
P.O. BOX 3,900
ELDORET.

RE: PERMISSION TO CONDUCT RESEARCH IN ELGEYO MARAKWET COUNTY.

MS. Susan Chepchirchir Boit is a student at Moi University in the school of Tourism and Events Management pursuing PHD Studies and wishes to conduct a research project on the topic **"Mediating Effect of Community Participating on the Relationship Between Tourism Impacts and Community Attitudes Towards Tourism Development in Rimoi National Reserve, Kenya.**

She has been granted permission to go ahead with research project within Elgeyo Marakwet County (Rimoi National Reserve). This is therefore, to request all institutions and individuals within the County to accord her the necessary assistance.

Thank you.

PAUL CHEMMUTTUT
COUNTY SECRETARY/HEAD OF COUNTY PUBLIC SERVICE

THE COUNTY SECRETARY
ELGEYO MARAKWET COUNTY
P. O. Box 220-30700, ITEN
Email: info@elgeyomarakwet.go.ke

C.C

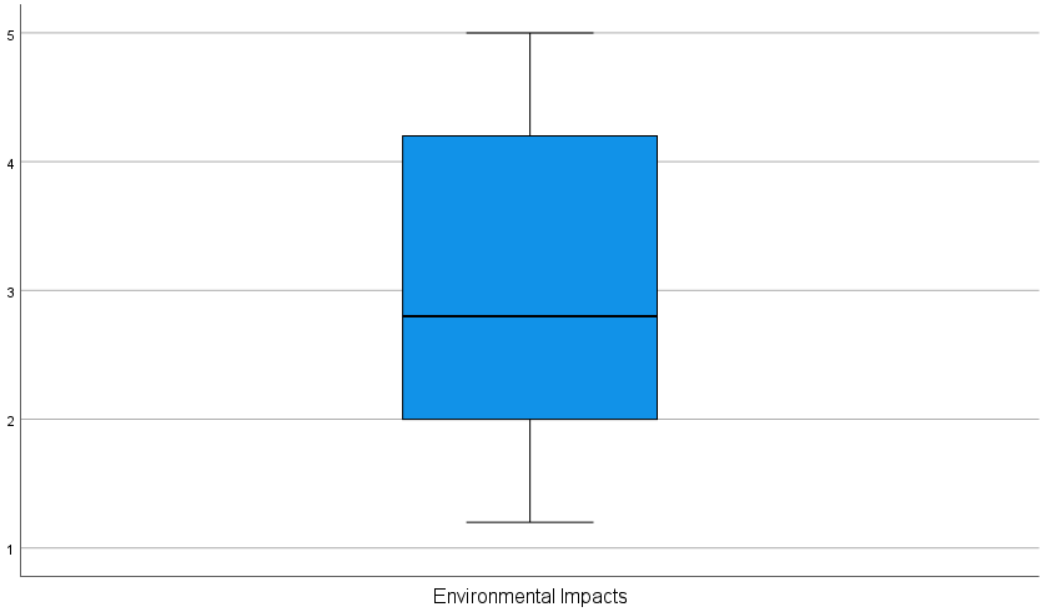
H.E. GOVERNOR

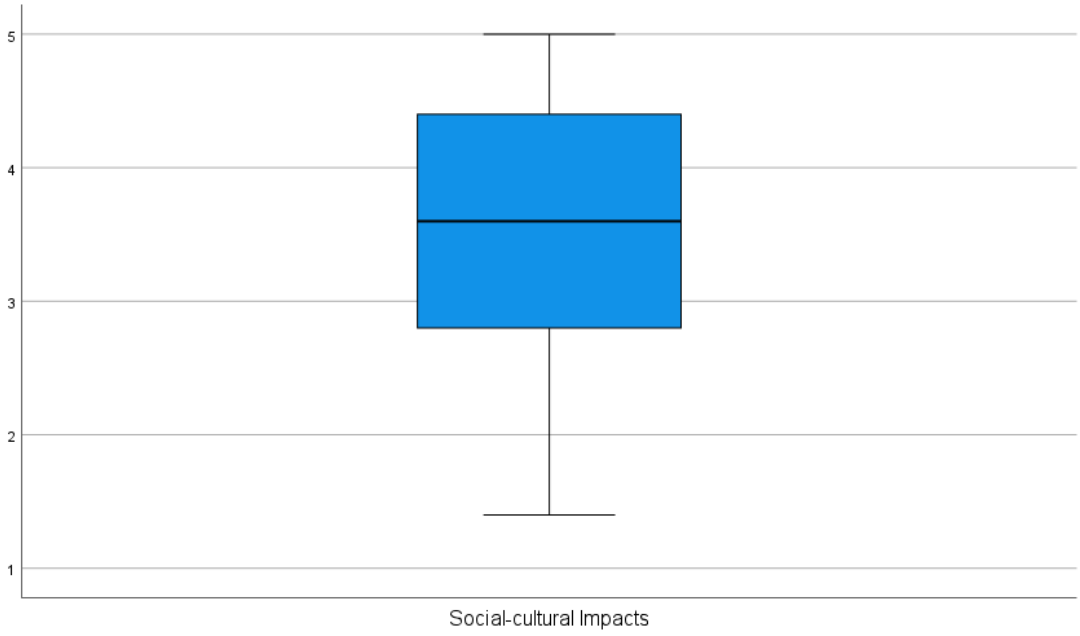
Appendix 6: Univariate Outlier Analysis

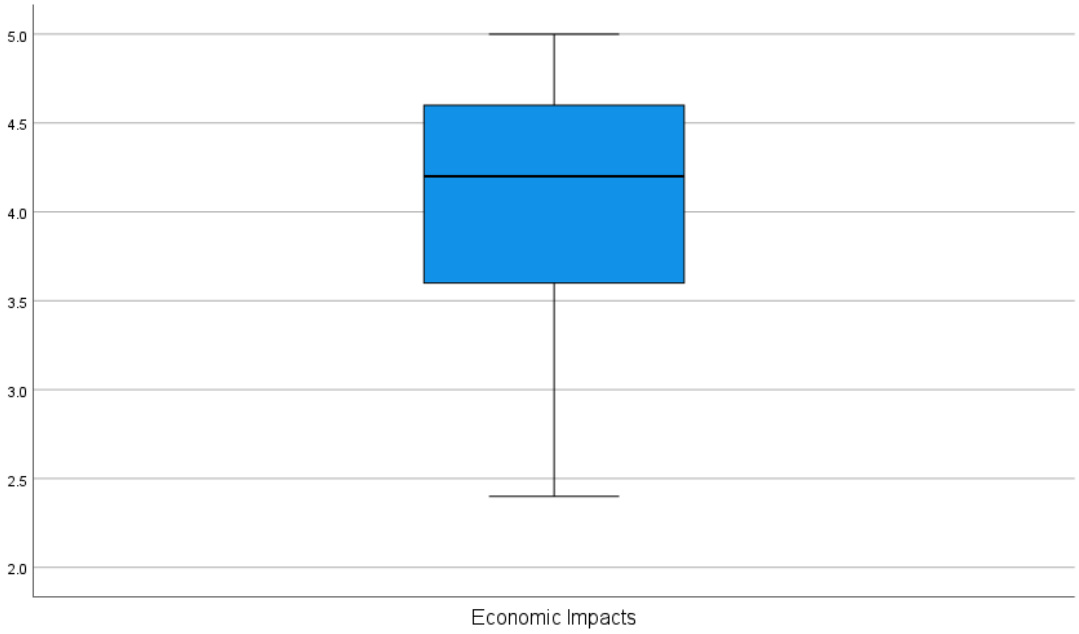
Variable	Number of Univariate Outlier Cases	Cases Associated with Outliers	Z-Scores of the Outlier Cases	Corrected Z-Score
Environmental Impacts	0	None		
Socio-cultural Impacts	0	None		
Economic Impacts	5	189	-3.529	-2.150
		104	-3.253	-2.150
		31	-3.253	-2.150
		143	-2.977	-2.150
		148	-2.702	-2.150
Community Participation	7	138	-3.324	-2.287
		104	-3.117	-2.287
		71	-2.909	-2.287
		77	-2.909	-2.287
		101	-2.702	-2.287
		52	-2.702	-2.287
		100	-2.702	-2.287
Community Attitudes towards Tourism Development	8	104	-3.631	-2.317
		101	-3.193	-2.317
		87	-3.193	-2.317
		114	-3.193	-2.317
		83	-3.193	-2.317
		100	-2.974	-2.317
		113	-2.755	-2.317
		26	-2.755	-2.317

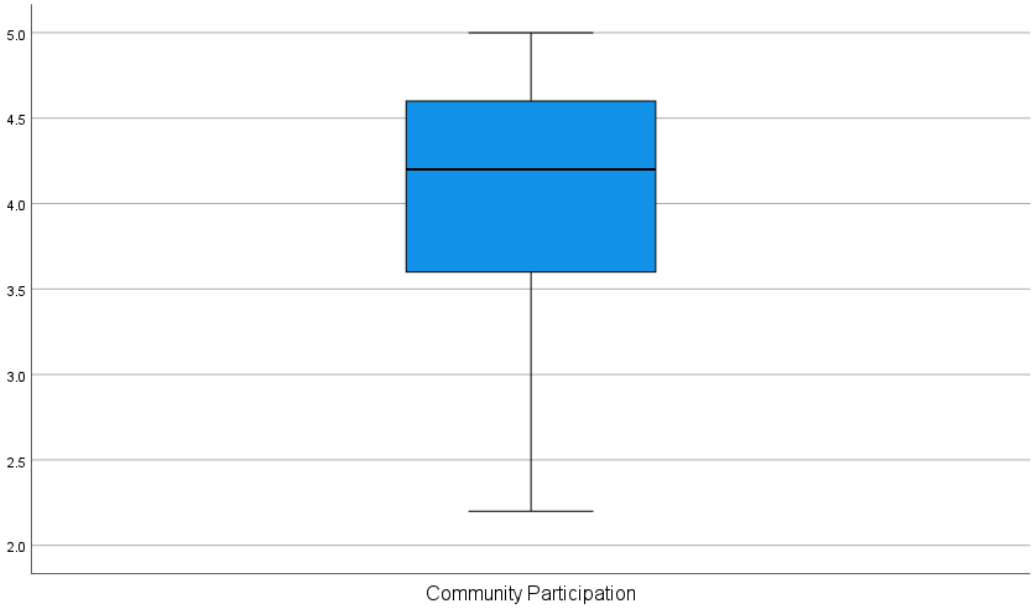
Source: Field data (2023)

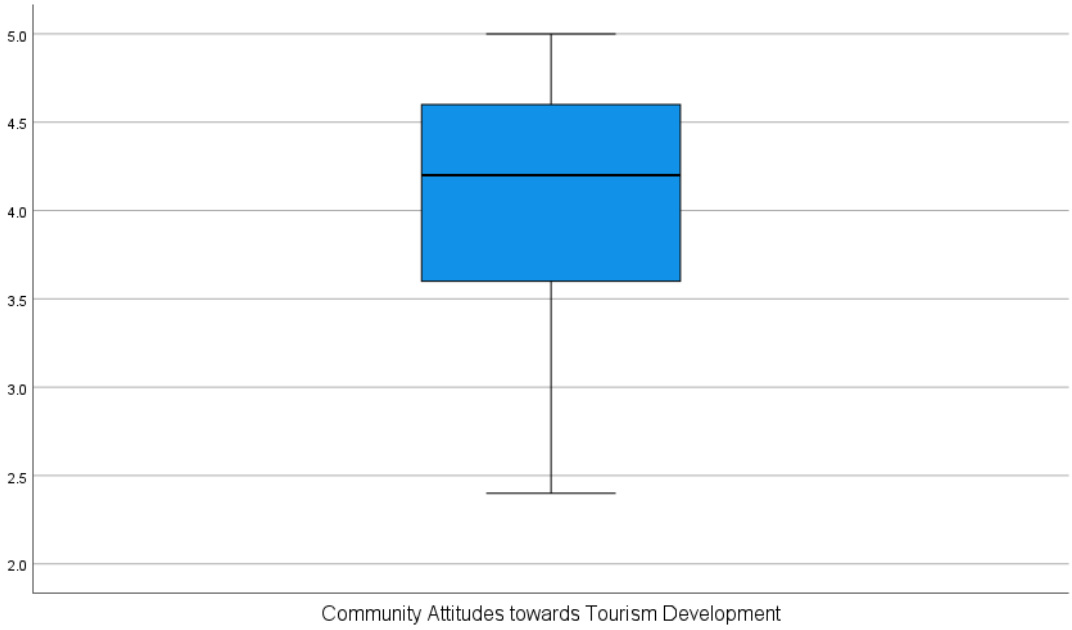
Appendix 7: Stem and Leaf Box plots






5.0
4.5
4.0
3.5
3.0
2.5
2.0
Economic Impacts


5.0
4.5
4.0
3.5
3.0
2.5
2.0
Community Participation


5.0
4.5
4.0
3.5
3.0
2.5
2.0
Community Attitudes towards Tourism Development

Appendix 8: Mahalanobis Distance Multivariate Outliers' Analysis

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.0970	4.7102	4.0286	.42756	231
Std. Predicted Value	-2.179	1.594	.000	1.000	231
Standard Error of Predicted Value	.041	.162	.074	.017	231
Adjusted Predicted Value	3.1292	4.7203	4.0284	.42738	231
Residual	-1.72018	1.55703	.00000	.57501	231
Std. Residual	-2.972	2.690	.000	.993	231
Stud. Residual	-3.012	2.720	.000	1.003	231
Deleted Residual	-1.76681	1.59166	.00020	.58627	231
Stud. Deleted Residual	-3.067	2.759	-.001	1.009	231
Mahal. Distance	.131	17.088	2.987	2.095	231
Cook's Distance	.000	.095	.005	.010	231
Centered Leverage Value	.001	.074	.013	.009	231

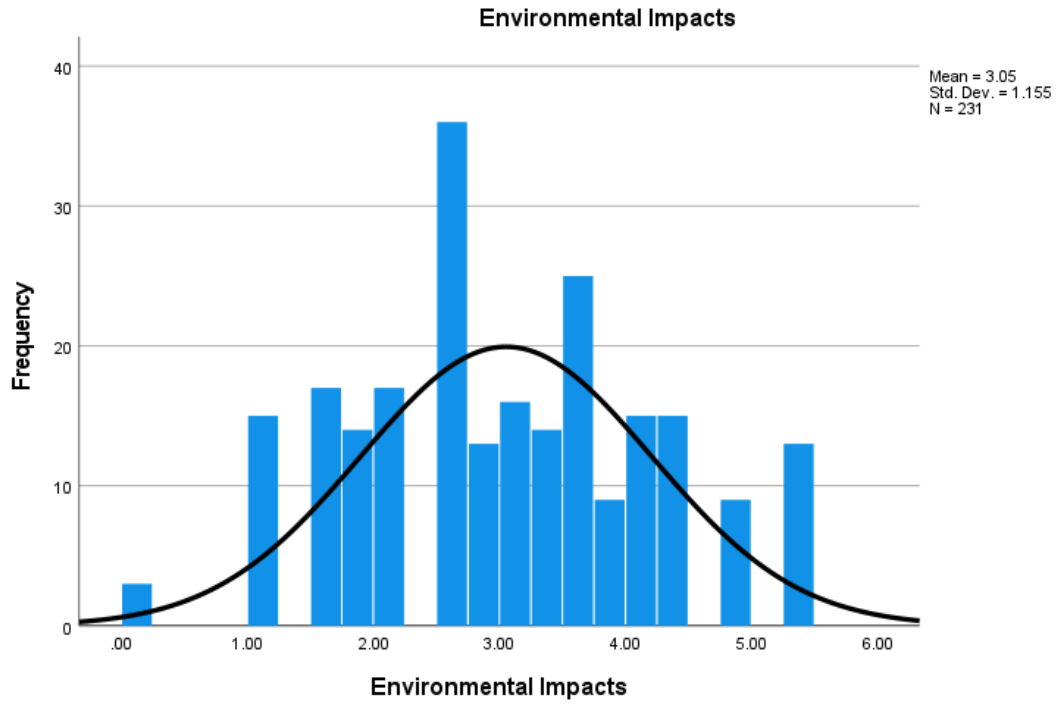
a. Dependent Variable: TD

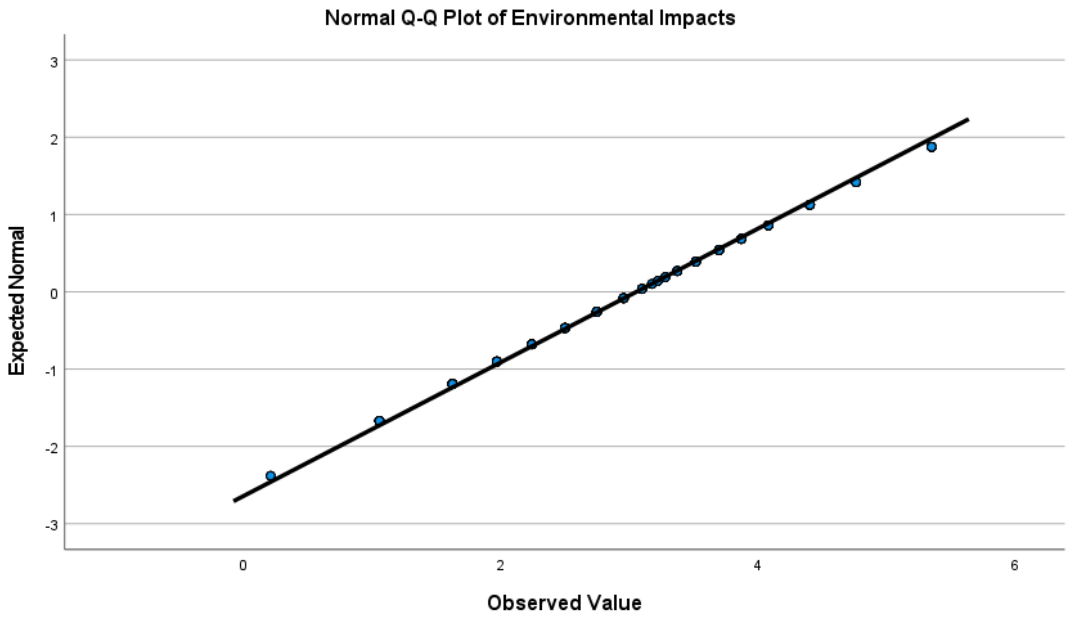
Appendix 9: Skewness and Kurtosis Coefficient Values of the Transformed Variables

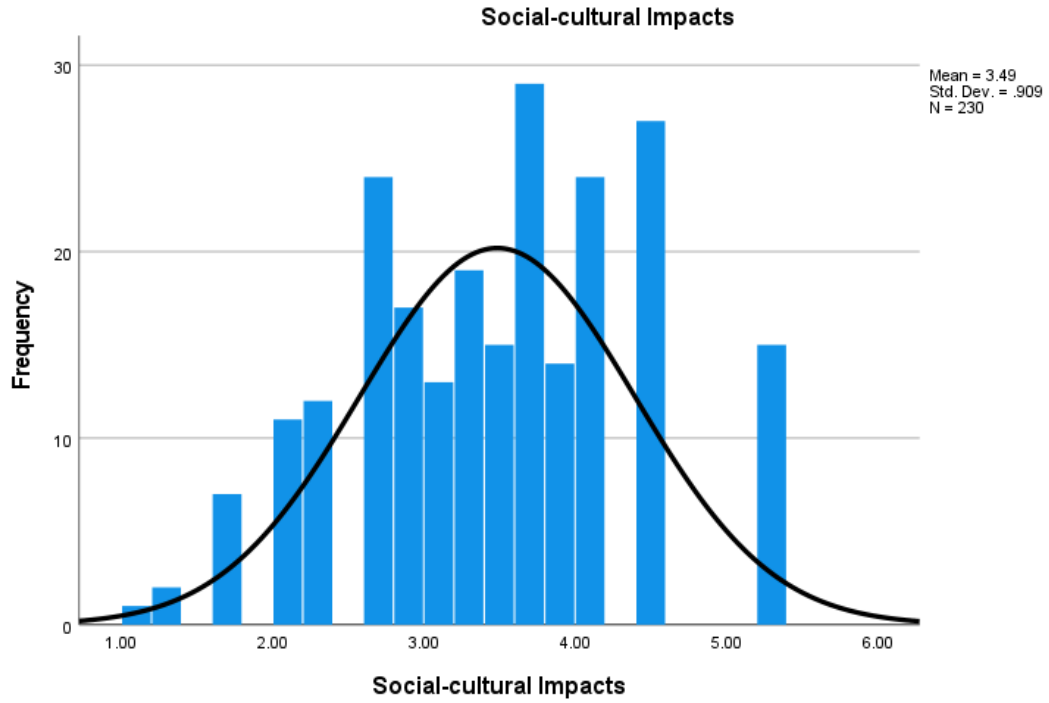
Descriptive Statistics

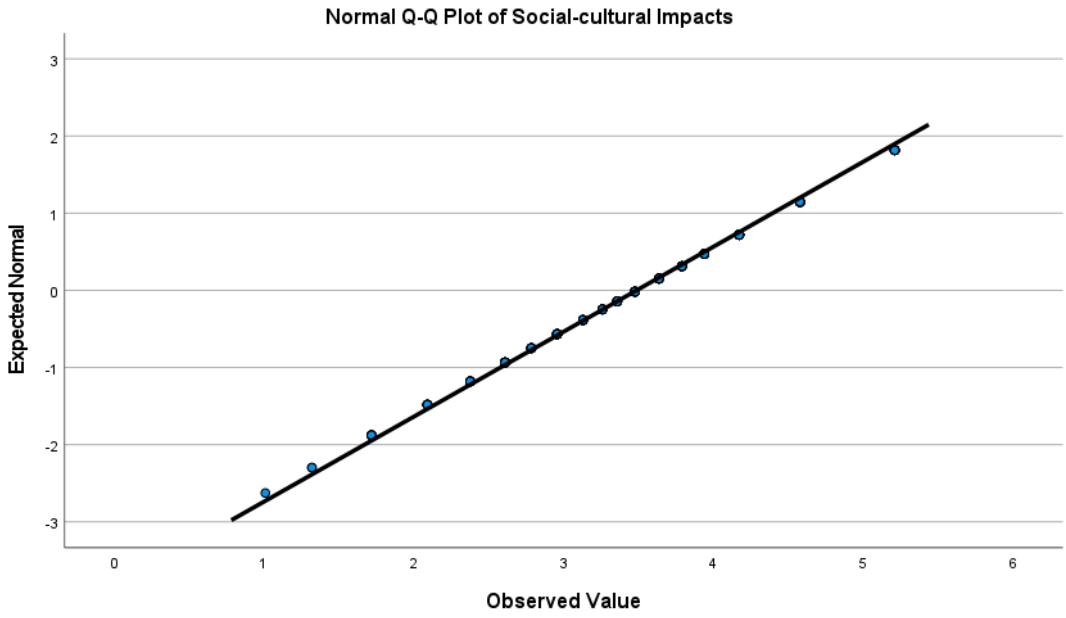
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Environmental Impacts	231	.21	5.35	3.0534	1.15548	.001	.160	-.419	.319
Socio-culturalImpacts	231	1.01	5.21	3.4861	.90876	.090	.160	-.410	.319
Economic Impacts	231	2.60	5.35	3.9811	.66114	.007	.160	-.411	.319
Community Participation	231	2.53	5.61	4.0105	.76485	.027	.160	-.453	.319
Community Attitudes towards Tourism Development	231	2.74	5.56	4.0477	.65906	.042	.160	-.370	.319
Valid N (listwise)	231								

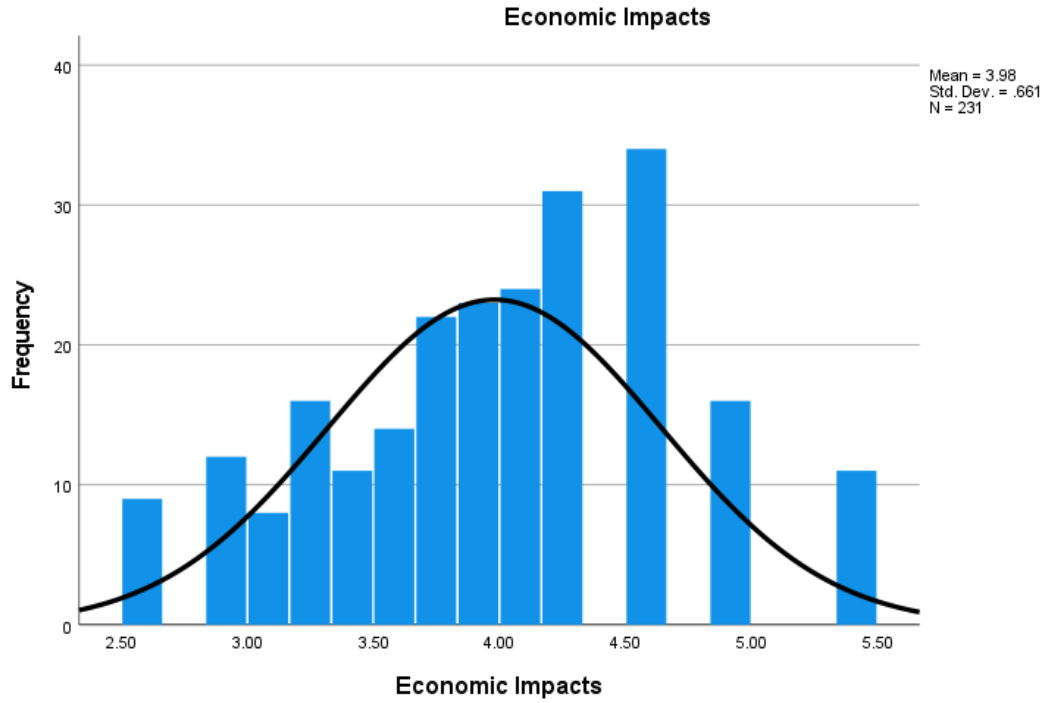
Appendix 10: Normality (Normal Q-Q) plots for Study Variables

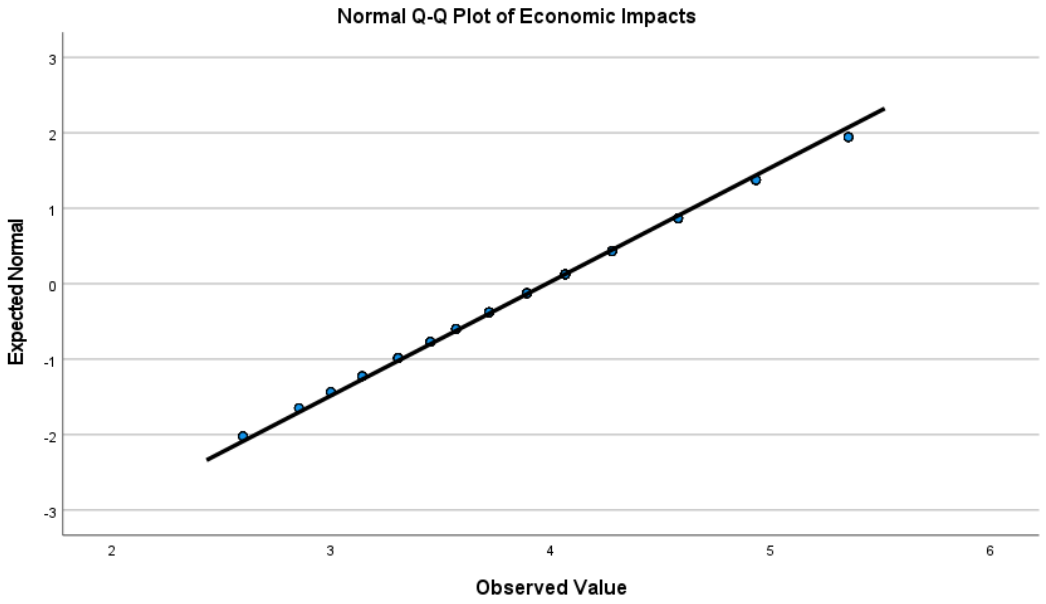


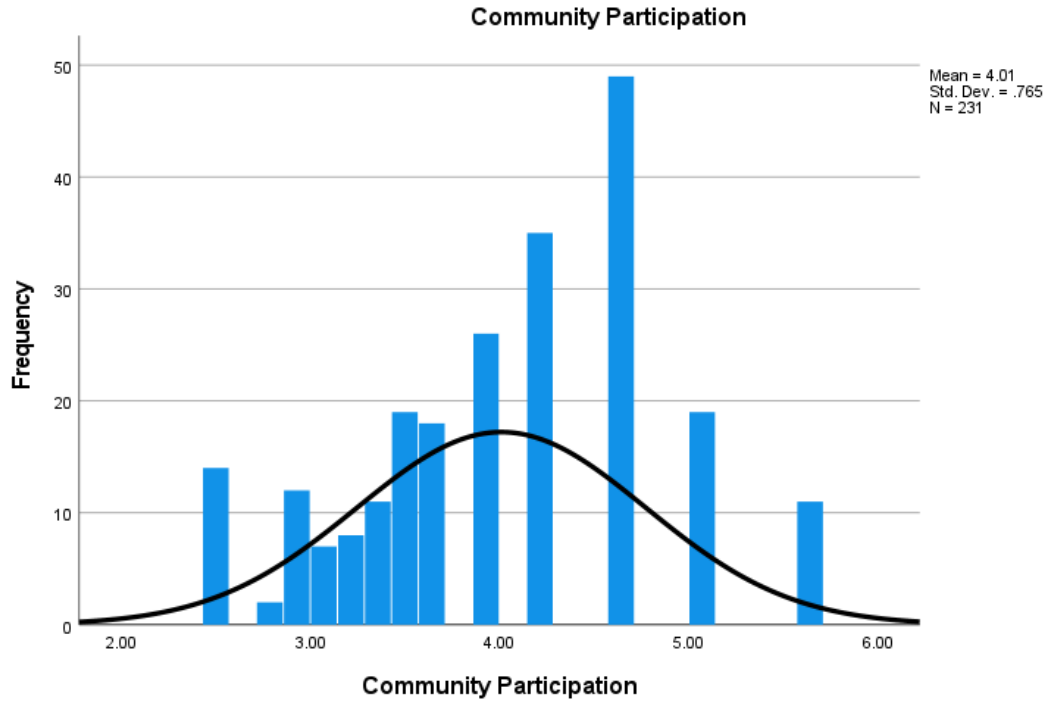


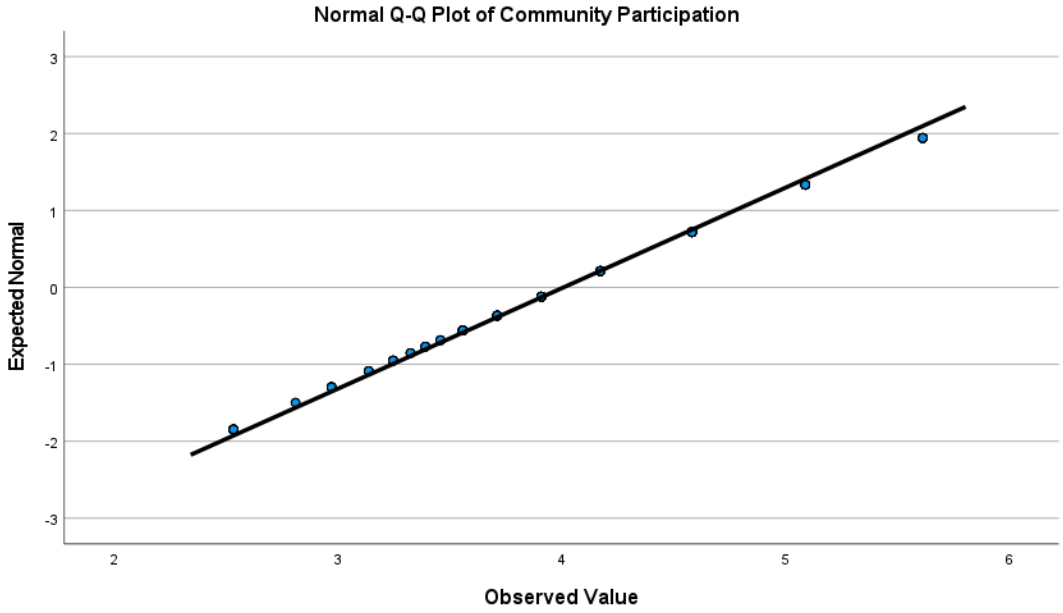

Social-cultural Impacts
Mean = 3.49
Std. Dev. = .909
N = 230
Frequency
30
20
10
0
1.00
2.00
3.00
4.00
5.00
6.00
Social-cultural Impacts

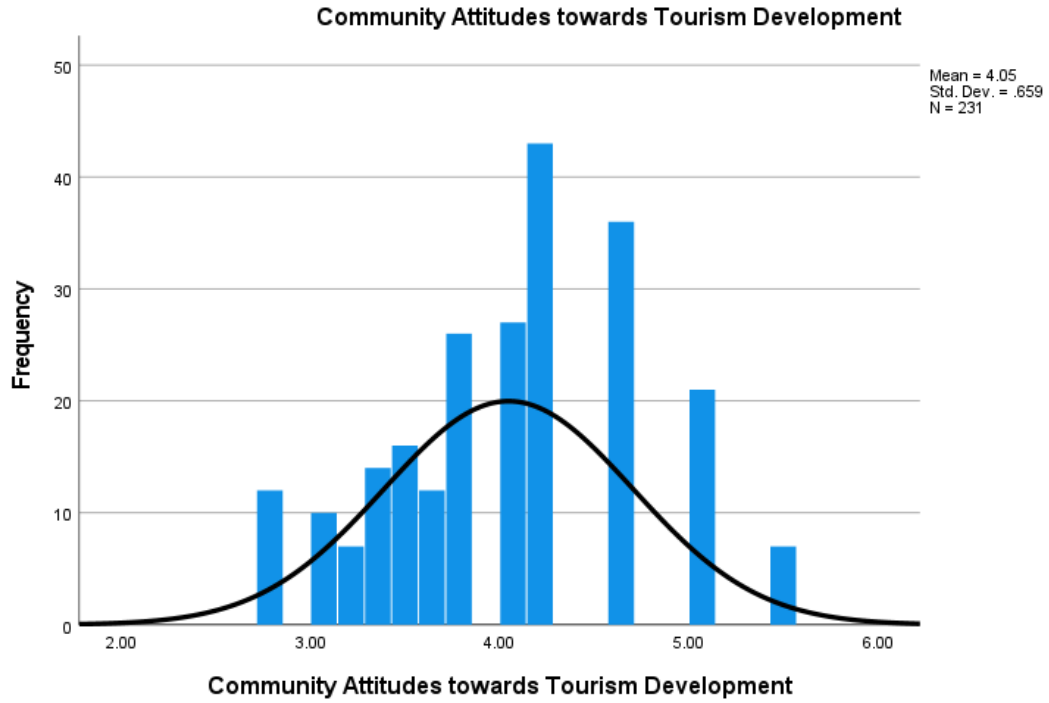

Normal Q-Q Plot of Social-cultural Impacts
Expected Normal
3
2
1
0
-1
-2
-3
0
1
2
3
4
5
6
Observed Value

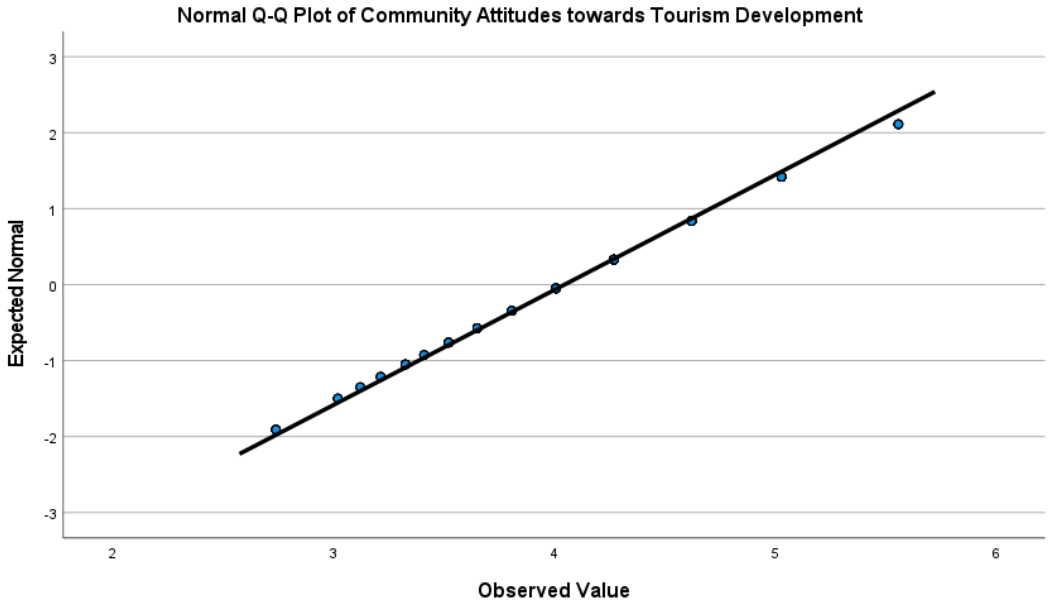

Economic Impacts
Mean = 3.98
Std. Dev. = .661
N = 231
Frequency
40
30
20
10
0
2.50
3.00
3.50
4.00
4.50
5.00
5.50
Economic Impacts


Normal Q-Q Plot of Economic Impacts
Expected Normal
3
2
1
0
-1
-2
-3
2
3
4
5
6
Observed Value


Community Participation
Mean = 4.01
Std. Dev. = .765
N = 231
Frequency
50
40
30
20
10
0
2.00
3.00
4.00
5.00
6.00
Community Participation


Normal Q-Q Plot of Community Participation
Expected Normal
3
2
1
0
-1
-2
-3
2
3
4
5
6
Observed Value


Community Attitudes towards Tourism Development
Mean = 4.05
Std. Dev. = .659
N = 231
Frequency
50
40
30
20
10
0
2.00
3.00
4.00
5.00
6.00
Community Attitudes towards Tourism Development


Normal Q-Q Plot of Community Attitudes towards Tourism Development
Expected Normal
3
2
1
0
-1
-2
-3
2
3
4
5
6
Observed Value

Appendix 11: Exploratory Factor Analysis for Tourism Impacts

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.904
Bartlett's Test of Sphericity	Approx. Chi-Square	3309.050
	Df	300
	Sig.	.000

Communalities

	Initial	Extraction
ECOW1	1.000	.559
ECOW2	1.000	.558
ECOW3	1.000	.581
ECOW4	1.000	.677
ECOW5	1.000	.517
ECOW6	1.000	.858
ENVW1	1.000	.650
ENVW2	1.000	.674
ENVW3	1.000	.624
ENVW4	1.000	.673
ENVW5	1.000	.704
ENVW6	1.000	.674
ENVW7	1.000	.738
ENVW8	1.000	.732
ENVW9	1.000	.546
ENVW10	1.000	.587
ENVW11	1.000	.690

ENVW12	1.000	.718
SOCW1	1.000	.777
SOCW2	1.000	.723
SOCW3	1.000	.636
SOCW4	1.000	.642
SOCW5	1.000	.548
SOCW6	1.000	.713
SOCW7	1.000	.599
SOCW8	1.000	.529

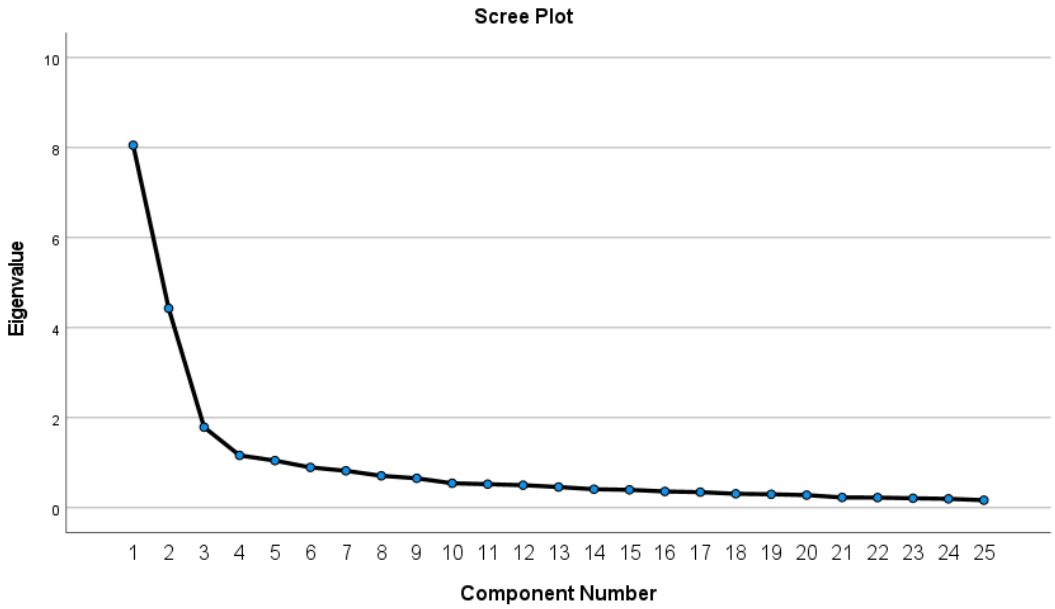
Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.053	32.211	32.211	7.678	30.711	30.711
2	4.429	17.718	49.928	3.924	15.695	46.406
3	1.788	7.154	57.082	2.669	10.676	57.082
4	1.162	4.648	61.730			
5	1.046	4.183	65.913			
6	.895	3.579	69.492			
7	.819	3.277	72.770			
8	.708	2.832	75.602			
9	.653	2.611	78.213			
10	.543	2.170	80.383			
11	.522	2.088	82.471			
12	.500	2.000	84.471			
13	.459	1.837	86.309			

14	.410	1.641	87.949			
15	.397	1.588	89.537			
16	.361	1.442	90.979			
17	.345	1.381	92.360			
18	.309	1.236	93.596			
19	.298	1.191	94.787			
20	.279	1.117	95.904			
21	.227	.908	96.813			
22	.224	.897	97.710			
23	.209	.837	98.546			
24	.197	.788	99.334			
25	.166	.666	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix[a]

a. 3 components extracted.

Rotated Component Matrix[a]

	Component		
	1	2	3
ENVW7	.842		
ENVW5	.825		
ENVW6	.820		
ENVW8	.811		
ENVW4	.807		
ENVW12	.803		
ENVW2	.796		
ENVW11	.794		
ENVW1	.750		
ENVW10	.750		
ENVW3	.744		
ENVW9	.713		
ECOW6			
SOCW1		.856	
SOCW2		.767	
SOCW3		.750	
SOCW4		.734	
SOCW5		.689	
SOCW6		.650	

SOCW7			
ECOW4			.821
ECOW3			.717
ECOW2			.672
ECOW5			.663
ECOW1			.633

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 5 iterations.

Component Transformation Matrix

Component	1	2	3
1	.960	-.278	.032
2	.210	.791	.575
3	.185	.546	-.817

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Appendix 12: Factor Analysis for community participation

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.833
Bartlett's Test of Sphericity	Approx. Chi-Square	514.176
	df	15
	Sig.	.000

Communalities

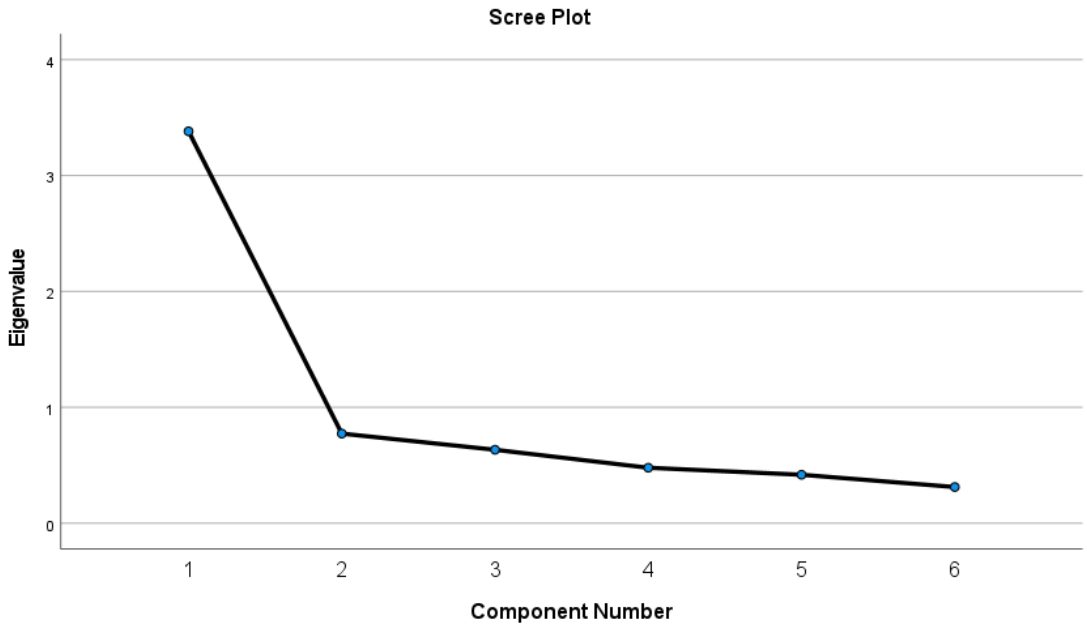
	Initial	Extraction
PAR1	1.000	.520
PAR2	1.000	.562
PAR3	1.000	.596
PAR4	1.000	.455
PAR5	1.000	.645
PAR6	1.000	.604

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.382	56.367	56.367	3.382	56.367	56.367
2	.774	12.894	69.261			
3	.634	10.569	79.830			
4	.479	7.984	87.814			
5	.419	6.976	94.790			
6	.313	5.210	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix[a]

	Component 1
PAR5	.803
PAR6	.777
PAR3	.772
PAR2	.749
PAR1	.721
PAR4	.675

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix 13: Factor Analysis for Community Attitudes towards Tourism Development

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.819
Bartlett's Test of Sphericity	Approx. Chi-Square	464.652
	Df	28
	Sig.	.000

Communalities

	Initial	Extraction
TD1	1.000	.569
TD2	1.000	.504
TD3	1.000	.514
TD4	1.000	.203
TD5	1.000	.399
TD6	1.000	.424
TD7	1.000	.376
TD8	1.000	.366

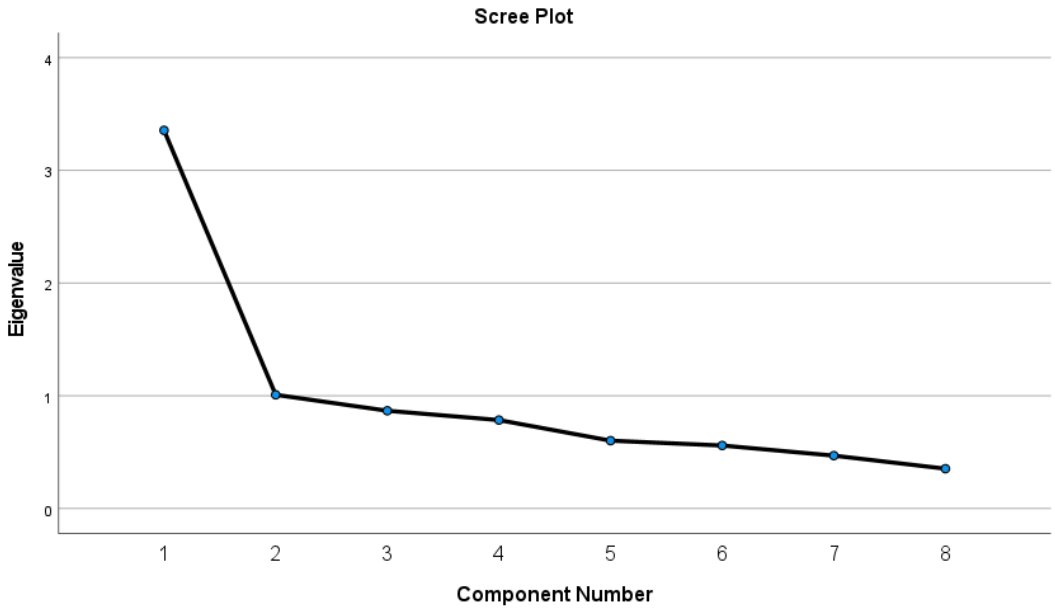
Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.355	41.942	41.942	3.355	41.942	41.942
2	1.009	12.612	54.554			
3	.867	10.843	65.398			
4	.785	9.809	75.206			

5	.602	7.524	82.730			
6	.559	6.989	89.719			
7	.469	5.865	95.584			
8	.353	4.416	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix[a]

	Component 1
TD1	.754
TD3	.717
TD2	.710
TD6	.651
TD5	.632
TD7	.613
TD8	.605
TD4	

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix 14: Regression Analysis for Covariates (SPSS Output)

Descriptive Statistics

	Mean	Std. Deviation	N
Community Attitudes towards Tourism Development	4.0416	.68143	231
Age	2.2165	1.10173	231
Gender	1.47	.500	231
Level of Education	3.08	.952	231

Correlations

		Community Attitudes towards Tourism Development	Age	Gender	Level of Education
Pearson Correlation	Community Attitudes towards Tourism Development	1.000	-.179	.098	.270
	Age	-.179	1.000	.021	-.489
	Gender	.098	.021	1.000	.042
	Level of Education	.270	-.489	.042	1.000
Sig. (1-tailed)	Community Attitudes towards Tourism Development	.	.003	.068	.000
	Age	.003	.	.377	.000
	Gender	.068	.377	.	.263
	Level of Education	.000	.000	.263	.
N	Community Attitudes towards Tourism Development	231	231	231	231
	Age	231	231	231	231
	Gender	231	231	231	231
	Level of Education	231	231	231	231

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.289[a]	.084	.072	.65659	.084	6.912	3	227	.000	1.933

a. Predictors: (Constant), Level of Education, Gender, Age

b. Dependent Variable: Community Attitudes towards Tourism Development

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.940	3	2.980	6.912	.000[b]
	Residual	97.861	227	.431		
	Total	106.801	230			

a. Dependent Variable: Community Attitudes towards Tourism Development

b. Predictors: (Constant), Level of Education, Gender, Age

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	3.439	.257		13.390	.000					
	Age	-.041	.045	-.067	-.915	.361	-.179	-.061	-.058	.760	1.316
	Gender	.123	.087	.090	1.414	.159	.098	.093	.090	.996	1.004
	Level of Education	.167	.052	.233	3.199	.002	.270	.208	.203	.759	1.318

a. Dependent Variable: Community Attitudes towards Tourism Development

Appendix 15: Hierarchical Multiple Linear Regression Analysis (SPSS Output)

a) Economic Impacts

Descriptive Statistics

	Mean	Std. Deviation	N
Community Attitudes towards Tourism Development	4.0416	.68143	231
Age	2.2165	1.10173	231
Gender	1.47	.500	231
Level of Education	3.08	.952	231
Economic Impact	3.9811	.66114	231

Correlations

		Community Attitudes towards Tourism Development	Age	Gender	Level of Education	Economic Impact
Pearson Correlation	Community Attitudes towards Tourism Development	1.000	-.179	.098	.270	.358
	Age	-.179	1.000	.021	-.489	-.237
	Gender	.098	.021	1.000	.042	.081
	Level of Education	.270	-.489	.042	1.000	.241
	Economic Impact	.358	-.237	.081	.241	1.000
Sig. (1-tailed)	Community Attitudes towards Tourism Development	.	.003	.068	<.001	<.001
	Age	.003	.	.377	.000	.000
	Gender	.068	.377	.	.263	.110
	Level of Education	.000	.000	.263	.	.000
	Economic Impact	.000	.000	.110	.000	.
N	Community Attitudes towards Tourism Development	231	231	231	231	231
	Age	231	231	231	231	231
	Gender	231	231	231	231	231
	Level of Education	231	231	231	231	231
	Economic Impact	231	231	231	231	231

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Level of Education, Gender, Age[b]	.	Enter
2	Economic Impact[b]	.	Enter

a. Dependent Variable: Community Attitudes towards Tourism Development

b. All requested variables entered.

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.289[a]	.084	.072	.65659	.084	6.912	3	227	<.001	
2	.410[b]	.169	.154	.62685	.085	23.048	1	226	<.001	1.947

a. Predictors: (Constant), Level of Education, Gender, Age

b. Predictors: (Constant), Level of Education, Gender, Age, Economic Impact

c. Dependent Variable: Community Attitudes towards Tourism Development

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.940	3	2.980	6.912	<.001[b]
	Residual	97.861	227	.431		
	Total	106.801	230			
2	Regression	17.997	4	4.499	11.450	<.001[c]
	Residual	88.804	226	.393		
	Total	106.801	230			

a. Dependent Variable: Community Attitudes towards Tourism Development

b. Predictors: (Constant), Level of Education, Gender, Age

c. Predictors: (Constant), Level of Education, Gender, Age, Economic Impact

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	3.439	.257		13.390	<.001					
	Age	-.041	.045	-.067	-.915	.361	-.179	-.061	-.058	.760	1.316
	Gender	.123	.087	.090	1.414	.159	.098	.093	.090	.996	1.004
	Level of Education	.167	.052	.233	3.199	.002	.270	.208	.203	.759	1.318
2	(Constant)	2.278	.344		6.614	<.001					
	Age	-.011	.044	-.018	-.251	.802	-.179	-.017	-.015	.744	1.345
	Gender	.090	.083	.066	1.088	.278	.098	.072	.066	.990	1.011
	Level of Education	.132	.050	.185	2.629	.009	.270	.172	.159	.743	1.346
	Economic Impact	.313	.065	.304	4.801	<.001	.358	.304	.291	.917	1.090

a. Dependent Variable: Community Attitudes towards Tourism Development

b) Environmental Impacts

Descriptive Statistics

	Mean	Std. Deviation	N
Community Attitudes towards Tourism Development	4.0416	.68143	231
Age	2.2165	1.10173	231
Gender	1.47	.500	231
Level of Education	3.08	.952	231
Environmental Impact	3.0424	1.18898	231

Correlations

		Community Attitudes towards Tourism Development	Age	Gender	Level of Education	Environmental Impact
Pearson Correlation	Community Attitudes towards Tourism Development	1.000	-.179	.098	.270	-.186
	Age	-.179	1.000	.021	-.489	-.243
	Gender	.098	.021	1.000	.042	.098
	Level of Education	.270	-.489	.042	1.000	.075
	Environmental Impact	-.186	-.243	.098	.075	1.000
Sig. (1-tailed)	Community Attitudes towards Tourism Development	.	.003	.068	<.001	.002
	Age	.003	.	.377	.000	.000
	Gender	.068	.377	.	.263	.069
	Level of Education	.000	.000	.263	.	.129
	Environmental Impact	.002	.000	.069	.129	.
N	Community Attitudes towards Tourism Development	231	231	231	231	231
	Age	231	231	231	231	231
	Gender	231	231	231	231	231
	Level of Education	231	231	231	231	231
	Environmental Impact	231	231	231	231	231

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Level of Education, Gender, Age[b]	.	Enter
2	Environmental Impact[b]	.	Enter

a. Dependent Variable: Community Attitudes towards Tourism Development

b. All requested variables entered.

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.289[a]	.084	.072	.65659	.084	6.912	3	227	<.001	
2	.374[b]	.140	.125	.63752	.056	14.778	1	226	<.001	1.944

a. Predictors: (Constant), Level of Education, Gender, Age

b. Predictors: (Constant), Level of Education, Gender, Age, Environmental Impact

c. Dependent Variable: Community Attitudes towards Tourism Development

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.940	3	2.980	6.912	<.001[b]
	Residual	97.861	227	.431		
	Total	106.801	230			
2	Regression	14.947	4	3.737	9.194	<.001[c]
	Residual	91.855	226	.406		
	Total	106.801	230			

a. Dependent Variable: Community Attitudes towards Tourism Development

b. Predictors: (Constant), Level of Education, Gender, Age

c. Predictors: (Constant), Level of Education, Gender, Age, Environmental Impact

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	3.439	.257		13.390	<.001					
	Age	-.041	.045	-.067	-.915	.361	-.179	-.061	-.058	.760	1.316
	Gender	.123	.087	.090	1.414	.159	.098	.093	.090	.996	1.004
	Level of Education	.167	.052	.233	3.199	.002	.270	.208	.203	.759	1.318
2	(Constant)	3.945	.282		13.992	<.001					
	Age	-.083	.045	-.135	-1.848	.066	-.179	-.122	-.114	.715	1.399
	Gender	.158	.085	.116	1.870	.063	.098	.123	.115	.984	1.016
	Level of Education	.156	.051	.217	3.063	.002	.270	.200	.189	.756	1.323
	Environmental Impact	-.141	.037	-.246	-3.844	<.001	-.186	-.248	-.237	.927	1.078

a. Dependent Variable: Community Attitudes towards Tourism Development

c) Socio-Cultural Impacts

Descriptive Statistics

	Mean	Std. Deviation	N
Community Attitudes towards Tourism Development	4.0416	.68143	231
Age	2.2165	1.10173	231
Gender	1.47	.500	231
Level of Education	3.08	.952	231
Social-cultural impact	3.4918	.94633	231

Correlations

		Community Attitudes towards Tourism Development	Age	Gender	Level of Education	Social-cultural impact
Pearson Correlation	Community Attitudes towards Tourism Development	1.000	-.179	.098	.270	.578
	Age	-.179	1.000	.021	-.489	-.174
	Gender	.098	.021	1.000	.042	.095
	Level of Education	.270	-.489	.042	1.000	.286
	Social-cultural impact	.578	-.174	.095	.286	1.000
Sig. (1-tailed)	Community Attitudes towards Tourism Development	.	.003	.068	<.001	<.001
	Age	.003	.	.377	.000	.004
	Gender	.068	.377	.	.263	.076
	Level of Education	.000	.000	.263	.	.000
	Social-cultural impact	.000	.004	.076	.000	.
N	Community Attitudes towards Tourism Development	231	231	231	231	231
	Age	231	231	231	231	231
	Gender	231	231	231	231	231
	Level of Education	231	231	231	231	231
	Social-cultural impact	231	231	231	231	231

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Level of Education, Gender, Age[b]	.	Enter
2	Social-cultural impact[b]	.	Enter

a. Dependent Variable: Community Attitudes towards Tourism Development

b. All requested variables entered.

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.289[a]	.084	.072	.65659	.084	6.912	3	227	<.001	
2	.591[b]	.349	.338	.55460	.265	92.159	1	226	<.001	2.013

a. Predictors: (Constant), Level of Education, Gender, Age

b. Predictors: (Constant), Level of Education, Gender, Age, Social-cultural impact

c. Dependent Variable: Community Attitudes towards Tourism Development

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.940	3	2.980	6.912	<.001[b]
	Residual	97.861	227	.431		
	Total	106.801	230			
2	Regression	37.287	4	9.322	30.306	<.001[c]
	Residual	69.514	226	.308		
	Total	106.801	230			

a. Dependent Variable: Community Attitudes towards Tourism Development

b. Predictors: (Constant), Level of Education, Gender, Age

c. Predictors: (Constant), Level of Education, Gender, Age, Social-cultural impact

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	3.439	.257		13.390	<.001					
	Age	-.041	.045	-.067	-.915	.361	-.179	-.061	-.058	.760	1.316
	Gender	.123	.087	.090	1.414	.159	.098	.093	.090	.996	1.004
	Level of Education	.167	.052	.233	3.199	.002	.270	.208	.203	.759	1.318
2	(Constant)	2.443	.240		10.158	<.001					
	Age	-.025	.038	-.040	-.646	.519	-.179	-.043	-.035	.758	1.319
	Gender	.060	.074	.044	.819	.413	.098	.054	.044	.988	1.012
	Level of Education	.067	.045	.094	1.480	.140	.270	.098	.079	.719	1.392
	Social-cultural impact	.389	.041	.540	9.600	<.001	.578	.538	.515	.909	1.100

a. Dependent Variable: Community Attitudes towards Tourism Development

Appendix 16: Mediation Analysis Output 1 (IV=Economic Impacts)

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : NTD
    X  : NECO
    M  : NPAR

Covariates:
 Age      Gender   Educ

Sample
Size:  231

**************************************************************************
OUTCOME VARIABLE:
 NPAR

Model Summary
         R       R-sq        MSE          F        df1        df2          p
      .4001      .1601      .5424    10.7680     4.0000   226.0000     .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.9466      .4047     4.8106      .0000     1.1493     2.7440
NECO          .3906      .0767     5.0919      .0000      .2394      .5417
Age           .0114      .0511      .2224      .8242     -.0894      .1121
Gender        .0141      .0976      .1448      .8850     -.1783      .2065
Educ          .1484      .0592     2.5092      .0128      .0319      .2650

**************************************************************************
OUTCOME VARIABLE:
 NTD

Model Summary
         R       R-sq        MSE          F        df1        df2          p
      .6865      .4713      .2509    40.1197     5.0000   225.0000     .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.2781      .2890     4.4229      .0000      .7087     1.8476
NECO          .1128      .0551     2.0480      .0417      .0043      .2214
NPAR          .5136      .0452    11.3526      .0000      .4245      .6028
Age          -.0168      .0348     -.4823      .6301     -.0853      .0517
Gender        .0832      .0664     1.2523      .2117     -.0477      .2140
Educ          .0561      .0408     1.3754      .1704     -.0243      .1365

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 NTD
```

```
Model Summary
        R       R-sq        MSE          F        df1        df2          p
      .4105      .1685      .3929    11.4500     4.0000   226.0000     .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    2.2780      .3444     6.6142      .0000     1.5993     2.9566
NECO         .3134      .0653     4.8009      .0000      .1848      .4421
Age         -.0109      .0435     -.2513      .8018     -.0967      .0748
Gender       .0904      .0831     1.0882      .2776     -.0733      .2542
Educ         .1323      .0503     2.6286      .0092      .0331      .2316


************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      .3134      .0653     4.8009      .0000      .1848      .4421

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      .1128      .0551     2.0480      .0417      .0043      .2214

Indirect effect(s) of X on Y:
         Effect     BootSE   BootLLCI   BootULCI
NPAR      .2006      .0430      .1212      .2894

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----
```

Appendix 17: Mediation Analysis Output 2 (IV=Environmental Impacts)

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : NTD
    X  : NENV
    M  : NPAR

Covariates:
 Age      Gender   Educ

Sample
Size:  231

**************************************************************************
OUTCOME VARIABLE:
 NPAR

Model Summary
        R       R-sq        MSE          F        df1        df2          p
      .3312      .1097      .5750     6.9623     4.0000   226.0000     .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    3.9280      .3353    11.7139      .0000     3.2673     4.5888
NENV        -.1492      .0437    -3.4168      .0008     -.2353     -.0632
Age         -.0710      .0537    -1.3221      .1875     -.1767      .0348
Gender       .0921      .1008      .9140      .3617     -.1065      .2908
Educ         .1795      .0604     2.9720      .0033      .0605      .2984

**************************************************************************
OUTCOME VARIABLE:
 NTD

Model Summary
        R       R-sq        MSE          F        df1        df2          p
      .6872      .4722      .2505    40.2580     5.0000   225.0000     .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    1.8920      .2806     6.7424      .0000     1.3391     2.4450
NENV        -.0632      .0296    -2.1370      .0337     -.1214     -.0049
NPAR         .5226      .0439    11.9009      .0000      .4360      .6091
Age         -.0463      .0356    -1.3019      .1943     -.1164      .0238
Gender       .1103      .0667     1.6546      .0994     -.0211      .2417
Educ         .0617      .0406     1.5193      .1301     -.0183      .1418

************************ TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 NTD
```

```
Model Summary
       R       R-sq        MSE          F        df1        df2          p
      .3741      .1399      .4064     9.1936     4.0000   226.0000     .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     3.9447      .2819    13.9915      .0000     3.3891     4.5002
NENV         -.1411      .0367    -3.8443      .0002     -.2135     -.0688
Age          -.0834      .0451    -1.8479      .0659     -.1723      .0055
Gender        .1584      .0847     1.8696      .0628     -.0086      .3254
Educ          .1555      .0508     3.0631      .0025      .0555      .2555


************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI
     -.1411      .0367    -3.8443      .0002     -.2135     -.0688

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
     -.0632      .0296    -2.1370      .0337     -.1214     -.0049

Indirect effect(s) of X on Y:
         Effect     BootSE   BootLLCI   BootULCI
NPAR     -.0780      .0246     -.1271     -.0304

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----
```

Appendix 18: Mediation Analysis Output 3 (IV= Socio-cultural Impacts)

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : NTD
    X  : NSOC
    M  : NPAR

Covariates:
 Age      Gender   Educ

Sample
Size:  231

**************************************************************************
OUTCOME VARIABLE:
 NPAR

Model Summary
         R       R-sq        MSE          F        df1        df2          p
      .6899      .4760      .3384    51.3150     4.0000   226.0000     .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    1.9422      .2523     7.6995      .0000     1.4452     2.4393
NSOC         .5668      .0425    13.3335      .0000      .4830      .6506
Age         -.0022      .0400     -.0549      .9562     -.0810      .0766
Gender      -.0366      .0772     -.4741      .6359     -.1887      .1155
Educ         .0460      .0475      .9678      .3342     -.0476      .1396

**************************************************************************
OUTCOME VARIABLE:
 NTD

Model Summary
        R       R-sq        MSE          F        df1        df2          p
      .6943      .4821      .2458    41.8839     5.0000   225.0000     .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    1.6061      .2416     6.6490      .0000     1.1301     2.0821
NSOC         .1448      .0484     2.9908      .0031      .0494      .2403
NPAR         .4308      .0567     7.5995      .0000      .3191      .5426
Age         -.0237      .0341     -.6948      .4879     -.0908      .0435
Gender       .0760      .0658     1.1556      .2491     -.0536      .2057
Educ         .0472      .0406     1.1636      .2458     -.0327      .1272

************************ TOTAL EFFECT MODEL ************************
OUTCOME VARIABLE:
 NTD
```

```
Model Summary
        R       R-sq        MSE          F        df1        df2          p
      .5909      .3491      .3076    30.3061     4.0000   226.0000     .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     2.4429      .2405    10.1584      .0000     1.9691     2.9168
NSOC          .3890      .0405     9.6000      .0000      .3092      .4689
Age          -.0246      .0381     -.6460      .5189     -.0998      .0505
Gender        .0603      .0736      .8194      .4134     -.0847      .2052
Educ          .0670      .0453     1.4799      .1403     -.0222      .1563


************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      .3890      .0405     9.6000      .0000      .3092      .4689

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      .1448      .0484     2.9908      .0031      .0494      .2403

Indirect effect(s) of X on Y:
         Effect     BootSE   BootLLCI   BootULCI
NPAR      .2442      .0423      .1617      .3311

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----
```

Appendix 19: Budget for the Thesis

Research title: Mediating Effect of Community Participation on the Relationship between Tourism Impacts and Community Attitudes towards Tourism Development in Rimoi National Reserve, Kenya. Data Collection Period: November -December 2022

S/N	ITEM	UNIT	Ksh	TOTAL COST Ksh
1.	**Research Ethical clearance**			
	Research license by National Commission for Science, Technology and innovation (NACOSTI).	1	1,000	1,000
2.	**Field Research**			
	Vehicle hire/Travel within.	30days	1000	30,000
	Research Assistant field allowance	20days	1500	30,000
	Research Assistant's meals and transport.	20days	500	10,000
	Communication/ Airtime.		3000	3,000
3.	**Stationary**			
	Reams of paper for questionnaires & thesis for examination submission.	7	400	2,800
	Reams of paper for Final Submission of the thesis.	4	400	2,800
	Printing costs.	5400pages	3	16,200
	Spiral binding cost.	8copies	240	1,920
	Hardcover binding at the library	8copies	400	3,200
4.	**Editorial work**	250 pages	144,000	144,000
	Total			**414,506**

Appendix 20: Work -Action Plan and Time schedule

Study Tittle: Mediating Effect of Community Participation on the Relationship between Tourism Impacts and Community Attitudes towards Tourism Development in Rimoi National Reserve, Kenya.

Strategic Action Description	**Resource Required**	**Time frame**	**Outcome desired.**
Development of the proposal	Literature research & Review	March-June 2022	Proposal document
Submission of Proposal	Internet	July, 2022	Approval
Corrections and Suggestions from supervisors	Corrections and suggestions from supervisors received	July-August 2022	Corrected and approved proposal ready for defence
Proposal Defence and Correction after Defence	Defence	August-Sept.	Approved proposal document
Submission to Graduate School	Approved Proposal Document	Sept-October, 2022	
Secure Research permit	Funds	Sept-Oct 2022	Research Permit.
Appointment with County officials.	Research Permit	October-Nov 2020	Authorization letter.
Appointment with local administrators at Rimoi and selecting, training research assistants	Permission Letters from NASCOTI plus introductory letters from County office	October-Nov. 2022	Sampling Frame.
Data collection.	Funds	December -January 2022	Completed questionnaires
Data screen and Analysis	SPSS version 23	January 2023	Outputs.
Report writing	Data outputs	January-March 2023	Outputs
Submission of drafts to supervisors	Analysis and Results output	March 2023	Corrections and suggestions
Submission of draft with corrections to supervisors	Approved document	April 2023	Approved document
Editorial work	Funds	April -May 2023	Drafts and final copy
Publication of articles	Report outputs and funds	Apr-May 2023	Articles from the report.
Submission of the thesis	Report.	May- July2023	Submission and defense.