

The potential of accessible tourism for sustainable development of local communities in northern Pakistan

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Abstract

PURPOSE: Accessible tourism holds significant importance for local communities as it is a cornerstone for fostering inclusivity and equal participation in the tourism industry. Recognizing the growing global emphasis on inclusivity, especially for individuals with diverse needs, this research aims to explore the multifaceted impacts of accessible tourism on the sustainable development of local communities in the northern areas of Pakistan. Additionally, the study assesses the moderating role of destination image between accessible tourism dimensions and the sustainable development of local communities. Given that destinations heavily rely on tourism to fulfill their socio-economic needs, it becomes imperative to evaluate the potential transformative impact of accessible tourism on their sustainable development. **METHODOLOGY:** A self-administered survey was completed using a two-stage sampling approach with 321 tourists and 321 local residents from five tourist destinations in northern Pakistan. Subsequently, the collected data were analyzed using Structural Equation Modeling (SEM) to test the proposed hypotheses. **FINDINGS:** The results show the significance of all four dimensions of accessible tourism (accessible core resources and attractors, accessible supporting factors and resources, accessible qualifying and amplifying determinants, and destination planning and management) in the sustainable development of local communities. The moderation assessment further confirms that destination image strengthens the relationship between accessible core resources and attractors, contributing to the sustainable development of local communities. However, destination image was found to have a negative moderating effect between accessible qualifying and amplifying determinants and the sustainable development of local communities. **IMPLICATIONS:** Empirical findings offer fresh insights for destination planners and policymakers in the tourism industry. These insights pertain to the effective utilization of accessible tourism practices, which can significantly contribute to the sustainable development of destinations. Additionally, tourism businesses can leverage the research to attract a broader segment of tourists, increase profitability, and enhance tourist satisfaction by implementing accessible practices and services. Understanding the moderating role of destination image can further guide them in crafting responsible tourism narratives that resonate with diverse travelers. **ORIGINALITY AND VALUE:** The study marks an initial attempt to explain how destinations, particularly those heavily reliant on tourism, can strategically leverage accessible tourism as a crucial factor in fostering sustainable community development. **Keywords:** accessible tourism, sustainable development, local communities, northern Pakistan, inclusivity in tourism, destination image, structural equation modeling, tourism policy, community development, tourist satisfaction

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INTRODUCTION

Tourism has emerged as the most extensive and rapidly expanding industry in the 21st century (UNWTO, 2022). This unprecedented growth has spurred the development and utilization of diverse alternative forms of tourism, each characterized by its unique dynamics and offering (Qiao et al., 2021). Recognized as an alternative form of travel, accessible tourism has gained prominence as a burgeoning market in recent years (Kasimati, 2019). It involves addressing attitudinal and institutional barriers in society and encompasses accessibility in various aspects such as the physical environment, transportation, accommodation, communications, as well as facilities and services. In essence, accessible tourism caters to any segment of the market seeking seamless access to tourism experience (Benjamin et al., 2021a). According to Kanwal et al. (2020), the benefits of accessible tourism extend to the entire population. Accessible tourism, as a continuously growing service industry, not only facilitates job creation and foreign exchange generation but also fosters improved environmental conservation. Furthermore, it serves as a custodian of local heritage, thereby contributing to the comprehensive development of the local destination (Abbas et al., 2021).

To achieve stable growth in the tourism industry, the sustainable development of the local communities is imperative. Numerous researchers have emphasized the indispensability of engaging local communities for the long-term success of tourism development (Jehan et al., 2023a; Ramkissoon, 2023; Saluja et al., 2022). The descriptive approach of the triple bottom line (TBL) theory also posits that tourism planners should manage tourism resources effectively, ensuring the sustainable development of a destination's economic, socio-cultural, and environmental aspects (Elkington, 1994). As studied by Aquino et al. (2018), accessible tourism plays a pivotal role in promoting sustainable community development. By ensuring the accessibility of tourist destinations, local communities can tap into previously underserved market segments (Tomasi et al., 2020). Recognizing the benefits of economic growth and social inclusion, the World Tourism Organization has prioritized the provision of inclusive tourism. Pakistan and numerous other nations are making significant efforts to encourage and implement initiatives that support accessible travel. The tourism industry of Pakistan is presently valued at approximately USD 2.5 billion, and it is projected to increase to USD 4 billion within the next four years (World Travel & Tourism Council, 2021). Pakistan Tourism Development Corporation (PTDC) has made efforts to promote accessible tourism in Pakistan by collaborating with various stakeholders, including disability organizations and tourism industry professionals (The Nation, 2020). However, according to Nazneen et al. (2019), there are significant gaps in assessing Pakistan's competitiveness in providing accessible tourism. For instance, Rashid et al. (2020) found that the travel industry in Pakistan requires fundamental changes to incorporate accessible facilities, such as supporting infrastructure, transportation, and efficient policies to serve people with special needs. The existing evidence suggests that Pakistan has the potential to provide accessible tourism. However, there is a lack of insight regarding the current state of accessible tourism in Pakistan and its potential benefits for sustainable community development.

The profound impact of accessible tourism on destination competitiveness has been widely acknowledged by researchers (Cronjé & du Plessis, 2020a; Domínguez Vila et al., 2015a; Natalia et al., 2019). However, most of the studies in the field of tourism predominantly concentrate on traditional tourism and its consequences (Aquino et al., 2018b; Han, 2021a; Miličević et al., 2017a; Pasanchay & Schott, 2021a; Pratama & Mandaasari, 2020; Qiao, Ding, Linlin, et al., 2021; Wang et al., 2020) leaving a scarcity of research that delves into the implications of accessible tourism. Moreover, existing studies on accessible tourism are mainly conducted in Western countries (Cronjé & du Plessis, 2020; Devile & Kastenholz, 2018; Natalia et al., 2019). Consequently, the applicability of these findings to the Pakistani context may be questionable. This research gap is significant because it hinders the development of evidence-based policies and practices that can facilitate the development of accessible destinations. Furthermore, a favorable and inclusive destination image not only attracts a diverse range of travelers but also inculcates a sense of belonging and empowerment within the local community (Lee & Jan, 2019). This situation suggests that the impact of destination image on the relationship between accessible tourism and the sustainability of local communities can vary. The existing research lacks sufficient evidence to support such a moderated relationship. Building upon this background, the present study attempts to investigate how accessible tourism impacts the sustainable development of local communities in relation to their socio-cultural, economic, and environmental aspects. The study will specifically focus on renowned tourist destinations located in the northern areas of Pakistan. The present research will also explore the moderating role of destination image between accessible tourism and the sustainable development of local communities. Given the aforementioned, this study makes a significant contribution to the extant literature and intends to offer valuable insights that can assist the tourism industry in crafting impactful strategies for accessible tourism.

LITERATURE REVIEW AND CONCEPTUAL BACKGROUND

The Triple Bottom Line (TBL) approach

Tourism inherently imparts adverse effects on the climate; however, it concurrently holds considerable potential for positive impacts. Effectively managing tourism to optimize its positive outcomes while mitigating negative consequences is paramount (Uslu et al., 2020). The pivotal strategy in this regard is the adoption of the triple bottom line approach. This approach recognizes tourism's capacity to yield economic advantages, generate employment, and stimulate local economies, while concurrently acknowledging its potential for environmental degradation and social upheaval (Tseng et al., 2020). Stakeholders within the tourism sector aim to achieve equilibrium between economic prosperity, societal well-being, and ecological sustainability by incorporating the triple bottom line approach. This necessitates the implementation of eco-friendly initiatives, community involvement, and the preservation of cultural heritage (Roxas et al., 2020). Such a comprehensive outlook is imperative for crafting a tourism paradigm that supports economic advancement and prioritizes environmental preservation and social accountability (Elkington, 1994). The adoption of the triple bottom line approach in tourism aligns with the principles of sustainable development for local communities in Pakistan. By integrating economic growth, social well-being, and environmental conservation, this approach seeks to ensure that tourism contributes positively to the livelihoods of local residents while preserving the cultural and natural heritage of the region.

The concept of accessible tourism

Accessible tourism aims to provide "tourism for all" by ensuring that individuals with access requirements, such as mobility, vision, hearing and cognitive abilities, can participate in tourism activities independently, equitably, and with dignity (Darcy & Dickson, 2009). This initial definition of accessible tourism only focused on eliminating obstacles that hinder people with disabilities (PwD). The concept of accessible tourism has evolved to encompass a broader scope that involves transforming the entire tourism concept. The contemporary approach to accessible tourism is to align the tourist environment with the principles of Universal Design, ensuring its usability and access by all population groups, irrespective of their age, condition, capacity, or impairment (De Matteis et al., 2021). This inclusion encompasses a wide range of people, including families with young children, expectant females, individuals with disabilities, and older adults. It underscores the importance of inclusiveness, ensuring that everyone can participate in tourism activities regardless of their specific requirements (Darcy et al., 2020). It is estimated that millions of individuals with accessibility requirements travel every year, both domestically and internationally. This underscores the substantial market potential of accessible tourism and emphasizes the significance of creating more inclusive tourism opportunities for all individuals, regardless of their abilities or disabilities (Cochran, 2020).

Saluja et al. (2022) claimed that accessible tourism positively impacts economic sustainability by creating economic opportunities, generating employment and increasing income within local communities, all due to the rise in visitors seeking accessible travel experiences. Furthermore, Giampiccoli et al. (2020) found that accessible tourism actively preserves cultural heritage by eliminating obstacles and offering inclusive experiences that facilitate cultural understanding and the transmission of knowledge. Han (2021) inculcates that accessible tourism supports environmental sustainability by promoting responsible practices, adopting universal design principles, and safeguarding natural resources and ecosystems. In this context, accessible tourism is crucial in securing the continuous growth and sustainability of the local population. However, conceptualizing accessible tourism to reflect all its dimensions is critical. More recently, the concept has started to mature with a conceptualization that sought to make sense of individual studies and provide a holistic index (Natalia et al., 2019). Domínguez Vila et al. (2015) were among the first to incorporate Ritchie and Crouch's (2003) competitiveness model to compare the current state of accessible tourism between the two regions. According to Domínguez Vila et al. (2015), Ritchie and Crouch's (2003) competitiveness model can be used to examine the accessibility of tourist destinations. The current study also utilized accessible tourism conceptualization adapted by Domínguez Vila et al. (2015) to investigate the potential impact of accessible tourism in the northern areas of Pakistan. The subsequent literature review will discuss various dimensions of accessible tourism in relation to the sustainable development of local communities.

Accessible core resources and attractors

Accessible core resources refer to the accessibility of primary tourism resources and attractions. These factors are the foremost considerations for tourists when choosing among various destinations (Lestari et al., 2022). Cronjé and du Plessis (2020) conceptualized core resources and attractors as the integration of essential hospitality elements: physiography, tourism superstructure, and culture and heritage. Tomasi et al. (2020) identified that accessible tourism activities have been closely intertwined with the well-being and sustainability of local communities. As Coban and Yildiz (2019) observed, when a destination provides convenient access to visually appealing landscapes, it draws in a larger influx of tourists. Attracting tourists creates economic opportunities, supports infrastructure development, and improves essential services. There is a growing perspective that the success of tourism should not be solely gauged by the number of visitors it attracts but rather by its capacity to contribute to local economies and generate overall positive outcomes for destinations. Goffi et al. (2019) argue that the importance of cultural resources should not be overlooked, as they often have an essential part in attracting visitors and influencing the competitiveness of a destination. Physical and perceptual accessibility to heritage sites and activities involves establishing disability-friendly public transportation networks and implementing appropriate road signage. Dandotiya and Aggarwal (2022) affirmed that the level of accessibility to core resources and attractors encourages the safeguarding of indigenous traditions and thus enhances local investment in cultural assets and facilities that cater to the needs of the local population. A similar study by Jehan et al. (2023) underlined that convenient access to core resources facilitates the cultivation and preservation of diverse community amenities, promoting their development and ongoing maintenance. Thus, from the literature mentioned above, the subsequent hypothesis is put forward:

H1: Accessible core resources and attractors are positively related to the sustainable development of local communities.

Accessible supporting factors and resources

Accessible supporting factors and resources refer to the elements that are readily available and easily accessible, thus having a supplemental effect in enhancing the competitiveness and sustainability of local destinations. These factors include created resources, such as well-established infrastructure for accommodation, transportation, and communication (Lestari et al., 2022). Recent studies (Janjua et al., 2022; Mathew & P M, 2021) found that enhancing the accessibility of supporting resources elevates the overall travel experience and contributes to the well-being of the local communities. Kamyabi and Alipour (2022) highlighted that carefully constructed pathways empower individuals facing mobility challenges to explore destinations effortlessly with comfort and independence. Furthermore, the provision of seamless transportation alternatives like low-floor buses and vehicles equipped with wheelchair ramps enhances the overall mobility of tourists with special needs. The study by Setini et al. (2021) found that accessible factors and resources increase tourist numbers and amplify local business revenue streams. Bano et al. (2022) emphasize the instrumental role of Information and Communication Technologies (ICT) as a supporting factor in fostering the development of local communities by providing new tools and distribution channels. ICT facilitates business transactions, networking with partners, and global information dissemination in the tourism industry. Information and Communication Technologies (ICT) assist travelers with accessibility needs by furnishing them with comprehensive information, recommendations, and booking details pertinent to tourist destinations through online applications. Additionally, Benjamin et al. (2021) believe that accessible infrastructure offers convenient access to essential services and recreational activities, subsequently promoting the preservation of cultural heritage and mitigating adverse ecological impacts. By investing in and prioritizing accessible supporting resources, local communities can achieve sustainability through economic, socio-cultural, and environmental benefits. Given the evidence above, the following hypothesis is developed:

H2: Accessible supporting factors and resources are positively related to the sustainable development of local communities.

Accessible qualifying and amplifying determinants

Accessible qualifying and amplifying determinants encompass a range of competitive factors, including location, cost/value, and safety and security, that meet the basic accessibility requirements to improve the inclusivity of people with special needs (Lestari et al., 2022). Cheer et al. (2019) emphasize the importance of implementing measures that aim to reduce transportation costs and provide affordable and customized options, as this approach would enable greater

accessibility to travel destinations (Setini et al., 2021). Khanh and Phong (2020) highlight that expanding the tourist market and increasing visitor numbers leads to heightened tourism revenue for destinations. This, in turn, contributes to local economic growth and nurtures a business ecosystem. Accessible destinations enable individuals with access requirements to immerse themselves in the local culture and traditions. By facilitating meaningful experiences and interactions, these destinations instill cultural exchange and social integration (Paul & Roy, 2023). Kamyabi and Alipour (2022) identified that by ensuring that destinations provide a secure environment, tourists with disabilities can confidently engage in exploration and enjoyment. The provision of a positive and secure travel experience not only supports return visits but also promotes positive word-of-mouth recommendations. This organic promotion attracts more visitors, stimulating tourism demand and economic development. Qiao et al. (2021) corroborate that destinations that prioritize accessibility often incorporate sustainable practices, such as eco-friendly transportation, energy-efficient infrastructure, and responsible waste management. These sustainable initiatives mitigate environmental impact associated with over-tourism, underscoring the commitment to environmental preservation. Darcy et al. (2020) found that the integration of accessible qualifying determinants into strategies for destination planning has been proven to strengthen the economic, socio-cultural, and environmental development of the local population. Consequently, it is predicted that:

H3: Accessible qualifying and amplifying determinants are positively related to the sustainable development of local communities.

Destination planning and management

Accessible tourism destination planning involves comprehensive management of diverse aspects related to a specific destination, encompassing the identification and facilitation of both natural and developed resources, along with supportive measures, in a well-coordinated approach to maximize its attractiveness and inclusivity for tourists with diverse needs (Fyall & Garrod, 2020). Destination planning and management that prioritizes accessible tourism significantly contribute to the long-term sustainability of the local population. By prioritizing accessibility for individuals with disabilities and diverse requirements, it expands the potential for a broader spectrum of tourists to visit and actively participate in the community. This deliberate focus on inclusivity enhances the economic benefits of tourism and fosters social integration and cultural exchange (Darcy et al., 2020). The relationship between destination planning and the sustainability of local communities has been the center of focus of different recent studies (Uslu et al., 2020). The effectiveness of destination planning and management, particularly within the domain of accessible tourism, is significantly linked to the competence and strategic acumen of decision-makers engaged in the process. Discourse underscores the pivotal role decision-makers play in shaping the outcomes of accessible tourism initiatives, exerting influence over the destinations' capacity to accommodate diverse requirements (Dandotiya & Aggarwal, 2022). However, Volgger et al. (2021) highlight that an observed need exists for a more comprehensive examination and enhancement of the skill set and expertise of decision-makers in the context of accessible tourism planning. The level of proficiency and perspicacity demonstrated by decision-makers assumes a critical role in delineating the inclusivity, sustainability, and overall success of destination planning endeavors tailored to meet the needs of a diverse spectrum of tourists. According to Thetsane (2019), investing in training programs for tourism providers to cater to the unique requirements of individuals not only enhances the quality of the tourism experience but also presents economic and local entrepreneurship opportunities. Wang et al. (2020), through a dynamic system approach, researched urban Chinese destinations and concluded that accessible destination planning should prioritize the preservation of the region's natural and cultural heritage by embracing sustainable tourism practices. This entails promoting responsible behaviors among tourists, supporting environmentally friendly local businesses, and actively conserving delicate ecosystems through the establishment of protected areas. Kumar et al. (2021) further added that the comprehensive integration of destination planning and accessible tourism initiatives cultivates social inclusion and environmental sustainability and yields substantial economic advantages for local communities. Based on the above literature, it can be presumed that destination planning and management of accessible tourism significantly impact local communities' sustainability. Thus, the following hypothesis is postulated:

H4: Destination planning and management are positively related to the sustainable development of local communities.

The moderating role of destination image

Destination image is crucial in understanding how individuals decide when selecting a travel destination. The current study defined destination image as collective perceptions, beliefs, and impressions that individuals with disabilities and other access requirements hold regarding the level of accessibility and inclusivity offered by a particular destination (Huete-Alcocer & Lopez, 2019). Accessible tourism brings financial advantages while enhancing the reputation of destinations, thereby fostering the sustainable growth of the local population (Rasoolimanesh et al., 2021). Cham et al.'s (2021) study examined country-related factors on the destination image and found that perceiving a destination as an accessible tourism provider holds considerable potential for positively impacting the economic, sociocultural, and environmental advancement of local communities. Domínguez Vila et al. (2015) remarked that when a destination is recognized as accessible, it attracts a diverse range of tourists, including those with disabilities or special needs, resulting in an expanded visitor base that brings economic benefits to the destination. Dyk et al. (2019) investigated the implications of destination image for sustainable development and underlined that a positive destination image fosters social inclusivity and empowerment by ensuring equitable access to tourism experiences, nurturing a sense of community pride, and safeguarding the preservation of local culture. According to Liu et al. (2020), the image of a destination as an accessible tourism provider benefits the local economy and facilitates environmental preservation through sustainable and responsible tourism practices.

On the contrary, Loureiro and Jesus, (2019) identified that regardless of how accessible a destination is, if the image of the destination is not favorable, it will struggle to attract visitors. As a result, this inability to attract visitors could hinder the overall development of the destination. Given the significance of destination image, it is anticipated that destination image plays a moderating role in the relationship between different dimensions of accessible tourism and the sustainable development of local communities. Consequently, the following hypotheses are formulated:

- H5: Destination image moderates the relationship between accessible core resources and attractors and sustainable development of local communities.
- H6: Destination image moderates the relationship between accessible supporting factors and resources and sustainable development of local communities.
- H7: Destination image moderates the relationship between accessible qualifying and amplifying determinants and sustainable development of local communities.
- H8: Destination image moderates the relationship between destination planning and management and sustainable development of local communities.

Referring to the literature review and its gaps, the research model for this study is presented in Figure 1.

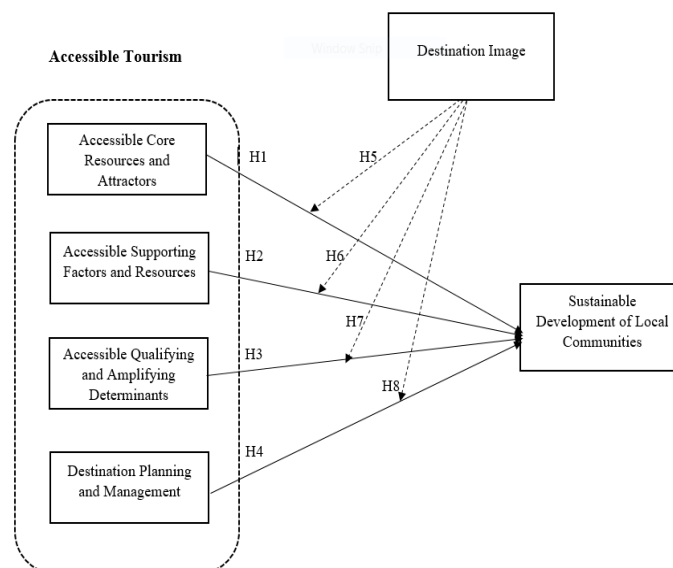


Figure 1. Conceptual framework of the study

RESEARCH METHODOLOGY

Study area

The study was aimed to be performed on local communities of the northern areas of Pakistan. The areas are located in the northern region of the country and share borders with Afghanistan to the west and China to the north and northeast. The northern areas consist of two districts, Baltistan and Gilgit, with Gilgit serving as the capital. The major political hubs in the area are Gilgit, Skardu, Hunza, and Chilas (Ministry of Tourism, 2021). Every year, thousands of local and international tourists visit these areas to enjoy the spectacular beauty of nature. Diverse local communities, such as Balti, Gilgit, Hunza, Kalasha, and Wakhi people, inhabit the northern areas of Pakistan. Each community possesses its unique cultural practices and customs. The locations draw a varied group of tourists, encompassing adventure seekers, nature lovers, mountaineers, and those interested in culture. While accessibility for people with specific requirements can be challenging due to the rugged terrain and limited infrastructure in certain areas, efforts are being made by Pakistan Tourism Development Corporation (PTDC) to accommodate these visitors and address their needs (Khan, 2021). Despite the obstacles faced, individuals involved in the tourism industry note a significant increase in tourism after the relaxation of COVID-19 restrictions. Consequently, the percentage of foreign travelers visiting Pakistan has risen to approximately 12–15%, compared to the previous 5–6%. The remaining 85% of tourists are domestic travelers. The local communities residing in these areas rely heavily on tourism since it provides opportunities for productive and inclusive employment, fosters small business growth, funds the preservation of natural and cultural resources, and enhances economic empowerment (Hussain, 2022). The data for the current study were primarily collected from five tourist destinations, Naran-Kaghan, Hunza, Skardu, Naltar, and Kashmir valleys, which have the highest population density in the region

Sample and procedure

A cross-sectional approach was employed to achieve the study objective, focusing on a specific phenomenon within a defined study period. Prior to the formal survey, a pilot study was conducted to assess the refinement and feasibility of the research instrument. A preliminary analysis was undertaken with a sample size of 50 participants to ascertain the clarity and unambiguity of the items. The primary objective was to examine the initial reliability and validity of the study model. The outcomes of the validity and reliability measures met the stipulated minimum thresholds, affirming the instrument's operationalization capability in fulfilling the primary objectives of the study. Nonetheless, a few minor issues pertaining to the structure and content of the survey items were identified and successfully rectified. Data collection for this study was performed from April to June 2023, the optimal time to visit northern Pakistan due to favorable weather conditions. A two-stage sampling approach was employed to ensure appropriate participants for data collection. In the first stage, data was collected from both local and international tourists, considering their perspectives on accessible tourism and destination image. The target sample for this phase included tourists with specific access requirements, as per the criteria defined by Darcy and Buhalis 2010. Following this, in the second stage, a separate sample consisting of local residents in tourist areas was selected to evaluate the impact of accessible tourism on various aspects of sustainable community development. A combination of proportionate stratified and convenience sampling methods was used to gather the necessary data. Specifically, tailored questionnaires were designed for each stage, addressing both the tourist sample and the local population. The proportionate stratified sampling approach involved enlisting an equal number of participants from each of the five tourist destinations: Naran-Kaghan, Hunza, Skardu, Naltar, and Kashmir. The questionnaires were distributed to the participants, accompanied by a clear explanation of the study's purpose and the voluntary and confidential nature of their involvement. The participants were provided with approximately 10 to 12 minutes to complete the survey either through a Tablet using an online link or by filling out a hard copy of the questionnaire. Respondents encountered no difficulties completing the questionnaire in both stages, as all unclear questions and responses were eliminated. In the second stage, to conduct a comprehensive assessment of the economic, socio-cultural, and environmental consequences associated with accessible tourism, the data collection predominantly targeted local residents. Ultimately, a total of 321 responses were received in each stage after a thorough screening process. Current research in the field of hospitality management suggests that a sample size ranging from 200 to 300 respondents is considered appropriate. Therefore, based on the assumptions outlined by Mihalic and Kušcer (2021), the present study collected data from 321 respondents. Additionally, in line with the recommendations of Tiwari et al. (2022), convenience sampling was employed to ensure

a large and diverse representation of the target population, which in this case consisted of tourists and local residents of the northern areas of Pakistan.

Measurement instrument

The measurement instrument utilized in this study was developed based on prior research. To ensure the validity of the scale items, the items were initially reviewed and discussed with four tourism and hospitality professionals to assess content validity. Two separate questionnaires (see Appendix A and B) were created to gather data. The first questionnaire was specifically designed to gather insights from tourists visiting the northern areas of Pakistan. Its main purpose was to evaluate the current status of accessible tourism in the region and examine how the destination was perceived in terms of its accessibility. A total of six constructs were used in this study. Accessibility of core resources and attractors was measured by five items, accessible supporting factors and resources were measured by five items, accessible qualifying and amplifying determinants, and destination planning and management were each measured by five items. All these items were taken from Domínguez Vila et al. (2015), Dwyer et al. (2014) and Gomezelj and Mihalič (2008). Furthermore, the destination image was assessed using six items adopted from Lee and Xue (2020). A separate sequel questionnaire was designed to measure the impact of accessible tourism on the sustainable development of local communities. In line with the study of Lee and Jan (2019), the sustainable development of local communities was assessed through a unified construct comprising eight items. These items encompassed economic, socio-cultural and environmental aspects and were adapted from the work of Chahal and Devi (2016), Jehan et al. (2023), and Lee and Jan (2019). It is important to note that the studies from which we adapted measurement items were conducted in the context of traditional tourism. As a result, the indicators they used for each construct were adjusted and modified to suit the current study's context. The first part of both questionnaires was designed to collect demographic information from the respondents (see Tables 1 and 2). Conclusively, a total of 600 questionnaires were given to local and international tourists, while 600 questionnaires were distributed to local residents. After eliminating incomplete questionnaires, we finalized 321 complete responses from each sample for further analysis. To ensure the absence of biases in the responses, the study employed Herman's single-factor test to assess whether the instrument introduced any biases in the data. The results indicated that after transforming all the measurement items into a single variable, the factor explained 17.8% of the variance. Since this variance of 17.8% falls below the threshold of 50%, it can be concluded that there was no significant presence of common method bias.

Data analysis technique

The current study used Partial Least Square Structural Equation Modeling (PLS-SEM) to assess the precision of the measurement model and to test the statistical significance of the proposed hypotheses. Descriptive statistics were separately computed for each sample to analyze the demographic information of the respondents. However, for structural equation modeling, the responses from both questionnaires were merged and treated as a unified dataset. This approach allowed for a comprehensive analysis to be conducted, examining and quantifying the impact of accessible tourism on the sustainable development of local communities.

RESULTS

Table 1 presents demographic information about tourists visiting the northern areas of Pakistan. It shows that 65.7% of the tourists were male, while 34.3% were female, indicating a higher representation of male tourists. The majority of tourists, accounting for 31.2% and 31.5% of the total sample, fell under the age brackets of 26 to 34 years and 35 to 44 years, respectively. This suggests a significant presence of young and middle-aged visitors. In terms of education, 48% of the tourists had completed their undergraduate or graduate studies, 40.8% had education up to a Master's level or higher, and 11.2% had education up to Matric/O-levels. Occupation-wise, 48.6% of the tourists were either self-employed or worked in the private sector, 26.8% were public sector employees, and 16.2% were students. The results further show that 86% of the sample were local tourists from Pakistan, while 14% were international tourists from different countries. Additionally, the proportions of 30.2%, 48.2%, 10.9%, and 10.5% delineate the compositional breakdown of tourists with accessibility needs: 30.2% encompasses individuals with disabilities, 10.5% pertains to senior or elderly tourists aged 60 and above, 48.2% represent parents accompanied by young children, 10.9% shows expectant female tourists, and 10.5%

pertains to senior or elderly tourists aged 60 and above. These statistics elucidate the disparate prevalence of accessibility considerations among different tourist demographics in the study. It is important to note that, in the case of tourists with disabilities, the data was collected from people who accompany these tourists, such as family or friends. Finally, the majority of tourists (51.4%) had a visit duration of less than 5 days, 35.2% stayed for 5 days, and 13.4% stayed for more than 5 days, providing valuable insights into the duration of their visit to the northern areas of Pakistan.

Table 1. Demographic profile of tourists

Items	Category	Frequency	Percentage
Gender	Male	211	65.7%
	Female	110	34.3%
Age	18–25	63	19.6%
	26–34	100	31.2%
	35–44	101	31.5%
	45–54	23	7.2%
	55–64	23	7.2%
	65 or above	11	3.4%
Level of education	Matric/O-Levels	39	11.2%
	Undergraduate/ Graduate	156	48%
	Master or above	126	40.8%
Occupation	Student	52	16.2%
	Public Sector Employee	86	26.8%
	Private Sector Employee/Self-employed	156	48.6%
	Retired/Unemployed	27	8.4%
Tourist status	Local Tourist (From Pakistan)	276	86%
	International Tourist	45	14%
Accessibility need	Tourists with disabilities	97	30.2%
	Parents with children	155	48.2%
	Expectant females	35	10.9%
	Senior/old age tourists	34	10.5%
Average duration of visit	Less than 5 days	165	51.4%
	5 days	113	35.2%
	More than 5 days	43	13.4%

Data was collected from local residents in northern Pakistan to measure the sustainable development of local communities, and their demographic information is presented in Table 2. Of 321 local residents, 69.5% were male, and 30.5% were female.

Table 2. Demographic profile of local residents

Items	Category	Frequency	Percentage
Gender	Male	223	69.5%
	Female	98	30.5%
Age	18–25	70	21.8%
	26–34	101	31.5%
	35–44	92	28.7%
	45–54	14	4.4%
	55–64	21	6.5%
	65 or above	23	7.2%
Level of education	Matric/O-Levels	147	45.8%
	Undergraduate/Graduate	132	41.1%
	Master or above	42	13.1%
Occupation	Student	35	10.9%
	Self-Employed	162	50.5%
	Public sector Employee	21	6.5%
	Private Sector Employee	69	21.5%
	Retired	34	10.6%

Items	Category	Frequency	Percentage
Monthly income	Less than 40k	57	17.8%
	40k–60k	165	51.4%
	60k–80k	49	15.3%
	80k–100k	18	5.6%
	100k or above	32	10.0%

The largest age group, comprising 31.5% of the sample, falls within the range of 26 to 34 years, indicating a significant proportion of young residents. In terms of education, 45.8% completed education up to Matric/O-Levels, which suggests that the current standard of education in northern Pakistan is not very comparable. 41.1% pursued higher education at the undergraduate/graduate level, and 13.1% attained a Master's degree or above, reflecting a diverse educational background. Self-employment was the dominant occupation, representing 50.5% of the respondents, followed by private sector employment at 21.5%. The data reveals that the respondents' monthly income predominantly falls within the range of Rs. 0k–40k (17.8%) to Rs. 40k–60k (51.4%), indicating that residents generally have a moderate income level, which is not particularly high.

Measurement/outer model assessment

In the first stage of structural equation modeling, the measurement model was assessed in terms of reliability and validity for the studied constructs. The detailed results are recorded in Tables 3 and 4. Construct reliability is measured using composite reliability, and the obtained values for all the constructs range from 0.601 to 0.912. These values are higher than the suggested threshold of 0.6, as Hair et al. (2013) recommended, indicating strong consistency among the items within each construct. Convergent validity is assessed using factor loading and the average variance extracted (AVE) from the data. The standardized factor loadings of all items fall within the range of 0.513 to 0.690, which exceeds the suggested criterion of 0.5, as proposed by Hair et al. (2013). This demonstrates that the items adequately capture the underlying construct, confirming convergent validity.

Table 3. Constructs with reliability and validity

Construct	Item	Factor loading	Cronbach's alpha	CR	AVE
Accessible Core Resources and Attractors (ACR)	ACR1	0.828	0.886	0.896	0.690
	ACR2	0.729			
	ACR3	0.858			
	ACR4	0.833			
	ACR5	0.895			
Accessible Supporting Factors and Resources (ASF)	ASF1	0.912	0.922	0.927	0.762
	ASF2	0.833			
	ASF3	0.900			
	ASF4	0.828			
	ASF5	0.889			
Accessible Qualifying and Amplifying Determinants (AQAD)	AQAD1	0.812	0.876	0.880	0.669
	AQAD2	0.818			
	AQAD3	0.762			
	AQAD4	0.813			
	AQAD5	0.881			
Destination Planning and Management (DPM)	DPM1	0.870	0.901	0.903	0.718
	DPM2	0.846			
	DPM3	0.823			
	DPM4	0.803			
	DPM5	0.892			
Destination Image (DI)	DI1	0.782	0.900	0.913	0.668
	DI2	0.831			
	DI3	0.856			
	DI4	0.881			
	DI5	0.708			
	DI6	0.836			

Construct	Item	Factor loading	Cronbach's alpha	CR	AVE
Sustainable Development of Local Communities (SLC)	SDLC1	0.673	0.758	0.873	0.513
	SDLC2	0.667			
	SDLC3	0.601			
	SDLC4	0.806			
	SDLC5	0.708			
	SDLC6	0.710			
	SDLC7	0.767			
	SDLC8	0.782			

Note: CR: Composite Reliability, AVE: Average Variance Extracted.

Subsequently, discriminant validity was measured using the Fronell-Larcker criterion by comparing the average variance extracted (AVE) derived from each variable to the shared variance. Table 4 presents the findings related to discriminant validity, demonstrating a satisfactory outcome. The diagonal values in the table exhibit higher values compared to the non-diagonal values within their respective columns and rows, which further reinforces the validity of the measurement model.

Table 4. Discriminant validity

	ACR	AQAD	ASF	DI	DPM	SDLC
Accessible Core Resources and Attractors (ACR)	0.830					
Accessible Qualifying and Amplifying Determinants (AQAD)	0.615	0.818				
Accessible Supporting Factors and Resources (ASF)	0.510	0.729	0.873			
Destination Image (DI)	0.581	0.744	0.731	0.818		
Destination Planning and Management (DPM)	0.515	0.715	0.683	0.763	0.847	
Sustainable Development of Local Communities (SDLC)	0.565	0.780	0.763	0.758	0.769	0.716

The results of the correlation matrix and descriptive statistics are exhibited in Table 5. The correlations among the accessible tourism dimensions, destination image, and sustainable development of local communities were consistently moderately strong to strong, ranging from $r = 0.49$ to $r = 0.75$, all of which are statistically significant at $p < 0.001$. This finding indicates a satisfactory association between all dimensions of accessible tourism and the overall sustainability of the local communities of the northern areas of Pakistan.

Table 5. Correlation, mean and standard deviation

	AQAD	ASF	ACR	DPM	DI	SDLC
Accessible Qualifying and Amplifying Determinants (AQAD)	1					
Accessible Supporting Resources and Attractors (ASF)	0.726**	1				
Accessible Core Resources and Attractors (ACR)	0.608**	0.499**	1			
Destination Planning and Management (DPM)	0.715**	0.679**	0.509**	1		
Destination Image (DI)	0.730**	0.720**	0.561**	0.755**	1	
Sustainability of Local Communities (SDLC)	0.755**	0.760**	0.558**	0.753**	0.736**	1
Mean	4.138	4.285	4.05	4.308	4.506	4.551
SD	1.635	1.639	1.581	1.608	1.538	1.417

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

Structural/inner model assessment

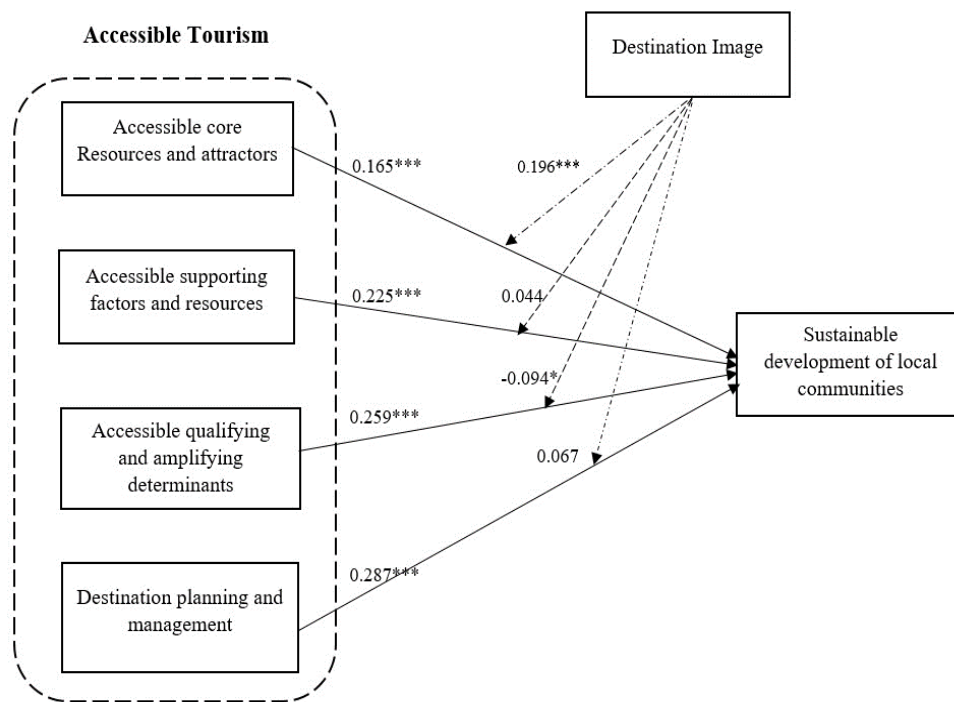
By the evaluation procedure proposed by Hair et al. (2013), several checks were performed to assess the structural model's accuracy. Collinearity issues among the predictor variables were examined, and it was found that all Variance Inflation Factor (VIF) values were less than 5.0, indicating no significant concerns regarding collinearity. The fit of the model was evaluated using the Standardized Root Mean Square Residual (SRMR), which was found to be 0.062, lower than the threshold of 0.08. This result suggests that the model fits well with the data. Q2 and R-squared (R²) values of the

endogenous variable were analyzed to measure the relevance and predictive power of the research model. The R2 value of sustainable development of local communities (0.774) indicates substantial predictive accuracy. Furthermore, the Q2 value for the sustainability of local communities was above zero, demonstrating that the exogenous constructs had significant explanatory power and provided satisfactory predictive relevance for the endogenous constructs in the model.

The results of the structural model presented in Table 6 and Figure 3 show that accessible core resources and attractors ($\beta = 0.165, p < 0.00$) and accessible supporting factors and resources ($\beta = 0.225, p < 0.00$) have a significant positive effect on the sustainable development of local communities. Therefore, H1 and H2 are accepted. In addition, H3 and H4 are also supported, indicating that accessible qualifying and amplifying determinants ($\beta = 0.259, p < 0.000$) and destination planning and management ($\beta = 0.287, p < 0.000$) have a substantial effect on the sustainable development of the local communities of the northern areas of Pakistan. Subsequently, to measure the importance of each path, the effect size (F2) was calculated. The findings in Table 5 indicate that all of the hypothesized paths (H1, H2, H3, H4) demonstrate a small yet meaningful effect size (Sawilowsky, 2009).

Table 6. Results of hypothesis testing (direct effect)

	Hypothesized Path	Std Beta	Std Error	T-value	F2	P-value	Decision
H1	ACR -> SDLC	0.165	0.041	4.021	0.055	0.00	Supported
H2	ASR -> SDLC	0.225	0.048	4.655	0.079	0.00	Supported
H3	AQAD -> SDLC	0.259	0.051	5.102	0.093	0.00	Supported
H4	DPM -> SDLC	0.287	0.046	6.204	0.128	0.00	Supported



Note: ***Significant at 1% level, **significant at 5% level; *significant at 10% level; **significant at 5% level.

Figure 2. Results of structural model

Table 7 shows the moderating results of destination image on the relationship between four dimensions of accessible tourism and sustainable development of local communities. A two-stage approach, as outlined by Becker et al. (2018), was applied to assess the moderation effect. The results, presented in Table 7, demonstrate that destination image positively moderates the relationship between the accessible core resources and attractors and sustainable development of local communities ($\beta = 0.196, p < 0.000$) with a fairly moderate effect size (F2 = 0.120). Destination image was found to have

a non-significant moderating effect on the relationship between supporting factors and resources and the sustainable development of local communities ($\beta = 0.044, p < 0.462$), as well as between destination planning and management and sustainable development of local communities ($\beta = 0.067, p < 0.205$). As a result, hypotheses H6 and H8 are rejected. Finally, destination image shows negative moderation between the accessible qualifying and amplifying determinants and the sustainable development of local communities ($\beta = -0.094, p < 0.042$) with a small effect size ($F2 = 0.053$). However, since the significant value is $p < 0.05$, H7 is accepted. These results are presented in Table 6 and Figure 2.

Table 7. Hypotheses testing for a moderation effect

	Hypothesized Path	Std Beta	Std Error	T-value	F2	P-value	Decision
H5	DI x ACR -> SDLC	0.196	0.031	6.303	0.120	0.000	Supported
H6	DI x ASR -> SDLC	0.044	0.060	0.735	0.003	0.462	Not Supported
H7	DI x AQAD-> SDLC	-0.094	0.045	5.102	0.014	0.042	Supported
H8	DI x DP-> SDLC	0.067	0.053	1.268	0.006	0.205	Not Supported

To provide further insights, we created interaction plots depicted in Figures 3, 4, 5, and 6 by employing one standard deviation value below and above the mean of the destination image. The utilization of ± 1 standard deviation in testing and illustrating interaction effects is a common method for representing high and low values (Dawson, 2014). As illustrated in Figure 3, accessible core resources (on the X-axis) exhibit a stronger positive effect on the sustainable development of local communities (on the Y-axis) when the destination image is high (depicted by a dotted line), in comparison to a low destination image (depicted by a solid line). The significant interaction effect highlights that a more positive destination image corresponds to a stronger relationship between accessible core resources and the sustainable development of local communities.

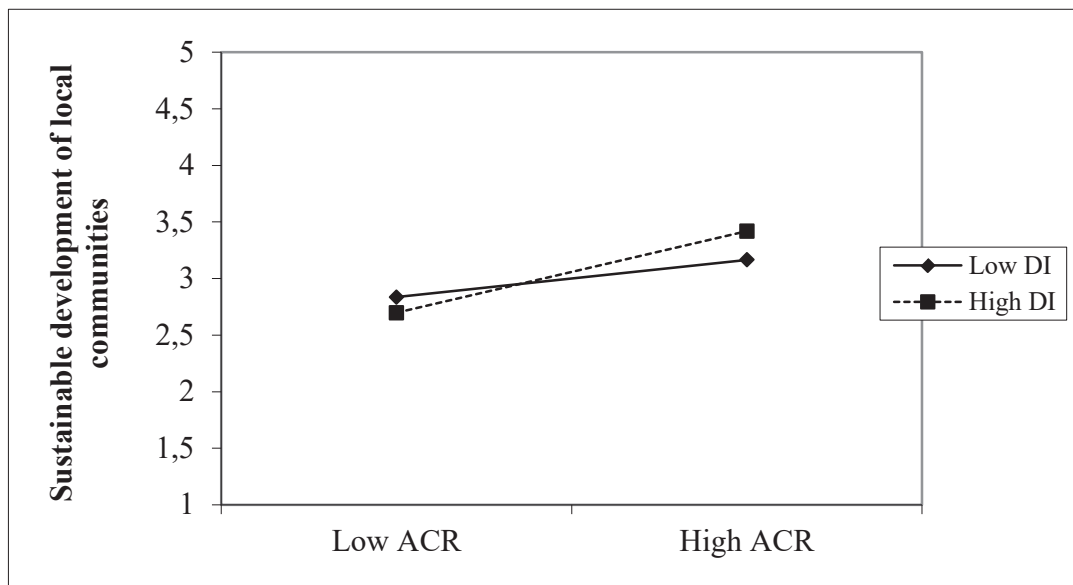


Figure 3. Interaction plot between accessible core resources and sustainable development of local communities

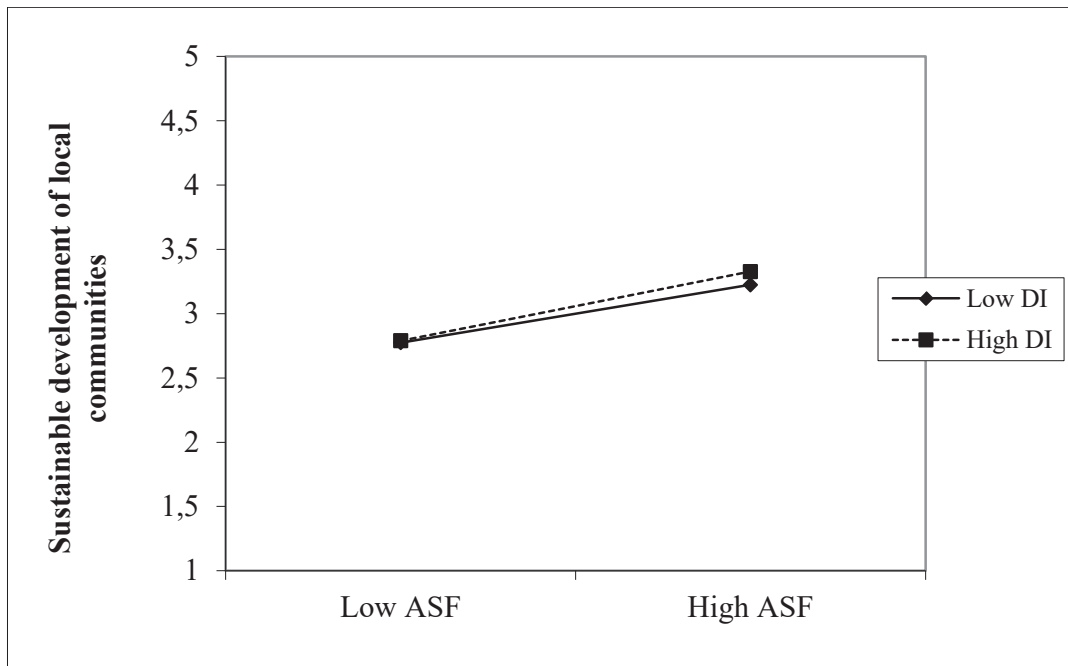


Figure 4. Interaction plot between accessible supporting factors and resources and sustainable development of local communities

In two of the interactions (Figures 4 and 5), the sustainable development of local communities is not significantly improved by the presence of the destination image, as indicated by the steeper dotted lines. While the dotted lines in Figures 4 and 6 may suggest an increase, a simple slope analysis reveals that this increase lacks statistical significance. Therefore, it can be inferred that the destination image does not significantly moderate the relationship between accessible supporting factors and the sustainable development of local communities, nor between destination planning and sustainable development of local communities. Unlike the other three interactions, the interaction effect depicted in Figure 5 shows a very slight increase in the dotted line, which is statistically significant. However, the negative coefficient value indicates that a higher destination image weakens the relationship between accessible qualifying and amplifying determinants and the sustainable development of local communities.

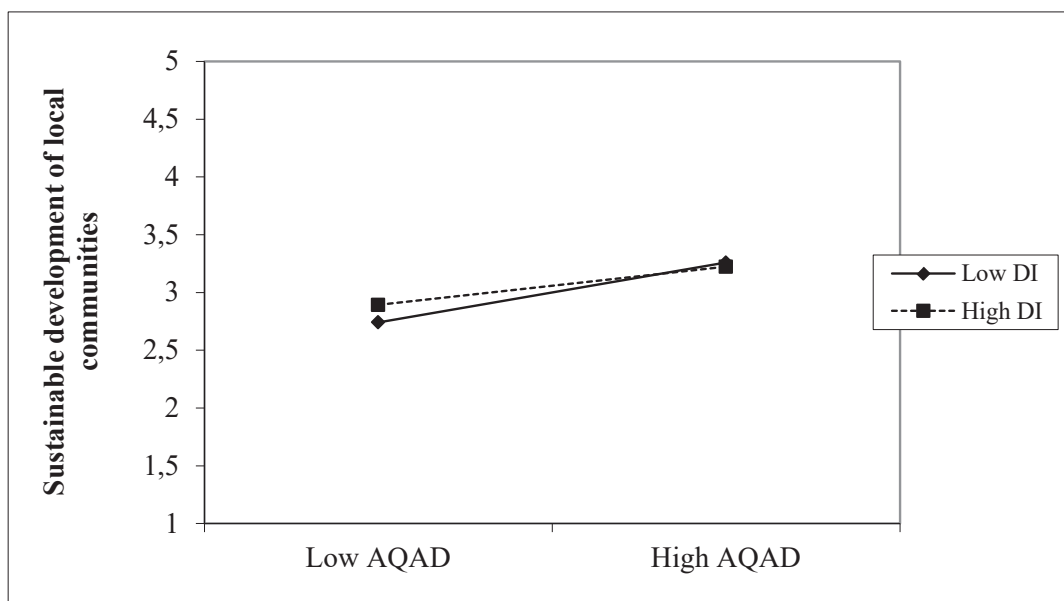


Figure 5. Interaction plot between accessible qualifying and amplifying determinants and sustainable development of local communities

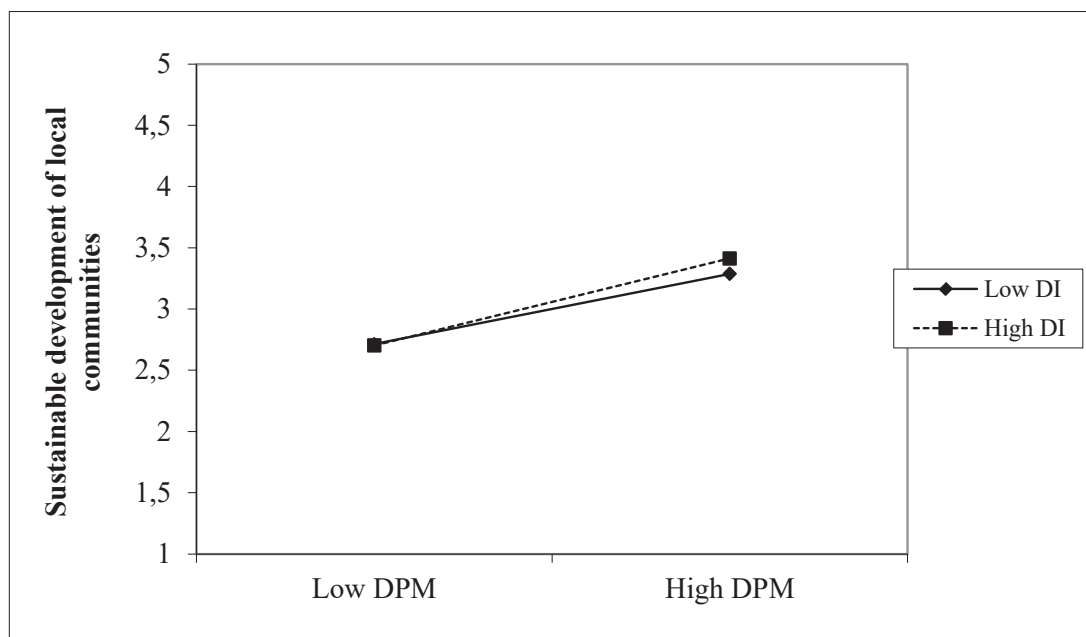


Figure 6. Interaction plot between destination planning and management and sustainable development of local communities

DISCUSSION

This result endorses the view of Lee and Jan (2019), who considered tourism as a strong predictor of economic, socio-cultural, and environmental development of the destination. The study found significant relationships between accessible core resources and attractors and the sustainable development of local communities. Enhanced access to core resources leads to increased tourist arrivals, which benefits the local economy and promotes cultural exchange. The recent investments by the Pakistan Tourism Development Corporation (PTDC) in accessible tourism facilities and new attractions have made a significant contribution to job creation, poverty reduction, and socio-economic development in the northern region (Pakistan Tourism Development Corporation, 2022). Responsible management of these resources also ensures the preservation of the natural environment. While recent studies have not directly assessed the relationship between these variables, this finding is partially consistent with other studies that indicate the positive effect of core resources and attractions on promoting the well-being of the local community (Lestari et al., 2022). The results also corroborate a significant relationship between accessible supporting factors and resources and sustainable local development. Partially consistent with the work of Benjamin et al. (2021) and Kamyabi and Alipour (2022), this evidence indicates that well-established infrastructure, facilitating amenities, and efficient transportation systems significantly enhance the destination's economic, socio-cultural, and environmental sustainability. The majority of the residents in northern Pakistan are involved in farming, livestock rearing, and hospitality-related businesses. Therefore, improved connectivity and visitor convenience lead to positive economic outcomes. Additionally, PTDC initiatives of geotagging major tourist sites, camping pods at new tourist locations, and roadside facilities (such as toilets, tuck-shops, and restrooms) have all been completed to enhance the accessible travel experience (Pakistan Tourism Development Corporation, 2022).

The results of the study also support the positive significance of accessible qualifying and amplifying determinants and sustainable community development. Pakistan is widely recognized as a budget-friendly destination. The country's relatively low cost of living allows travelers with diverse needs to find affordable deals on accommodation, food, and transportation. The Pakistan Ministry of Tourism has launched streamlined immigration procedures, such as providing e-visa facilities for 175 countries and offering on-arrival visas for 50 countries. This initiative promotes cultural diversity and enhances the positive impact of tourism on the local economy. Besides, with the improvement of the law and order situation in northern Pakistan, there has been a notable surge in tourism, catering to all types of tourists with diverse needs (The Nation, 2020). The results of the study partially concurred with the study of Jehan et al. (2023) in the context of the local community perspective. The findings also confirmed a positive relationship between destination planning and management and the sustainable development of local communities. Incorporating accessible tourism practices makes destinations

more inclusive, attracting a broader range of tourists and thereby increasing tourist spending, which contributes to local sustainability. The tourism industry of Pakistan has formulated plans for accessible tourist destinations. Additionally, the industry has developed master plans for new integrated tourism zones, national parks, and tourist resorts, all equipped with accessible facilities (Pakistan Tourism Development Corporation, 2022). This result partially agrees with Goffi et al. (2019) in the context of destination competitiveness. In particular, destination planning and management, in contrast to other accessible tourism dimensions, have the strongest effect on the sustainable development of local communities.

In addition, the current study also proved that the strength of the relationship between accessible core resources and attractors and the sustainability of local communities positively fluctuates with the inclusion of destination image as a moderating variable. The increased demand for accessible core resources and attractors, such as convenient access to visually appealing landscapes, inclusive infrastructure, and transportation, leads to optimized investment in accessible tourism practices, which benefit sustainable community development. Furthermore, it is interesting to find that destination image negatively moderates the relationship between accessible qualifying and amplifying determinants and sustainability of local communities. Despite significant improvements in Pakistan's image as a tourist destination, some tourists still perceive a lack of accessible facilities and proper safety and security measures for people with diverse needs. These concerns may hinder their decision to visit Pakistan's northern areas. While recent studies have not directly explored the moderating role of destination image, this finding is partially consistent with other studies indicating the significant role of destination image in promoting revisit intention, which in turn supports the sustainable development of the local population (Tavitiyaman et al., 2021; Ullah et al., 2022). The current study also predicts the moderating role of destination image for accessible supporting factors and resources and destination planning and management. However, destination image was not found as a significant moderator between these hypothesized relationships. The findings underscore the multifaceted factors influencing sustainability in the region and highlight the importance of destination planning and accessible supporting resources beyond the influence of destination image in fostering sustainable community development.

CONCLUSION

The current study primarily focuses on examining how accessible tourism influences the sustainable development of local communities, with a moderating role of destination image. To achieve this objective, the current study utilized accessible tourism conceptualization adapted by Domínguez Vila et al. (2015) to investigate the potential impact of accessible tourism in northern Pakistan. As predicted, accessible tourism was found to have a significant impact on the sustainable development of local communities. The findings endorse the significance of accessible core resources and attractors, accessible supporting factors and resources, qualifying and amplifying determinants, and destination planning and management in fostering economic, socio-cultural, and environmental sustainability. The efforts made by the Pakistan Tourism Development Corporation to enhance accessibility have contributed to job creation, poverty reduction, and socio-economic development in the region while preserving the natural environment. Furthermore, the study highlights the role of destination image as a moderating variable, indicating its positive influence on the relationship between accessible core resources and attractors and local community sustainability but a negative influence on the relationship between accessible qualifying and amplifying determinants and sustainability. These findings underscore the multifaceted nature of sustainable community development in the tourism industry and emphasize the need for continued investment in accessible tourism practices and the management of tourist destinations in northern Pakistan.

Theoretical and practical implications

From the theoretical standpoint, this study is one of few that conceptualize and test accessible tourism and incorporates key dimensions from the perspective of tourists with special access requirements. Moreover, to the best of the authors' knowledge, this study fills a noticeable gap in the existing literature by examining the relationship between accessible tourism and the sustainable development of local communities. Given the increasing emphasis on accessible tourism, the current study offers unique insights and contributes significantly to the academic understanding of how accessible tourism can be leveraged to foster the sustainable development of the local population. The current study also substantially contributes to the extant literature by conceptualizing destination image as a moderator between accessible tourism and the sustainable development of local communities. Previous studies have mainly tested destination image in the context of tourist behavioral intention and satisfaction. In this regard, this research increases the empirical knowledge pertinent

to accessible tourism. This research also addresses another gap in the existing literature on tourism in Pakistan, as there is a lack of studies on this aspect. By focusing on the growing tourism in Pakistan, specifically in the northern areas, the research provides a synthesis to understand the current state of affairs and challenges, contributing valuable insights for enhancing inclusive tourism experiences for diverse travelers.

The study also provides valuable practical implications for policymakers and destination planners in the tourism industry. The northern areas of Pakistan have a substantial reliance on tourism. Consequently, the provision and promotion of accessible tourism in this area can serve as an effective tool in building sustainable local development. The findings of this study not only offer practical implications for the northern areas of Pakistan but also hold significance for countries undertaking initiatives to offer inclusive tourism. The current study suggests tourism authorities focus on improving infrastructure and accessibility, ensuring that tourism initiatives benefit both tourists and local population. Our findings suggest a clear need for better training of tourism staff regarding accessible tourism requirements. Hotels, restaurants, and tour operators often lack the knowledge and expertise to implement accessibility measures effectively. Thus, prioritizing training and development programs for the local workforce will enhance the quality of accessible facilities. Our study provides evidence that destination image can fluctuate the relationship between accessible tourism and sustainable development; thus, destination planners should focus on developing destination marketing campaigns to attract diverse groups of tourists and promote the area's inclusive approach. Furthermore, our findings hold significance for policymakers involved in the development of accessible tourism. They can utilize the insights from our study to identify pertinent issues and develop public policies and effective actions that ensure accessible and high-quality tourism for all. By adopting inclusive tourism policies, the northern areas of Pakistan can unlock the potential of accessible tourism, leading to sustainable growth and benefiting both tourists and local communities.

Limitations and directions for future research

A few limitations of this study must be acknowledged. Firstly, only Ritchie and Crouch (2003) attributes with significant relevance were included in the analysis, Future studies should consider more dimensions with regard to accessibility measures. This approach would allow for a more comprehensive exploration of the factors that influence sustainable community development. Secondly, the study employed sustainability of local communities as a composite variable to gauge the economic, socio-cultural, and environmental dimensions of sustainable community development. Future research could consider investigating these dimensions as distinct variables. This approach would allow for the examination of the individual impact of each dimension of accessible tourism on various facets of the local community's development. Finally, the study participants were selected exclusively from the northern areas of Pakistan, which may restrict the generalizability of the results to other geographic locations.

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Appendix

Part A: Questionnaire for tourists

Constructs	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Adapted from
Accessibility of core resources and attractors						Vila et al. (2015) Dwyer et al. (2014) Gomezelj & Mihalič (2008)
1 The historic site/heritage locations are accessible to visitors, considering factors such as easy transportation options and other facilities.						
2 The natural environment surrounding the site/destination is untouched and unspoiled, providing a sense of tranquility and connection with nature.						
3 The climate of the location contributes significantly to its attractiveness for tourism, considering factors such as favorable weather conditions and seasonal variations.						
4 The area has accessible facilities for sports activities like trekking, swimming, and cricket.						
5 The area offers entertaining and enjoyable activities like campfires and fishing that are easy to access.						
Accessibility of supporting factors and resources						Gomezelj & Mihalič (2008)
1 The residents in the area are welcoming and hospitable towards tourists with disabilities or diverse needs.						
2 There is effective communication and trust between tourists and residents in the area.						
3 The parks or protected areas are accessible in terms of trails, road signage, and information provided to visitors.						
4 The quality of hotels and restaurants in the area is satisfactory and trained staff are available to provide a seamless service to people with diverse needs.						
5 Seamless transportation alternatives like low-floor buses adapted taxis, and vehicles equipped with wheelchair ramps or lifts.						
Accessible destination planning and management						Dwyer et al. (2014)
1 The destination has clear policies in place to support social tourism, catering to disabled or aged people.						
2 The destination actively develops and promotes new accessible tourism facilities and services. (for example, lifts in multi-story buildings).						
3 The residents in the area actively support the development of tourism.						
4 The destination's goals and plans reflect what the local community wants and needs.						
5 The tourism and hospitality businesses in the area work effectively and smoothly.						
Accessibility of qualifying and amplifying determinants						Dwyer et al. (2014)
1 The security and safety of visitors with special needs in the area are well-maintained.						
2 The tourist providers have the necessary capabilities and knowledge to ensure accessibility for all visitors.						
3 The security and safety measures in place prioritize the needs of visitors with disabilities or special requirements.						
4 Visitors, including those with or without accessibility needs, receive good value for money in terms of shopping and accommodation options.						
5 Visitors, including those with accessibility needs, have enriching and fulfilling experiences in the destination, providing value for money.						

	Accessible destination planning and management	Dwyer et al. (2014)
	Destination image	Lee & Xue (2020)
1	The accessibility of key tourist attractions and activities within the city.	
2	The destination image effectively communicates its accessibility features and services to potential tourists.	
3	The destination is known for its commitment to accessible tourism and providing facilities for people with diverse needs.	
4	The destination reputation for being inclusive to the diverse needs of tourists enhances its image.	
5	The destination promotional materials and online platforms provide accurate and detailed information about accessibility options for tourists.	
6	The accessibility of key tourist attractions and activities within the city.	

Part B: Questionnaire for local residents

Constructs						Adapted from
Sustainability of local communities	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
(In terms of economic, sociocultural, and environmental effects)						Jehan et al. (2023)
1	Inclusive tourism increases job opportunities for local people in the northern areas of Pakistan.					
2	Accessible tourism improves the quality of life of local people.					
3	Accessible tourism helps in the conservation and protection of the natural environment					Gnanapala & Sandaruwani (2016)
4	Tourism has changed the northern area's traditional culture to be more positive.					
5	Tourism provides more parks and other recreational areas and facilities for local residents.					
6	Accessible tourism creates new markets for local products.					Chahal & Devi (2016)
7	Because of accessible tourism, roads, and other tourism services are well maintained.					
8	Tourism developed in harmony with the natural and cultural environment.					

Biographical notes

Hassaan Ahmed has worked in academia and industry for over 11 years. He has been an Associate Professor and Program Manager at Salim Habib University for over five years in the Department of Business Administration, Faculty of Management Sciences. Dr. Hassaan attained his Ph.D. in Retail Management from the University of Karachi. His MBA from Anglia Ruskin University, United Kingdom, gave him international exposure and enabled him to offer greater value to student learning and mentoring. His core competencies include omnichannel retailing, brand management, marketing communication, and digital marketing. He is passionate about advancing the knowledge and practice of marketing and retailing, and has collaborated with various business stakeholders to design and deliver high-quality courses, projects, and business solutions.

Hadiqa Riaz is a lecturer at Bahria University Karachi and has over four years of teaching experience. She holds a distinction in her Masters in Marketing and is currently pursuing a Ph.D. degree in the same field. She has contributed to the academic field with her publications in reputed journals. Her research interests include digital marketing, omnichannel retailing, customer experience, and green marketing.

Authorship contribution statement

Hassan Ahmed: Data Curation, Formal Analysis, Investigation, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Original Draft, Writing – Review & Editing. **Hadiqa Riaz:** Formal Analysis, Investigation, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Original Draft, Writing – Review & Editing.

Conflicts of interest

The authors declare no conflict of interest.

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