Why invest in Tourism in Pakistan? Examining Evidence from Keenjhar Lake

Regional and sectoral development within a country is never straightforward and offers many challenges. In this policy brief, we examine the recreational use of Pakistan’s largest freshwater lake and ask whether further investment in tourism development is warranted. The study is the work of Ali Dehlavi and Iftikhar Hussain Adil from the Indus for All Programme of the World Wide Fund for Nature, Pakistan.

Keenjhar lake is a large freshwater lake in Sindh Province that supplies fish, recreational services and drinking water to Karachi. One issue in developing the region around the lake is whether there is a significant amount of tourism flow to the area. This study estimates that, on average, approximately 1,000 visitors come to the lake every day for recreation. The value visitors place on recreation at Keenjhar lake is around PKR 3.5 billion (or USD 42 million\(^1\)). In contrast, current revenues to the government from entrance and parking fee collections amount to about 0.2% of this value. Given the ample demand for recreation and potential for revenue generation, investments related to the lake are justified and could improve the local economy.

Pakistan’s Largest Freshwater Lake

Keenjhar is situated approximately 120 km north of Karachi and is Pakistan’s largest freshwater lake, with an area of 14,000 ha (see Figure 1). A wildlife sanctuary and a Ramsar site, it is set in a stony desert composed of alternating layers of sandstone and limestone. Approximately 50,000 people, from 12 large and 20 small surrounding villages are dependent on the lake, primarily for fishing. Tourists, mainly from Karachi, also enjoy swimming, boating, and other recreational activities at the lake. These activities are offered by the Sindh Tourism Development Corporation (STDC) at a resort on the lake’s western bank. The lake also supplies water for residential and commercial use in Karachi. Given the importance of the lake as a tourism destination and water supply resource, there are significant public concerns about the pollution of the lake’s waters. Among the factors contributing to the pollution of the lake are upstream tanneries, sewerage, and grease from vehicle-washing and motorized fishing boats.

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\(^1\) Using a 16 July 2009 conversion rate of PKR 81.7 = USD 1.

This policy brief is based on SANDEE working paper No. 58–11, ‘Valuing the Recreational Uses of Pakistan’s Wetlands: An Application of the Travel Cost Method’ by Ali Dehlavi and Iftikhar Hussain Adil, of the World Wide Fund for Nature – Pakistan (WWF-P), Indus for All Programme, Karachi, Pakistan. The full report is available at: www.sandeeonline.org
The travel cost model

This study uses the Travel Cost Model to access the recreational use value of Keenjhar Lake. The basic idea behind the travel cost model is that the travel costs that people incur to visit a site can be used to estimate their willingness to pay for recreation. This method is routinely used by economists to estimate recreational demand and the value of national parks.

There are several methodological and sampling challenges that have been addressed in this study. The researchers were careful to account for variables that may bias the estimation of travel costs. Different methods were used to account for travel time and the opportunity costs incurred by travelers. The presence of charter travel was carefully examined. Travel costs were calculated by identifying vehicle operating costs, petrol and vehicle depreciation.

The study takes into account of the fact that information is collected from an on-site sample of tourists – i.e. tourists who were avid visitors to the lake. This meant that the average number of trips recorded was higher than it would be for the population as a whole. This potential bias was corrected. Another potential sampling bias addressed by the study is the absence of respondents not intending to ever visit the lake or who were simply unaware of it.

The researchers also distinguished single-purpose visits from multipurpose visits, e.g. visits that also incorporated detours to destinations on the way to Keenjhar or on the way back home. This turned out to be very important since up to 42% of the survey sample undertook such incidental visits.

The Recreational Use Value of Keenjhar Lake

In order to estimate the recreational benefits from the lake, Dehlavi and Adil model the demand for recreational trips to Keenjhar Lake and estimate visitor ‘willingness to pay’ for recreation. This is challenging because natural resources such as lakes or parks (and the recreational benefits they supply) frequently do not command a price, or at least not one that is high enough or that exhibits sufficient variation, to allow a direct estimate of demand. Thus, the researchers use the travel cost method (TCM) to estimate recreational demand (see sidebar). This research is among a handful of studies in Pakistan to estimate non-market values for public policy purposes. Indeed, only one other study has adopted the travel cost method to help shape policy.

Using travel cost information, Dehlavi and Adil estimate the recreational use value of Keenjhar Lake to be PKR 3.5 billion (or USD 42 million) per year. This estimate is based on an annualized mean consumer surplus per visit of PKR 9,500 (or USD 116) and assumes that there are, on average, 1,000 visits to the lake every day. Thus, the typical visitor to Keenjhar lake values his/her recreational experience to be worth approximately 10,000 PKR (over and above any costs incurred) per trip.

Previous studies have investigated the direct consumptive use value (i.e. the producer surplus from commercial fisheries), indirect use value (i.e. the residential water supply to 1 million of the 15 million population of Karachi), and the non-use values associated with Keenjhar lake. These three other use values have been estimated to be in the order of PKR 9 billion (or USD 110 million) per year. This estimate is almost equivalent amount in parking fees of PKR 9 per person). Together, the two fees bring in approximately PKR 6.8 million (USD 84,000), which amounts to 70% of STDC’s estimated annual expenditures on the park. There is clearly a mis-match between revenues earned, expenditures made and economic benefits. There is sufficient economic surplus that can be partially captured to increase revenues and make capital investments around the park.

Investments by raising Revenues

Can the revenue the government earns from the lake be increased? And, are the recreational benefits large enough to justify the introduction of new and different types of user fees? The current entry fee to the lake is PKR 10 (USD 0.12) per person. This amounts to only 0.1% of annual economic benefits estimated in this study. Indeed, the STDC also obtains additional revenues by charging, on average, an almost equivalent amount in parking fees of PKR 9 per person. Together, these two fees bring in approximately PKR 6.8 million (USD 84,000), which amounts to 70% of STDC’s estimated annual expenditures on the park. There is clearly a mis-match between revenues earned, expenditures made and economic benefits. There is sufficient economic surplus that can be partially captured to increase revenues and make capital investments around the park.

Figures

Figure 1: Keenjhar lake

Figure 2: Trend in visitor numbers to STDC reserve and projections

Source: Author’s estimate based on SANDEE / WWF-P Keenjhar surveys (Feb, Mar and Aug 2009 survey data)
If the current entry fee is raised to PKR 50 (or USD 0.60) per person, then this would increase annual revenues to STDC three-fold. Would visitors be willing to pay this amount? Seventy two percent of the visitors surveyed by Dehlavi and Adil indicated that they would pay this increased entry fee to ensure cleanliness alone. This would be in addition to the parking fees they pay. If we compare such an increase in fees to the costs visitors currently incur (in terms of travel and recreation) at the park, the reason for this becomes clear. A five-fold increase in entry fees would increase current recreational expenditures incurred by less than 5% per trip.

**Using Tourism studies for Recreational Management**

The study has multiple applications that could serve policy makers. The visitor database allows for the easy addition of more data and could serve as an ongoing tool for the STDC. The STDC could, for example, use it to analyze demand for accommodation and to shape the choice of activities offered. The database could also be used to estimate the impact of price increases on visitation and revenues.

There is enormous potential for recreation around Keenjhar that is yet to be tapped. The estimated average benefits (consumer surplus) derived by a visitor to the Keenjhar lake is a little over 100 USD per visit. This shows that the current entry fees are a tiny fraction of the economic benefits received by visitors. Knowing the recreational value of the lake and its revenue potential, should help policy makers make decisions about investments in the multiple uses associated with the lake.

The Government of Sindh’s Finance Department is planning for investments around Keenjhar lake. It recently requested proposals related to the construction of hotels, restaurants, theme parks, lagoon pools and spas. There is much to be said in favor of developing the recreational uses of Keenjhar Lake. However, it is vital that this is done without compromising the lake’s status as a nature reserve and as a site that is available to a cross-section of the population regardless of wealth and social status.