

Examining E-mountain Biking as Part of the Active and Adventure Tourism Market in South Africa

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How to cite this article: Van Vuren, A.J. (2022). Examining E-mountain Biking as Part of the Active and Adventure Tourism Market in South Africa. African Journal of Hospitality, Tourism and Leisure, 11(SE1):565-577. DOI: <https://doi.org/10.46222/ajhtl.19770720.243>

Abstract

Since the pandemic started in early 2020, the sale of bicycles, especially electric bikes, has seen a huge spike. More and more people want to be outside and explore their natural environment, and what better way to do it than on an e-mountain bike. E-mountain biking, also known as pedelecs or power-assisted bicycles, is an activity of riding an off-road bike with an integrated motor that assists the rider when pedalling on off-road trails. E-mountain biking offers an opportunity for a day-long adventure, using the rural landscape as a more dynamic stage. South Africa, with its diverse environment and ideal climate, is a location that lends itself to active and adventure tourism. An advantage of this type of travel is that it offers the opportunity to explore an environment in a different way while practising physical activity. The tourist is not only an observer, but also becomes part of the environment. E-mountain biking can be a major role player in active and adventure tourism, where it can be seen as responsible travel to unexplored areas, and encourages greater physical and mental participation of tourists. The current trend towards e-mountain bikes is increasingly being addressed by tourism destinations. Experts predict that e-mountain bikes will bring new types of mountain bike guests, since they make mountain biking possible for all age groups, due to the reduced physical effort needed. This paper will hopefully lay the foundation for future research on the development and sustainability of e-mountain biking as part of active and adventure tourism.

Keywords: Niche tourism, adventure tourism, active tourism, mountain biking, e-mountain biking

Introduction

With over one billion bicycles in the world and 40 million of them expected to be electric bikes by 2023, it is incredible to see how far electric bikes have come and just how far they can take us (Resha, 2018). Bikes mean different things to different people. For some, a bike is merely a tool, a way of moving around; however, some see it as a gateway to new experiences (Worsey, 2020). Bicycles are widely used for transportation, recreation and sport (Berto, 2021). Who would have thought, at the start of bicycling about 200 years ago, what impact cycling would have on the field of tourism, specifically on the adventure and action tourism? From the first two-wheeled rider-propelled machine, the development in the 1970s mountain bike called 'clunker' (Berto, 2021), to the evolution of the current e-mountain bike, many opportunities have opened in the world of recreational cycling. Mountain biking, as a part of adventure tourism, has experienced tremendous growth in recent years (Kremser & Wölfle, 2020). To date, insufficient academic attention has been given to mountain bike tourism (Buning et al., 2019). Most studies concentrate on motivations for taking part in mountain bike events. The following researchers identified hedonic or personal motivations, such as a search for "speed/excitement/risk" (Cessford, 1995), "to have fun" (Getz & McConnell, 2014:69-100; Kulczycki & Halpenny, 2014:169-197), as well as "event attractiveness" or "to seek out opportunities to engage in a physical challenge" (Kruger & Saayman, 2014: 137-152). If there has been little attention given to mountain bike tourism, even fewer studies have been done on

e-mountain bike tourism. This paper aims to examine e-mountain biking as part of the active and adventure tourism market within a South African context, making use of a conceptual research design by systematically clarifying concepts. Young (1995) proposes that an important defining parameter of conceptual research is its attempt to systematically clarify concepts. It is generally used to develop new concepts or to reinterpret existing ones (Kothari, 2008; Leuzinger-Bohleber & Fischmann, 2006). That means conceptual research makes the concepts themselves the objects of the research, investigating the origin, meaning and use of concepts as well as their evolution over time or within other contexts (Wallerstein, 2009). Jaakkola (2020) states that the role of each element in the paper needs to be specifically stated to ensure the logic of generating findings that are visible to the reader. An ethical waiver was obtained (FREC/HS/21/01/2022/ 6.3.27) from the Human Sciences Faculty Research Ethics Committee of the Vaal University of Technology, for the study. The author will define the keywords of the study within the larger scope of the tourism industry to answer two research questions. How does active and adventure tourism fit into the tourism niche market? What is e-mountain biking and how does it fit into active and adventure tourism in South Africa? Therefore, the ease with which the chain of evidence is followed by readers is pivotal to the success of the paper.

Niche tourism

The term ‘niche tourism’ is largely borrowed from the term ‘niche marketing’, which refers to how a specific product can be tailored to meet the needs of a particular audience or market segment. This is then extended to the idea of ‘niche tourism products’ and ‘niche tourism markets’ (Novelli, 2005). The specification of a niche can be based on the characteristics of the consumers or their behaviour, but also on the benefits derived from the product or service offered (Toften & Hammervoll, 2009). The specification process involves positioning and differentiation, that is, creating an offer that is perceived as unique in the market (Dinisa & Krakoverb, 2015). The niche tourism market, which is characterised by its name, targets a small number of consumers when compared to mass tourism, but, at the same time, it is a constant tourism market. Niche tourism is motivated by what a tourist does, whereas mass tourism is concerned with how many do something (Venter, 2022). Niche tourism is more identified with what tourists are doing than their number in a particular destination, at a particular time (Bunghez, 2021). Robinson and Novelli (2005) suggest distinguishing between “macro-niches – i.e. cultural tourism, rural tourism ... and micro-niches – i.e. geo-tourism, gastronomy, cycling tourism, etc.” The latter is formed by a greater segmentation of the industry as a result of growing specialisation.

Lotter, Geldenhuys and Potgieter (2018) identify three macro-markets for niche tourism (cultural tourism, events, and natural areas tourism) and seven secondary markets (adventure tourism, eco-tourism, festival tourism, heritage tourism, nature tourism, religious tourism, and sports tourism). It is clear that adventure tourism falls under the seven secondary markets and is a growing niche or segment in the international economy (McKay, 2012).

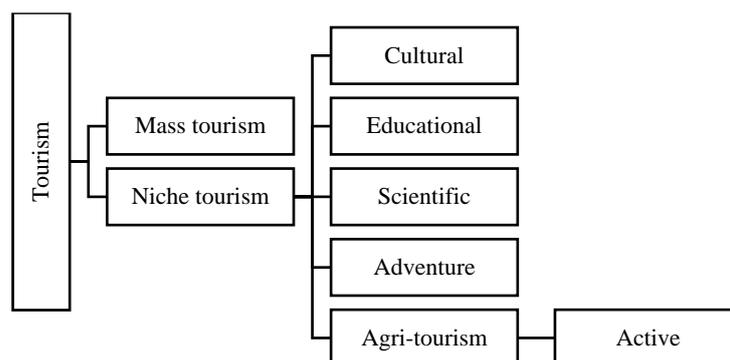


Figure 1.2: Niche tourism (adapted from Saayman 2003:220, Venter 2017)

Adventure tourism

From ancient times, humans have been travelling for survival and in search of food and water. Humans have been engaging in adventurous travel for hundreds of years via exploration of sea routes, new destinations, or visiting new countries (Tourism Notes, 2018-2020). The World Tourism Organization (UNWTO) (2014) suggests that one of the key drivers of adventure tourism is the increase in urbanisation and digitalisation, resulting in consumers seeking active, authentic experiences that highlight natural and cultural values.

According to the Adventure Travel Trade Association, adventure tourism is a tourist activity that includes physical activity, cultural exchange, or activities in nature (Tourism Notes, 2018-2020). Adventure tourism is also a niche tourism activity where travellers expect the unexpected (Malik, 2018). It also offers exciting experiences that are physically demanding and lead to personal accomplishment by conquering dominating challenging environments. Adventure tourism is an underlying part of the active tourism concept and has grown exponentially worldwide over recent years, with tourists visiting destinations previously undiscovered (Koščak & O'Rourke, 2018). This allows for new destinations to market themselves as truly unique, appealing to those travellers looking for rare and different experiences. George (2019) says that adventure tourists seek mainly challenging holidays.

Most scholars agree that risk to life and limb is the defining feature of adventure, such that the adventure activity is usually something substantially different from ordinary everyday life, but also fun and exciting (Swarbrooke et al., 2003; Kane & Zink, 2004; Fletcher, 2010; Gstaettner, Lee & Rodger, 2016). The UNWTO's Global Report on Adventure Tourism (2014) defines adventure tourism "as a trip that includes at least two of the following three elements: physical activity, natural environment, and cultural immersion". McKay (2014) further describes adventure tourism as "The sale of a guided adventurous trip or activity where there is some risk, uncertainty, and challenges involved. Clients are actively and physically involved and most people experience strong emotions, such as fear and excitement, while participating" (McKay, 2014). Most of what has been termed adventure tourism in present-day publications are located in an intersection of outdoor recreation (*friluftsliv*), extreme sports, and serious leisure, indicated in Figure 2.1 (Mykletun, 2018).

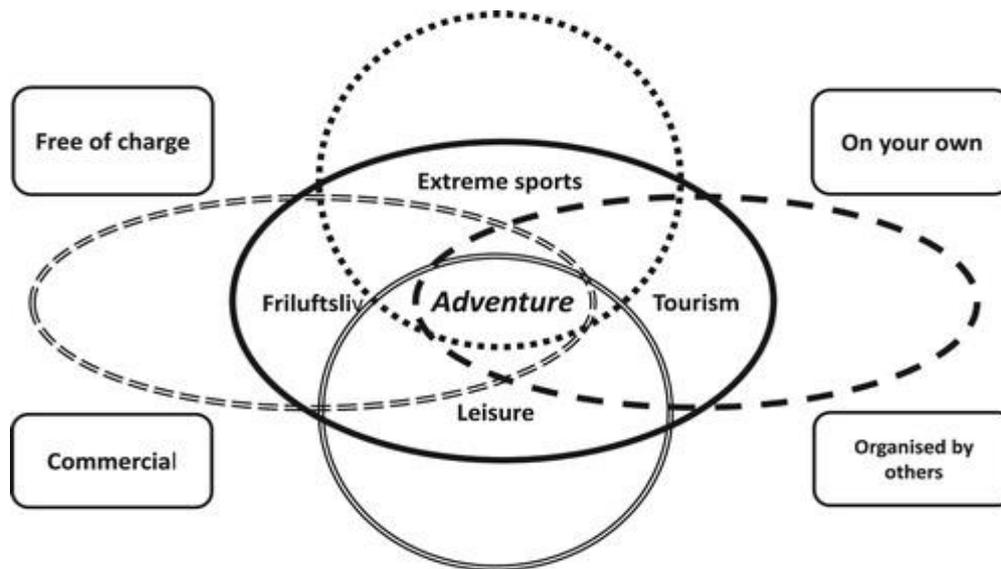


Figure 2.1. Adventure tourism is an intersection between tourism, serious leisure, extreme sports, and *friluftsliv*, and is related to the contextual dimensions of commercialisation and remoteness
 Source: Mykletun (2018)

Adventure tourism is often divided into hard adventures (e.g. bungee jumping, heli-skiing, white water rafting) and soft adventures (e.g. hiking, mountain biking or stand-up paddling) (Neirotti, 2010; Swabrooke et al., 2003). Activities are sometimes divided differently between soft and hard adventures by different authors (Patterson & Pan, 2007). This is also because some activities, such as kayaking or mountain biking, can be performed both as hard and as soft adventure activities, depending on where, when and how they are carried out. The general idea is that all activities with a higher risk, a higher complexity and a higher exposure to nature and wilderness are considered as hard adventures. Activities involving substantial risk or heavy physical activity are classified as ‘hard adventure’ and usually attract the ‘danger rangers’ and often involve strenuous physical exertion (Buckley, 2007). Soft adventures do not need special training, can be easily learned and performed, and attract a wide audience (Gross & Sand, 2019). Soft adventure activities are usually guided, only incorporate low/perceived risk, and can be conducted by novices as they require minimal skills (Beckman et al., 2017; Gross & Sand, 2019). Millington et al. (2001) add another perspective to adventure tourism by dividing the adventure tourism market into adventure travel that is destination-driven and adventure tourism that is activity-driven. Each of these basic divisions is then subdivided (see Table 1).

Table 1: Subdivisions of destination-and activity-driven adventure tourism

<i>Destination-driven</i>	<i>Activity-driven</i>
(a) By vehicle	(a) Hard
(b) Non-vehicular	(b) Soft

Source: Swabrooke et al. (2003)

In destination-driven adventure travel, the destination is the most important aspect of the trip, with the traveller being interested in the landscape and scenery, the ecosystem, the people, or the history of the place. The location will often be somewhere unusual, remote or exotic, providing novelty, stimulation, discovery and challenge for the traveller. In activity-driven travel, it is the activity rather than the destination that is crucial. The destination could be a remote or wilderness area if the activity demands it, but could also be near home. As the choice

of terms suggests, the division used by Millington et al. (2001) is based on tourist drive and motivation.

The threefold combination of activity, nature and cultural characteristics marks adventure travel as an all-around challenge. It is advisable to investigate the characteristics and features of adventure tourism as it is so closely related to e-mountain bike tourism and may illustrate interesting perspectives and future areas of research. The following are unique characteristics and features of adventure tourism (Tourism Notes, 2018-2020):

- Physical activity, i.e. activities involving physical exertion or psychomotor skills
- Contact with nature, i.e. activities leading to contact with the natural world in general, or with specific wildlife
- Contact with different cultures, i.e. people, faiths, lifestyles
- Journeys, i.e. by vehicle-, animal-, or human-power
- Uncertain outcomes
- Danger and risk
- Challenges
- Anticipated rewards
- Novelty
- Stimulation and excitement
- Exploration and discovery
- Contrasting emotions

These characteristics of adventure tourism give an indication that e-mountain bike tourism and adventure tourism share similar features, and that active tourism also needs to be evaluated to indicate its importance in the greater niche tourism market.

Active tourism

According to the General Secretariat of Tourism (2004), active tourism is “one that has as main motivations the realization of recreational and leisure activities, the interpretation and/or knowledge of nature, with different degree of depth and the practice of sports activities of different physical intensity and risk who expressly use the local resources in a specific way, without degrading or exhausting them”. Active tourism typically takes place in non-overcrowded areas with limited levels of man-made modifications, which gives it a character of purity and tranquillity, also linked to the previously addressed search for well-being (Vila et al., 2019).

Active tourism, as a concept, is frequently applied in connection with sports, adventure, and physical activities. There are, however, other definitions of active tourism that view it as a variation of responsible tourism, development of ecotourism, or a version of local tourism. In the more common uses of the concept ‘active tourism’, we regularly find the word ‘action’, the etymological cousin of active; and linked to action, we often find the word ‘adventure’. Active tourism occurs commonly in or near natural environments, social environments with distinct cultures, and/or sites containing historical artefacts (Koščak & O’Rourke, 2018). Active tourism should aim to combine recreation and education to benefit both the tourist as well as the visited destination.

Active tourism encompasses all kinds of outdoor tourism activities that imply the practice of some physical effort (Vila et al., 2019). More recently, the number of encompassed activities has grown, and they are classified according to two criteria: environment (terrestrial, aquatic and aerial) and intensity (soft or hard) (Buckley, 2011). Active tourism is also low-impact, ecological, and socially compatible, as well as high quality. Active tourism has three major aims:

- **Recreation:** It allows distraction from the daily working routine during vacations. Active tourism is fun and can provide you with all the pleasure you can desire. It relaxes your mind and recharges your body energy by practising exercise.
- **Education:** An active tourist is eager to learn about other cultures and gain access to their way of living. Your vacations should broaden your horizons.
- **Benefit:** Tourism does not only bring advantages to visitors, but also helps the local economy and promotes the development of the visited land. Active tourism uses and values nature, protects biodiversity and offers employment to people (Active Tourism, 2002).

The reasons why people engage in active tourism are diverse, but the most frequently cited motivations are relaxation, exploring new places, time with family, and learning about different cultures (UNWTO, 2014). Active tourism is no longer to be viewed as a new travelling philosophy that combines adventure, ecotourism and cultural aspects of a discovery tour. Active tourism should be low-impact, ecological, socially compatible, and of high quality (Koščak & O'Rourke, 2018). An important application of the concept of 'active tourism' is by linking it to activities. Tourists, visiting destinations and attractions are offered a range of activities to learn more about the destination, to cater to different needs and requirements of tourists, and to present experiences offered in specific regions (Active Tourism, 2002).

Active tourism, if ecologically driven, inspired and sustained by local communities, can offer a rich experience to several growing tourism segments and tourism lifestyles. Developed compassionately and carefully, it will add social, environmental and economic benefits (Koščak & O'Rourke, 2018). Adventure tourism and active tourism are substantial industry factors, which play an important role in the niche tourism market. In the following section, the author addresses the principle themes of mountain biking and e-mountain biking as part of this exciting tourism market.

Mountain biking

To be able to fully understand e-mountain biking, it is important to investigate what a mountain bike is and where it originated from. A mountain bike is defined as: “ a bicycle with a light sturdy frame, broad deep-treaded tyres, and multiple gears, originally designed for riding on mountainous terrain” (Oxford Dictionaries, 2022). Mountain bikes originated as fully rigid steel-framed behemoths and have steadily evolved into lightweight and incredibly capable machines (Benziger, 2021). Mountain biking involves bicycling on rough terrain such as mountain trails and may also involve various other 'extreme' conditions such as bicycling on snow and ice or in the dark (Van der Plas & Kelly, 1998). It began in the early 1970s when some young cyclists started to use their bicycles off-road. Existing commercial bikes were not suited to this type of rough usage, so these early users put together their equipment out of strong old bike frames with balloon tires, to which they added motorcycle lever-operated drum brakes for better stopping ability. They called their creations 'clunkers' (Penning, 1998; Buenstorf, 2002).

These special kinds of bicycles have a certain category of visitors/tourists who participate in it. Mountain bikers appreciate the risk, the search for a new adventure, and meeting new people (Kruger & Saayman, 2014). Skar et al. (2008) identified seven motives for mountain bikers to participate in mountain biking, namely speed and excitement, physical exercise, contemplation, managing challenges, social relations, equipment and attention, and lastly, nature and place. A factor analysis was undertaken with 27 items from the Recreation Experience Preference (REP) scales to establish the relative importance of various kinds of motivation. Participants rated the importance of the factors on a scale from 1 (not at all important) to 5 (very important). *Physical exercise* scored a mean value of 4.46; *contemplation*

3.91; *nature & place* 3.52; *speed & excitement* 3.43; *managing challenges* 3.35; *social relations* 2.49; and *equipment & appreciation* 2.02 (Skar et al., 2008). Getz and McConnell (2011), on the other hand, identified four contributing factors for mountain bikers to participate, namely athleticism, social interaction, prestige and excitement, of which athleticism and excitement were regarded as the most important. Mountain bikers need to challenge themselves, have fun or choose to take part just for the thrill of it.

These views confirmed the notion that active sports tourists need to compete and improve their skills; however, mountain bikers did not seem to place a high value on winning compared to other active cycling tourists. According to Taylor (2010), motives for participation in mountain biking, among other things, include enjoying the landscape (scenery), escape, freedom, thrill-seeking, and feelings of ‘flow’. Regardless of whether one is looking at cycle participants in general or mountain bike tourists specifically, the demographic statistics are relatively consistent. Mountain biking therefore first developed as a form of personal recreation before it became a tourist activity. Mountain biking, as a tourist activity, originated and developed in the USA in the 1980s, and it spread throughout the world to places as far as France (Saint-Martin, Savre, & Terret, 2012). Mountain biking is a fast-growing, money-generating tourism niche (Mourdale & Weaver, 2016) and a lucrative, frequent, ‘short break’ market (Buning, Cole & Lamont, 2019). Mountain biking is practised in various forms, from riding technical, demanding downhill trails to easily manageable forest roads (Skar et al., 2008).

On average, cycle tourists, whether road bikers or mountain bikers, tend to be middle-aged (40-60 years), college-educated, white males, with higher average incomes derived from professional occupations, who describe themselves as possessing intermediate to advanced skills (Buning & Gibson, 2016b; Gajda, 2008; Getz & McConnell, 2011; Nickerson et al., 2013; Ritchie, Tkaczynski & Faulks, 2010). The profiles of those attracted to mountain biking are evidently homogenous, with privileged mid-life males outweighing the rest. It is characterised by an alarming absence of women (Bordelon & Ferreira, 2019).

Within the South African context, mountain biking (MTB) is one of the fastest-growing sports (Du Toit, 2013; Barry, 2014). Kruger and Saayman (2014) found that compared to road cyclists, mountain bikers in South Africa were younger, male participants, motivated by athleticism, excitement (risk) and a drive for adventure. Considering the boost in economic and tourist activity that cycling events can generate, it is no wonder that many South African cities are focusing on promoting a cycle-friendly environment (Du Toit, 2013; Barry, 2014). Mountain biking in South Africa seems to be an extremely promising activity. Many businesses recognise the potential untapped market. iSimangaliso Wetland Park (RSA) is one of the destinations offering adventurous MTB experiences. Riding with a mountain bike through the World Heritage Site of the iSimangaliso Wetland Park, tourists do not only experience riding a mountain bike through different landscapes, but also riding with different animals surrounding them. The park operators use natural tracks, which are etched into the soil by footprints of hippos and antelopes. These animals are “nature’s most accomplished trail designers” (iSimangaliso Wetland Park, 2020). This indicates that mountain biking is already successfully used as a touristic product in South Africa and enjoys great popularity and demand, using relatively simple ways of implementing such a product.

E-mountain biking

The first electric bicycles were documented in patent offices in the 1880s and 1890s, in both France and the United States. In 1897, Hosea W Libbey of Boston invented an electric bicycle that was propelled by a ‘double-electric motor’. The motor was designed within the hub of the crank set axle. This model follows similar principles of design and operation to present-day mid-drive motors as seen on some bikes (Resha, 2018).

In 1989, one of the most important innovations was created in the form of the first ‘pedelec’ or pedal-electric cycle (now known as pedal-assist) in which the motor power is triggered as assistance pedalling action is registered by the bicycle. By 2001, the terms ‘e-bike’, ‘power bike’, ‘pedelec’, ‘pedal-assisted’, and ‘power-assisted bicycle’ were commonly used to refer to electric bikes (Resha, 2018).

According to Fishman and Cherry (2016), e-bikes are bicycles with electric assistance, incorporating chargeable batteries and an electric motor. Depending on individual state legislation, e-bikes are classified differently (Fishman & Cherry, 2016). A fundamental distinction is based on the type of electrical support. So-called ‘pedelecs’ only assist the rider while pedalling. ‘E-bikes’, however, also give support when not pedalling. E-mountain bikes thereby represent a sub-form of e-bikes and combine conventional mountain bikes with the assistance of an electrical motor. Electric mountain bikes, known as e-mountain bikes, are similar to regular e-bikes, in that they are bicycles with a battery-powered ‘assist’, which comes via pedalling and, in some cases, via a throttle. When you push the pedals on a pedal-assist e-mountain bike, a small motor engages and gives you a boost, so you can zip up hills and cruise over tough terrain without gassing yourself (Yeager, 2021). Most e-mountain bikes come with a power switch that allows you to adjust the boost setting. An electric mountain bike can allow you to get out for a quick blast; propelling you uphill easily, to enjoy the descents. The ability to cover ground quickly means you can go out and explore places you would not otherwise have considered (Norman, 2021).

This type of electric bike is designed to go off-road. Mountain bikes usually have higher-volume tyres with aggressive tread (smaller knobs for gravel roads and packed dirt, larger knobs for soft loose terrain). Most e-mountain bike products have front suspension and many offer full suspension (ElectricBikeReview, 2012-2022).

As a subgroup of e-bikes, e-mountain bikes have developed rapidly, especially over the past year. It presents the tourism and leisure industry with numerous opportunities. The potential is boundless (Pröbstl-Haider et al., 2018). The Union Cycliste Internationale (UCI) adopted strict regulations regarding the electric motors on e-mountain bikes, which must not exceed 250 watts. Pedalling assistance is only permitted to a maximum speed of 25 kilometres per hour (kph).

E-mountain biking within the South African context is a fairly new contender in the battle for recreation. Most of the trails are natural jeep tracks, hiking trails or single-track footpaths; and they usually go through private landowners’ farms, which leaves the cyclists at risk, as they are unfamiliar with the trail ahead of them (Steyn et al., 2014). Because of a total lack of research in the field of e-mountain biking in South Africa, urgent studies need to be conducted. It is the author’s opinion that attention needs to be given to cycle paths and safety precautions against criminals, to enhance the possibility of the further development of e-mountain biking as part of the action and adventure tourism niche market in South Africa.

Conclusion

E-mountain biking is a new trend in tourism activity that is not only providing tourism with new target groups, but also extends tourism to new destinations and can play an important role in rural economies. The emergence of the electric pedal-assist bikes (e-bikes), and specifically electric pedal-assist mountain bikes (eMTB), presents an opportunity for a larger segment of the population to enjoy active and adventure tourism destinations in South Africa. Mountain biking was often limited, or perceived to be limited, to those individuals who already enjoy a relatively high level of cardiovascular fitness and endurance. Lately, however, there has been a growing interest in this new emerging trend of e-mountain biking, which influences the overall target market and also attracts elderly people and tourists, who are more interested in

experiencing the landscape than a physical challenge. Therefore, a whole new world has been opened up to people who have never thought that it would be possible for them to be part of active and adventure tourism in any way. E-mountain biking opens the door for a wide range of opportunities in future adventure-cycling tourism strategies, such as slow tourism, food tourism, or nature-based tourism, promoting their destinations and tourism products, and then as a result, seeing an increase in the number of overnight stays.

This paper has used an extensive literature analysis of active and adventure tourism to show the potential of e-mountain biking as a tourism niche market in South Africa. The concept of e-mountain biking, as part of active and adventure tourism, was analysed. To better understand the state of e-mountain biking as part of the active and adventure tourism niche market in South Africa, the author proposes further research in the development and sustainability of e-mountain biking, the quality-of-life factors, and to determine what the travel motives for these tourists are. The author also recommends that a standard analysis of market segmentation and spending patterns of e-mountain bike tourists and visitors should be done.

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