Archaeological Tourism: Features, Infrastructure, And SWOT Analysis Case Study: Tassili N’ajjer Barn In Southern Algeria

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Abstract:
Archaeological sites are an essential part of the tourism experience in Algeria, and it is becoming increasingly significant. Today, archaeological tourism is one of the available alternatives to the Algerian economy. Tourists choose the Tassili N’ajjer barn destination based on its archeology and rock drawings offering.
They are increasingly attracted by many factors such as the history and traditions, cultural heritage, ideas or events of indigenous. The paper emerges the basic properties of the Tassili N'ajjer barn in southern Algeria. It also highlights supportive components such as natural features, tourist facilities. Besides, the paper attempts to analyze the strengths, weaknesses, opportunities and threats (SWOT) of tourism in Tassili N'ajjer. The main finding of the study indicated that there is an untapped potential for natural tourism and human resources. The subsidiary results showed that SWOT analysis was used to identify the processes required to improve the tourism activities in the barn.

**Key words:** archaeological, tourism, SWOT, Tassili n’Ajjer,

**Introduction**

Natural or artificial tourist attractions are a significant source of revenue for many governments around the world. Tourism income contributes to economic growth, creates employment opportunities, In addition, it helps develop industries and markets for traditional local tourism products. In this light, and given that the tourist sites are different. Tourism activities are classified into recreational, educational, medical and religious tourism; there is also safari and adventure tourism in historical sites. In addition, there are heritage areas directly related to archaeological tourism. In this context, reference may be made that those who prefer these sites are researchers, scholars or explorers of the customs, cultures, and lifestyle of societies during periods of history. (Geovan., et al, 2018).
In Algeria, the TassiliN’ajjer barn makes up an open landscape exhibit with portraits carved into the rocks, according to UNESCO, the TassiliN’ajjer region has been classified as a world cultural heritage. Moreover, archaeological portraits illustrate the existence of indigenous life, as they practiced animal husbandry, agriculture and industry, in addition to other activities. These pictures on rocks also show the pattern of weddings, wars and various social relationships of local communities. According to the vision of local tourist program, The Ministry of Tourism, through the National Tourism Development Schema (SDAT2030; Linda, 2021; Wassym, 2021), is trying to develop the TassiliN’ajjer Tourist barn by supporting all public and private efforts to enhance the elements of local tourist attractions, especially in the investment side. As well as, supporting historical monuments, and strengthen the traditional craft sector, furthermore, expand plans to encourage international tourism arrivals.

Algerian laws consider the Tassili N’ajjer region a national reserve, and it is forbidden to hunt or steal carved stone, the law also punishes smuggling or trading in those portraits carved. On the other hand, government's efforts to promote archaeological tourism helped attract a large numbers of tourists from Europe, America and Japan…ect. The authorities responsible for organizing the barns have also concluded agreements with international archaeological laboratories to conduct diagnostic research in the area. (David & Alec, 2009).

This paper deals with the theme of archaeological tourism, aims also to explore the component of tourism in Tassili n’Ajjer
region. In addition, the paper attempts to identify components of that kind of tourism, and will discuss the SWOT analysis of archaeological tourism in the barn.

**Study Problem**

Tourism in Tassilli N’ajjer area in Djanet province is one of the most important activities, mainly for the local inhabitants, and it is considered a basic source of income for Tuareg society. We can also say that the local tourism activities have an economic impacts and carries cultural objectives. Thus, the relations that are established through archaeological tourism between local society and cultures are one of the means of discovering landscape, local customs and traditions, and rock carvings in the region (Farid & Rida, 2020). In view of the above, we propose the following question:

What is archaeological tourism? How does this type of tourism support desert tourism in Algeria?

**Study importance:** The importance of the study lies in the following:
- Attempt to recognize the archaeological sites of Tassili n’Ajjer barn.
- Shedding light on world cultural heritage sites in the Tassili n’Ajjer barn in Algeria.
- Study the aspects of tourist attraction sites of the Tassili n’Ajjer barn.
- Evaluate the role of Tassili n’Ajjer barn in supporting the local Algerian tourism sector.
The Theoretical Aspect

1. Archaeological Or Heritage Tourism:

Archaeological tourism has become a particularly important economic resource for many countries, where archaeological sites are often situated in arid deserts, on remote settings, on mountainsides, in exotic places, and thus offer opportunities for other non-archaeological or even traditional tourism interests as well. According to Hoffman, et al., 2003. Heritage or archaeological tourism is called “travel activity designed to experience the places and tourist sites that authentically represent the people and stories of the past” (Walker, 2005; Shiong & Abdullah, 2017; Aline, Traci, & Scott, 2007) This definition could involve travel to archaeological sites, museums, parks, and places of ethnic significance, as well as to foreign countries for the opportunity to experience various indigenous cultures., the question arises of why do some tourists prefer archaeological tourism? We can say that they prefer this type of tourism for three main reasons which are frequently really interested in archaeology or history and would like to see the ancient sites remains firsthand. consistent with the different definitions of the Heritage tourism provided in literature reviews, that kind of tourism is diverse and includes historic, natural and indigenous themes and values. (Ali & Kamran, 2020).

2. Heritage Tourism Gains:

Archaeological tourism encourages tourists to visit a certain destination, visitors also have an ability to engage in unforgettable and truly inspiring experiences that touch them in an emotional way and connect them with special places, people and cultures.
Furthermore, Archaeological Tourism achieves many benefits, the most important of which are: (AHT, 2018)
- The authenticity and significance of heritage places can be preserved, protected and shared by investing in people and places.
- Heritage can deepen, guide and strengthen the history of tourism.
- Mutually beneficial partnerships in the field of archaeological tourism can be strengthened and developed.
- Fun and enriching experiences can be offered to tourists through storytelling.
- Tourists are embraced at all levels as a greatest ambassador for local Archaeological tourism.
- Develop strong business products and services and sustainable business models.
- Develop and nurture skills and abilities, especially in Archaeological areas.

3. What is Algeria's Archaeological?
Algeria as an African country has a rich heritage and diverse cultures that underpin a sense of place and national identity. All four sides (north, south, east, west) have a heritage which is included stories, traditions, events and experiences inherited from the past and is comprised of natural, historic and indigenous sites of physical and intangible values. In Algeria, there are many sites classified as world heritage by UNESCO, like (Kasbah of Algeria, Tipasa, Castle of Bani Hammad, djemila, Timгад, M'zab Valley, Tasilin' Ajjer). (table 1) And, beyond that, there are also celebrations and commemoration of heritage places provides...
opportunities for tourists to recognize, understand and to be part of Algeria’s stories. (UNESCO, 2021; Nadia, 2021).

The objective of the SDAT program of tourism ministry is to support places of cultural significance, which provides the quality standard for the care of heritage areas, according to previous studies on Algeria’s tourism noted that the heritage places enrich people’s lives, often providing a deep sense of connection to community and landscape, to the past and to lived experiences. In the same context, in September 2019, the Ministry's list was amended to include 1,030 cultural properties from across the country. Skikda Province has the highest number of assets at 131. (MTATF, 2021; worldatlas, 2019).

**Table1.** Algeria's sites classified as world heritage by UNESCO.

<table>
<thead>
<tr>
<th>Monument</th>
<th>Type</th>
<th>Municipality</th>
<th>Date of inscription World heritage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kasbah of Algiers</td>
<td>living city center/Medieval</td>
<td>Casbah</td>
<td>1982</td>
</tr>
<tr>
<td>Tipasa (Phoenician, Roman, palaeochristian and)</td>
<td>ruins/antiquity</td>
<td>Tipasa, Cherchell</td>
<td>1982</td>
</tr>
</tbody>
</table>
4. Tassili N' Ajjer  Barn Presentation:

The Tassili n’Ajjer barn was designated a World Heritage Site in 1982. It has geological features that include stony forests and biodiversity. The barn has also gained its global significance thanks to rock carvings which go back to BC, in 1986 UNESCO declared the area a biological nature reserve. The Tassili n’Ajjer barn also ranked second on the list of protected areas within the Program of The International Union for Conservation of Nature (IUCN). The Tassili N’Ajjer national barn (covering a region of 80,000 S kilometers) is one of the world's richest rock-art locations. , is located in south-eastern Algeria. , the Barn is bounded by the Ahaggar National Park in the south west, and in the east and south it’s bordered protected areas in Libya and Niger (figure 2). According to the indigenous language the word N’ajjer
comes from Tamahaq, which means plateau. This name is associated with the traditional Ajjer tribe that inhabited the place. (Sedie, 2018; David & Alec, 2009).

Moreover, UNESCO reports indicate the great geological importance of the barn as one of the most important rock art which goes back to prehistoric, it includes about 15,000 drawings and sculptures dating back to 6000 BC, the barn is also an open space to trace climate change, livestock migration and the evolution of human life in the depths of deserts. (Bradshaw, 2021).

**Figure N° 1:** The TassiliNAjjer National Barn.


**5. Tassili n'ajjer barn attraction sites:**

Tourists might be fascinated by observation towers, commercial markets, high-tech exhibits, or even the customs and traditions of exotic societies, But their surprise and admiration for areas and
landscapes that human beings had no role in creating may increase. For this reason, Tassili n’Ajjer barn has become a popular destination for tourists from all countries of the world, for its outstanding characteristics and components.

5.1 Natural Components:
There are many natural components: (ITD, 2019; Habnasi, 2021)

- **Ponds:** There are many permanent ponds located to the north of the barn, and they are distinguished by their fresh water, as well as the presence of fish species that live there.
- **Rock Pillars:** These pillars were formed through the phenomenon of natural erosion which created vast areas of petrified forests in the form of rock pillars. Besides, these forests are considered a destination for geological and stratigraphic specialists to conduct research and field studies.
- **Stone Arches:** The Tassili n’Ajjer barn has around 300 stone arches in its south-eastern part.
- **Rare plants:** The Tassili N’ajer barn is considered the original home of the cypress, which is the oldest tree in the world after the prickly pine (Pinus aristata) in the United States of America. In addition, the barn contains about 250 rare desert cypresses.

5.2 TassiliN’ajerstone drawings:
The stone drawings reflect historical periods in the Algerian desert; The Tourism Ministry reported that the Barn's caverns have over 15,000 rock paintings. Currently, the Tassili n’Ajjer administration barn is located in Djanet, also includes several cities, including: Eherir, Bordj el-haouas, and Afara. At the start of the 20th century, the Tassili n’Ajjer stone carvings were known
around the world. In 1930, the barn witnessed a visit by a band of the French army led by Brennan, and between 1933-1940 the band made many notes on drawings and stone carvings which were donated to the Algiers Bardo Museum. In addition to the foregoing, the French archaeologist Henri Lhote visited the Tassili n’Ajjer region between 1956 - 1970. The indigenous people took him on an archaeological tour to obtain information about drawings and inscriptions. (ITD, 2019).

In a related context, Mori, 1998 indicated that there are more than 15,000 drawings and engravings on the rocks dating back more than 12,000 years or more. The rock drawings include human faces, native wild animals, and geometric patterns (see figure 3). According to the researchers, the periods were divided into five periods: (David & Alec, 2009; ITD, 2019)

- Large Wild Fauna (during the period 6000-12000 BC);
- Round Head (during the period 7000-9500 BC);
- Pastoral Period (during the period 3000-7200 BC);
- Horse and Libyan-Warrior (during the period 1000-3000 BC);
- Camel Period (during the period 1000-2000 BC).

**Figure N° 2:** The Tassili n’Ajjer stone drawings
In addition to the above, stone drawings can be divided into two parts according to their type and date. There are ancient stone drawings that appeared between 10 to 12 thousand years ago, and new ones appeared between one and two centuries. For drawings types, the most famous animals mentioned in the stone drawings are the cow, the giraffe, the elephant, the ostrich, the deer, the horse, the lion, the crocodile, and the camel. Moreover, among the drawings there are those that personify the human element (woman, man, boy, weapon). As for the drawings dating back almost 9000 years, in which people appear in abundance, many colors were used: red, yellow, green, white and black. In addition, relevant studies indicated that the tools used for engraving are only longitudinal and pointed stones. (MDH, 2021; KERZABI, 2011).
As for the writings and letters used in the murals, it is from right to left and in rare cases from left to right, as in some cases it was written from the top to the bottom and the other way around. Furthermore, the specialists have pointed out that the difficulty in understanding meanings is mainly due to the dialects and their differences in terms and perhaps even letters. Just for reference, many researchers believe that this language was written in a cipher in order to preserve the secrecy that the clans and tribes sought at that time. There are many stone inscriptions in the Tassili n’Ajjerbarn, such as Tin Merzouga, In Djaren, Tagharaghart, And El Beridj, Tandjet, Idanioune, Tamadjertet Tighmar. (ITD, Tassili n’Ajjer tourist attraction site, 2019).

6. TASSILI N'DJjer Supply Tourists:

6.1. Tourists situation:
The major sources of tourist supply, 2015–2019, are shown in figure 4. From the figure, more tourists have arrived from France, Germany, United Kingdom and other Europe countries. The majority of these tourists are Algerians from overseas. However, the tourists who visited Tassili n’Ajjer represent all nationalities. As it appears from the statistics that the visit of tourists throughout the year was on a wobbly trend.

Figure3: International Arrivals By Country.
Algerians from abroad are the largest source of tourist traffic to Tassili N'ajjer barn with 90.2% of the total traffic received from 2015 to 2019. France accounted for 6.3% of the total traffic while other countries accounted for 3.5% (Aoumer, 2021).

Domestic tourism is a great opportunity for the Tassili N' Ajjer barn, as local tourists prefer to travel to the desert areas. The Ministry of Tourism has launched several programs to encourage local tourists to visit the barn, there are two types of local tourism, the first type is organized trips, and the other is individual trips, the figure shows domestic arrivals.

**Figure 4:** local tourism
Local tourists have preferred individual tourism, which is estimated at 56%. While the organized trips percentage was estimated at 44%. This is mainly due to the lower costs of individual trips compared to organized trips. (Aoumer, 2021).

6.2 Physical Facilities
There are many facilities that directly contribute to supporting archaeological tourism, including: (ITD, tourism Facilities in Illizi, 2019)

- **Agencies**: contribute to the development of cultural tourism, by activating and promoting tourism programs to attract tourists, these agencies also work to provide the best service to tourists.

**Table No 2**: Tourist Agencies InTassili n’Ajjer Area.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Location</th>
<th>Activity type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tadrart</td>
<td>Djanet</td>
<td>Travel and tourism</td>
</tr>
<tr>
<td>Djarettour</td>
<td>Illizi</td>
<td>Travel and tourism</td>
</tr>
<tr>
<td>Tehobar</td>
<td>Illizi</td>
<td>Travel and tourism</td>
</tr>
<tr>
<td>Tin merzouga</td>
<td>Djanet</td>
<td>Travel and tourism</td>
</tr>
<tr>
<td>Zeriba</td>
<td>Djanet</td>
<td>Travel and tourism</td>
</tr>
</tbody>
</table>
**Source:** tourism demand reports, Illizi tourism direction, 2019

**- Hotels:** It is one of the most important places of accommodation and hospitality to help attract tourists, the services quality of Tassili n’Ajjerhotels increase demand and create loyalty for tourists. In addition, its traditional character, stemming from the region tourist potential, has also contributed to its preference as a residence place for foreign tourists.

**Table N°03:** Hotels In Tassili n’Ajjer Area.

<table>
<thead>
<tr>
<th>Hotel</th>
<th>Category</th>
<th>Rooms/beds</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bounaga</td>
<td>Without</td>
<td>29 R / 50 B</td>
<td>BP 46 Illizi</td>
</tr>
<tr>
<td>Tybeelarabi</td>
<td>Without</td>
<td>22 R / 44 B</td>
<td>BP 54 Illizi</td>
</tr>
<tr>
<td>Ambassador's Cave</td>
<td>Without</td>
<td>12 R / 27 B</td>
<td>BP 127 ifri Djanet</td>
</tr>
<tr>
<td>Alaarigalkabir</td>
<td>Without</td>
<td>28 R / 29 B</td>
<td>BP 76 in aminasillizi</td>
</tr>
<tr>
<td>Teneri</td>
<td>Without</td>
<td>25 R / 60 B</td>
<td>BP 08 djanet</td>
</tr>
<tr>
<td>Zeriba</td>
<td>Without</td>
<td>30 R / 78 B</td>
<td>BP 92 djanet</td>
</tr>
</tbody>
</table>
7- Tassili N’ajjer Swot Analyse:
In this part, the study focused on SWOT to analyse the strengths, weaknesses, opportunities and external threats of the tourism market in the Tassili n’Ajjer region. Moreover, To formulate the SWOT matrix, researchers interviewed tourism staff, the national park, hotel managers, tourism agencies, and desert tourism professionals in the region. The SWOT was developed as follows:

Table 4: SWOT Analyse For Tassili n’Ajjer barn

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Nature and diverse ecosystem</td>
<td>- Bum by and geographically undefined tourists routes</td>
</tr>
<tr>
<td>- Unique natural destinations (mountains, valleys, caves)</td>
<td>- Poor rehabilitation of natural tourist areas</td>
</tr>
<tr>
<td>- historic stone inscriptions and drawings</td>
<td>- Poor presence of hotels and camps on booking platforms such as Trivago, booking hotel</td>
</tr>
<tr>
<td>- Hotels and camps with a traditional environment</td>
<td>- There are no international hotel chains or foreign partnerships</td>
</tr>
<tr>
<td>- Distinguished hotel services</td>
<td>- Absence of a brand name for tourist facilities</td>
</tr>
<tr>
<td>- Experienced Tour Agencies</td>
<td>- Insufficient promotion of tourist destinations, for</td>
</tr>
<tr>
<td>- Various tourist services (safari, camping, and adventure)</td>
<td></td>
</tr>
<tr>
<td>- cultural diversity</td>
<td></td>
</tr>
<tr>
<td>- stable and peaceful community</td>
<td></td>
</tr>
</tbody>
</table>
example E-marketing on social media networks
- Lack of communication languages such as English and Spanish
- weak media and electronic coverage of tourist destinations

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Government support for tourism projects (SDAT tourism plan)</td>
<td>- Security threats in the Sahel region (kidnappings, assassinations ...)</td>
</tr>
<tr>
<td>- helpful financial and economic policies</td>
<td>- Closure of many crossings and corridors with important tourist attractions</td>
</tr>
<tr>
<td>- archaeological areas is a promising tourist market</td>
<td>- Complicated procedures for granting tourist visas to some countries</td>
</tr>
<tr>
<td>- Investment laws, foreign partnerships, are encouraging</td>
<td>- Negative evaluation of local tourism services from an international perspective</td>
</tr>
<tr>
<td>- International exhibitions for tourism marketing, such as the London International Exhibition</td>
<td>- Weak diplomatic representation in promoting domestic tourism</td>
</tr>
<tr>
<td>- The region is a shrine for ambassadors, diplomatic missions and celebrities from all over the world</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** prepared by researchers based on: Personal interviews for the tourism sector parties, in Illizi, 2021.
Providing strategies for Archaeological tourism of Tassili n’Ajjer are presented below based on WO, ST, SO and WT: (Aouamer, 2021)

- **Offensive/competitive strategies (SO)**

This strategy has focused on internal strengths and external opportunities, following strategies are proposed to utilize available priorities in order to develop Archaeological tourism in Tassili n’Ajjer:

- More development in desert tourism because of relative advantages for developing Archaeological tourism;
- Utilization of government support for investments in Archaeological tourism sector in the Tassili n’Ajjer;
- Take advantage of stone drawings, attractions safari sites, traditional souvenir, and cultural diversity of communities.

- **Diversification strategies (ST)**

In this strategy that focus on the internal strengths and threats in the environment, the following strategy is presented to provide some solutions of Archaeological tourism in order to meet the threats:

- Use tourism facilities and unique traditional services in order to meet tourists’ satisfaction;
- Increasing the number of tourists through the creation of a pleasant and safe environment to avoid crimes against tourists;
- Developing the attraction of tourism activities by enhancing the granting of visas processes,
- Enhancing Algeria's international tourism ranking by advertising for Archaeological tourism components;
- Enhancing the role of tourism agencies and facilities to encourage the diplomatic corps for promoting Archaeological tourism in Tassili n’Ajjer.

- **Overview strategies (WO)**
This strategy is focused on the weaknesses; we try to take advantage of external opportunities to deal with weaknesses facing on Tassili n’Ajjer. Following proposes are provided:
- Optimal utilization of financial and economic policies to make strong promotional campaigns;
- Training the local community in Tassili n’Ajjer to become skilled workers, through the provision of financial support from the government, improve living standards and local employment;
- Exploiting international exhibitions to display the tourism potential of the Tassili n’Ajjer barn;
- Regulate local rules for optimal utilization of attractions tourism sites, prevention of destruction of the wildlife and stone drawings.

- **Defensive strategies (WT)**
In this strategy, in an effort to reduce threats and control vulnerabilities, the following strategies are provided:
- Encourage private sector to participate in the development of infrastructures, various equipment and facilities for tourism;
- Utilization of government's support in the management of desert tourist destinations in order to become an unique tourism;
- Encourage the local community to ensure the safety of tourists through an integrated scheme in which all tourism actors participate.

**CONCLUSION:**
Algeria is looking forward to meeting its tourism challenges and putting the country on the list of tourist destinations in the world. First of all, Algeria announced its intention to aspire to be a preferred tourist destination in North Africa. Therefore, a national program "SDAT" was developed for tourism marketing led by the Ministry of Tourism. The SDAT program included strengthening the components of tourism in all provinces of the country. For desert tourism, tourism ministry observed that “Algeria was able to realize its full potential in Archaeological tourism in Tassili n’Ajjer. In addition, the authorities responsible for the management of the Tassili n’Ajjer barn have attached great importance to understand which fruitful aspects of tourism can be adapted to archaeological sites in the Tassili n’Ajjer. Moreover, the authorities of the barn have also focused their efforts on protecting the physical cultural heritage try to enhance it through continuous monitoring processes.

From our perspective, this study also focused on SWOT analysis of Tassili n’Ajjer area as Archaeological site. Based on qualitative aspects for each one of internal and external factors, we concluded that most Archaeological areas have vulnerable level in the advertising and marketing scope. There is also a
serious lack of interest in archaeological tourist sites in terms of periodic monitoring to protect them from vandalism. Hereby, we made the following recommendations to Elevate Tourism Status in Tassili n’Ajjer:

- Need for knowledge of Tassili n’Ajjer tourist sites, through International Exhibitions;
- Development of communications strategy to publicize stones drawings in Tassili n’Ajjer;
- Developing human resources specialized in archaeological tourism;
- Develop integrated and consistent marketing communications for tourism destinations in the barn;
- Improved quality and creativity and innovation for the hotels, tourist agencies;
- Development of the supportive services like Airlines, National and Regional Airports, the exchange banks, transportation, and tourist guides in the Tassili n’Ajjer;
- Enhancing Links with tourism marketing websites, International Tour Operators and Package Holiday Websites;
- The use of information and communication technology such as e-tourism and applications.

References:


