

**TOURISM DESTINATION COMPETITIVENESS ACROSS EASTERN  
AND SOUTHERN AFRICA: AN APPLICATION OF THE TRAVEL AND  
TOURISM COMPETITIVENESS INDEX**

**BY**

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## DECLARATION

This research paper is my original work and has not been presented for any award or degree in any other University.

Signature.......... Date.....03/11/2023.....

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## Declaration by the supervisor

This research paper has been submitted for examination with my approval as university supervisor.

Signed.......... Date...5<sup>th</sup> December 2023...

Daniel Abala

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

EU – European Union

ICT – Information Communication Technology

IUCN - International Union for the Conservation of Nature

GDP – Gross Domestic Product

RCA – Revealed Comparative Advantage

TALC – Tourism Area Life Cycle

TDC – Tourism Destination Competitiveness

TTC – Travel and Tourism Competitiveness

TTCI – Travel and Tourism Competitiveness Index

UNWTO – United Nations World Tourism Organization

UNESCO - United Nations Educational, Scientific and Cultural Organization

USD – United States Dollar

WEF – World Economic Forum

WTTC – World Travel and Tourism Council

## DEFINITION OF TERMS

*Allocentric tourist* – refers to a type of traveler who seeks adventure, novelty, and unique experiences when they explore new destinations. They are motivated by a desire to immerse themselves in local cultures, traditions, and environments that may not be as commonly visited by mainstream tourists.

*Domestic Tourism* – comprises the travel and exploration activities carried out by locals or residents of a country within their own country.

*Equifinality* – is a term used in systems theory and it refers to the idea that in open systems, various methods or pathways can lead to the same or similar outcomes.

*International Tourism* – refers to the situation in which individuals travel to and explore places outside their own countries of origin

*Inbound tourism* – refers to trips to a country by people who are not locals/natives. That is they are foreigners. It is also referred to as ‘foreign tourism’ or ‘international tourism’.

*Non-standard exports* – also known as non-traditional exports, that is, exports that do not fall under the category of goods and services. International tourism is an example of a non-standard export as it implies a source of receipts and consumption at the place of origin (in situ)/ at the tourist destination.

*Outbound tourism* – refers to holidays outside the country by residents.

*Psychocentric tourist* – refers to a type of traveler who prefers familiar, well-established, and often mainstream tourist destinations. They tend to avoid taking risks and are more likely to choose destinations and experiences that are well-known.

*Revealed Comparative Advantage* – is a concept used to determine the comparative benefit or drawback of a country in a specific class of goods or services based on its trade flows. In terms of tourism, it helps identify the comparative gain or drawback of a country or region in terms of its tourism-related activities



*Systems Thinking* – refers to the approach that involves the analysis and understanding of the interrelationships among various components and factors within a system to comprehend how they collectively contribute to, or influence, a particular outcome.

*Tourism Area Life Cycle (TALC)* – is a model advanced by Richard Butler which is used to describe and predict the progression of tourist numbers and the development of a tourist destination over time.

*Tourist arrivals* – refers to the number of individuals who visit a destination outside their home country for tourism purposes.

*Tourist destination* – refers to a city, town, region or country that attracts and appeals to tourists.

*Tourism Destination Competitiveness* – refers to the ability of a tourist destination to effectively contest in the tourism industry. It involves a combination of factors that make a destination appealing and competitive to tourists.

## ABSTRACT

*The growing competition among tourism destinations reflects the increasing global demand for travel experiences and the necessity for destinations to differentiate themselves to attract more visitors. Despite the steady growth in tourist numbers and revenues across Africa, the pace of development in Sub-Saharan Africa lags behind many global tourist destinations including some of those in Northern Africa. To empower policymakers and stakeholders with the knowledge to formulate strategies that enhance their regions' appeal, this study investigated destination competitiveness across Eastern and Southern Africa by examining the factors that drive competitiveness. The study utilized the feasible generalized least squares (GLS) method for panel data analysis with random effects. The results highlighted the significance of International Openness as a key driver thus calling for robust policies aimed at removing travel barriers and bolstering connectivity. Other drivers included factors such as Human Resources, Natural Resources and ICT. The scope of the research spanned 14 countries in the region that offer a similar tourist experience. Ultimately, this research is meant to equip policymakers to promote a competitive tourism industry across Eastern and Southern Africa.*

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background**

The United Nations World Tourism Organization (UNWTO) 2018 report noted that the travel industry is the largest and fastest-growing sector in the world. The sector is known to be primarily comprised of small, micro and, mid-sized businesses and is largely labour-intensive and thus a significant job creator and employer. It has been estimated that one job in the sector creates one and a half additional jobs directly and indirectly (United Nations Environment Programme, 2011). Additionally, the sector is a significant provider of foreign currency in reference to non-standard exports. In 2019, it was estimated that the sector generated USD 5 billion per day solely in exports. This was able to translate into USD 1.7 trillion a year based only on tourism receipts and passenger transport (World Tourism Organization (UNWTO), 2021a). Moreover, the sector contributes to the economic growth of economies through backward and forward linkages as well as spinoff benefits where it develops infrastructure that assists other industries (Sotiriadis and Varvaressos, 2015).

Tourism essentially involves the movement of people who consume an intangible product that is at the destination point. This means that the number of tourists at the destination points matters as it translates into revenue. Globally, the number of international visitors to tourist destinations has been growing steadily over the years falling only during times of economic downturns. For instance, events like the Arab Spring, which was marked by political unrest in Northern Africa and the Middle Eastern region, saw tourist arrivals significantly decline in those regions. Similarly, the COVID 19 pandemic forced countries to shut their borders in a bid to deter the spread of the deadly disease.

The rise in tourism numbers is evidenced by the fact that in 1950 global international tourists totaled some 25 million people and this grew steadily to 528 million international arrivals in 1995, 763 million arrivals in 2004 to an impressive 1460 million arrivals in 2019. The arrivals in 2019 translated to a 3 percent increase in tourism receipts to a total of USD 1481 billion (World Tourism Organization (UNWTO), 2015, 2021a).

According to UNWTO, the increase in arrivals of international tourists was driven by factors such as increased market openness, an expanding middle class, rapid urbanization as well as affordability of travel and, rapid visa facilitation. The share of people travelling for leisure purposes among the global international arrivals increased to 55 percent, while people travelling for religious and health purposes came second at 28 percent of the global international arrivals. Travel for business-related purposes accounted for 11 percent of the global international arrivals.

The rapid growth has also been noticed in the travel sector which goes hand in hand with tourism. The trend to fly further over shorter periods of time increased and this was evidenced by the steady growth of air travel whose share in the transportation of international arrivals grew from 46 percent in 2000 to 59 percent in 2019 as the share of land transport dipped from 49 percent in 2000 to 35 percent in 2019 (United Nations Environment Programme, 2011; World Tourism Organization (UNWTO), 2021a).

### **1.1.1 The African Tourism Perspective**

In Africa, tourism is a major contributor to economic growth but, just like other countries globally its economic significance is highly variable. However, it is worth noting that tourism is considered quite important in most African countries. For instance, the northern region of Africa is regarded as a magnet for both cultural and adventure tourism which has been able to contribute to its economic growth. This is evidenced by countries like Morocco where the sector's input to Gross Domestic Product (GDP) has grown steadily over the years to record highs of over 7 percent. Similarly, countries like Tanzania, Kenya and South Africa rely greatly on the sector as a contributor to foreign exchange earnings (Oluwaseyi, 2019; World Tourism Organization (UNWTO), 2021b). Furthermore, Rwanda, which is an emerging tourism destination, has invested significantly in the sector to boost its returns. A notable instance is Rwanda's strategic partnerships with globally renowned football clubs like Arsenal and Paris St. Germain. The partnership involves displaying the 'Visit Rwanda' brand on the club's jerseys which will guarantee global visibility and increased exposure for the country. This strategic move aims to market the destination in football-loving countries, ultimately boosting tourism arrivals and overall earnings (Assamah and Yuan, 2023).

Besides its economic contribution in terms of revenue, linkages, and spinoff benefits, the sector is highly valued by developing countries because it is largely unregulated with regards to protectionist barriers from source countries and thus has a larger growth capability. The sector also has the potential to reduce poverty if concerted steps are taken to ensure its growth is pro-poor in that it maximizes linkages and spinoff benefits (Henama, 2013).

Africa as a tourist destination has evolved over the years and this is evidenced by the fact that initially, most tourists visited the continent solely for big game hunting but with time this has evolved and Africa now receives middle-income tourists who mainly frequent among others the coastal resorts and game parks.

In 2019, a total of 70 million international tourists visited Africa which was a 2 percent increase from the previous year. This translated to USD 38 billion in tourism receipts which was a 3 percent share of global tourism receipts. For North Africa, this was a 6 percent increase in tourism arrivals to a total of 25.6 million international arrivals while Sub-Saharan Africa recorded a less than 1 percent increase with 44.3 million international arrivals. This translated to a more than 10 percent increase in tourism receipts in North Africa and a 3 percent decline in receipts in Sub-Saharan Africa. Moreover, the annual average growth rate for tourism in North and Sub-Saharan Africa was estimated at 3 percent and 4.2 percent respectively from the year 2010 to 2019.

### **1.1.2 Destination Competitiveness**

Ritchie and Crouch (2000) referred to competitiveness as a country's ability to enhance its national wealth by efficiently managing its resources and processes, as well as by demonstrating appeal, assertiveness, and proximity. In the contemporary tourist landscape, competition among tourist destinations is increasing yearly as a result of the increase in the number of tourist destinations, compelling countries to vie for larger market shares within the global tourism marketplace.

Tourism competitiveness must be considered in a multidimensional sense. This is because there is no single factor that makes a region more attractive but rather a combination of factors. The factors include those inherent, such as geographical location, natural resources and biodiversity,

as well as others that have been built or influenced by human agents such as infrastructure, security and technology. Andrades-Caldito et al. (2014) claimed that competitiveness is vital for the survival of a tourist destination and thus has to be pursued fervently regardless of the life cycle the area presently faces.

### **1.1.3 The Tourism and Travel Competitiveness Index (TTCI)**

In 2007, the World Economic Forum created and published an index called the Tourism and Travel Competitiveness Index which was meant to be a benchmarking tool that measured destination competitiveness (Blanke and Chiesa, 2007). The index replaced the World Travel and Tourism Council's (WTTC) Competitiveness Monitor whose main focus was analyzing the tourism industry's impact on a country's economy periodically. In contrast, the TTCI was seen to provide a broader evaluation of a country's overall competitiveness as it encompasses many dimensions.

Since its inception in 2007, the index has been published every two years with its aim cited as 'to compare and rank the competitiveness' of over 100 select economies and assess the factors and policies that enhance the appeal of nurturing the travel and tourism industry in those nations. The index has 4 sub-indices with 14 pillars and 90 specific metrics allocated across the pillars. The four sub-indices include Enabling Environment, Infrastructure, Travel and Tourism Policy and Enabling Conditions and Natural and Cultural Resources. For each country evaluated in the index, a score ranging from 1 to 7 is assigned for every pillar assessed. The Travel and Tourism Competitiveness Index (TTCI) offers a thorough valuation of a nation's potential to deliver sustainable economic benefits through tourism. This is particularly significant as tourism competitiveness is widely regarded as the forerunner to successful tourism performance (Croes and Kubickova, 2013).

To date, the index represents the most significant contribution to destination competitiveness. The index is considered revolutionary due to its reliability and precision of information as well as the fact that it allows for comparison of tourist destinations. Additionally, the index is good for visibility as highly ranked regions receive a good deal of attention from stakeholders and policymakers (Abreu-Novais et al., 2016; Andrades and Dimanche, 2017). However, it has faced

a number of criticisms such as its lack of strong causal conclusions as well as the fact that lack of data in a recorded region is detrimental to its ranking(Wu, 2011).

## **1.2 Statement of the Problem**

Recent data has shown that Africa receives only 3 percent of the international tourists worldwide; this is as a result of increased competitiveness between destinations. Additionally, studies have highlighted a noticeable shift in the evaluation of destination competitiveness. The shift now emphasizes the scrutiny of factors that influence competitiveness within distinct geographical areas since universality is hard to achieve. Understanding how tourism destinations establish, sustain, safeguard, or enhance their competitive stances in a progressively competitive environment and global tourist marketplace is a challenge but the starting point is the identification of the factors that influence competitiveness across these regions.

Tourism Destination Competitiveness (TDC) brings both challenges and opportunities to tourist spots. On the one hand it intensifies competition from neighboring destinations, necessitating the need for differentiation and branding. For instance, countries like Kenya and South Africa are facing branding issues given that countries like Tanzania, Namibia, and Uganda offer similar tourism experiences (Hankinson, 2004). On the other hand, tourism competitiveness is able to drive substantial economic growth if it is well handled.

Central to the assessment and enhancement of competitiveness is the Tourism and Travel Competitiveness Index (TTCI) whose scoring and ranking highlight a country's advantages that render it appealing for tourism sector development.

The focus on destination competitiveness has profound implications for the tourism industry's resilience and vitality. The aim of this study is to examine the intricate dynamics of competitiveness, especially within the African context, shedding light on the factors that are shaping and influencing selected African destinations' ability to thrive in the global tourism arena.

### **1.3 Research Questions**

1. How do the factors that go into the TTCI influence the overall competitiveness across Eastern and Southern Africa tourist destinations?
2. What are the key TTCI factors that drive the competitiveness of Eastern and Southern Africa tourism destinations?
3. What policy implications can we draw from the analysis of the factors that drive the TTCI?

### **1.4 Objectives of the study**

#### **1.4.1 General Objective**

The general objective of this study is to evaluate destination competitiveness in the African context using the TTCI.

#### **1.4.2 Specific objectives**

1. To analyze the factors that drive Travel and Tourism Competitiveness across Eastern and Southern Africa.
2. To identify and empirically estimate the major factors impacting tourism competitiveness across Eastern and Southern Africa travel destinations based on the theoretical framework.
3. To draw policy implications based on the findings of the study.

### **1.5 Relevance of the study**

The study aims to fill a significant gap in the literature by examining the impact the pillars of the TTCI index have on tourism destination competitiveness within the diverse landscapes of African destinations. The target is to provide evidence-based insights that might assist in identifying areas for tourist investment and improvement, this paper offers great promise for policymakers in that regard. By doing so, it has the potential to drive economic growth through



increased revenue generation and job creation, while also ensuring that resources are allocated optimally.

Furthermore, focusing on Eastern and Southern African destinations, this study's findings can enhance competitiveness strategies for these areas, better positioning them in the global tourism landscape. The identification of key factors that influence competitiveness may highlight areas where cross-border collaborations may be beneficial. This may in turn lead to the discovery of niche tourism experiences.

Moreover, this study's examination of Eastern and Southern African destinations' performance offers valuable insights that may help policymakers to develop targeted strategies. These strategies may involve adjusting existing tourism policies and incentives to enhance the sustainability of the sector. This in turn will be able to set the stage for the tourism industry to thrive.

Finally, this study could guide stakeholders and investors in making well-informed decisions that positively shape the trajectory of tourism growth and development in Africa. The findings may serve as a basis for strategic planning, paving the way for positive and sustainable outcomes for the tourism sector in the region.

## **1.6 Organization of the paper**

Following this introduction, the next section presents a review of the literature in this area of study starting with theoretical literature on tourism competitiveness of tourist destinations, followed by recent empirical literature on the subject. It concludes with an overview of the literature, focusing on the research gaps identified from the review. This is then followed in Section Three by the methodology consisting of a theoretical framework, and empirical model specification as well as the diagnostic tests to be carried out on the data. The section also provides a brief explanation of the data types, sources of the data and their measurements. The variables to be used in the analysis are clearly defined including their hypothesized relationships to the dependent variable. Section four holds the results of the tests that were outlined in section three along with the discussion of the results. Finally, section five contains the summary and conclusion of the study along with the policy implications.

## **CHAPTER 2**

### **LITERATURE REVIEW**

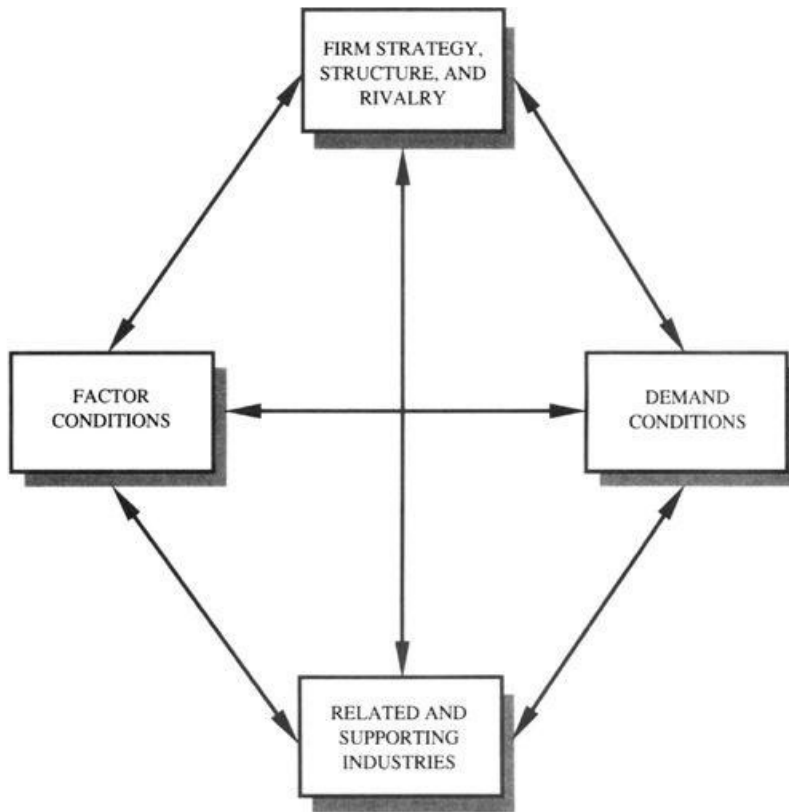
#### **2.0 Introduction**

This chapter presents a summary of the existing literature, encompassing diverse dimensions. It includes an exploration of factors employed in the analysis of competitiveness, delving into distinctions in competitiveness attributable to differences in geographical locations. Additionally, a critique of the summarized literature is conducted.

#### **2.1 Theoretical Literature**

Michael Porter's Diamond Theory was developed to answer two key questions: why some countries attract high capital inflows in specific industries, and why some countries excel in creating and sustaining competitive advantages against the world's best competitors in certain fields. Traditionally, the questions were answered using Adam Smith's 'Wealth of the Nations' thesis and David Ricardo's Comparative Advantage theory whereby the pursuit of self-interest and production of low cost goods would naturally lead to international advantages. However, Porter (1990) felt that they were insufficient in explaining the rise of multinational corporations that compete at home and abroad. Thus Porter went about answering these questions by using an industry in a nation as his unit of analysis. His goal was to explain why firms based in a nation can compete successfully against foreign rivals in particular industries.

The theory outlined four main attributes that he believed revealed how businesses enjoy a national advantage in the international markets. Namely; company structure, rivalry and strategy, factor conditions, demand conditions and supporting and related industries. He claimed that if the four attributes were favourable, companies would be able to innovate and stay competitive.



*Source: Porter (1990)*

**Figure 1: Diamond Theory of Competitive Advantage**

Company structure, rivalry and strategy is the first attribute he identified. The attribute focuses on competition in the local markets. This competition is necessary and companies have to strive to excel against their competitors. The regions where firms operate are seen to have an impact on the structure and strategies that are adopted by firms to compete. This means that the strategies adopted will differ from region to region. The competition present is considered to be healthy and essential as it drives firms to innovate thereby performing better. Additionally, constant competition brings about consistency in the performance of a firm and this makes it to be viewed as reliable and trustworthy globally in the long run.

The second attribute Michael Porter identifies is Factor conditions. Factor conditions refer to the resources available to businesses and are seen as nothing more than inputs. The stock of resources available to nations differs and this plays a role in its competitive advantage. The role is however more complex than often understood as a huge abundance of resources may not necessarily translate to a nation having a competitive advantage. He grouped the resources into

five broad categories, namely; human resources, natural resources, knowledge resources, capital resources and infrastructure which consisted of the transport systems and cultural resources that affect the quality and attractiveness of a nation. He further divided the factors into various types. The first type was basic and advanced factors. Basic factors included natural resources, climate, location, unskilled and semi-skilled labour as well as debt capital. These factors are considered unimportant to competitive advantage as the advantage they provide is unsustainable due to their diminishing necessity, widening availability and ready access to investors. Advanced factors included infrastructure, Information and Communication technology and a highly skilled workforce. Though these factors are considered the most important to competitive advantage, some are built upon sufficient quantity and quality of basic factors.

The second distinction among factors is their specificity in that they are either generalized factors or specialized factors. Generalized factors include having resources such as a basic highway or a pool of employees with college educations but specialized factors involve having a narrowly skilled workforce or infrastructure with specific properties. The ideal combination for competitive advantage was to have advanced and specialized factors as they would determine the sophistication of competitive advantage that can be potentially attained. Basic and generalized factors were viewed as fleeting in their competitive advantage as they only lasted until another nation that was determinately developing itself could match them. Due to their ability to be created through investments, factor conditions were considered the most important since few factors are truly inherited. This meant that countries could and should create and develop real competitive advantages using advanced factors.

The third attribute was demand conditions which refer to the consumer market's ability to stimulate productivity and innovation. This in turn leads to differentiation as businesses strive to fulfill their customer expectations. If well executed, businesses can become global leaders in their particular industries. Finally, the fourth attribute pertained to the supporting and related industries that are complimentary to the businesses. If the supporting and related industries offer cost-effective and quality inputs then this will condition the businesses to achieve national advantage in an industry. It is alleged that if all four attributes are favourable, competitive advantage will be achieved and sustained.

Along with the four attributes, 'chance' and the government were included in the theory to explain the influence of the environment that businesses may be in. The two elements are largely exogenous and have an impact on all attributes. 'Chance' refers to the unpredictable external events that may occur such as wars, natural disasters and global financial situations that may negatively or positively impact an industry or nation. These events may either create a competitive advantage for a nation or destroy the competitive advantage that a nation enjoys. Government refers to the role that the local and national administration plays in the development of competitive advantage by offering a conducive business environment. This includes regulation, policies and development of educational institutions as well as robust infrastructure. This means that the government's role may either hasten or raise the odds of achieving a competitive advantage.

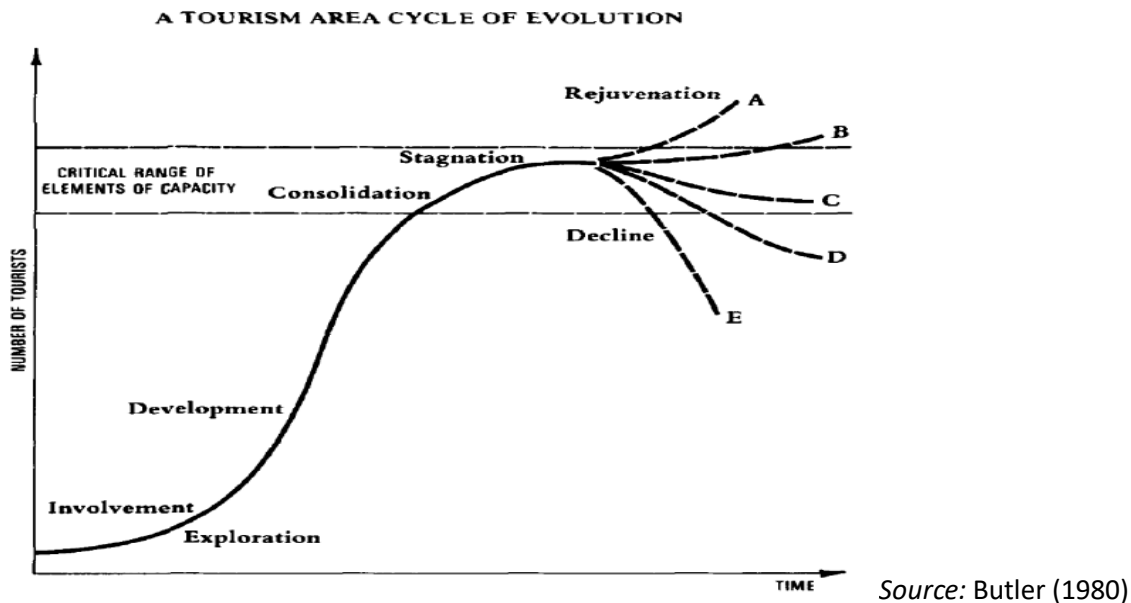
While some scholars such as Iain Begg, (1999, 2002) have confirmed some of Porter's concepts over the years in their research works such as the importance of the Business Environment an industry is in and the impact of demand conditions on raising quality, others have criticized various aspects of the theory. An example is Lazonick, (1993) who argued that too much competition would lead to imitation rather than innovation.

More surprising about the theory is that though it was initially created to analyze industries, its concepts have been adapted to explain tourism destination competitiveness by several scholars and researchers such as Nunes et al. (2018) who used the theory to identify the main factors that impact competitiveness in Portugal and found that the business environment created by the government along with factor conditions were the main drivers of competitiveness.

The Tourism Area Life Cycle (TALC), which was popularized by Richard Butler, is an adaptation of the Life Cycle Theory of a product by Raymond Vernon (1966). Butler (1980) developed the model in response to what he viewed as an absence of long-term preparation in the tourism sector as most tourism stakeholders at the time were more focused on getting profits quickly. The lack of planning was then seen to lead to unsustainable tourism endeavors such as over-tourism where for example, numerous hotels would litter a popular tourist spot. Thus he used Cohen's (1972) concept of Tourism destination evolution and extended it by adding

additional stages to the model to create a complete life cycle for a tourism destination which is the fundamental unit of analysis.

Butler saw tourism destinations as products in that they are normally developed and modified to meet the needs of the market. This concept was to show that tourist development is dynamic rather than static. Thus using a similar S-shaped asymptotic curve like that of the Product Life Cycle theory, he created one for tourist destinations with slight changes. The model was divided into six different stages and each stage was distinguished using an identified set of characteristics including economic and spatial features which he adapted from the literature of several scholars including Christaller's (1966) Central place theory where Butler drew on the concept of hierarchies and growth of destinations and Doxey's (1975) Irridix model which focused on the negative impacts of tourism and incorporated the idea that as destinations progress from one stage to the next, tensions and conflicts between tourists and locals may develop and this may in turn lead to a decline in tourist satisfaction. Additionally, he integrated Plog's (1974) Psychographic model which divided tourists into different groups based on their travel preferences and noted that as tourist destinations evolve, the type of tourists they attract also changes and this in turn affects marketing and development strategies.



**Figure 2: Tourism Area Life Cycle**

The stages he modeled were: exploration, involvement, development, consolidation, stagnation and decline/rejuvenation. The first stage, the exploration stage, refers to a situation where a destination is largely unknown to most people and the types of tourists to frequent the area are allocentric tourists. The impact of tourism is of relatively low significance and the area is mainly undeveloped leading to an abundance of natural and cultural aspects. Additionally, there are no specific tourist facilities and interaction with the locals is high.

A small increase in the popularity of the area may lead to an increase in the number of tourists. This may be a result of some basic marketing. This increase leads to the initial market area being defined as the government is being pressured to improve some facilities such as transport for tourists. This is the involvement stage as locals become involved in providing facilities to the visitors and the government is also pressured to become involved in the development of the area.

From there, with government involvement increasing, a well-defined tourist market area is developed. This is the Development stage which is the third stage. Due to the significant increase in the number of tourists and government involvement, locals lose control over the facilities they provide for tourists as external organizations enter the market and begin offering more sophisticated services to tourists. Additionally, the tourist destination's appearance drastically changes and this may begin to irritate some locals. As development in the sector increases, tourism becomes tied to the economy of the destination. However, though the number of tourists is very large, the rate of increase begins to slow down. This is the consolidation stage where the tourism destination is now developed and major franchises and tourism chains are represented in the region but the rate of growth of tourist numbers is slowing.

Once the carrying capacity of the destination is reached or exceeded, the stagnation stage has been reached. From there, the negative impacts of tourism such as pollution and over-tourism are more prominent and though the destination image is well-established it is less popular and the types of tourists it attracts are psychocentrics. The natural and cultural attractions that initially made the area popular will now have been replaced by imported artificial attractions. As the image begins to decline, changes in the ownership of tourist service properties in the area will become frequent.

The negative development in the area may spur two different responses that define the final stage: decline or rejuvenation. If the area does not change the direction of its declining trajectory, the destination will eventually be unable to compete and the number of tourists visiting the area will fall drastically. The loss of visitors may lead to the tourist areas being converted to non-tourist-related areas and structures. On the other hand, if the area seeks to avoid this fall and does so by developing artificial attractiveness such as casinos or shifting to previously unused natural resources, they may experience a rejuvenation that would see tourist numbers grow.

The TALC theory has been viewed as a guide for analysis for numerous destinations however, it did face criticism on its applicability as some scholars felt that its simplification of the evolution process made it difficult to distinguish the different stages. Additionally, the term 'carrying capacity' was considered vague as its exact reference was not identifiable since scholars could not tell if it referred to physical capacity or environmental capacity (Agarwal, 1997; Berry, 2000; Haywood, 1986).

However, Haywood (1986) made recommendations to make it more applicable. He suggested that the unit of analysis be based on the need and intended use of the information, for the unit of measurement of the carrying capacity to be defined and for tourist market segmentation to be introduced to differentiate between domestic and international tourists since they interact differently with the destination. Agarwal (1997) recommended the addition of a new stage, the re-orientation stage, before the decline stage. He argued that a total decline was less likely to occur as tourism stakeholders would use massive efforts to maintain tourism activity. He also suggested an examination of the factors that have stimulated tourist development in the destination.

In relation to destination competitiveness, the theory suggests that competitiveness can vary at different stages and thus the recognition and evaluation of the factors and the strategic measures taken to develop the sector are crucial for its survival. Additionally, tourist destinations should identify where they lay in the life cycle so as to adjust their policies accordingly.

The Systems theory is a multidisciplinary concept that provides a framework for understanding how different elements within a system interact with each other and their environment. The



theory describes a system as interconnected and interdependent elements that work together to achieve a common goal with elements being individual entities that may be tangible or intangible. However, it is important to note that systems can vary in complexity and scale and thus can be organized hierarchically with subsystems within systems. Moreover, systems can be categorized into open systems, closed systems and complex adaptive systems. Open systems are those that are viewed in most organizations and are those that are considered to be dynamic since they can adapt to changes in their surroundings. Closed systems are theoretical constructs and tend to be isolated while complex adaptive systems are those characterized by their ability to self-organize and adapt to changing conditions such as economies.

The theory also emphasizes equifinality which refers to systems' ability to achieve similar outcomes using different processes and feedback which can influence behavior since it runs throughout the system. The feedback may be positive or negative and may drive change depending on how it is received. The theory emphasizes the analysis of systems as a whole rather than the analysis of individual elements. This is because the properties and behaviours of the system as a whole may differ greatly from those of individual parts.

The theory emerged in the mid-twentieth century through the contributions of various scholars and researchers. Ludwig von Bertalanffy ( 2009) developed the concept of 'open systems' which emphasized the concept that systems interact with the environment and through feedback can exchange information. His work was able to emphasize the aspect of looking at a system as a whole rather than as individual parts. Norbert Wiener (2007) who is known for his work on the study of communication and control contributed to the theory by developing the concept of feedback and the idea that systems self-regulate based on the feedback loops. Ross Ashby (1978) emphasized the importance of understanding the relationship between control mechanisms, that is regulators, and the complexity of the systems they govern. Kenneth Boulding (1956) introduced the concept of general systems theory which allowed the theory to be applied to multiple disciplines to address societal and global challenges. Peter Senge (1997) popularized the idea of 'learning organization' where organizations adapt and learn collectively as more information becomes available and this in turn would enable continuous refinement of the theory.

Applying the systems theory to TDC provides a holistic and comprehensive framework for understanding the complex relationship of the factors that determine a destination's competitiveness. In the tourism space, the theory can be used to analyse the factors and interactions that contribute to destinations moving through different stages as those in the TALC. Feedback in the tourism space could also lead to an increase or decrease in arrivals and ultimately tourism receipts. Additionally, the theory's emphasis on equifinality can be adapted to tourism destination competitiveness to show that different destinations can achieve competitiveness through various strategies.

However, the theory has received its fair share of criticisms along with praise. Critics argued on the overly abstract nature as well lack of specificity in the Systems theory using Karl Popper's (1934) criticism on 'holism' and emphasis on falsability. They felt that the theory may be unable to provide concrete solutions. Other critics used Herbert Simon's (1947) work on rationality and complexity to acknowledged the complexity of real-world systems and argue that applying the model practically would be too overwhelming. Other critics also cited the theory's lack of predictive power and its reductionist tendencies that oversimplify the reality of dynamic systems.

Proponents of the theory have acknowledged that the theory is still a work in progress and more research is required to refine it. However, some of the criticisms have been addressed. Proponents have acknowledged the theory is not a one-size-fits-all and have suggested adaptation and integration with other approaches so that it can address specific situations. They also argue that the abstract nature is a strength that allows for applicability across a wide range of disciplines and that while it may not offer concrete solutions, it does provide a foundation for problem-solving. In response to the complexity criticism, proponents have emphasized developing and refining systems thinking through education and training. Systems thinking refers to looking at the relationship between various elements of a system and passing them through an iterative process of modeling, analysis and revision. This will equip organizations with the tools to navigate and manage complexity. Reductionism is also lauded as a necessary step to understanding the underlying dynamics of a system. Lastly, they claim precise predictions for the future may not always be the main goal as the theory first seeks to understand the underlying mechanisms and behaviours of systems. By understanding these dynamics it becomes

possible to identify future scenarios and make informed decisions that shape the trajectory of the system.

## **2.2 Empirical literature**

The study of Tourism destination competitiveness has garnered significant interest over the years. However, scholars have been unable to agree on what destination competitiveness refers to.

Ritchie and Crouch (2003) defined Tourism Destination Competitiveness as the ability of a destination to attract and satisfy visitors in a way that would enhance the overall well-being of the destination. Their definition was able to highlight a new term concerning tourism destination competitiveness: Attractiveness. Initially, destination competitiveness and attractiveness were considered to refer to the same thing. However, with recent literature, scholars have acknowledged their interconnectedness but have slightly separated the two terminologies. Destination competitiveness is for the most part associated with supply while destination attractiveness is associated with demand, and in recent years focus has shifted from just attracting tourists to destinations (demand aspect) to making destinations more competitive (supply aspect) (Diana et al., 2009).

Tourist destinations have ceased to be viewed as just natural, cultural and artistic resources but rather as overall appealing products. This adds complexity to them especially when considering the concept of competitiveness. Competitiveness as a concept is complex due to the multidimensional and relative nature of tourism destinations (Boo et al., 2009; Cracolici and Nijkamp, 2009; Scott, 1988). Porter (1990) blamed the multidimensional aspect on differences in perspectives on competitiveness. The relative aspect was taken to mean qualitative and quantitative superiority in comparison to other destinations. What researchers agreed on is the fact that competitiveness is an important step for countries that strive for bigger market shares and destinations have to strive to identify and explore competitive advantages for them to prosper.

Over the years several components or determinants that contribute to a destination's competitiveness have been identified. The key determinants include infrastructure, natural resources, cultural resources, tourism policy, price competitiveness, human resources and marketing strategies. These components form the basis for many competitiveness models.

One of the earliest models developed was the Worldwide Environmental Scanning (WES) approach which was developed in response to a demand for the analysis of the competitive positions of countries in the Caribbean region. The study was able to make a clear distinction between the factors contributing to competitiveness and the indicators of competitive performance. Indicators were defined as the historical measures that describe past performance such as international arrivals and tourism receipts. The factors that affected competitiveness were divided into 5 groups, namely, macroeconomic factors such as fiscal policy and the real exchange rate; supply factors such as the price level, infrastructure and human resources; demand factors such as marketing efforts and dependencies; tourism policy such as the prioritization of tourism by the government and policy frameworks and transport factors which focused on the availability of cruise, charter and general services. Using multiple regression analysis to assess the impact of the 18 identified factors the study was able to find that high taxes and a negative business environment that is related to tourism were detrimental. Additionally, it was found that some Caribbean countries had overvalued currencies that made the destinations expensive (Vanhove, 2011).

From the study, it is clear that the definition of competitiveness is quite narrow despite the study's evaluation of 18 factors since they were mainly economic and efficiency factors. Moreover, the natural and cultural aspects of the region were ignored despite the study being adapted to the region.

The Conceptual model introduced the idea that competitiveness is a dynamic process that is influenced by several factors that offer either competitive or comparative advantages. The model used the Delphi method to identify factors whereby tourism experts were interviewed and 36 factors that were considered to influence tourism competitiveness were identified. The 36 factors were then clustered into 5 components namely; core resources and attractions, supporting factors and resources, destination management, destination policy planning and development, and

qualifying and amplifying determinants. The components were then organized hierarchically implying a linear sequential relationship. Natural and cultural resources were identified as necessary factors under the core resources dimension but they were found not to be sufficient for tourism competitiveness. The destination management and destination policy planning and development dimensions were considered the core components necessary for competitiveness to be achieved. Thus core factors identified were marketing, human resources, finance, organization, research and crisis management (Crouch and Ritchie, 1999). However, the model did not guide on how to quantitatively measure or assess the components. Additionally, since the model had not been empirically tested on any geographical area, this led to debates on the practicality of it.

To add practicality to the Conceptual Model, Enright and Newton (2005) examined 413 companies spread across Bangkok, Singapore and Hong Kong. They also used the Delphi method where survey data was gathered from tourism practitioners in the three rival destinations. The data was then subjected to several statistical tests such as factor analysis, regression analysis, ANOVA and the Ryan-Einot-Gabriel-Welsch (REGW) test. The study was able to reveal the practical importance of identifying competitors along with highlighting the importance of including business-related factors such as international access, international transport facilities and communication facilities. However, the study ascribed low importance to some factors such as museums and galleries based on the survey data rather than actual tourist behavior leading to the conclusion that additional research is necessary since the study acknowledged that those ascribed low importance may still be necessary for tourism competitiveness.

While the conceptual model viewed destination competitiveness as an end in itself, the Integrated model by Dwyer and Kim (2003) saw destination competitiveness as an intermediary and that socio-economic prosperity was the actual goal. This is despite the fact that they borrowed many of the variables identified in the conceptual model and were seen more or less in favour of the conceptual model. By analysing destinations such as Korea and Australia, they were able to conclude that demand conditions such as awareness, perception and preference were important for tourism competitiveness. This deferred with the conceptual model that did not recognize demand conditions. Additionally, the model was among the first to separate tourist infrastructure from general infrastructure. The core components were also reduced to 4, namely, core resources

and supporting actors, situational conditions, destination management and demand conditions. Nonetheless, the connection between the Integrated model and the Conceptual model led scholars to apply the same criticisms that they had for the Conceptual model to the Integrated model such as the lack of a technique for measuring the variables identified.

However, regardless of the criticisms against the model, some scholars have applied the model to analyze competitiveness. Gomezelj and Mihalič (2008) were able to conduct a survey with their questionnaires based on the Integrated model's 85 competitive indicators and were able to find that Slovenia was stronger in its inherent attractiveness than its built infrastructure and management's ability to add value. This was confirmed by Armenski et al. (2012) who also used the model to identify the factors that made Serbia and Slovenia more competitive. From a survey of 258 respondents from both countries, they were able to identify natural and cultural resources as the core factors that influenced competitiveness. The study acknowledged the idea that there is no one-size-fits-all model that can accurately measure the competitiveness of all tourist destinations worldwide. This is because each destination has its unique characteristics, strengths, weaknesses, and challenges that may not be effectively captured by a single generic model. However, despite this recognition, the study still uses a competitiveness model that was originally developed for different countries, such as Australia and Korea, to assess the competitiveness of two different countries, Slovenia and Serbia, even though these countries may have distinct features and conditions that the model might not account for adequately.

Even though destination competitiveness is believed to be multifaceted, some scholars decided to approach the concept by evaluating a single factor that they deem to be the most important. The Price Competitiveness approach was developed to examine the role of price in competitiveness and argues that changing costs, in light of exchange rate fluctuations, significantly influence a destination's share of international tourists. While the model does recognize two other factors, that is socio-economic and demographic factors and qualitative factors such as marketing, destination image, appeal and quality of tourism services, it ignores them during the analysis. The model is assessed by calculating the purchasing power parity for tourism expenditures and then adjusting them to the exchange rates to derive the price competitiveness index. The findings were used to compare the relative competitiveness of different destinations and concluded that a lower index meant that destinations were less competitive in terms of price and when compared

to Australia which was the baseline destination. The study was also able to find that there can be significant differences in the price levels for both ground and travel components (Dwyer et al., 2000).

Nonetheless, the study had its weaknesses in that there was limited focus on non-price factors despite acknowledging them. Moreover, by focusing solely on price the study simplified a complex process and thus was unable to provide a complete picture of destination competitiveness. Its weaknesses were further revealed when the study carried out by Zhang and Jensen (2007) to explain tourism flows in Organization for Economic Cooperation and Development (OECD) countries found that price differentials mattered less than expected. The findings were from an analysis of supply-side factors such as infrastructure, natural endowment, prices and technology among others. It was found that in OECD countries, high prices attract more tourists and this is because the high prices were positively correlated to differentiation. Additionally, from an analysis of 133 countries in 15 years, it was found that for destinations to compete they required adequate planning and inputs and thus tourism as a business was not a quick fix for economic prosperity as most less developed countries assume.

Despite the many models that have been created to analyze destination competitiveness, a large number of scholars have still opted to analyze destination competitiveness by focusing on the attributes that are specific to the regions under review. Using qualitative data from surveys and interviews, they were able to not only identify the factors that impact the destinations' competitiveness but also rank the factors.

In Zimbabwe, such a study was conducted where competitiveness was investigated through tourist feedback from 30,328 tourists. From the survey data collected infrastructure was the most mentioned factor as a result of the challenges the country's air transport system was facing which forced tourists to access the country mainly via road transport. Thus the study ranked infrastructure as the factor that impacted Zimbabwe's competitiveness the most (Nyaruwata and Runyowa, 2017). However, the study was conducted based on data collected from a single year and though it was relevant at the time changing dynamics have showcased the need for updating the study as the factors that were noted as relevant at the time may have changed.

Apart from the Delphi method, another mode of estimation that is gaining prominence is the use of composite index measurements to assess complex phenomena and multidimensional concepts. These indices typically consist of multiple variables or indicators, each weighted according to their perceived importance in contributing to the overall construct. While composite indices offer a convenient way to measure and rank diverse aspects of a phenomenon, they also raise important questions about the selection of variables, the weighting scheme, and the interpretation of results. The Travel and Tourism Competitiveness Index (TTCI) is the most noteworthy composite index developed to analyze tourism destination competitiveness. With 14 pillars and 90 indicators, it is considered almost comprehensive. However, analysis of the index by various scholars has been able to reveal its weaknesses along with its strengths such as its lack of data on various countries' tourism-related factors (Hanafiah et al., 2016).

For instance, the index was used to evaluate the competitiveness of East African countries over 7 periods by analyzing the TTCI factors' relationship with key performance indicators which are considered to be the Revealed Comparative Advantage. Using correlation analysis and panel regression the study evaluated the impact of natural resources and infrastructure and was able to find that natural resources exhibited a positive impact with the revealed comparative advantage (RCA) while cultural resources exhibited a negative impact. Additionally, infrastructure was also found to exhibit a positive impact on the RCA. The use of the TTCI made the analysis more comprehensive, however, the lack of full data on various variables in certain years did impact the analysis. Additionally, an interesting situation did develop from the analysis whereby the TTCI was found to be negatively correlated to the RCA, however, individual factors of the TTCI were found to be positively correlated to the index. These findings highlighted the need for more analysis of the TTCI and its factors (Bacsi et al., 2023).

Another instance is Kayar and Kozak (2010) who sought to evaluate the competitiveness of 28 European Union member nations and compare them to Turkey. To achieve this objective, the study adopted a composite index measurement approach due to several reasons; the presence of numerous interrelated factors, making it a complex landscape and the ability to conduct cross-country comparisons and rankings, which was a central focus of the study. By condensing



diverse aspects of competitiveness into a singular score, the TTCI facilitated meaningful and insightful assessments. However, the study was not without its limitations, including its lack of data on some member countries. The study was also unable to generalize its findings to other regions as a result of the differences that exist in every country.

According to Hanafiah and Zulkifly (2019), a tourism destination is considered competitive only when it can generate revenue in the form of tourism receipts. Using Partial Least Squares structural equation modeling, the authors evaluated 115 countries and were able to confirm the multidimensional nature of tourism destination competitiveness. From the study, core resources, infrastructure, price competitiveness and complementary tourism performance were highlighted as important factors. However, the study did not evaluate all the countries that were ranked in the Competitiveness report for that year and while economic disparities were highlighted by the authors as matters of interest, the TTCI's equal weighting of sub-indices failed to recognize the unique characteristics and strengths of different countries' tourism offerings. Additionally, the study was seen to capture a moment, a snapshot, as the data was analysed for one specific year which is less relevant given the dynamic nature of tourism. This also brings about a problem in giving policy implications given how different destinations are.

Novel methods have also been used to create indices to analyze destination competitiveness. One such index is the one created to analyze the competitiveness of the Caribbean destinations. Responding to the lack of adequate recognition and representation in international rankings, Pérez León et al. (2021) created an index for measuring tourism competitiveness in the region. The study encompassed 21 island states and 12 continental states that were considered to be competitors in the Caribbean region. 27 individual indicators based on relevance were drawn from the TTCI and grouped into 4 indexes using Goal Programming and Data Envelopment Analysis. First, Goal programming was used to balance multiple conflicting objectives in the region concerning tourism competitiveness by assigning weights to indicate importance. Data Envelopment Analysis was then conducted by gauging competitiveness in terms of production efficiency, which is by comparing input and output ratios. This allowed efficient and inefficient destinations to be identified. Those considered efficient were then labeled competitive. From the study, it was found that small island states were more competitive than continental states with the top performing states excelling in the travel and tourism policy and enabling conditions and

infrastructure. Natural resources, cultural resources and environmental sustainability were found to be weak dimensions. Though the index was created to fill the gap left by the TTCI's lack of data on some regions, it did have its limitations. It was not as comprehensive as the TTCI which evaluates 90 individual indicators and thus gives a clearer picture of the competitiveness situation but the novel index has the potential of improving upon further availability of data and research.

Another novel index is the inbound and outbound tourism index which was constructed to investigate the influence of the transport system on inbound and outbound tourism in 19 tourist-oriented countries over 25 years. The inbound index included international arrivals, receipts and travel items while the outbound index included departures, passengers' expenditures and travel items. Using a fully modified Ordinary Least Squares regression the study was able to confirm the positive bi-directional relationship between inbound tourism, air transportation, railways transport, trade openness and travel and transport services. Limitations of the study included the availability of the data for all 19 countries over the specified period. Additionally, the study though focusing on a single factor was not able to capture other aspects of the transport system that may impact tourism such as the quality of the air and railway infrastructure which may lead to the road system being considered more (Rehman Khan et al., 2017).

### **2.3 Overview of the literature**

The literature on tourism competitiveness has been characterized by the development of numerous models in which most have their basis on Porter's theory. The models have identified several variables to consider when evaluating destination competitiveness. However, the variables under review have fallen short on numerous occasions of providing a holistic evaluation of a destination as the variables under review may not provide a full picture of the destination's offerings due to how they are applied in research.

The Tourism Area Life Cycle model has been instrumental in showcasing the fact that destinations are not static but dynamic and that it is important to understand where a destination stands on the life cycle before evaluating it. This is in contrast to most literature on destination

competitiveness as most studies have conveyed the situation of a destination statically by evaluating a single moment in time and not caring about the actual tourism situation of the destination. That is to say, they cover a specific snapshot in time rather than reflect the dynamism of the sector. This raises the question about the continued relevance of these studies in a rapidly changing world with the tourism scene for destinations also changing. Additionally, it makes it difficult to provide efficient policy implications.

The literature has also shown that the generalization of findings is difficult since all destinations have unique aspects that impact their attractiveness and competitiveness. Therefore, most scholars have advised on the usage of segmented analysis or grouping of similar destinations to enhance the analysis.

The creation of the TTCI composite index has been revolutionary as it has been able to allow countries to compare themselves and though the TTCI is not fully comprehensive, it is considered the most comprehensive index when compared to all others developed up to date. Additionally, the index does provide the modes of measurement for the variables it investigates. Traditional models all had a similar issue of measurement whereby though the authors pinpointed the variables to consider, they did not provide the modes of measuring said variables.

Taking all these findings into consideration, this study sought to evaluate tourism destination competitiveness across Eastern and Southern African tourist destinations by using the TTCI. Concerning dynamism the study evaluated competitiveness over 7 periods for countries that are at the development stage in the tourism life cycle.

## **CHAPTER 3**

### **METHODOLOGY**

#### **3.0 Introduction**

This chapter outlines the methodology that was used in the research study. In particular, the section discusses the theoretical framework, the model, and definitions of the variables, the data source and the estimation methods that were used in the study.

#### **3.1 Theoretical framework**

This study used the Diamond Theory of competitive advantage to evaluate destination competitiveness across Eastern and Southern African tourist destinations. The assumption made by the Diamond theory is that countries can create their own factor conditions rather than rely on inherited resources. The theory lays emphasis on the availability and quality of advanced factors such as Infrastructure, human resources and Information and Communication Technology.

Additionally, the theory sees the role of government as vital in influencing competitiveness through the advanced factors such as though mentioned above. This is because government creates policies and makes regulations and this in turn influences the Business Environment. Therefore this paper will additionally evaluate the Business Environment as a factor.

The TTCI was applied as it is considered fairly comprehensive and its data is reliable. The World Economic Forum (WEF) gathers data for TTCI in two primary categories: hard data and soft data. Hard data comprises quantifiable information based on measurable facts and may be sourced from country reports. On the other hand, the soft data collected relies on the Executive Opinion Survey which is an extensive assessment tool that evaluates critical aspects for which statistical data is missing. The survey is conducted on over 10,000 business executives globally where they are given 78 situational questions to respond to by rating them on a scale of 1 to 7 with one being the worst and 7 the best. All variables collected are scores.

The theoretical model was given by

$$y = f \{ BE, SS, HH, HR, ICT, PT, IO, PC, AT, GP, TS, NR, CR, ES \}$$

Where,

$$y = TTCI$$

*BE = Business Environment*

*SS = Safety and Security*

*HH = Health and Hygiene*

*HR = Human resources and Labour market*

*ICT = ICT Readiness*

*PT = Prioritization of tourism and travel*

*IO = International Openness*

*PC = Price Competitiveness*

*AT = Air Transport Infrastructure*

*GP = Ground and Port Infrastructure*

*TS = Tourist Service Infrastructure*

*NR = Natural Resources*

*CR = Cultural resources and Business Travel*

*ES = Environmental Sustainability*

### 3.2 Definition of the variables

<b>Variable</b>	<b>Definition</b>	<b>Measurement</b>	<b>A Priori Expectation</b>
Business Environment (BE)	Assess policy framework's impact on business conditions.	Evaluates policy impact by surveying property rights, foreign-owned businesses, startup cost, and tax rate.	+ve
Safety and Security (SS)	Measures security risks for citizens, foreigners and businesses.	Measures security risks with data on crime cost, terrorism, security force reliability, homicide rate, and terrorism frequency rate.	±
Health and Hygiene (HH)	Evaluates health infrastructure, accessibility and security.	Measures the healthcare workforce, access to sanitation and clean water, and the HIV and malaria data.	±
Human Resources and Labour market (HR)	Assesses education, labour efficiency and workforce.	Evaluates staff competence, HR practices, school enrollment as well as workforce diversity.	+ve
ICT readiness (ICT)	Focuses on ICT facilities' growth and usage.	Measures ICT usage, electricity quality, internet, and mobile network coverage.	+ve
Prioritization of Tourism and Travel (PT)	Measures government and stakeholder support for tourism.	Assesses government expenditure on tourism, marketing effectiveness and comprehensiveness of tourism data.	+ve
International Openness (IO)	Evaluates a country's openness to visitors.	Evaluates the ease of entry and the regional trade and economic integration agreements.	±

Price Competitiveness in the tourism sector (PC)	Evaluates the travel expenses associated with each country.	Assesses cost relative to ticket taxes, accommodation, fuel, and purchasing power.	±
Air Transport Infrastructure (AT)	Assesses air network integration and access to and from a country.	Evaluates and measures the quality of air infrastructure.	+ve
Ground and Port Infrastructure (GP)	Evaluates road, railway and port transport efficiency to key tourist areas.	Assesses road, rail and port transport quality and efficiency including road density and railway density.	+ve
Tourist Service Infrastructure (TS)	Examines accommodation infrastructure and car rental facilities.	Measures the quality of tourism infrastructure including accommodation and the presence of global ATMs and car rental facilities.	+ve
Natural Resources (NR)	Focuses on the natural environment's appeal.	Assesses the attractiveness of natural assets, IUCN's total known species, share of protected areas, number of UNESCO world heritage natural sites and online visibility.	+ve
Cultural Resources and Business Travel (CR)	Measures the presence, promotion and utilization of cultural assets and business events.	Evaluates the number of UNESCO world heritage cultural sites, heritage practices and skills, sports facilities, international association meetings, and online visibility.	±
Environmental Sustainability (ES)	Assesses government's environmental regulations.	Evaluates the enforcement and stringency of environmental regulations and the sustainability tourism development.	±

### 3.3 The Empirical model

The empirical model was at the core of the research, as it enabled a comprehensive exploration of the driving forces that impact the competitiveness of the Eastern and Southern African destinations' travel and tourism industries. By scrutinizing the significance and magnitude of the relationships between our explanatory variables and the Travel & Tourism Competitiveness Index (TTCI), this model highlighted the dynamics at play.

The empirical model was structured as follows:

$$\text{TTCI}_{it} = \beta_0 + \beta_1 \text{BE}_{it} + \beta_2 \text{SS}_{it} + \beta_3 \text{HH}_{it} + \beta_4 \text{HR}_{it} + \beta_5 \text{ICT}_{it} + \beta_6 \text{PT}_{it} + \beta_7 \text{IO}_{it} + \beta_8 \text{PC}_{it} + \beta_9 \text{AT}_{it} + \beta_{10} \text{GP}_{it} + \beta_{11} \text{TS}_{it} + \beta_{12} \text{NR}_{it} + \beta_{13} \text{CR}_{it} + \beta_{14} \text{ES}_{it} + u_{it}$$

The dependent variable, which is the  $\text{TTCI}_{it}$ , signifies the Travel & Tourism Competitiveness Index Score for a country (i) at a given point in time (t). The  $\beta$  coefficients represent the parameters that were to be estimated. The compound disturbance term,  $u_{it}$ , consists of  $a_i$  and  $\varepsilon_{it}$ .

The model was able to differentiate between two sources of unobservable factors. The first is the  $a_i$  term, representing time-constant country-specific effects, such as geographical features. The second is the  $\varepsilon_{it}$  term, denoting the error term or unexplained variations. The inclusion of these unobservable effects allowed us to account for individual-specific, time-invariant factors that may influence the TTCI.

### 3.4 Data, data types and sources

The study analysed Tourism Destination Competitiveness across 14 countries in Eastern and Southern Africa from 2007 to 2019 (7 periods). Thus the data collected was panel data. Panel data, which is characterized by observations collected over multiple periods and across various entities, has emerged as a powerful tool to uncover hidden patterns, track trends, and explore causal relationships within a changing environment. The use of panel data offers researchers the



opportunity to harness both the cross-sectional and time-series dimensions, shedding light on the complex relationship of factors shaping outcomes.

To ensure the richness and reliability of the data, the study sourced it from the Travel and Tourism Competitiveness Report database maintained by the World Economic Forum (WEF). This database provides a comprehensive and reliable source of information, making it a well-suited resource for the study. It encompasses data on performance in the form of continuous variables ranging from 1 to 7 with 1 being the lowest and 7 the highest.

### **3.5 Estimation Techniques**

Data was analyzed using R software and Microsoft Excel. The analysis involved both descriptive and inferential statistics. Descriptive statistics were computed to provide an overview of the dataset. These statistics included measures such as means, median, maximum, minimum, standard deviation, variance, skewness, and kurtosis. These statistics help in understanding the central tendencies, variability, and distribution of the data.

The Durbin-Wu-Hausman test was conducted as a pre-test to determine whether a fixed effects model or a random effects model was more suitable for the analysis. The level of significance for this test was set at 0.05. The results of the Hausman test indicated that a random effects model was more appropriate. This suggests the presence of unobserved factors correlated with the independent variables, supporting the use of random effects to account for this correlation.

After determining that a random effects model was appropriate, the study proceeded with inferential statistics. The generalized least squares (GLS) estimation method, which is suitable for panel data analysis with random effects, was employed. This is because it allows for more efficient and unbiased parameter estimation when dealing with unobservable entity-specific effects (random effects).

After estimating the model, the Breusch-Pagan Test was performed to check for heteroscedasticity. Heteroscedasticity is the violation of the assumption of constant error

variance which can lead to bias and inconsistent parameter estimates. The level of significance for the Breusch-Pagan Test was set at 0.05.

## CHAPTER 4

### DATA ANALYSIS, RESULTS AND DISCUSSION

#### 4.0 Introduction

This chapter presents the outcomes of the data analysis alongside the findings of the study. It is divided into the following sections consisting of the descriptive statistics, model estimation and discussions of the study.

#### 4.1 Descriptive Statistics

The dataset comprised observations across 14 countries over seven time periods, resulting in 98 observations. The countries under review were: Kenya, Uganda, Tanzania, Ethiopia, Burundi, Lesotho, South Africa, Namibia, Botswana, Mauritius, Malawi, Mozambique, Zambia and Zimbabwe.

A balanced panel database was created where 14 independent variables were examined.

Below are the descriptive statistics which include the means, median, maximum and minimum values, variance and standard deviation.

**Table: Descriptive Statistics**

	AT	BE	CR	ES	GP	HH	HR	ICT	IO
Mean	2.37	4.18	1.90	4.37	2.98	2.97	3.88	2.44	3.92
Std.Dev	0.65	0.64	1.02	0.49	0.69	1.00	0.51	0.87	1.21
Min	1.30	2.29	1.00	2.85	1.80	1.02	2.54	1.37	1.66
Q1	1.86	3.83	1.30	4.10	2.47	2.31	3.57	1.77	2.90
Median	2.23	4.21	1.50	4.36	2.85	2.98	3.84	2.18	4.28
Q3	2.82	4.70	1.75	4.71	3.36	3.51	4.18	2.87	4.73
Max	3.97	5.40	4.96	5.34	4.77	5.60	5.25	4.90	6.59
MAD	0.66	0.62	0.30	0.47	0.62	0.85	0.41	0.76	1.51
IQR	0.96	0.86	0.44	0.61	0.87	1.19	0.59	1.08	1.79
CV	0.27	0.15	0.53	0.11	0.23	0.34	0.13	0.35	0.31
Skewness	0.62	-0.33	1.54	-0.56	0.79	0.32	0.18	0.99	0.02
Kurtosis	-0.47	-0.19	1.02	0.44	0.10	0.05	0.31	0.10	-0.92
N.Valid	98.00	98.00	98.00	98.00	98.00	98.00	98.00	98.00	98.00

	NR	PC	PT	SS	TS	TTCI
Mean	3.71	4.90	4.14	4.54	2.64	3.41
Std.Dev	1.01	0.45	0.94	0.70	1.04	0.43
Min	1.88	3.91	1.75	3.12	1.20	2.57
Q1	2.99	4.58	3.60	4.00	1.84	3.11
Median	3.79	4.86	4.06	4.58	2.42	3.37
Q3	4.42	5.22	4.67	5.20	3.05	3.69
Max	6.13	6.10	6.44	5.91	5.45	4.63
MAD	1.07	0.46	0.81	0.88	0.91	0.41
IQR	1.43	0.63	1.06	1.19	1.19	0.57
CV	0.27	0.09	0.23	0.15	0.39	0.13
Skewness	-0.15	0.21	0.14	-0.07	0.81	0.46
Kurtosi	-0.63	-0.29	0.06	-0.96	-0.25	-0.33
N.Vali	98.00	98.00	98.00	98.00	98.00	98.00

The descriptive statistic findings indicated that over the seven-year period, the Business Environment variable had an average score of approximately 4.18, with a minimum of 2.29 and a maximum of 5.40. The standard deviation of 0.64 indicates that the data points were relatively close to the mean, suggesting moderate variability. The kurtosis value of -0.08 suggests that the distribution slightly flatter than normal as a result of the lighter tails, while the skewness value of -0.34 indicates an approximately symmetric distribution.

Safety and Security had a minimum value of 3.12 and a maximum of 5.91. The median value of 4.58 represents the middle of the data, and the variable averaged approximately 4.54 over the seven-year period. The standard deviation of about 0.70 implies that data points varied around the mean. A negative kurtosis of -0.96 indicates a distribution slightly flatter than normal, and a skewness of -0.07 suggests an approximately symmetric distribution.

Health and Hygiene (HH) ranged from a minimum of 1.02 to a maximum of 5.60. The median score of 2.98 and a mean of approximately 2.97 were observed. A standard deviation of about 1.00 indicates moderate variability, while having a variance of 0.993072 and a positive kurtosis value of 0.05. A skewness of 0.32 indicates an approximately symmetric distribution.

The Human Resources (HR) variable had a minimum of 2.54 and a maximum of 5.60, with a median of 3.84 and a mean of approximately 3.88. The standard deviation was 0.51, and the variance was approximately 0.264233. The positive kurtosis value of 0.31 is still well below the normal distribution kurtosis of 3 and thus indicates lighter tails than a normal distribution, while the skewness value of 0.18 suggests an approximately symmetric distribution.

ICT ranged from a minimum of 1.37 to a maximum of 4.90. The median and mean were approximately 2.18 and 2.44, respectively. The standard deviation of 0.87 indicates variability around the mean, and a positive kurtosis value of 0.10 suggests that the tails are lighter than that of a normal distribution. A positive skewness of 0.99 indicates that the distribution is moderately skewed.

The Prioritization of Travel and Tourism variable had a minimum value of 1.75 and a maximum value of 6.44. The mean was approximately 4.14, and the standard deviation was about 0.94, indicating that the data points had some variation around the mean. The variance, approximately 0.875529, provides insight into the overall spread. The positive kurtosis value of 0.06 suggests that the tails are lighter than those of a normal distribution, while the skewness value of 0.14 indicates an approximately symmetric distribution.

The International Openness (IO) variable ranged from a minimum value of 1.66 to a maximum of 6.59. The median score was 4.28, while the data averaged at approximately 3.92 over the seven-year period. The standard deviation was about 1.21, indicating a relatively high degree of variability, and the variance was approximately 1.461429, suggesting a wider spread. The negative kurtosis value of -0.92 indicates that this distribution has lighter tails than a normal distribution, while the skewness value of 0.02 suggests an approximately symmetric distribution.

The Price Competitiveness variable ranged from a minimum value of 3.910 to a maximum of 6.100. The median score was 4.860, and the mean was approximately 4.897551. The standard deviation was 0.452575815, indicating that the data points were close to the mean. The variance was approximately 0.20482, providing insight into the overall spread. The negative kurtosis value of -0.1854 suggests a distribution slightly flatter than a normal distribution, and the skewness value of 0.21254 indicates an approximately symmetric distribution.

The Air Transport Infrastructure variable had the lowest observed value of 1.300 and the highest value of 3.970. The median score was 2.230, while the mean was approximately 2.367653. The standard deviation of about 0.646785551 indicated that the data points were close to the mean. The negative kurtosis value of -0.3748 suggests a distribution slightly flatter than a normal distribution, while the skewness value of 0.63808 indicates a moderately skewed distribution.

For the Ground and Port Infrastructure (GP) variable, the minimum value was 1.800, and the maximum value was 4.770 over the seven periods. The median score was 2.850, and the mean was at 2.975102. The standard deviation was about 0.689347884, while the variance stood at 0.475201. The positive kurtosis value of 0.23361 suggests that the distribution had lighter tails compared to a normal distribution, and the skewness value of 0.81934 indicates a moderately skewed distribution.

The Tourism Service Infrastructure (TS) variable observed the lowest value of 1.200 and the highest score of the seven periods was 5.450. The median value was 2.415, while the mean was approximately 2.642041. The standard deviation was 1.041360093, and the variance stood at 1.084431. The negative kurtosis value of -0.1404 indicated a distribution that is slightly flatter than a normal distribution, while the skewness value of 0.83569 suggested that the distribution is moderately skewed to the right.

Natural Resources (NR) had a minimum value of 1.880 and a maximum value of 6.130. The median value of 3.790 represented the middle value of Natural Resources scores. The mean was approximately 3.714082, while the standard deviation was about 1.006483965, indicating a relatively high degree of variability. The variance was 1.013010, indicating a wider spread. The negative kurtosis value of -0.5462 indicated that while the distribution was slightly flatter, it also had heavier tails than a normal distribution, and the skewness value of -0.1560 suggested that the distribution is moderately skewed to the left.

Cultural Resources had a minimum value of 1.000, representing the lowest observed CR value in the dataset, and a maximum value of 4.960 over the seven periods. The mean was approximately 1.902347, while the standard deviation was 1.017566129, indicating high variability. The variance was approximately 1.035441. The positive kurtosis value of 1.23017 indicated the distribution had tails that were lighter compared to a normal distribution, and the skewness value of 1.59133 suggested that the distribution was highly skewed to the right.

Lastly, Environmental Sustainability had a minimum score of 2.850, representing the lowest observed value in the dataset, and a maximum of 5.340 represents the highest observed value. The median value was 4.355. The mean was approximately 4.366429, whereas the standard

deviation was 0.4871276. The positive kurtosis value of 0.60253 showed that the distribution had light tails compared to those of a normal distribution, while the negative skewness value of -0.5769 suggested that the distribution was moderately skewed to the left.

## 4.2 Model Estimation

```
Call:
plm(formula = TTCI ~ BE + SS + HH + HR + ICT + PT + IO +
      PC + AT + GP + TS + NR + CR + ES, data = TTCI_Data_Final,
      model = "random", random.method = "amemiya")
```

Balanced Panel: n = 14, T = 7, N = 98

```
Effects:
              var  std.dev share
idiosyncratic 0.005189 0.072032 0.03
individual    0.167498 0.409265 0.97
theta: 0.9336
```

```
Residuals:
      Min.      1st Qu.      Median      3rd Qu.      Max.
-0.1728240 -0.0406982 -0.0046884  0.0354264  0.2374946
```

Robust standard errors:

t test of coefficients:

	Estimate	Std. Error	t value	Pr(> t )	
(Intercept)	1.7571086	0.4409575	3.9848	0.0001445	***
BE	-0.0200174	0.0289700	-0.6910	0.4915118	
SS	-0.0253059	0.0294860	-0.8582	0.3932361	
HH	0.0547685	0.0171310	3.1970	0.0019653	**
HR	0.0595930	0.0193017	3.0874	0.0027447	**
ICT	0.0549548	0.0256136	2.1455	0.0348321	*
PT	0.0103262	0.0318479	0.3242	0.7465764	
IO	0.0902572	0.0158783	5.6843	1.902e-07	***
PC	0.0295938	0.0101463	2.9167	0.0045487	**
AT	0.0766800	0.0813497	0.9426	0.3486223	
GP	0.0773653	0.0415870	1.8603	0.0663815	.
TS	-0.0051617	0.0366762	-0.1407	0.8884179	
NR	0.0795412	0.0292674	2.7177	0.0079995	**
CR	0.0362126	0.0206165	1.7565	0.0826928	.
ES	0.0053684	0.0333419	0.1610	0.8724769	

---  
 Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

```
Total Sum of Squares:    2.212
Residual Sum of Squares: 0.50631
R-Squared:                0.77111
Adj. R-Squared:          0.73251
Chisq: 279.626 on 14 DF, p-value: < 2.22e-16
```

Based on the analysis conducted, it is evident that the model is well-suited for the dataset, as a substantial portion of the variability in the dependent variable can be accounted for by the model. The total variation in the dependent variable was found to be 2.212 while the variation in the dependent variable that cannot be explained by the model was found to be 0.50631. The proportion of the variance in the TTCI that can be explained by the factors was approximately 77.11 percent, while the adjusted R-squared was 73.25 percent. The value for the adjusted R-squared suggests that the model has predictive power. The p-value is extremely low at  $< 2.22e-16$  suggesting that the regression model is statistically significant in that the relationship between the TTCI Scores and the 14 factors is highly significant.

The 'effects' section reveals that a significant portion of the total variation in the dependent variable was attributed to both idiosyncratic, that is individual-specific, effects and common effects. The individual-specific effects which captured the unique characteristics of each entity account for 3 percent of the variation while the common effects shared across all entities accounted for 97 percent.

Additionally, the residuals were seen to have a small range, with the median close to 0 suggesting that the model may be a good fit for the data.

The feasible generalized least square was used in the estimation process. It was during the estimation process that it was found that the data suffered from heteroscedasticity. To remedy the situation, robust standard errors were calculated.

The data analysis reveals several key findings about the factors impacting tourism competitiveness across Eastern and Southern African tourist destinations. The data showed that the intercept is highly significant with a high level of significance ( $p = 0.0001445 < 0.001$ ). This indicates that there is a statistically significant constant term in the model. The Business Environment has a negative impact on competitiveness. The impact is statistically insignificant since the p-value is larger than the threshold of 0.05 ( $p = 0.4915118 > 0.05$ ). Additionally, the calculated t-statistic of -0.6910 is larger than the significance level of -1.96. Safety and Security as well as the Tourism service infrastructure had similar results whereby the impact was not only



negative but also insignificant and this was revealed by the fact that their p-values larger than the threshold of 0.05. Additionally, the t-test statistic was larger than the significance level of -1.96.

Though the Prioritization of Tourism had a positive impact on competitiveness, the impact was insignificant since the p-value was larger than the set threshold of 0.05 ( $p=0.7465764>0.05$ ). Moreover, the calculated t-statistic of 0.3242 was smaller than the significance level of 1.96. A similar situation was seen in the Ground and Port Infrastructure, Cultural Resources, Air Transport and Environmental Sustainability factors whereby though they had positive impacts on the competitiveness in the regions, the impact was insignificant as a result of the large p values when compared to the 0.05 threshold.

The findings on IO reveal that there was not only a strong positive impact on competitiveness but also the p-value was very low ( $p= 1.902e-07 < 0.001$ ), indicating a very high level of statistical significance. IO significantly impacts the dependent variable. This is further affirmed by the t-statistic of 5.6843 which is greater than the 1.96 critical t-statistic value.

The findings for Health and Hygiene, Human Resources, Natural resources and Price Competitiveness are revealed to be not only positive but also statistically significant at the 0.01 level, indicating that they have a significant impact on the competitiveness in Eastern and Southern Africa while ICT was positive and statistically significant at the 0.05 threshold. All this was affirmed by their t-statistics being greater than the 1.96 critical value.

### **4.3 Diagnostic Tests**

#### **Durbin Wu-Hausman Test**

Hausman Test

```
data:  TTCI ~ BE + SS + HH + HR + ICT + PT + IO + PC + AT + ...
chisq = 3.883, df = 14, p-value = 0.9961
alternative hypothesis: one model is inconsistent
```

The Hausman test was applied to determine which model between a Fixed and a Random effects model was appropriate. The null hypothesis in the Hausman test states that the preferred model is the random effects model as its coefficients are not only consistent but also efficient. While the Alternative hypothesis states that only the coefficients of the fixed effects model are consistent meaning that the other model is inconsistent. Since the p-value is high and well above the

significance level ( $p=0.9961>0.05$ ), the null hypothesis was not rejected and thus the model was treated as a random effects model.

## Heteroscedasticity

### Breusch-Pagan test

```
data:  TTCI ~ BE + SS + HH + HR + ICT + PT + IO + PC + AT +      GP + TS + NR
+ CR + ES
BP = 36.504, df = 14, p-value = 0.0008767
```

The Breusch Pagan test was conducted to test for the presence of heteroscedasticity. The null hypothesis in the test is of homoscedasticity while the alternative hypothesis rejects the null by affirming the presence of heteroscedasticity. The results of the Breusch-Pagan test (BP = 36.504, degrees of freedom = 14, p-value = 0.0008767) suggested that there was significant evidence of heteroscedasticity in the statistical model. With the p-value less than the typical significance level of 0.05, the test indicated that the assumption of constant variance of residuals was violated hence robust standard errors were computed to rectify the issue.

## Parsimonious Estimation

Coefficients:

	Estimate	Std. Error	z-value	Pr(> z )	
(Intercept)	2.0732775	0.2982045	6.9525	3.588e-12	***
HH	0.0656878	0.0180681	3.6356	0.0002774	***
HR	0.0490020	0.0385621	1.2707	0.2038249	
ICT	0.0449219	0.0283693	1.5835	0.1133155	
IO	0.1265430	0.0173120	7.3096	2.680e-13	***
PC	0.0057701	0.0269303	0.2143	0.8303440	
NR	0.0865003	0.0213719	4.0474	5.179e-05	***

---  
 Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

```
Total Sum of Squares:    2.2372
Residual Sum of Squares: 0.64265
R-Squared:                0.71275
Adj. R-Squared:          0.69381
Chisq: 225.793 on 6 DF, p-value: < 2.22e-16
```

A parsimonious estimation was conducted and the model was simplified by including only the statistically significant variables from the original model. The results of this approach were as follows: the intercept remained statistically significant at the 0.001 level. Health and Hygiene had a positive coefficient which suggested that on average a unit increase in the Health and Hygiene variable is associated with an average increase in the TTCI by 0.0656878. The same

was implied for the International Openness variable and the Natural Resource variable which registered average increases in the TTCI by 0.1265430 and 0.0865003 respectively. The International Openness variable was seen to have the largest parameter estimate of the three followed by Natural Resources and lastly Health and Hygiene.

The R-squared value revealed that 71.275 percent of the variation in the TTCI can be explained using the 6 independent variables selected.

Coefficients:

	Estimate	Std. Error	z-value	Pr(> z )	
(Intercept)	2.5691928	0.1455477	17.6519	< 2.2e-16	***
HH	0.0564154	0.0164476	3.4300	0.0006036	***
IO	0.0965899	0.0088044	10.9707	< 2.2e-16	***
NR	0.0803047	0.0214176	3.7495	0.0001772	***

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Total Sum of Squares: 2.2507  
Residual Sum of Squares: 0.68501  
R-Squared: 0.69564  
Adj. R-Squared: 0.68592  
Chisq: 214.843 on 3 DF, p-value: < 2.22e-16

A further iteration of the statistically significant variables revealed that they were all statistically significant at the 0.001 level. However, it is International openness that was the most statistically significant since its p-value (<2.2e-16) was lower than that of Natural Resources and Health and Hygiene. Additionally, the R-squared value of 0.69564 indicates that approximately 69.564 percent of the variation in the TTCI can be explained by the three independent variables on average, across the 14 countries.

#### 4.4 Discussion

The findings of the study were meant to identify the factors that impact competitiveness across Eastern and Southern tourism destinations over time. The results highlighted the complex interplay of multiple factors influencing tourism competitiveness. First and foremost, the study conducted a Hausman test to determine whether the model would be treated as a fixed effects model or a random effects model. As a result of the p-value ( $p=0.0008767>0.05$ ) being greater than the significance level of 0.05, the model was treated as a random effects model.

The feasible generalized least squares was then used to estimate the model. From the findings, it is clear that the highly significant intercept ( $p < 0.001$ ) underscores the existence of inherent competitiveness in the region, even when other factors are not considered. This suggests that, even in the absence of specific influencing factors, inherent strengths are contributing to overall tourism competitiveness across the destinations.

Certain factors emerged as significant contributors to tourism competitiveness. These include Health and Hygiene, Human Resources, Natural Resources, Price Competitiveness, and Information and Communication Technology (ICT). Their positive impacts, supported by a high level of statistical significance, indicate that focusing on these aspects can significantly enhance tourism competitiveness. However, it is International Openness that emerged as the most crucial driver of tourism competitiveness with a highly substantial impact. This means that the ease of accessibility has impacted tourism quite positively.

The Business Environment, Safety and Security, Tourism Service Infrastructure, Ground and Port Infrastructure, as well as Prioritization of Tourism, did not exhibit statistically significant impacts on tourism competitiveness. This implies that the countries may not need to prioritize these factors as standalone drivers and other areas should be considered for improvement.

Additionally, some of the factors identified using the theoretical framework and their relationship to the TTCI were validated by the study results. Based on the framework, the highlighted factors that impacted competitiveness included the Business Environment, Infrastructure, Human Resources and ICT. From the results, it is only Human Resources and ICT that are highlighted as factors that influence competitiveness across the tourist destinations. This was attributed to their low  $p$  values and positive coefficients. This means that across the region, education and training along with the labor market conditions and growth in the use of ICT facilities, impact tourism destination competitiveness. In contrast, infrastructure, which comprises Air Transport Infrastructure, Ground and Port Infrastructure and Tourism Service Infrastructure, was found to not be statistically significant as all the  $p$ -values associated with its components were large. However, they did exhibit positive relationships with the TTCI. The Business environment also exhibited a negative relationship with the outcome variable and exhibited a large  $p$ -value that was above the threshold.

After running the regression model, a Breusch-Pagan (BP) test, which is used to test for heteroscedasticity, was conducted to ensure the parameter estimates were reliable. The test results showed that there was evidence of heteroscedasticity. So as not to modify the underlying regression model, robust standard errors were calculated.

## CHAPTER 5

### SUMMARY OF FINDINGS, CONCLUSIONS AND POLICY IMPLICATIONS

#### 5.1 Summary

The study set out to identify the factors influencing competitiveness across Eastern and Southern African tourism destinations, focusing on areas in the development stage of the Tourism Area Life Cycle. The dataset comprised 14 countries observed over seven time periods where 14 factors were examined.

The research employed a Hausman test to select the appropriate model, which led to the adoption of a random effects model due to the high p-value. Feasible Generalized Least Squares (FGLS) was then used to estimate the model as it is able to provide efficient parameter estimates of the model parameters. Additionally, it can lead to a better fit for the model as the underlying relationships are able to be more accurately represented.

The study found a highly significant intercept, indicating inherent competitiveness in the region even without considering the factors being examined. Notably, factors such as Health and Hygiene, Human Resources, Natural Resources, Price Competitiveness, and Information and Communication Technology (ICT) were identified as contributors to tourism destination competitiveness in the region. International Openness was highlighted as the most influential driver, emphasizing the positive impact of easy accessibility.

The study also validated the theoretical framework with respect to Human Resources and ICT as they stood out as influential factors due to their low p-values and positive coefficients as education, training, labour market conditions, and ICT facilities were found to significantly impact tourism destination competitiveness. In contrast, infrastructure and Business Environment did not have an impact on competitiveness.

To ensure the reliability of parameter estimates, a Breusch-Pagan (BP) test was conducted to detect heteroscedasticity, which was confirmed and robust standard errors were calculated as a solution to this issue without modifying the underlying regression model.

## **5.2 Conclusion**

In conclusion, this study provided critical insights into the tourism industry's dynamics in Eastern and Southern African destinations over several years.

Several factors emerged as significant contributors to tourism competitiveness, with factors such as Human Resources, Information and Communication Technology (ICT), Health and Hygiene, Natural Resources, International Openness, and Price Competitiveness being key drivers.

However, it is International Openness (IO) that stood out as the most crucial driver of tourism competitiveness, with a highly substantial impact. This underscored the importance of regional accessibility and international connectivity. It suggested that fostering international partnerships and improving connectivity such as by using regional trade agreements and joint air travel can significantly boost the tourism competitiveness of these destinations.

On the other hand, variables such as Business Environment, Safety and Security, Tourism Service Infrastructure, Ground and Port Infrastructure, and Prioritization of Tourism did not exhibit statistically significant impacts on tourism competitiveness. These results imply that while these factors remain important, they may not be the drivers of competitiveness in the region.

## **5.3 Policy Implications**

To boost tourism competitiveness, policymakers should prioritize measures that eliminate barriers to international travel and enhance connectivity. Policies aimed at removing barriers to international travel and increasing connectivity can lead to a substantial boost in tourist arrivals and revenue. Policymakers should therefore focus on fostering international collaborations, promoting visa facilitation, and enhancing international transportation networks to ensure easy accessibility across the region.

Recognizing the positive impact of skilled and well-trained human resources on tourism competitiveness, governments and industry stakeholders should invest in improving the local

workforce. Policies aimed at enhancing the quality and skill set of the labour market will lead to improved service quality, which, in turn, attracts more tourists and investors. Thus Governments and industry stakeholders should focus on improving the education and training of the local workforce. This includes initiatives for vocational training, language skills, and customer service training.

A well-developed ICT infrastructure not only enhances the visitor experience but also increases the efficiency of operations in the sector, improving overall competitiveness. Governments should invest in ICT infrastructure and promote its widespread use in the tourism sector, including online booking systems, digital marketing, and information dissemination.

In the post-pandemic era, ensuring clean and safe environments is paramount for attracting visitors and investors. Governments, in collaboration with the tourism industry, should establish and enforce stringent health and hygiene standards. Measures include hiring additional personnel, improving healthcare quality, conducting regular inspections, certifications, and public awareness campaigns to instill confidence in travelers.

Preserving the tourist destinations' natural beauty and resources is vital for competitiveness. Policymakers should encourage responsible and sustainable tourism practices to protect natural resources. Sustainable tourism practices can attract eco-conscious travelers and preserve the environment for future generations. Thus government should encourage responsible and sustainable tourism practices to protect natural resources. This can be done by implementing more stringent conservation and environmental protection policies, limiting the negative impact of tourism on ecosystems.

Policymakers should enact policies that promote fair and competitive pricing to make destinations more attractive to cost-conscious travelers. This can be done through cross-country collaborations to ensure consistent pricing practices that prevent cross-border pricing differentials. Additionally, a competitive pricing strategy that takes into account factors like the cost of living, exchange rates, and market demand can be established through collaborations with the private sector to ensure fair pricing practices. This will enhance the destinations' appeal to a



broad spectrum of travelers. Additionally, the cost of fuel should be monitored and lowered so as to lower all other associated sectors such as food and accommodation.

## References

- Abreu-Novais, M., Ruhanen, L., & Arcodia, C. (2016). Destination competitiveness: What we know, what we know but shouldn't and what we don't know but should. *Current Issues in Tourism*, 19(6), 492–512. <https://doi.org/10.1080/13683500.2015.1091443>
- Agarwal, S. (1997). The resort cycle and seaside tourism: An assessment of its applicability and validity. *Tourism Management*, 18(2), 65–73. [https://doi.org/10.1016/S0261-5177\(96\)00102-1](https://doi.org/10.1016/S0261-5177(96)00102-1)
- Andrades, L., & Dimanche, F. (2017). Destination competitiveness and tourism development in Russia: Issues and challenges. *Tourism Management*, 62, 360–376. <https://doi.org/10.1016/j.tourman.2017.05.008>
- Andrades-Caldito, L., Sánchez-Rivero, M., & Pulido-Fernández, J. I. (2014). Tourism Destination Competitiveness from a Demand Point of View: An Empirical Analysis for Andalusia. *Tourism Analysis*, 19(4), 425–440. <https://doi.org/10.3727/108354214X14090817031035>
- Armenski, T., Gomezelj, D. O., Djurdjev, B., Čurčić, N., & Dragin, A. (2012). Tourism Destination Competitiveness-between Two Flags. *Economic Research-Ekonomska Istraživanja*, 25(2), 485–502. <https://doi.org/10.1080/1331677X.2012.11517519>
- Ashby, W. R. (1978). *Design for a brain: The origin of adaptive behaviour*. Chapman and Hall.
- Assamah, D., & Yuan, S. (2023). Can Smaller Powers Have Grand Strategies? The Case of Rwanda. *Insight on Africa*, 15(1), 108–127. <https://doi.org/10.1177/09750878221135074>
- Bacsi, Z., Yasin, A. S., & Bánhegyi, G. (2023). Tourism Competitiveness in Eastern Africa: RCA and TPCI. *Heritage*, 6(9), 5997–6015. <https://doi.org/10.3390/heritage6090316>
- Begg, I. (1999). Cities and Competitiveness. *Urban Studies*, 36(5–6), 795–809. <https://doi.org/10.1080/0042098993222>
- Begg, I. (2002). “Investability”: The Key to Competitive Regions and Cities? *Regional Studies*, 36(2), 187–193. <https://doi.org/10.1080/00343400220121972>
- Berry, E. N. (2000). *An application of Butler's (1980) tourist area life cycle theory to the Cairns region, Australia, 1876-1998* [James Cook University]. <https://doi.org/10.25903/5BEBAE108228C>
- Bertalanffy, L. von. (2009). *General system theory: Foundations, development, applications* (Rev. ed., 17. paperback print). Braziller.
- Blanke, J., & Chiesa, T. (2007). *The travel & tourism competitiveness report 2007: Furthering the process of economic development*. World Economic Forum.

- Blanke, J., & Chiesa, T. (2011). *The travel & tourism competitiveness report 2011: Beyond the downturn*. World Economic Forum.
- Blanke, J., & Chiesa, T. (Eds.). (2013). *The travel & tourism competitiveness report 2013: Reducing barriers to economic growth and job creation*. The World Economic Forum.
- Boo, S., Busser, J., & Baloglu, S. (2009). A model of customer-based brand equity and its application to multiple destinations. *Tourism Management*, 30(2), 219–231. <https://doi.org/10.1016/j.tourman.2008.06.003>
- Boulding, K. E. (1956). General Systems Theory—The Skeleton of Science. *Management Science*, 2(3), 197–208. <https://doi.org/10.1287/mnsc.2.3.197>
- Butler, R. W. (1980). THE CONCEPT OF A TOURIST AREA CYCLE OF EVOLUTION: IMPLICATIONS FOR MANAGEMENT OF RESOURCES. *The Canadian Geographer/Le Géographe Canadien*, 24(1), 5–12. <https://doi.org/10.1111/j.1541-0064.1980.tb00970.x>
- Christaller, W. (1966). *Central Places in Southern Germany* (C. W. Baskin, Trans.). Prentice-Hall, Inc.
- Cohen, E. (1972). Towards a Sociology of International Tourism. *Social Research*, 39(1), 164–182.
- Cracolici, M. F., & Nijkamp, P. (2009). The attractiveness and competitiveness of tourist destinations: A study of Southern Italian regions. *Tourism Management*, 30(3), 336–344. <https://doi.org/10.1016/j.tourman.2008.07.006>
- Croes, R., & Kubickova, M. (2013). From potential to ability to compete: Towards a performance-based tourism competitiveness index. *Journal of Destination Marketing & Management*, 2(3), 146–154. <https://doi.org/10.1016/j.jdmm.2013.07.002>
- Croes, R., & Rivera, M. A. (2010). Testing the Empirical Link between Tourism and Competitiveness: Evidence from Puerto Rico. *Tourism Economics*, 16(1), 217–234. <https://doi.org/10.5367/000000010790872114>
- Crouch, G. I., & Ritchie, J. R. B. (1999). Tourism, Competitiveness, and Societal Prosperity. *Journal of Business Research*, 44(3), 137–152. [https://doi.org/10.1016/S0148-2963\(97\)00196-3](https://doi.org/10.1016/S0148-2963(97)00196-3)
- Diana, B., Virgil, B., & Călin, V. (2009). Travel And Tourism Competitiveness Of The World's Top Tourism Destinations: An Exploratory Assessment . *Annales Universitatis Apulensis Series Oeconomica*, 2(11), 979–987. <https://doi.org/10.29302/oeconomica.2009.11.2.43>

- Doxey, G. V. (1975). A causation theory of visitor-resident irritants: Methodology and research inferences. *Travel and Tourism Research Associations Sixth Annual Conference Proceedings*, 3, 195–198.
- Dwyer, L., Forsyth, P., & Rao, P. (2000). The price competitiveness of travel and tourism: A comparison of 19 destinations. *Tourism Management*, 21(1), 9–22. [https://doi.org/10.1016/S0261-5177\(99\)00081-3](https://doi.org/10.1016/S0261-5177(99)00081-3)
- Dwyer, L., & Kim, C. (2003). Destination Competitiveness: Determinants and Indicators. *Current Issues in Tourism*, 6(5), 369–414. <https://doi.org/10.1080/13683500308667962>
- Enright, M. J., & Newton, J. (2005). Determinants of Tourism Destination Competitiveness in Asia Pacific: Comprehensiveness and Universality. *Journal of Travel Research*, 43(4), 339–350. <https://doi.org/10.1177/0047287505274647>
- Gomezelj, D. O., & Mihalič, T. (2008). Destination competitiveness—Applying different models, the case of Slovenia. *Tourism Management*, 29(2), 294–307. <https://doi.org/10.1016/j.tourman.2007.03.009>
- Hanafiah, M. H., Hemdi, M. A., & Ahmad, I. (2016). Tourism destination competitiveness: Towards a performance-based approach. *Tourism Economics*, 22(3), 629–636. <https://doi.org/10.5367/te.2014.0446>
- Hanafiah, M. H., & Zulkifly, M. I. (2019). Tourism destination competitiveness and tourism performance: A secondary data approach. *Competitiveness Review: An International Business Journal*, 29(5), 592–621. <https://doi.org/10.1108/CR-07-2018-0045>
- Haywood, K. M. (1986). Can the tourist-area life cycle be made operational? *Tourism Management*, 7(3), 154–167. [https://doi.org/10.1016/0261-5177\(86\)90002-6](https://doi.org/10.1016/0261-5177(86)90002-6)
- Kayar, Ç. H., & Kozak, N. (2010a). Measuring Destination Competitiveness: An Application of the Travel and Tourism Competitiveness Index (2007). *Journal of Hospitality Marketing & Management*, 19(3), 203–216. <https://doi.org/10.1080/19368621003591319>
- Kayar, Ç. H., & Kozak, N. (2010b). Measuring Destination Competitiveness: An Application of the Travel and Tourism Competitiveness Index (2007). *Journal of Hospitality Marketing & Management*, 19(3), 203–216. <https://doi.org/10.1080/19368621003591319>
- Lazonick, W. (1993). Learning and the Dynamics of International Competitive Advantage. In R. Thomson (Ed.), *Learning and Technological Change* (pp. 172–197). Palgrave Macmillan UK. [https://doi.org/10.1007/978-1-349-22855-3\\_10](https://doi.org/10.1007/978-1-349-22855-3_10)
- Mazanec, J. A., & Ring, A. (2011). Tourism Destination Competitiveness: Second Thoughts on the World Economic Forum Reports. *Tourism Economics*, 17(4), 725–751. <https://doi.org/10.5367/te.2011.0065>

- Mu, R. (n.d.). *Enhancing Africa's Tourism Competitiveness*.
- Nunes, S., Estevão, C., & Nicolau Filipe, M. (2018). Determinant factors of competitiveness in the hotel sector: The case of Portugal. *Competitiveness Review: An International Business Journal*, 28(2), 122–135. <https://doi.org/10.1108/CR-07-2016-0043>
- Nyaruwata, S., & Runyowa, D. (2017). Transport Choices and Tourism Destination Competitiveness: The Case of Zimbabwe. *Business and Economic Research*, 7(2), 332. <https://doi.org/10.5296/ber.v7i2.12000>
- Oluwaseyi, A. R. (2019). Is Tourism a Sustainable Haven for Economic Growth in North African Countries? Evidence from Panel Analysis. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3323486>
- Pérez León, V. E., Pérez, F., Contreras Rubio, I., & Guerrero, F. M. (2021). An approach to the travel and tourism competitiveness index in the Caribbean region. *International Journal of Tourism Research*, 23(3), 346–362. <https://doi.org/10.1002/jtr.2411>
- Plog, S. C. (1974). Why Destination Areas Rise and Fall in Popularity. *Cornell Hotel and Restaurant Administration Quarterly*, 14(4), 55–58. <https://doi.org/10.1177/001088047401400409>
- Popper, K. (1934). *The logic of scientific discovery* (Special Indian Edition). Routledge.
- Porter, M. E. (1990). *Competitive advantage of nations: Creating and sustaining superior performance*. Free Press.
- Rehman Khan, S. A., Qianli, D., SongBo, W., Zaman, K., & Zhang, Y. (2017). Travel and tourism competitiveness index: The impact of air transportation, railways transportation, travel and transport services on international inbound and outbound tourism. *Journal of Air Transport Management*, 58, 125–134. <https://doi.org/10.1016/j.jairtraman.2016.10.006>
- Ritchie, J. R. B., & Crouch, G. I. (2003). *The competitive destination: A sustainable tourism perspective*. CABI Pub.
- Sánchez, A. G., & López, D. S. (2015). Tourism Destination Competitiveness: The Spanish Mediterranean Case. *Tourism Economics*, 21(6), 1235–1254. <https://doi.org/10.5367/te.2014.0405>
- Scott, B. R. (Ed.). (1988). *US competitiveness in the world economy* (3. dr). Harvard Business School Press.
- Senge, P. M. (1997). THE FIFTH DISCIPLINE. *Measuring Business Excellence*, 1(3), 46–51. <https://doi.org/10.1108/eb025496>

- Simon, H. A. (1947). *Administrative behavior: A study of decision-making processes in administrative organizations ; [now updated with extensive new commentaries by the author]* (4. ed). Free Press.
- Sotiriadis, M. D., & Varvaressos, S. (2015). A Strategic Analysis of the Greek Leisure Tourism: Competitive Position, Issues and Challenges. *Mediterranean Journal of Social Sciences*. <https://doi.org/10.5901/mjss.2015.v6n1s1p319>
- The Travel & tourism competitiveness report 2015 Growth through shocks*. (2015). World Economic Forum.
- The Travel & tourism competitiveness report 2019 travel and tourism at a tipping point*. (2019). World Economic Forum.
- United Nations Environment Programme (Ed.). (2011). *Towards a green economy: Pathways to sustainable development and poverty eradication*. UNEP.
- Vanhove, N. (2011). Competition and the Tourism Destination. In *The Economics of Tourism Destinations* (pp. 147–191). Elsevier. <https://doi.org/10.1016/B978-0-08-096996-1.00006-6>
- Vernon, R. (1966). International Investment and International Trade in the Product Cycle. *The Quarterly Journal of Economics*, 80(2), 190. <https://doi.org/10.2307/1880689>
- Webster, C., & Ivanov, S. (2014). Transforming competitiveness into economic benefits: Does tourism stimulate economic growth in more competitive destinations? *Tourism Management*, 40, 137–140. <https://doi.org/10.1016/j.tourman.2013.06.003>
- Wiener, N. (2007). *Cybernetics or control and communication in the animal and the machine* (2. ed., reprint). MIT Press.
- World Tourism Organization (UNWTO) (Ed.). (2015). *UNWTO Annual Report 2014*. World Tourism Organization (UNWTO). <https://doi.org/10.18111/9789284416905>
- World Tourism Organization (UNWTO) (Ed.). (2021a). *International Tourism Highlights, 2020 Edition*. World Tourism Organization (UNWTO). <https://doi.org/10.18111/9789284422456>
- World Tourism Organization (UNWTO) (Ed.). (2021b). *The Economic Contribution of Tourism and the Impact of COVID-19*. World Tourism Organization (UNWTO). <https://doi.org/10.18111/9789284423200>
- Wu, W.-W. (2011). Beyond Travel & Tourism competitiveness ranking using DEA, GST, ANN and Borda count. *Expert Systems with Applications*, 38(10), 12974–12982. <https://doi.org/10.1016/j.eswa.2011.04.096>

Zadeh Bazargani, R. H., & Kiliç, H. (2021). Tourism competitiveness and tourism sector performance: Empirical insights from new data. *Journal of Hospitality and Tourism Management*, 46, 73–82. <https://doi.org/10.1016/j.jhtm.2020.11.011>

Zhang, J., & Jensen, C. (2007). Comparative advantage. *Annals of Tourism Research*, 34(1), 223–243. <https://doi.org/10.1016/j.annals.2006.08.004>