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Diploma Thesis

Economics of National Parks in the United States of America

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Declaration

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In Prague, March 31st 2017

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Economics of National Parks in the United States of America

Summary

This thesis studies the system of US National Parks tourism's and its impact on the economics of the state and evaluates the ability of tourism to provide a sustainable solution for economic development. The theoretical part of the thesis is based on the literature review and introduces the basic information about the National Parks in the world and in the United States of America, their system and methodology of research national park activity.

The second practical part focuses on the application of methods and analysis, such as cost benefit analysis, situation analysis and travel cost method in order to evaluate the economic effectiveness of national parks as a tourism destination.

Key words

national parks, recreation, sustainable, tourism economics, travel-cost method, cost-benefit analysis

Ekonomika Národních parků ve Spojených státech amerických

Souhrn

Tato diplomová práce se zabývá cestovním ruchem národních parků Spojených Států a jejich vlivem na ekonomiku státu, oceňuje možnosti turismu, poskytnout dlouhodobě řešení ekonomického rozvoje. Teoretická část práce založená na přezkoumání literatury a představuje základní informace o národních parcích ve světě a ve Spojených Státech, jejich system a metodologie výzkumu působnosti národního parků.

Praktická část zaměřená na využití metod a rozborů, takových jako Analýza nákladů a přínosů, Situační analýza, Metoda cestovních nákladů, aby vyhodnotit ekonomickou efektivitu národního parků jako turistickou destinací.

Klíčová slova

rekreace, národní párky, dlouhodobý, ekonomika turismu, metoda cestovních nákladů, analýza nákladů a přínosů

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1. Introduction

In recent decades the world has witnessed a steady increase of interest in activities. This in turn leads to an increase of the role of protected areas, including national parks, which became the necessary elements for recreational activities.

National parks are not just sights, monuments and territories, not just mountains, forests, lakes and geological wonders; they are also integral part of the life of modern society which represents a culture of the state and local communities, provides opportunities for recreation for tourists and plays an important role in preserving biodiversity and the integrity of ecological systems. In connection with popularity of the ecotourism directions and development of infrastructure of national parks, value of these objects for tourism constantly increases. Every year national parks become stronger on the market of tourist services, more popular places for recreation and have a strong influence on the development of tourist branch all over the world.

The development of ecotourism in the United States of America is considered as a mechanism for self-financing of national parks and the economic component prevails in this field of activity. However, the economic benefits of national parks are associated not only with tourism. Those benefits do not conform to the existing market mechanism which is based on the rules of exchange of goods and services, accordingly, the value of national parks can not be calculated by using the market prices. At the same time it is impossible to underestimate economic advantage from the national parks and the protected territories.

Therefore, there is a need to study the economic foundation of national parks as recreational zones on the territory of protected areas. The United States of America has won considerable experience in these matters due to the National Parks System, which is created for recreation in the first place. These global realities have led to the selection of the research topic.

2. Objectives and methodology

2.1. Objectives

The aim of this work is the analysis of economic efficiency of tourism and recreational activities of the objects of the national parks system of the United States.

The following problems are formulated and solved to achieve this aim:

- to research the theoretical basis for the development of tourist infrastructure;
- to define tourism destination, tourism infrastructure and their place in economic development;
- to research national parks as tourism destinations in different countries;
- to form methodology of research of national parks activity;
- to give a general characteristic of development of national parks as tourism destination in the United States of America;
- to research meaning of national parks in tourist infrastructure of United States of America;
- to study cost-benefit and situation analysis of national parks activity;
- to analyze the economic effectiveness of national parks as a tourism destination.

The **objects of research** are the development trends in the world of international tourism destination.

The **subjects of research** are theoretical-methodological and applied methods of development of national parks system as tourism destination.

2.2. Methodology

The methodological and theoretical basis of the thesis has made a synthesis of the results of fundamental and applied research in the field of tourism, modern theory and methods of management of the national parks as tourism destination.

The thesis used such general methods of scientific knowledge, both historical and comparative, and special research methods, as particular abstract-logical, statistical and economic, monographic, analysis and synthesis, comparisons, benchmarking, travel cost method and other methods of economic research of economic-mathematical method, the

analytical and logical generalizations.

Practical significance of the obtained results is in the fact that the scientific provisions, conclusions and recommendations of the research can be used to improve the efficiency of national parks activity and its impact for economy of USA.

3. Literature overview

3.1. Tourism destination, tourism infrastructure and their place in economic development.

Nowadays, tourism is one of the leading, most developed and promising sectors of the economy, thanks to the rapid pace of development, it can be recognized as the economic phenomenon of the century.

In many countries tourism plays a significant role in the formation of gross domestic product, it is involved in activation of the foreign trade balance, creation of additional workplaces and employment of the population. Tourism has an impact on such key industries as transport and communications, construction, agriculture, production of consumer goods and others, i.e. acts as a kind of stabilizer of socio-economic development. In turn, the development of tourism is influenced by various factors: demographic, natural-geographic, socio-economic, historical, religious, and political-legal.

Scientific and technological progress, growth of the quality of life of the population, increase of the duration of free time, vacations, economic and political stability and other factors influence the development of tourism in the world.

Tourism is one of the types of domestic business, which is rapidly developing. The interest of entrepreneurs to tourism has a lot of factors. First of all, start of a tourist business does not require a large investment. Secondly, large, medium and enterprises quite successfully interact in the tourism market. At the same time, tourist business allows to quickly wrap capital (in the sphere of international tourism) and extract benefits at the expense of currency transactions.

Microeconomic bases of tourist business are in the abilities and capabilities of national tourism businesses. The country's tourism industry will not be complete until the time while tourist enterprises become efficient and cost-effective. Any state should not have unprofitable enterprises in any sector of the economy, as sooner or later it will be damaged as well as other industries that are directly or indirectly connected with it. However, shifting of the responsibility for the development of foreign economic activity in the sphere of tourism on tourist enterprises is wrong, because their capabilities and competencies in

foreign markets are derived from the microeconomic business environment. Thus, along with the creation of a favorable macro environment, the government should contribute to the development of the microeconomic environment. Tourism businesses constantly have to use a local economic infrastructure to cooperate with the actors of local labor markets. There are four critical aspects of modern economic theory in the analysis of the microeconomic business environment (Sharma, 2004, p.57):

- resources used by tourism enterprises in the process of their functioning (human resources, market, information, innovation infrastructure);
- internal competition because occasionally companies without competition in the domestic market can have competitive advantages on the external;
- the presence of demanding local customers, including those which demand can be satisfied only through access to foreign markets;
- create a local travel market by the interaction of all tourism firms with related and supporting industries.

Tourism infrastructure is defined as component of touristic product. Infrastructure includes basic buildings, devices and service institutions, which are crucial to proper operating of society and economy. Infrastructure is divided into two parts: technical part, which includes basic devices of communication, transport, heat, gas, power and road industry, and social part, which includes some institutions connected with culture, education, health, science, public administration, physical culture and tourism and the like (Gaworecki, 2003 p. 104).

Touristic attractive forms are based for attracting tourists and using data of direction for tourist movement and its structure. So, activities aiming at adaptation and protection of touristic attractive are could appear while complementary touristic goods are defined as tourism infrastructure. Tourism infrastructure is a set of institutions and devices, which constituting organizational and material basis for tourism development.

To explain the structure of tourism infrastructure entirely, it should be presented in accordance with two criteria, namely in two approaches:

- generic,
- from the point of view of financing its creation jointly with its exploitation rules.

In case when the basic function of infrastructure elements is tourist movement servicing, the elements are included in the tourism infrastructure. When the elements are dedicated to other socioeconomic needs, which are used not only by tourists, they are included in paratourist infrastructure, the existence of which is dependent on tourism development.

Therefore, the structure of tourist infrastructure consists of four elements.

1. Typically touristic infrastructure:

- accommodation facilities,
- other facilities for arrival servicing,
- tourist information,
- trails.

2. Paratourist infrastructure:

- transportation facilities – roads and transport points,
- local facilities, including communal and public transport,
- trade and service facilities, including craft.

3. Elements, which cannot be unequivocally classified, their function and results serving the purpose for which they had been built:

- gastronomy,
- accompanying facilities like sport and leisure, culture, entertainment.

The structure of tourism infrastructure unequivocally points on the participation of entities responsible for its creation.

Commercial entities, such as hotels or restaurants, are creating and exploit objects for servicing of their clients (tourists). Public entities (self-government units and state entities) develop techno-social infrastructure not only for servicing of tourists, but also for creation of the conditions for development of local regions and society (including tourists) and economy (including tourism).

Attention should be paid to the need or even necessity of cooperation between commercial and public entities. Involvement of commercial entities in taking up public financed activities for creation of infrastructure is also possible, e.g. through public and private partnership (Panasiuk, 2001 p. 213).

Tourism infrastructure can be regarded as the physical elements that are designed and

erected to cater for visitors. The strong relationship between tourism development and infrastructure has been theoretically established by a lot of authors (Adobayo, 2014).

Some authors point to the difference between tourism infrastructure and superstructure, claiming that superstructure depends on infrastructure. Tourism infrastructure is a set of objects that provides recreation and entertainment of tourists. It is due to the development of tourism and has much in common with shared infrastructure (primary supply): if in a certain area all the time tourists, the capacity of the system designed to ensure viability of local population not enough at all.

The tourism superstructure is the totality of economic and cultural facilities that complement the tourist infrastructure, located at the tourist area and increase the level of satisfaction that tourists travel.

Tourism infrastructure usually includes complementary and ancillary facilities, systems, processes, equipment, and resources which necessary for the functioning of some tourist destination. Tourism infrastructure includes airports, roads, railways and other tools, which make a tourist destination accessible for tourists. However, infrastructure consists of health care systems and other public services. Based on infrastructure, superstructure includes facilities, existing only because of tourism activities. Their main goal is research and meeting the desires and needs of tourists, in the form of hotels, restaurants, sports facilities, and other objects and services (Popesku, 2011).

Development of problems of formation of an optimal tourist infrastructure should be based on the recognition that the market infrastructure, designed to control the interaction of elements the market system, optimize the movement of commodity-money flows and development of market relations and its impact on production in infrastructure is the most effective means regulation of the economy.

Note that the tourism infrastructure can be regarded as a complex of activities on creation of conditions for realization of tourist services. Understanding of tourism infrastructure, as a different set of facilities used to meet the needs of tourists is correct. If in the first case, the focus was on the activity and dynamics aspect, in the second case there is a logistical static manifestation tourism infrastructure. Similar is the conceptual design of the "tourism industry", which should be interpreted as the set of subjects of tourism activities, catering,

transport, trade, culture, education, sports and the like, which provide services, production and sales of products for the needs of tourists. Tourist infrastructure contributes to the production of the tourist product - pre-designed complex of tourist services, which combines no less than two such services being sold or offered for sale at a certain price, which includes transportation services, accommodation services and other tourist services not related to transportation and accommodation, for example, services for the organization of visits to objects of culture, recreation and entertainment, souvenirs sale and the like.

Tourism infrastructure is the basis of tourism development, as well as a base for utilization of destination resources. The importance of tourism infrastructure is reflected in the fact that it can contribute to increasing the efficiency of production and distribution of tourism services, and, in some cases, such as remote destinations, even increase the supply of tourism services (Jovanovic, 2016 p. 289).

As a component of the regional tourism product, tourism infrastructure is of special importance for long-term tourism growth and the general progress of tourist destinations in providing the required services to tourists. Literature is providing the different views on the number and type of components representing tourism infrastructure.

The infrastructure of tourism business is presented as a set of organizational structures and regulatory compliance for documented procedures, ensuring the functioning and interaction of subjects of tourist activity and regulate the movement of material, financial and information flows between them and the external (social and natural) environment. The structure of the tourist market infrastructure can be summarized into three components: institutional, informational, and regulatory (Tourism and Transport forum, 2012 p. 173).

The institutional component presented as total institutions (transport, hotels, banks, insurance companies, customs, investment funds, etc.) and specialized institutions (travel agencies, advertising businesses, specialized insurance companies, marketing service, etc.). The information component includes elements such as:

- dissemination of information (Internet, media);
- information and advertising;
- information and travel resource (the need to create the image of a romantic trip,

which would attract tourists, stimulate tourism activity and effective use of tourism potential of the region).

Regulating component of the tourism infrastructure contains regulatory legal acts regulating relations in this sphere of activity companies.

Tourism infrastructure is the supply chain of transport, social and environmental infrastructure collaborating at a regional level to create an attractive tourism destination, according to the Tourism & Transport Forum (Tourism and Transport forum, 2012).

Today, a large number of countries, wishing to achieve higher tourism results and its significant impact on economic development enhancing the construction of tourism infrastructure concerns. Generating the effects of the overall development is conditioned by the way of managing the relationship between tourism infrastructure, tourism, and the local economy (Swyngedouw, 2000).

Tourist infrastructure is a set of artificially created recreational establishments (resorts, recreation centers, hotels, restaurants, etc.) and related facilities constructed for public use at the expense of public investment (road and rail road (path), checkpoints, airports, hospitals, schools, etc.). Infrastructure services play a kind of role that links different sectors of the tourism industry, including end-user and defined by starting the process of becoming an industrial and later post-industrial society, because this society cannot do without them (Faulkner, 2001).

Tourist infrastructure is a set of enterprises and institutions, the territorial, material and organizational basis for tourism development. It covers four basic elements: accommodation facilities, food, and related communication. Tourist infrastructure is represented by a set of physical objects, whose activity is directed on satisfaction of tourist needs of the population. It includes the material and technical base of the functional and economic structures, which are part of the TRS of a different order. Some researchers of tourism also include tourism and objects of natural origin, points of interest, museums, and the like. It is the tourist resources; tourist infrastructure occupies a special place in the development of the entire tourism industry. Resources tourism infrastructure includes a combination of natural and man-made objects, which have the comfortable properties and are suitable for creating tourism product. As a rule, their presence determines the formation

of tourism in a particular region. Objects representing historical and cultural past of the country (museums, monuments and places associated with historical events, the life and work of prominent representatives of science, technology, culture, and unique architectural and ethnographical objects). There also are objects in this list that demonstrate the modern achievements of the country in different sectors (Finnessey, 2012).

It follows, both the state and public enterprises, and the private sector are responsible for the quality of infrastructure. Planning the sustainable development of tourism infrastructure is requires overall development of basic infrastructure and facilities, along with all tourism facilities in a balanced way. Smith (1994) points out that the level of development and functional use of tourism infrastructure and lack thereof in the vicinity of tourist destination and in it are obstacles that can really affect the experience and satisfaction of tourists in respect of a certain tourist destination (Jovanovic, 2016).

So, the tourist infrastructure is the totality of enterprises, institutions and establishments whose activity is directed on satisfaction of needs of the people involved in the recovery or rest, and also of railways and of transport and tourist accommodation facilities, ensuring stable operation. The whole system is considered to consist of two subsystems: the social and industrial, which are interrelated and interdependent relative to the servicing of the subject. In turn infrastructure to a certain extent, forms the tourist regions, promotes tourism specialization and profile management, because due to the presence of infrastructure links between the individual objects determine the quality of service in a particular territory.

After a visit to a tourism destination, tourism infrastructure has an important role in the tourist's overall experience and impression regarding a specific destination. General infrastructure of the destination and services provided represent one of the most important factors of overall tourism development (Jovanovic, 2016).

3.2. National parks as tourism destinations in different countries

National parks are environmental, recreational, cultural, educational, scientific-research institutions of national importance established for the conservation, reproduction and

effective use of natural complexes and objects of special environmental, recreational, historical, cultural, scientific, educational and aesthetic value.

National parks are usually located in areas that were largely undeveloped, and often keep the area with rare animals, plants and ecosystems (especially those that are at risk), biodiversity, or unusual geological features. Sometimes national parks are created in the developed regions with the aim of returning some of the territories as close as possible to their original condition. National parks have a dual role, as a refuge for wildlife and a popular tourist districts. You need to maintain a balance between these two directions which, however, is often associated — for example, tourists often bring income of the park which can be spent on projects for the conservation of nature. Parks also serve as a significant reserve of natural resources such as timber, minerals and other valuable products. The balance between the expenditure of these resources and their preservation is also important for the Department of parks.

The development of functional relations between national parks and their immediate spatial surrounding continues to be a source of numerous research problems. It is a subject of much discussion in today's scientific literature, particularly in terms of combining nature conservation with the development of tourism and the local economy, and the evolution of national parks' relations with their social and economic environment.

An important example of linking recreation and national parks in the world is the classification of parks for their education, developed by V. Sicheva. The author identifies three requirements (types) for the creation of parks:

1. The creation of a national park specifically for tourism and leisure (it's mostly parks of North America);
2. The status of national park territory already happened the recreation, but the park was created in connection with the identification of a unique natural environment that need protection (such objects are parks of Europe);
3. The creation of the park exclusively for scientific and conservation goal, and subsequently use the park for recreational activities.

Table 1. The number, area and proportion of territory of national parks in some countries

Country	Number	Area, hectares	% of country area
Poland	17	314069	0,97
Romania	5	62311	0,26
Czech Republic	4	1184800	14,01
Slovakia	9	49048	12,5
Austria	1	182250	2,10
Switzerland	1	16887	0,41
Swiss	18	843966	1,88
Great Britain	21	90083	0,76
USA	59	5961427	0,64
Canada	28	12967441	1,2
Kenya	20	3400000	6,0
Tanzania	10	3924170	4,2
Zaire	7	7122000	3,0
Zambia	18	5943800	7,9
Japan	25	1995672	5,39

Source: own processing

The UK's national parks include the most beautiful natural landscapes, including coasts, mountains and forests. In 1949, the National Parks and Access to the Countryside Act was passed in order to protect the UK's areas of natural beauty and ensure that everyone could enjoy them today and in the future.

There are 12 national parks on the territory of England and Wales, such as Dartmoor, the Peak District, the New Forest, the Lake District, the Yorkshire Dales and Snowdonia.

The idea of the establishment of national parks was always considered in the United Kingdom having in mind public acceptance of conservation and the multi-functionality of “living and working” landscapes (NATURAL ENGLAND 2013a). To ensure the success of the movement to create national parks it had to combine the goals of different branches of “outdoor enthusiasts” to gain enough force to pressure the government into acting. The different forms of nature lovers and leisure activity promoters included every ideal from nature conservation to recreation in the countryside and demanded to think about ways of

bringing them together in a national park from early on. Though it was very clear from the start that this would pose conflicts between nature conservation and recreation purposes, as many recreational activities and overcrowding are detrimental to conservation goals, it was thought that only through experiencing nature and the opportunity to learn about it, the need for nature conservation could be ingrained into the public mind. As the national parks in England and Wales are inhabited and comprised of cultural landscapes, they fall under category V (protected landscapes/ seascapes) by standards of the IUCN management categories (IUCN 2013). This category typically features areas where anthropogenic activity has shaped an area with “significant, ecological, biological, cultural and scenic value, and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area” (IUCN 2013).

Based on the vision for the national parks in 2030 published by the Department for Environment, Food and Rural Affairs (DEFRA), sustainability, ability to mitigate climate change of the communities in the national parks and maintenance of wildlife are the key challenges in the future. By trying to achieve progress in these areas, the national parks should inspire people living outside of national parks to adapt ideas and lifestyles for a life within environmental limits and adaption to climate change. All in all, one can state that National Parks act as a test bed for sustainable living for the whole nation (DEFRA 2010). Taking this into account one could say that national parks in England and Wales for the most part encompass the purposes of UNESCO’s Biosphere Reserves that are areas that are designated by national governments and recognized by the UNESCO as areas in which solutions “to reconcile conservation of biodiversity with its sustainable use” and are as such considered to be “living laboratories” (UNESCO 2013). The benefits of Biosphere Reserves include that they can pose the framework for project development to foster sustainable development and create public awareness of present issues with balancing the requirements of nature and humans (UNESCO 2013). This thesis focuses on the PDEQM as an example of a project that tries to foster sustainable business practices in the Peak District National Park and thus would fall into the category of projects mentioned above; cementing the view that National Parks in England and Wales are indeed model regions for sustainable development.

The Lake District National Park was created in 1951. Covering 880 square miles, it is the

UK's largest national park and receives 12 million visitors a year. People come to the Lake District for many reasons, including hill walking, rock climbing, mountain biking, fishing and boating. They also come to visit historical buildings, or just to enjoy the beautiful lakes and mountains.

The park is managed by the National Parks Authority (NPA), which attempts to balance the conflicting priorities of different park users. For example:

- The protection of the park's environment, wildlife and natural features are things that can be harmed by excessive tourism. This is not only the Authority's job, but is also powerfully lobbied for by conservation and wildlife groups.

- Tourists who come to enjoy the park need roads, parking, accommodation, shops and restaurants which are not necessarily going to be good for the countryside.

- Local businesses may want to encourage more and more visitors.

- Farmers may be concerned about damage to fences and livestock by walkers and their dogs.

- Local residents may be worried about congestion, littering, noise pollution and the erosion of footpaths. If these different interests are not carefully balanced, the result could be damage to the environment, local people becoming upset or even hostile, and tourists being put off visiting the park (BBC, 2017).

Tourism is one of the fastest growing industries in the world, and in Finland, growth is occurring largely in nature-based tourism. Nature tourism may provide a new beginning, or at least a helping hand, for the economically depressive countryside by increasing employment and public activities in the area. For this reason, many organizations are interested in acquiring information on the regional economic impacts of nature tourism. On a practical level, many actors, local entrepreneurs and the public administration, require concrete figures representing the number of jobs and flow of funds in order to justify the maintenance of and investments in the recreation facilities of national parks and other recreation areas. Because many nature-tourism destinations, such as national parks, are public services, economic impact information should be comparable between the regions and be available at a moderate cost. When discussing economic impacts, one must bear in mind that although the economic impacts of tourism are typically positive, tourism may

also negatively impact society, culture or the environment. In addition, measuring economic impacts concerns only the flow of funds between regions and has little to do with the total value of the area.

Despite the growing need for information, it remains unclear how nature tourism affects the local economy, for no generally accepted and standardized method for measuring the employment and income effects. In the beginning of 1980s, the Nordic countries developed “the Nordic model” for estimating the regional economic impacts of tourism. The model compares tourist spending to the tourist income of enterprises, and the multiplier effects are counted based on enterprise surveys and interviews. This model has been applied to a few nature tourism areas in Finland, including the Southwestern Archipelago National Park, the Ruunaa Hiking Area and the municipality of Kuhmo.

3.3. National parks of the United States and its environmental conservation place

The National Park System in the United States consists of 394 units: 123 historical parks, 74 monuments, 59 national parks, 25 battlefields and military parks, 18 preserves, 18 recreation areas, 10 seashores, 4 parkways, 4 lakeshores, and 2 reserves. These areas cover over 84 million acres across the United States. The nation’s first national park was Yellowstone National Park, which was established on March 1, 1872. These areas are very special and have many unique characteristics. About 278 threatened or endangered species have their habitat in these parks. The world’s largest carnivore, the Alaskan Brown Bear, the highest point in North America, Mount McKinley, the world’s largest living things, Giant Sequoia trees, the longest cave system in the world, Mammoth Cave National Park, the country’s deepest lake, Crater Lake, and the lowest point in the Western Hemisphere, Badwater Basin, are all contained within these national parks. These parks also contain 17,000 miles of trails and 1.5 million archeological sites (Finnessey, 2012).

National parks are areas of land, which protected by the government, and often chosen for their natural beauty and ecology. The 59 national parks are operated by the National Park Service of the United States. National parks as tourism destination are attracted of millions of visitors for each year. So, it is estimated 307 million people visited national parks in the

U.S. in 2015. They are among the most popular types of destinations for U.S. leisure travelers and international tourists. Around 40 million people go on camping trips in the United States for each year.

The most visited national park in the United States is the Great Smoky Mountains National Park. The Great Smoky Mountains, which straddling Tennessee and North Carolina, were chartered as a national park by Congress of USA in 1934 and in recent years welcome around 10.7 million visitors per year. The mountains range from 876 feet to 6,643 feet and are home to an abundance of animal and plant species due to their varied climate. The park is popular among hikers, another favorite outdoor activity in which around 37 million Americans participate annually. Other most visited national parks include the Grand Canyon, Yosemite and the first national park in the U.S., Yellowstone, which was established in 1872. National park tourism benefits both the national and local economies. In 2015, national park visitor spending reached over 16 billion U.S. dollars – around one third of this was spent on accommodation and one fifth in restaurants and bars (Facts, 2017).

The American national park system will turn a hundred years old in 2016. With this centenary comes a legacy that is complex and not without conflict but, at the same time, in celebrating their birthday, the parks should be considered as the USA's great elders. And just respect them. They have been around for a very long time, they have seen wildlife come and go, people come and go, and storms come and go. They have seen it all. And, like all great elders, they are much adored by the generations who have sought solace and wisdom in their presence, and so now it is our role to conserve them for generations to come.

Tourists from around the world in North American country are attracted to the majestic city, scenic landscapes, and festivals, historical and architectural monuments. Natural attractions in the U.S. include a huge number of different geographic features as waterfalls, geysers, lakes, caves, swamps, mountains, rivers, deserts, valleys, volcanoes. National parks of the country are classified as the most concentrated and interesting places of observation of a living American nature. Annually they are visited by millions of people. The exact number is calculated by the U.S. national Park Service. Thus, a rating of the most popular tourist sites of natural character. Currently, there are 59 parks.

Ten most visited national parks of the United States, according for 2015, as follows:

1. Great Smoky Mountains (10,712,673 visitors)

Great Smoky Mountains National Park is located in two U.S. States – North Carolina and Tennessee, in the mountain system of the Appalachians. The Park is a biosphere reserve under UNESCO protection. Its territory hosts the longest Hiking trail in the world as Appalachia trail. The Park is 95 percent forested – deciduous, mixed, spruce-fir and oak-pine. The Park is home to a large number of animals and birds. On the territory of the Great Smoky Mountains NP are historic districts with buildings of the XIX – first half of XX century.

2. Grand Canyon (5,520,736)

Grand Canyon National Park was formed around the Grand Canyon of the Colorado River on 19 February 1919. The Park area is about five thousand square kilometers. The most visited part of the Grand Canyon is its southern edge. In this part of the Park are a large number of observation points, to walk about fifty kilometers of roads. UNESCO declared the Park a world heritage site. Multicolor layers of naked rocks of the canyon reveal geological history of the planet of the last 10 million years.

3. Rocky Mountain (4,155,917)

Rocky Mountain National Park is in Colorado. In its territory the river flows and is conditional of the continental boundary that separates the basin from the Pacific to the Atlantic and the Arctic Ocean. The Park is known for its picturesque views of the Rocky Mountains, many mountain roads, rivers and lakes. The Eastern part of the Park is characterized by dry climate and mountainous terrain, Western – abundance of moisture and forests. Most often found in rocky mountain tree is pine. In the Park live deer, sheep, squirrels, we can see different types of hummingbirds.

4. Yosemite (4,150,218)

Yosemite National Park is on the Western slopes of the mountain system of the Sierra Nevada, California .Almost the entire territory of the Park (90%) refers to area wildlife. Yosemite is famous for its granite cliffs, rivers, waterfalls and groves. The Park consists of

five natural zones: the dense bush of the lower and upper mountain forest, subalpine and Alpine zone of vegetation. In the upper part of Yosemite, along the ridges of mountains, and located touristic hiking paths. Climbers can try their hand on a granite cliff El Capitan.

5. Yellowstone national Park (4,097,709)

Yellowstone National Park was opened on 1 March 1872. It is the first national park in the world and protected by UNESCO as an international biosphere reserve. The territory of the Yellowstone is in three States – Idaho, Wyoming, and Montana. Its landscape reflects the effects of volcanic activity the earth's mantle, which took place over 17 million years. The Park has three thousand geysers at its disposal, two thirds of the geysers of the world, and ten thousand geothermal sources. Small earthquakes are still happening in Yellowstone. However, there are many hotels, shops, gas stations and campgrounds in the park.

6. Zion (3,648,846)

Zion National Park occupies an area of 593 km². It is located near the town of Springdale, Utah. The Central attraction of the Park is the canyon formed by the river Virginia. Sandy borders of the canyon have spectacular reddish-bronze color. The status of national Park received in mid-November 1919. The Temple Sinowave is Indian deity, depicted as a coyote, is in Zion NP Behind him, the road narrows and opens up the Hiking trails of the canyon Zion Narrows.

7. Olympic (3,263,761)

The founding date of Olympic National Park, located on the eponymous Peninsula in the northwestern part of Washington State, is 1938. The Park area is 3735 km². The isolation of the Olympic Peninsula from the mainland led to the biological diversity of the Park. It lives 15 are endemic (found virtually only here) animal species and 8 plant species. The Park consists of pristine forests, Alpine meadows, crystal clear lakes, several dozens of glaciers and the mountain massif of the Olympic, a height of 2,400 meters. The Western part of the Park is filled with tropical forests; the Eastern has a dry climate similar to California.

8. Grand Teton (3,149,920)

Grand Teton National Park located in the northwestern part of Wyoming, 16 km away from Yellowstone. The area comprises most of the mountain of the Teton Range and Northern Jackson Hole. The Park abounds with glaciers and lakes of glacial origin. The Park has more than a thousand different species of vascular plants. Here it is both broad-leaved and fir-spruce forests. A few dozen species of mammals, and three hundred species of birds and six species of bats are inhabited in the Park. Grand Teton is the only U.S. Park where hunting of animals is allowed, but only one moose.

9. Acadia (2,811,184)

Acadia National Park belongs to the territory of Maine. A significant part of the island of Mount Desert and a number of small nearby Islands is in its area. From a geological point of view Acadia is a classic coastal landscape of Maine. The overall landscape of the Park is very diverse: here there are not only beaches, but also ponds, swamps, lakes, spruce-pine forests and even mountains, the highest of which as Cadillac reaches a height of 466 meters. Two campsites operated in Acadia. Tourists can explore the Park on roads and trails with a total length of about 300 km.

10. Cuyahoga Valley (2,284,612)

Cuyahoga Valley National Park was established in 2000 in northeast Ohio. Its area amounts to a considerable 133,3 km². Since the end of the XIX century the territory of the future Park was used by local residents for recreation. The landscape of the Cuyahoga valley is full of many geographic features – waterfalls, hills, caves and meandering rivers. In the Park there are Hiking trails and bike paths. At the Cuyahoga valley it is built in the early nineteenth century, the Erie Canal.

Recreational opportunities of the protected area (even specifically allocated for this purpose, sections of the national Park) can be used only as supplementary and subordinate to its environmental functions. The development of the tourist infrastructure can only occur with priority given the environmental restrictions and the level of satisfaction of tourists' needs should be determined by these constraints. The only solution here is seen in the development of mass and alternative forms of tourism, which would contribute to the

attainment of the main objectives of the protected areas is protection of natural systems, while helping to achieve goals related to environmental education and obtaining a recreational effect. Hence tourism specialization of protected areas should be serving tourists for whom the main types of recreation classes are based on minimum consumption of environmental resources and live communication with nature.

The priority should have educational forms of tourism, whose development will attract to the rest of educated people and popularization of ecological and cultural-historical knowledge. One of the priority directions of development of cognitive forms of tourism are tourist routes or ecological routes and paths that extend from tourists knowledge about the processes and phenomena of the surrounding nature. Another important task is the education of ecological culture of human behavior as part of a General cultural relationship of people to each other and the relationship of man to nature. Ecological routes and paths, in addition, are regulators of flow of holidaymakers, distributing them in various areas on protected areas, reducing recreational pressure on natural environment.

Ecological tourism (especially in the form of biosphere tourism) is the most environmentally friendly views of nature. In the framework of cognition can go in line with either the educational process, or a simple acquaintance. Unlike the first type of knowledge from the second that the educational process associated with targeted and topical information on the ecosystem elements and a technical is professional nature watching. Improvement can occur in the passive (stationary being in the natural environment), active (associated with transitions from one tourist interested in natural object to another) and sports (overcoming natural obstacles when passing routes) forms.

Appropriate differentiation of forms of ecotourism in the intensity of recreational activities is in its practical organization of nature conservation areas where the zoning provides for various modes of nature. Moreover, such differentiation to take into account has two possible positions. The first is based on the fact that the implemented form of ecotourism more aggressive, the more intense the tourist moves in a natural space. The intensity is determined by the time and speed of active movement of the tourist to meet recreational needs.

The principle of rational use of natural recreational resources is in the second position. Its essence is this: science and cognitive information, which carries the object of nature,

should be used as more fully. Therefore, if this object or ecosystem is particularly valuable, their potential should not be used in the evaluation forms of tourism. Better to replace them with less valuable objects the involvement of which in the recreational resource, the cycle will not worsen the quality of tourist services, but will reduce the load on the unique objects of nature. In contrast to the first position of the rational use of cognitive capacity allows us to distribute the tourist flow used in natural areas.

Thus, protected areas are the most important link in the development of ecological tourism, as have a number of advantages:

- located in the most scenic, attractive, interesting from a cognitive point;
- have the current system of service of tourist groups, well-established system of tourist routes, the experience of organization of educational work;
- have some infrastructure and trained personnel;
- shape the attitude of the local population to a specific part of the natural and existing on site environmental restrictions on economic activity.

3.4. Methodology of research of national parks activity

Methodology of scientific activity is a process that establishes a set of specific techniques, approaches, methods, activities aimed at obtaining new scientific results, achieving goals and performing scheduled tasks. Methodology is a set of research methods used in science in accordance with the specific object of its cognition.

The method is a procedure of cognition of the phenomena of nature or social life, or system of methods used in any field of activity (the science, production and the like). There are many methods of scientific research. Among the most important are: descriptive, documentary analysis of information, research texts.

Under the method in the broad sense should be understood a way of understanding phenomena nature and public life to build and validate the system of knowledge. In the narrower sense method is a regulatory rule, a certain way, a procedure of decisions of problems of theoretical, practical, educational, managerial and worldly nature.

With the concept of method is closely related to the concept of methodology, methodic.

The methodology is considered as the doctrine of the structure, logical organization,

methods and means of activity. Science is the research of the principles, forms and ways of scientific knowledge. By definition, methodology is a set of the most essential elements of theory, constructive for the most of science; methodology in contrast to theories does not bring new knowledge; unlike the concept did not provide a basis for practice; but it develops in science, the elements which are indispensable for the development of science itself. Figuratively speaking, methodology is the concept of development of the theory, and the concept is methodology for transition from theory to practice. By O. Shabliy, an important assumption in the methodology is primarily the fact that every method of research must have a theoretical justification (Shabliy, 2001 p. 28). The method, in turn, considered as the doctrine of the application of a specific method or system of methods or combination of methods of research.

The basic methods of the research are comparative-methodological method, the method of conceptual, forms component, etymological analysis; the descriptive method, which includes methods of observation, interpretation, comparison, generalization and the elements of the statistical method.

Comparative research is a research methodology in the social sciences that aims to make comparisons across different countries or cultures. A major problem in comparative research is that the data sets in different countries may not use the same categories, or define categories differently (for example by using different definitions of poverty) (Hitz, 2006)

There are certainly methods that are far more common than others in comparative studies, however. Quantitative analysis is much more frequently pursued than qualitative, and this is seen by the majority of comparative studies which use quantitative data. The general method of comparing things is the same for comparative research as it is in our everyday practice of comparison. Like cases are treated alike, and different cases are treated differently; the extent of difference determines how differently cases are to be treated. If one is able to sufficiently distinguish two carry the research conclusions will not be very helpful.

Typology is a method (the result of) scientific knowledge, systematization, classification on the basis of common characteristics and properties. This method focuses on the search for resistant traits and properties of the studied objects. The Central concept of typology is

type as a model, showing some significant signs of a certain number of phenomena, but deliberately ignoring irrelevant features (Nordin).

Typology is the identification of similarities and differences of the investigated social objects or phenomena, the search for reliable methods for their identification and grouping of criteria in the framework of the researcher model. The result is allocation of certain types of the objects or phenomena. Typology differs from classification: "class" is a particular set of real objects, whereas "type" is a kind of ideal object, constructed by the researcher based on the combination of some traits.

The comparative method can be a complicated and lengthy process, and sometimes an educated guess is the best conclusion one can come to. Nevertheless, the comparative method is an indispensable tool for historical linguists and responsible for nearly all currently accepted language genealogies.

The classification method. To clarify relationships and patterns of development of the studied objects using the classification, the main factor this is a grouping that allows you to divide the complete set of objects or data into homogeneous groups so that differences within groups were smaller than between groups. When grouping is important to ensure uniformity and comparability of the grounds on which the distribution is carried out.

Classification according to certain characteristics and criteria makes it possible to identify common patterns in the various phenomena of reality, to outline a possible causal relationship between disparate facts. It is classification enables us to see the causal dependencies.

Economic valuation of natural areas is usually carried out in order to respond to social needs or economic requirements (e.g. for investment projects), in the context of new regulations to be introduced (e.g. new protected areas to be created) or following a deterioration of the environment in a specific area (Philips, 1998). Comprehensive economic valuation of protected areas as public assets aims at identifying their Total Economic Value (TEV) (Dumitras, 2011 p. 135).

In the TEV concept, various categories of economic value of natural environment are distinguished. One of those categories is "use values", relating to direct or indirect active use of the natural environment by consumers (direct/indirect use values). On the other

hand, “non-use values” are not related to the current use of the environment by the present generation. The total economic value of protected areas is the sum of use values and non-use values. The TEV concept is a theoretical construct of a holistic nature. The methodology it proposes is complex and extensive, but it shows the ambiguity of the issue of total economic valuation of a protected area. The applicability of this concept is debatable as it is not practicable to identify and measure the complete spectrum of present and future use and non-use benefits (Dixon, 1990).

Because of high research costs and methodological problems, the research is usually limited to valuation of specific goods for specific purposes (e.g. identifying the value of a national park for tourism), assessment of economic effects of actions undertaken or planned to be undertaken in a location, and assessment of the impact of protected areas on the regional economy. In most research, only direct use values are taken into consideration, being the easiest to estimate.

Another example among comprehensive approaches and methods for protected areas' valuation is the Travel Cost Method (TCM) used for valuating natural areas mostly for tourism and leisure. The travel-cost method is used for estimation of economic values of such environmental goods as national park and recreational areas. In contradistinction to the contingent valuation method, travel-cost can only calculate use value of an environmental good or service. This method can calculate the dependence between the entrance fee and the number of visitors and estimate total park revenues from the fee.

In the broadest terms, this method identifies the economic value of a given natural asset through the cost of a visitor's travel and stay in the destination, including the time cost of reaching the destination. The time cost is estimated on the basis of lost advantages (lost revenue). Another example is the Hedonic Prices Method (HPM). It allows the impact of the environment goods and services on the prices of related market goods and services (e.g. real properties) to be evaluated and expressed in monetary terms. TCM and HPM are based on an observation of prices on markets of goods related to a specific non-market good. However, finding such good is not always possible. In such cases, valuation is based on hypothetical markets, i.e. ones which would be conceivable if the non-market good in question was marketable (Zylicz, 2012 p. 22).

The most frequent method based on this approach is the contingent valuation method (CVM). In this method, potential users of the non-market good are asked what maximum amount they would be willing to pay for having that good delivered to them (Willingness To Pay, WTP) or what minimum compensation they would accept for losing that good (Willingness To Accept, WTA) (Zylicz, 2012 p. 24).

WTP is mostly used for estimating the value of for pro-environment projects or ecological benefits whereas WTA is used estimating the value of ecological losses due to environment deterioration and loss of renewable and non-renewable natural capital. However, some academic circles remain highly skeptical about the CVM method, claiming that the applicability of research findings obtained thereby is limited. Results obtained through CVM are largely affected by the procedures used (e.g. sample selection, interviewing methods) and respondents' awareness.

The most doubtful is the assumption inherent in CVM that a good is worth as much as people are willing to pay for it. Besides method of valuation of natural areas, other methods often used allow the economic effects of actions taken in c locations (e.g. pro-environment actions) to be evaluated. The most frequently used methods are those based on Cost-Benefit Analysis (CBA) (Dixon, 1990).

Even this brief overview of methods of economic valuation of protected areas demonstrates the significant theoretical and methodological complexity of the issue. It is mainly due to the fact that protected areas involve a broad spectrum of values, most of which are not marketable. Notwithstanding the methodological doubts, research on the economic value of natural areas is highly relevant for public awareness of the role which the natural environment plays in economic development. Increased public understanding of these issues helps build public support for nature conservation. Researches findings help make decisions concerning both the management of protected areas and the planning efforts for the creation of new ones.

4. Practical Part

4.1. National parks in tourist infrastructure of United States of America

According to article 16 of the United States of America Code, the National Park System (NPS) includes "any land and waters that is managed or will be managed in future by the Ministry of interior through the national Park Service for environmental, commemorative, historical, recreational or other purposes."

National Park area is especially scenic, historical, or scientific values, which is supported by government and Act of Congress (Facts, 2017).

The Congress declares that the national Park System, which began with creation of Yellowstone national park in 1872, since that time grew and began to include the unique natural, historical and recreation areas in every major region of the United States, its territories and island possessions; that these areas, although different in nature, United through their interrelated purposes and resources into one System of national parks as the cumulative expression of a single national heritage; that, individually and collectively, these areas are national dignity and defined an environmental quality, they are stored and managed for the benefit and inspiration of all people of the United States (BBC, 2017).

The National Park Service has some functions for satisfaction such original goals, as saving of diverse recreational and cultural resources; environment safety; world leading in preservation community and park destinations; and leader to protecting movement of open space of USA.

The National Park System consist of 409 areas (its square is over 84 million acres) in 50 States, American Samoa, the District of Columbia, Puerto Rico, Guam, the Virgin Islands and Saipan. These areas have national significance for justify special protection and recognition according to some acts of Congress (The National Parks Index).

America's national parks encompass some of the country's most iconic sights, from the Statue of Liberty to the Rocky Mountains to the giant sequoias of Yosemite. For people around the world, these and other wonders — the Grand Canyon, Yellowstone — are indelible symbols of a vast.

Now the system of national parks of the USA looks as follows (table 2):

Table 2. Elements of National Park system of the United States

Category	Number of objects	Square, km ²	Visitors, person
National Military Park, National Battlefield Park, National Battlefield Site, National Battlefield	25	289	8360261
National Historical Park, National Historic Site, International Historic Site	125	924	34407217
National Lakeshore	4	927	3728821
National Memorial	29	43	30559258
National Monument	78	8206	22646428
National Park	59	10821	62950968
National Parkway	4	718	29948911
National Preserve and National Reserve	20	97899	2956325
National Recreation Area	18	14974	50645414
National River and National Wild and Scenic River and Riverway	15	3020	5999161
National Scenic Trail	3	970	-
National Seashore	10	2408	17920507
Other objects (White House, National Mall, etc.)	11	149	11156670
TOTAL	401	341279	32030915
			1

Source: own processing

The diversity of national parks is reflected on its titles. The titles of parks include such designations as national preserve, national park, national memorial, national monument, national seashore, national historic site, and national battlefield park. In recent years, both the National Park Service and the Congress have attempted to simplify of nomenclature of parks and to establish united criteria of the official titles. Areas which added to the National Park System may be classified for their natural values, features of water or land, of great scientific and scenic quality and are designated as national parks, preserves,

monuments, lakeshores, seashores, or river ways usually. Such areas contain distinctive attributes as grassland, forest, desert, and tundra, estuary, or river systems; also they may contain «windows on the past» for a view of geological history; they may contain imposing landforms as mesas, mountains, thermal areas, and caverns; and they may be habitats of abundant or rare wildlife and plant life. As a rule, a national park contains different resources and encompasses massive volume of land or water areas for help to adequate protection of the resources. The national monument is preserving at least of one nationally significant touristic resource (The National Parks Index).

In 1974, Big Thicket and Big Cypress were authorized as first national preserves. The category of national preserve is established for the protection of certain resources primarily. Such activities as fishing, hunting or the extraction of minerals and fuels permitted where they do not threaten to natural values. City of Rocks, the first reserve, was established in 1988. According to NPS, "preserving shoreline areas and offshore islands, the national lakeshores and national seashores focus on the preservation of natural values while at the same time providing water oriented recreation. Although national lakeshores can be established on any natural freshwater lake, the existing four are all located on the Great Lakes. The national seashores are on the Atlantic, Gulf, and Pacific coasts. National rivers and wild and scenic river ways preserve free flowing streams and their immediate environment with at least one outstandingly remarkable natural, cultural, or recreational value" (The National Parks Index).

They must flow naturally without major alteration of the waterway by dams, diversion, or otherwise alteration. Besides protecting and enhancing rivers, these areas provide opportunities for outdoor activities like hiking, canoeing, and hunting (The National Parks Index).

The concept of national parks in the United States differs from generally accepted in Europe. The main difference is that the service in national parks of the USA is focused primarily on the campers. High-quality roads are cutting through national parks, all the most interesting places can be reached by car close, entrance fee is charged from cars, not from person. Accordingly, the entire infrastructure is located along the roads. Visit national parks are always paid. Depending on the size and popularity of Park the amount of payment varies from 1 to 25 USD with auto for a week. However \$ 80 you can buy an annual pass "America the Beautiful", which allows this car to drive to all facilities related

to the NPS system for year. Buy a subscription to "America the Beautiful - The National Parks and Federal Recreational Lands Annual Pass" on the website of the U.S. Geological survey (United States Geological Survey - USGS). This membership allows you to visit any national parks or State recreational areas during the year (Faulkner, 2001).

On the territory of national parks camping is forbidden to sleep outside campsites or hotels. Usual prices for campgrounds and especially the hotels than outside of national parks.

For national parks is separately-issued travel card. On crossroads set the usual for Europe pointers. However indicates not the time of the transition and the distance in miles.

As for the Hiking/mountain tourism, the national parks are specially designated areas and protected lands (Backcountry and Wilderness). Often, to visit these areas is necessary to obtain for a charge of special permits. In protected areas day the number of permits may be limited. In the US, the entire infrastructure located along roads, and in remote parts of the Park are no shelters they have respectively allowed Bukovina in tents along trails. And even an open fire may be permitted. Rules of visiting and implementation of recreational activities can differ significantly in different National parks. Rules of visiting of a particular national Park can be found on the website of the national Park Service (Finnessey, 2012).

Thus, the national parks of the United States are a subject of tourist interest and economic benefits.

4.2. Cost-benefit analysis of national parks activity

The U.S. National Park System is an economic asset at risk. The park system generates at least four dollars in value to the public for every tax dollar invested in its annual budget.

Yet, every year the parks suffer an operating shortfall of \$800 million, in addition to a massive multi-billion dollar maintenance backlog. As a result, the fiscal crisis confronting the national parks continues to deepen and important park functions go without, park infrastructure decays, natural ecosystems are overrun with exotic species, historical treasures are inadequately preserved, and public safety is jeopardized (National Parks Conservation Association, 2017).

The U.S. Congress established and maintains the National Park System to conserve the nation's most significant lands and landmarks. Yet, the U.S. Congress is jeopardizing this

valuable asset by not adequately funding the National Park Service. Although the full value of the park system evades quantification, this report presents hard economic evidence that national parks generate tremendous value to the public.

National parks generate more than four dollars in value to the public for every tax dollar invested. National parks support \$13.3 billion of local private-sector economic activity and 267,000 private-sector jobs.

National parks attract businesses and individuals to the local area, resulting in economic growth in areas near parks that is an average of 1 percent per year greater than statewide rates over the past three decades (National Parks Conservation Association, 2017).

Established in 1890, Sequoia and Kings Canyon National Parks rank among the oldest U.S. national parks. ⁸ Although representing two separate units, the parks have been administered jointly since 1943. The parks are situated in California in the southern part of the Sierra Nevada mountain range. Based on an official factsheet available online, the parks encompass 1 352 square miles (equaling 3 502 km²) of which 93.4% is designated wilderness the elevation in the parks ranges from 418 m to 4 417 m, the latter representing the summit of Mount Whitney, the highest mountain in the contiguous United States. As stated on parks' website, this great differences in elevation results in the versatility of landscape and environments contributing to a very rich diversity of animal and plants species (Seki Nature Science 2010). However, despite the multiplicity of species, an exceptionally high concentration of giant sequoia trees in Sequoia NP tends to outshine (and certainly outgrow) the other features of the parks. The Giant Forest, the world's greatest accessible concentration of giant sequoias, and General Sherman, the biggest tree in the world, are the major tourist draws in the area. Based on the statistics published by NPS Public Use Statistics Office, the combined visitation for both parks has exceeded 1.5 million every year since 2003.

The National Park Service is a bureau of the U.S. Department of the Interior established in 1916. It is led by a Director who is nominated by the President and confirmed by the U.S. Senate. The principal objectives of the NPS are, as expressed in the mission statement, "to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations (The National Parks Index).

The idea of establishing national parks dates back to the 19th century when "the scenic

natural wonders of the West, places like mineral springs in Arkansas, towering mountains and majestic trees of Yosemite, spouting geysers of Yellowstone, and the arid ruins of Casa Grande, inspired individual Americans to call for their preservation, asking their government to create something called „national parks“ (NPS Overview, 2015). The first U.S. national park, Yellowstone National Park, was established in 1872 as a public park or pleasuring-ground for the benefit and enjoyment of the people. Since 1872, the number of national parks has been increasing. The idea of conservation was promptly extended to other sites, leading to the establishment of other types of federally protected areas.

The benefits of national parks are many and extend well beyond economic values.

In 2014, the National Park Service hosted more than 292 million visitors. The system of national parks includes most iconic tourist destinations: Mount Rushmore, the Grand Canyon, Yosemite, Yellowstone, the Everglades and like. Tourists spend money for visit those sites, this money forming the basic income of national parks. The National Park Service has been measuring and reporting the economic effects of park tourism for the past 25 years. The first data collection of visitors was conducted in 1904. According this data 6 national parks was reported about 120,690 visitors (Conservation magazine, 2017).

The latest report, covering the year 2014, has just been released by NPS. According this report, the 292 million visits in 2014 represented an increase of nearly 20 million over 2013. In part, that’s because 2013 had a decline in visits owing to a 16-day government shutdown, closures in some parks for repairs following Superstorm Sandy, and the closure of the Washington Monument due to earthquake damage. However, 2014’s increase in visitation wasn’t entirely related to 2013’s slump: Rocky Mountain, Joshua Tree, Glacier, and Grand Teton national parks all saw record-breaking visitation (Conservation magazine, 2017).

It is conducted in developing the study an extensive literature review and collected data from academia, the National Park Service and other governmental agencies, nongovernmental organizations, and the private sector to gain their perspective on the economic role of the National Park System. This is determined that capturing the economic importance of national parks requires using three different approaches, each of which illuminates a different perspective. The results are not additive, but rather provide a view on the significance of parks to national, regional, and local stakeholders.

First it is use cost-benefit analysis to examine the national economic benefits of the park

system relative to its cost to taxpayers. Second, it is analyze the economic impact of national parks to the communities that surround them. And finally, we measure economic growth in the regions around parks. All analyses point to the same conclusion, the U.S. National Park System is an asset of tremendous economic value at the national, regional, and local level. Failure to properly manage the parks puts this public asset in jeopardy (National Parks Conservation Association, 2017). The \$16 billion in local expenditures directly supported almost 174,000 jobs and provided “secondary” support through an economic ripple effect (for example, an employee at a local business spending his or her paycheck in the local economy is a secondary effect) to another 103,000 jobs, for a total of some 277,000 jobs enabled by visits to US National Parks. That’s 35,000 more jobs than the park service supported, both directly and indirectly, in 2012. In other words, national parks are job creators (Conservation magazine, 2017).

Our results indicate that the American public’s value for the non-market public goods produced by the National Park Service is substantial. The lands, waters, historic sites and programs of the National Park System are worth \$92 billion at a minimum.

Table 3. Marginal and Per-Household Total Economic Values (TEV) for National Par Lands, Waters and Historic Sites

Parks	Indicators	Value
Nature-focused National Parks (79,096,632 acres)	Marginal Value (per acre)	\$0.0000141
	Per household TEV for survey cuts avoided	\$189.21
	Per household Total Economic Value for all acres	\$1,113.24
History-focused National Parks (226 sites)	Marginal Value (per site)	\$3.87
	Per household TEV for survey cuts avoided	\$148.66
	Per household Total Economic Value for all sites	\$874.71
Water-focused National Parks (4,818,275 acres)	Marginal Value (per acre)	\$0.000203
	Per household TEV for survey cuts avoided	\$185.99
	Per household Total Economic Value for all acres	\$977.93
All National Parks	Per household TEV for survey cuts avoided	\$523.86
	Per household Total Economic Value for all acres/sites	\$2,967

Source: own processing

Of the \$62 billion that is related just to the geographical holdings of NPS, less than half of this represents the value of recreational use. The remainder is the value that American households place on just knowing that lands, waters and historic sites of the National Park System exist and will be available for future generations.

Our estimates represent a minimum economic value for NPS assets and programs. The results are based on a highly conservative methodology. Our value calculations omit completely the economic value of the NPS to hundreds of millions of people worldwide, a significant number of whom come as tourists to visit the National Parks, or who value the existence of these places.

The basic for such effective results of implementation of tourism development strategies are the following factors:

- perfect legislation aimed at promoting business activities in the framework of the postulates of sustainable development;
- the openness of the economy;
- the introduction of new technologies in business projects;
- development and modernization of infrastructures;
- the creation of favorable conditions for realization of educational potential of the countries;
- high standards of safety and health;
- environmental protection, an active international activity in the context of attracting international business community and ensure high throughput of the national parks;
- the development of a network of entertainment and diversification of the chain of the tourist offer.

Adequate assessment of the competitiveness of tourism strategies in different states is based on the study of natural and cultural resources, the priorities of economic development, environmental attractiveness of the tourism industry, etc. Integrated and systematic approaches to the management of the tourism activities showed a positive effect and health impact on the general economic situation in USA as a whole. The backbone of the tourism complexes plays an important role in the formation of budgets of the countries. That is why the focus of state programs on sustainable economic development and environmental conservation, favourable business conditions are key to sustainable and

effective development of the tourism industry in USA.

Microeconomic bases of tourist business in the US lies in the ability and capacity of national parks as tourism enterprises. The country's tourism industry will not be complete until, while tourist enterprises become efficient, cost-effective. Any country should not have unprofitable enterprises in any sector of the economy, as sooner or later it will damage, and other industries that are directly or indirectly connected with it. However, to shift the responsibility for the development of foreign economic activity in the sphere of tourism on tourist enterprises is false, because their capabilities and competencies in foreign markets are derived from the microeconomic business environment. Thus, along with the creation of a favorable macro environment, the government should contribute to the development of the microeconomic environment. National parks always have to use the local economic infrastructure, to cooperate with the actors of local labor markets.

In modern economic theory in the analysis of the microeconomic business environment there are four critical aspects (BBC, 2017):

- resources used by tourism enterprises in the process of their functioning (human resources, market, information, innovation infrastructure);
- internal competition because occasionally companies without competition in the domestic market, can have competitive advantages on the external;
- the presence of demanding local customers, including those which demand can be satisfied only through access to foreign markets;
- create a local travel market by the interaction of all tourism firms and related and supporting industries.

Another side of modern transformational processes in the world economy associated with the growing importance of the skillful use of tourism enterprises to increase their foreign trade activity factors of location, the "image" of the region, which, in turn, is associated with advantages and disadvantages the infrastructure facilities, presence of qualified personnel and potential paying customers, and the term (changes of state regional policy) and the specifics of the local legislative framework of the tax system.

4.3. Situation analysis of national parks activity

To demonstrate internal and external factors that are favorable and unfavorable to achieve

special objectives for national park activity it is reasonable to implement the situation analysis (Table 4) and propose the actions to reduce threats and weaknesses and exploit opportunities (Table 5).

Table 4 . Matrix of the SWOT-analysis of national parks activity

Strengths	Weaknesses
1. Many years of experience in the market 2. Broad, deep and diverse range of parks 3. A significant number of regular users 4. Good reputation of the companies 5. A clearly formulated strategy 6. High level management, clearly defined management and organizational structure 7. A high level of qualification and training of personnel; experience	1. High cost of maintenance of parks 2. The low profitability of different parks services 3. The reduction of the market share 4. The lack of a sufficient amount of its equity
Opportunities	Threats
1. Expanding the range of services in national parks 2. Increasing the attractiveness of activities of national parks	1. The increase in expenses for cost of services 2. Outdated equipment on the territory of national parks

Source: own processing

By results of the conducted SWOT-analysis established that national parks activity has a number of strengths and opportunities in the relevant market. For national parks it is possible to offer a specific strategy for the potentiating of the parties and possibilities of the subject and limit the impact of weaknesses and threats that provide the firm a competitive advantage.

Table 5. Matrix of SWOT-activities of national parks activity

Activities for Strengths	Activities for Weaknesses
<ol style="list-style-type: none"> 1. Increased participation in the market by reducing for inefficient parks or diversification its activity 2. The increase in the number of programs for visitors 4. The conclusion of contracts on cooperation with the aim of market coverage 5. Ensuring stable high quality of services will contribute to the preservation of the achieved positions 	<ol style="list-style-type: none"> 1. Formation of assortment policy, closely linked to the diversification in the direction of expanding the range 2. The use of multiple pricing methods and pricing policies
Activities for Opportunities	Activities for Threats
<ol style="list-style-type: none"> 1. Attracting the attention of new customers by forming optimal assortment at an affordable price of services for different segments 2. Optimization of the number and quality of services 	<ol style="list-style-type: none"> 1. Cost reduction through the introduction of cost management system 2. Raising long-term loan for carrying out technical re-equipment of the enterprise

Source: own processing

Therefore, the role of the state in the formulation of macroeconomic exit strategy of USA tourism enterprises on foreign markets should be aimed at improving the infrastructural supply of the territory, promoting the formation of local labor markets, creating favorable conditions for the development of healthy competition in the local markets of tourist services.

Thirdly, it is strengthening the relationship between the developments of foreign economic

activities of tourism enterprises and solving social and environmental problems. Productive and dynamic development of foreign economic activity in the tourism sector requires a permanent growth of qualification level and skill of the workforce, the availability of physically and mentally healthy employees who would be provided with permanent housing near enough to work, the existence of favorable conditions for their development and meet the daily needs, provide sufficient material to conform to the "image" of an international company. Therefore, the development of macroeconomic exit strategies of tourism enterprises foreign markets should be combined with development activities to address various social problems.

Thus, we can formulate the objective function of tourism in this segment, which is to develop a complex of tourist services to meet the needs of consumers in the segment of national parks with a reasonable use of tourism resources of the territories and the simultaneous economic and social benefits to society.

Subsystem "tourism facilities" in the segment of recreational tourism consists of the following components:

1. The subsystem "tourism resources", which includes the following elements:

- natural resources (geographical position, the presence of water medicinal sources, scenery etc);
- historical and cultural resources (presence of monuments culture and architecture etc);
- socio-economic tourism resources (economic-geographical position, transport availability of objects etc).

The presence and composition of tourism resources to a large extent determine the feasibility and efficiency of national parks activity. The specificity of the tourism lies in its attachment to certain areas suitable for the structure of its resources to relax and travel.

2. The subsystem "common infrastructure" is composed of the elements of public use, which allow making economic and social activities. These include: transportation; utilities (roads, water, sewerage etc); information support; system of supply.

3. Subsystem "tourist infrastructure" is formed of the following elements:

- institutions for the accommodation of tourists (hotels, apartments, b & b, apartments, hotels, base camps);
- tour operators (businesses that have been creating rounds);

- travel agencies (businesses that sell tours along the national parks tour operators and individual primary producers of tourist services);
- companies of food and entertainment if they are an integral part of the enterprises of tourist accommodation, as well as those primarily focused on servicing tourists;
- tourist transportation means (lifts, tourist trains and the like).

Elements of the tourism infrastructure ensure the stay of tourists in a particular area and get acquainted with its attractions. In addition to the above, the tourist companies are also enterprises for the production of local travel guides and maps, insurance, information and advertising agencies, enterprises producing products of tourist demand, retailers for the sale of goods of tourist demand (BBC, 2017):

The creation of a new tourist product in the segment of active tourism sequentially passes through the following stages (Sicheva):

1) generating ideas about the product, its quantitative and qualitative properties on the basis of the study of actual and potential demand. This work should be conducted continuously, because the desire of tourists, the advantages of national parks as tourism destinations change frequently;

2) development of a new concept of tourism product. Is to give him specific consumer properties corresponding to the demand of the target market and logistical and financial capabilities of the Agency. This refers to the route selection, programs, facility inspection, services, placement, etc.;

3) test marketing, which means selling at the market the first batch of new tourism products to determine the attitude of potential buyers, and identify and address possible shortcomings;

4) commercialization of a new tourist product in the segment of active recreation and tourism, consisting in the organization of its mass sales.

4.4. The economic effectiveness of national parks as a tourism destination

The direct contribution of Travel & Tourism to GDP in 2015 was USD 2,229.8bn (3.0% of GDP). This is forecast to rise by 3.3% to USD2,304.0bn in 2016. This primarily reflects the economic activity generated by industries such as hotels, travel agents, airlines and other

passenger transportation services (excluding commuter services). But it also includes, for example, the activities of the restaurant and leisure industries directly supported (WTTC, 2016).

The total contribution of Travel & Tourism to GDP (including wider effects from investment, the supply chain and induced income impacts) was USD7,170.3bn in 2015 (9.8% of GDP) and is expected to grow by 3.5% to USD7,420.5bn (9.8% of GDP) in 2016. Travel & Tourism generated 107,833,000 jobs directly in 2015 (3.6% of total employment) and this is forecast to grow by 1.9% in 2016 to 109,864,000 (3.6% of total employment). This includes employment by hotels, travel agents, airlines and other passenger transportation services (excluding commuter services). It also includes, for example, the activities of the restaurant and leisure industries directly supported by tourists.

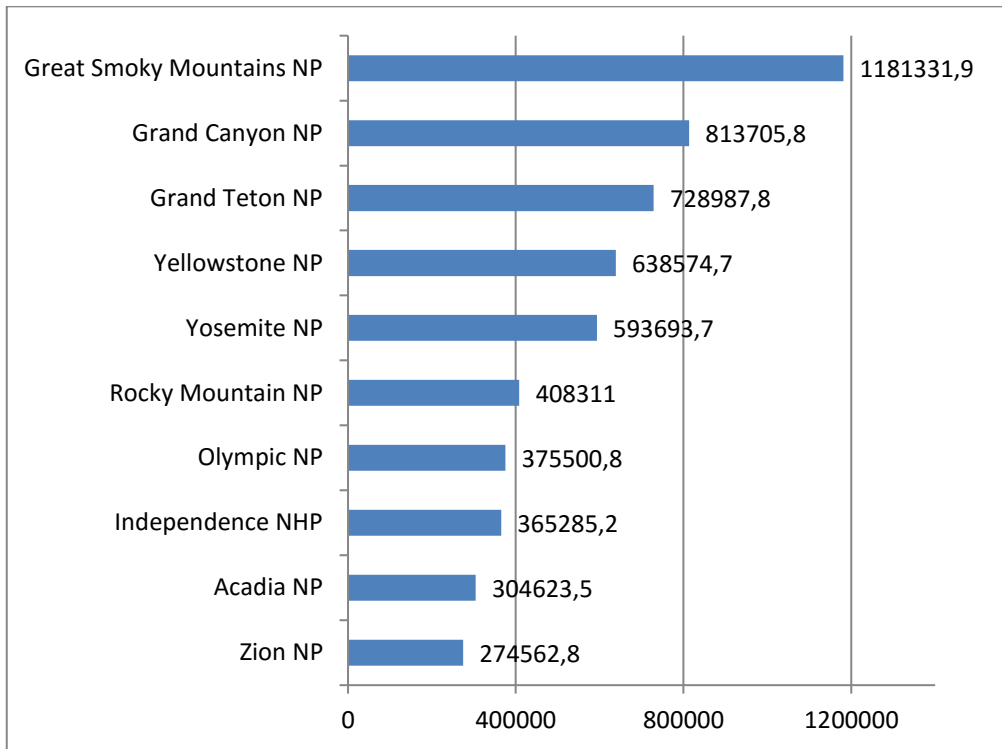
The total contribution of Travel & Tourism to employment (including wider effects from investment, the supply chain and induced income impacts) was 283,578,000 jobs in 2015 (9.5% of total employment). This is forecast to rise by 2.2% in 2016 to 289,756,000 jobs (9.6% of total employment) (WTTC, 2016).

The direct contribution of Travel & Tourism to GDP reflects the 'internal' spending on Travel & Tourism (total spending within a particular country on Travel & Tourism by residents and non-residents for business and leisure purposes) as well as government 'individual' spending - spending by government on Travel & Tourism services directly linked to visitors, such as cultural (eg museums) or recreational (eg national parks).

Contributions and impacts to local gateway economies are provided in Appendix 1.

Economic contributions are estimated by multiplying total visitor spending by park-level economic multipliers. Economic impacts are estimated by multiplying non-local visitor spending by park-level economic multipliers.

Figure 1. TOP-10 of national parks by economic output



Source: own processing

Contributions to state and regional economies are provided in Tables 6 and 7, respectively. State-level contributions use state-level multipliers and regional-level contributions use regional multipliers.

As can be seen from table 6, the greatest number of visitors falls on District of Columbia (over 41 million), California (38.4 million) and Virginia (23.2 million).

Table 6. Economic contribution to state of National Park System visitor spending

National park	Total Visitors, person	Total Visitor Spending, USD mln.	Contribution of all Visitor Spending			
			Staff, person	Labor Income, USD mln.	Value Added, USD mln.	Economic output
Arizona	11,729,985	\$932.1	14,729	\$497.2	\$823.5	\$1,370.1
California	38,366,828	\$1,774.4	25,771	\$1,004.9	\$1,546.7	\$2,562.7
District of Columbia	41,801,278	\$776.3	7,525	\$368.4	\$574.2	\$827.2
Florida	10,639,979	\$643.0	9,922	\$343.1	\$560.1	\$934.9
Massachusetts	9,399,918	\$472.0	6,578	\$255.5	\$395.4	\$627.4
New York	16,328,214	\$606.7	7,289	\$304.4	\$489.8	\$742.7
North Carolina	17,834,698	\$1,198.7	19,984	\$597.6	\$945.2	\$1,671.7
Pennsylvania	9,935,361	\$453.1	7,577	\$247.1	\$378.5	\$649.7
Tennessee	8,773,891	\$608.5	9,441	\$292.6	\$495.4	\$840.4
Utah	11,889,389	\$844.2	14,402	\$435.9	\$706.2	\$1,268.8
Virginia	23,249,803	\$982.9	15,470	\$487.9	\$778.9	\$1,332.1
Washington	7,674,513	\$470.1	6,364	\$218.4	\$388.0	\$631.7

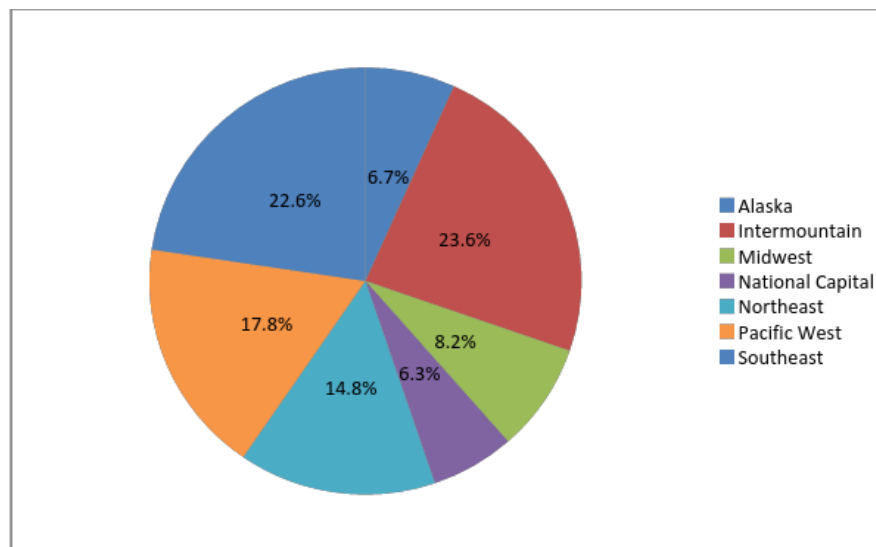
Source: <https://www.nps.gov/subjects/socialscience/vse.htm>

Table 7. Economic contribution to regional economies of National Park System visitor spending

National park	Total Visitors, person	Total Visitor Spending, USD mln.	Contribution of all Visitor Spending			
			Staff, person	Labor Income, USD mln.	Value Added, USD mln.	Economic output
Alaska	2,664,247	\$1,195.3	17,590	\$595.5	\$1,034.8	\$1,709.0
Intermountain	49,076,755	\$3,895.2	63,188	\$2,099.2	\$3,475.8	\$5,994.6
Midwest	20,664,906	\$1,326.1	22,818	\$712.8	\$1,177.4	\$2,092.4
National Capital	56,550,891	\$1,106.2	16,917	\$610.6	\$983.1	\$1,590.7
Northeast	53,642,666	\$2,500.5	37,515	\$1,443.1	\$2,320.4	\$3,758.6
Pacific West	61,026,752	\$3,058.6	44,749	\$1,732.5	\$2,730.6	\$4,522.4
Southeast	63,621,086	\$3,813.1	61,721	\$1,995.7	\$3,323.8	\$5,757.3

Source: <https://www.nps.gov/subjects/socialscience/vse.htm>

Figure 2. Structure of economic contribution to regional economies by economic output, %



Source: own processing

In 2015, NPS visitors spent a total of \$16.9 billion in local gateway regions while visiting NPS lands. Table 8 gives the economic contributions to the national economy of NPS visitor spending. In 2015, NPS visitor spending directly supported 186 thousand jobs, \$5.3 billion in labor income, \$8.2 billion in value added, and \$13.4 billion in economic output

in the national economy. The secondary effects of visitor spending supported an additional 109 thousand jobs, \$5.8 billion in labor income, \$10.1 billion in value added, and \$18.7 billion in economic output in the national economy. Combined, NPS visitor spending supported a total of 295 thousand jobs, \$11.1 billion in labor income, \$18.4 billion in value added, and \$32.0 billion in economic output in the national economy (National Park Visitor Spending Effects, 2017).

Table 8. Economic contributions to the national economy by sectors

Sector	Staff, person	Labor Income, USD mln.	Value Added, USD mln.	Economic output, USD mln.
Hotels, motels, and B&Bs	52,247	\$1,926.4	\$3,327.8	\$5,247.1
Camping and other accommodations	6,061	\$173.6	\$271.1	\$426.2
Restaurants and bars	64,829	\$1,467.7	\$1,975.8	\$3,414.0
Grocery and convenience stores	4,905	\$153.9	\$221.6	\$333.4
Gas stations	2,837	\$106.1	\$140.1	\$216.7
Transit and ground transportation services	8,408	\$394.7	\$830.9	\$1,249.9
Other amusement and recreation industries	28,028	\$668.7	\$961.8	\$1,723.5
Retail establishments	19,008	\$440.2	\$491.7	\$760.8
TOTAL	186,323	\$5,331.3	\$8,220.8	\$13,371.6

Source: own processing

Here there is a need to perform the travel costs of one of NP according to the kind of transport (Table 9):

Table 9. Travel cost analysis of Acadia NP

	Total passengers	Number of buses	Total costs	Cost per passenger	Cost per bus
Coach Bus Passengers @45 per bus	56,745	1,261	25,515	0,45	20,234
Small Bus Passengers @18 per bus	251	14	198	0,79	14,199
Vans Bus Passengers @10 per van	6,940	694	2900	0,42	4,179

Source: own processing

So, the most expedient is the use of van buses, for which the cost of transportation per passenger is the lowest.

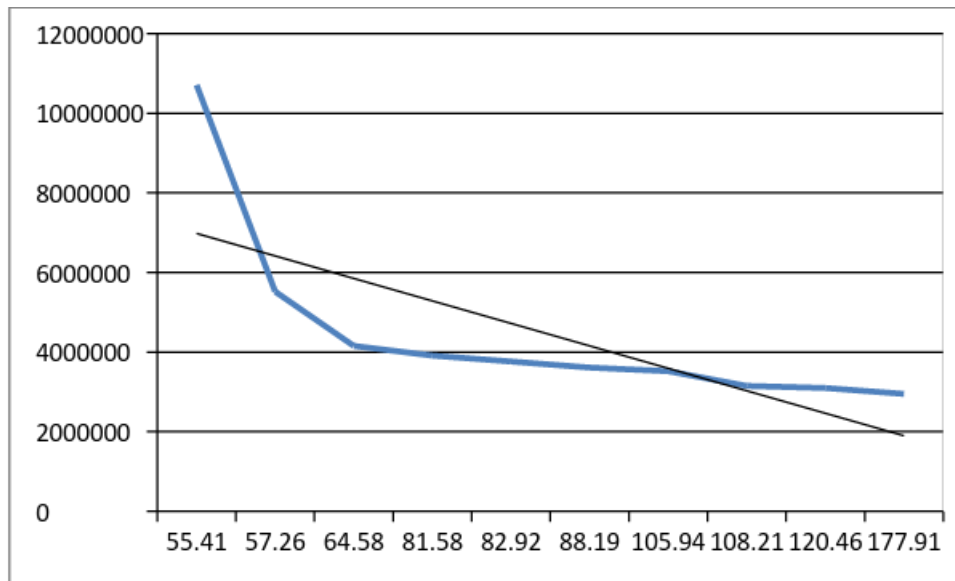
It is appropriate to examine the economic performance based on a single visitor for the ten largest of national parks by economic contributions for the travel cost analysis.

Table 10. TOP-10 National parks activity per visitor

National park	Total Visitors, person	Spending per visitor, USD	Economic output per visitor, USD
Zion NP	3,648,846	55,41	75,25
Acadia NP	2,811,184	88,19	108,36
Independence NHP	4,311,583	57,26	84,72
Olympic NP	3,263,761	82,92	115,05
Rocky Mountain NP	4,155,917	64,58	98,25
Yosemite NP	4,150,218	108,21	143,05
Yellowstone NP	4,097,709	120,46	155,84
Grand Teton NP	3,149,920	177,91	231,43
Grand Canyon NP	5,520,736	105,94	147,39
Great Smoky Mountains NP	10,712,673	81,58	110,27

Source: own processing

Figure 3. Trend between travel costs and visit rates



Source: own processing

Because the spending per visitor varies from 55 to 178 dollars, it is possible to determine the dependence of the economic output from the spending and calculate the optimal price that generates maximum profit.

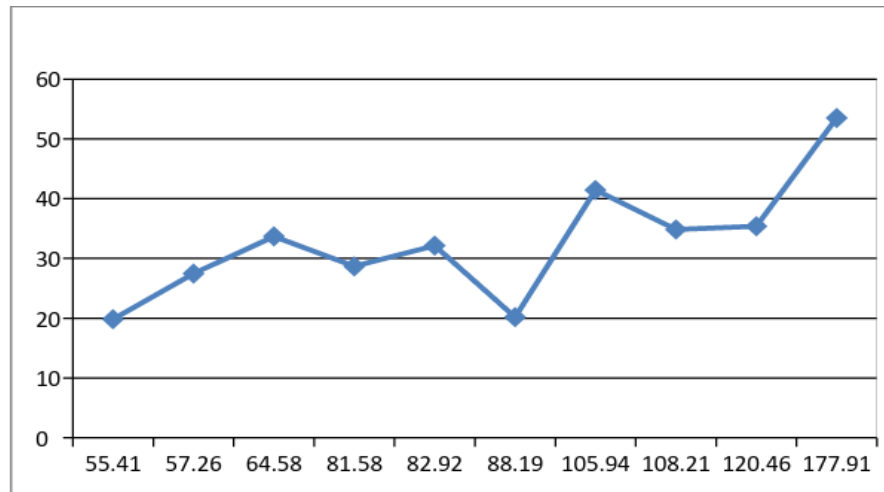
Table 11. Travel cost analysis by profit per visitor

National park	Spending per visitor, USD	Economic output per visitor, USD	Profit per visitor, USD
Zion NP	55,41	75,25	19,84
Independence NHP	57,26	84,72	27,46
Rocky Mountain NP	64,58	98,25	33,67
Great Smoky Mountains NP	81,58	110,27	28,69
Olympic NP	82,92	115,05	32,13
Acadia NP	88,19	108,36	20,17
Grand Canyon NP	105,94	147,39	41,45
Yosemite NP	108,21	143,05	34,84
Yellowstone NP	120,46	155,84	35,38
Grand Teton NP	177,91	231,43	53,52

Source: own processing

Maximum profit generated of Grand Canyon NP and Grand Teton NP, but Grand Teton has some additional services therefore, this park can be excluded from the overall calculation. So, maximum profit is generated for spending per visitor about \$106.

Figure 4. Trend between travel costs and profit per visitor



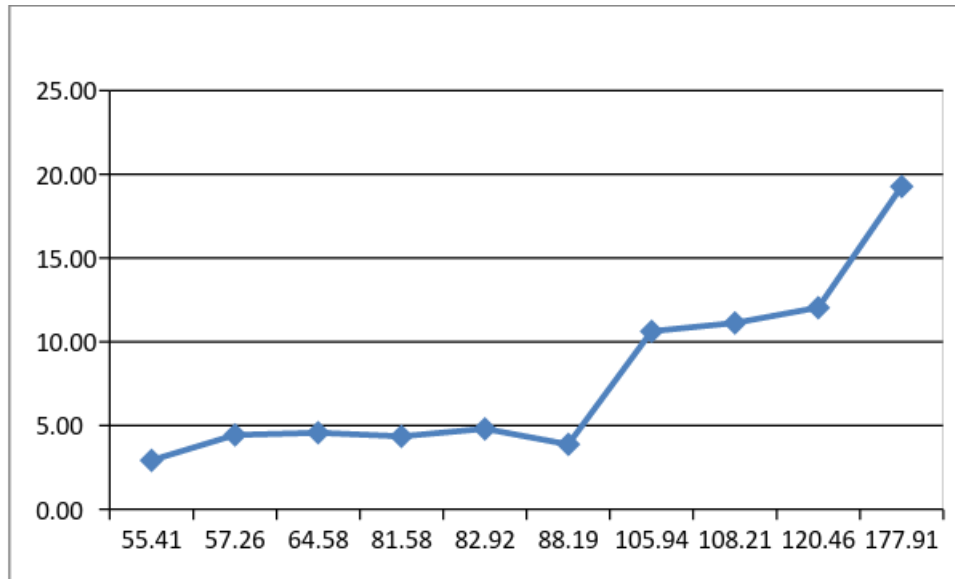
Source: own processing

Table 12. Travel cost analysis of NP by transport

National park	Total Visitors, person	Visitors by auto	Visitors by bus	Spending per visitor, USD	Auto/bus passengers
Zion NP	3,648,846	929415	2719431	55,41	2,93
Acadia NP	2,811,184	57690	2753494	88,19	3,87
Independence NHP	4,311,583	393349	3918234	57,26	4,43
Olympic NP	3,263,761	262237	3001524	82,92	3,28
Rocky Mountain NP	4,155,917	346572	3809345	64,58	10,99
Yosemite NP	4,150,218	342386	3807832	108,21	11,12
Yellowstone NP	4,097,709	314258	3783451	120,46	12,04
Grand Teton NP	3,149,920	155408	2994512	177,91	7,86
Grand Canyon NP	5,520,736	474824	5045912	105,94	10,63
Great Smoky Mountains NP	10,712,673	2000319	8712354	81,58	4,36

Source: own processing

Figure 5. Trend between travel costs and auto/bus passengers



Source: own processing

So, the more visitors have the opportunity to visit the National Park on its own car, the greater the income of the National Park. This is due to the fact that car owners have more opportunities to visit the highest level of comfort and a long duration of recreation in the National Park.

Therefore it is necessary to create more opportunities to accommodate car owners, improve infrastructure, focused on travel by car.

To estimate a value for recreational services of the ten most popular national parks there is a need to define a set of zones.

4.5. Travel cost analysis on national parks activities

It is considered to be appropriate to examine the economic performance based on a single visitor for the ten largest of national parks by economic contributions for the travel cost analysis. The first step is to define a set of zones surrounding the site. These may be defined by concentric circles around the site (50 km), or by geographic divisions that make sense, such as state, country or world.

Table 13. Length of the radius in each zone for TCM

Zone	Radius, km
Zone 1	<50
Zone 2	50-100
Zone 3	100-150
Zone 4	150-200
Zone 5	>200 km

Source: own processing

Table 14. Frequency of visitors at different zones

Zone	Population	Visitors	Visitors/1000
1	396707	8898603	22431
2	261744	3792834	14491
3	728415	2635732	3618
4	863329	1120421	1298
5	1097782	909455	828
Total		17357045	

Source: own processing

This step is to calculate the average round-trip travel distance and travel time to the site for each zone. Assume that people in Zone 0 have zero travel distance and time. Each other zone will have an increasing travel time and distance. Next, using average cost per mile and per hour of travel time, the researcher can calculate the travel cost per trip. The calculations are shown in the table 15.

Table 15. Average round-trip travel distance and travel time

Zone	Round Trip Travel Distance	Round Trip Travel Time	Distance times Cost/Mile (\$.75)	Travel Time times Cost/Minute (\$.35)	Total Travel Cost/Trip
1	0	0	0	0	0
2	50	30	37,5	10,5	48,0
3	100	60	75,0	21,0	96,0
4	150	120	112,5	42,0	154,5
5	200	180	150,0	63,0	213,0

Source: own processing

This step is to estimate, using regression analysis, the equation that relates visits per capita to travel costs and other important variables. From this, the researcher can estimate the demand function for the average visitor.

To maintain the simplest possible model, calculating the equation with only the travel cost and visits/1000, $\text{Visits}/1000 = 242 - 1 * (\text{Travel Cost})$.

Table 16. Demand function for visits to the site

Zone	Travel Cost plus \$10	Visitors/1000	Population	Total Visits
1	10	232	396707	92036
2	58,0	184	261744	48161
3	106,0	136	728415	99064
4	164,5	78	863329	66908
5	223,0	19	1097782	20858
			Total visits	327027

Source: own processing

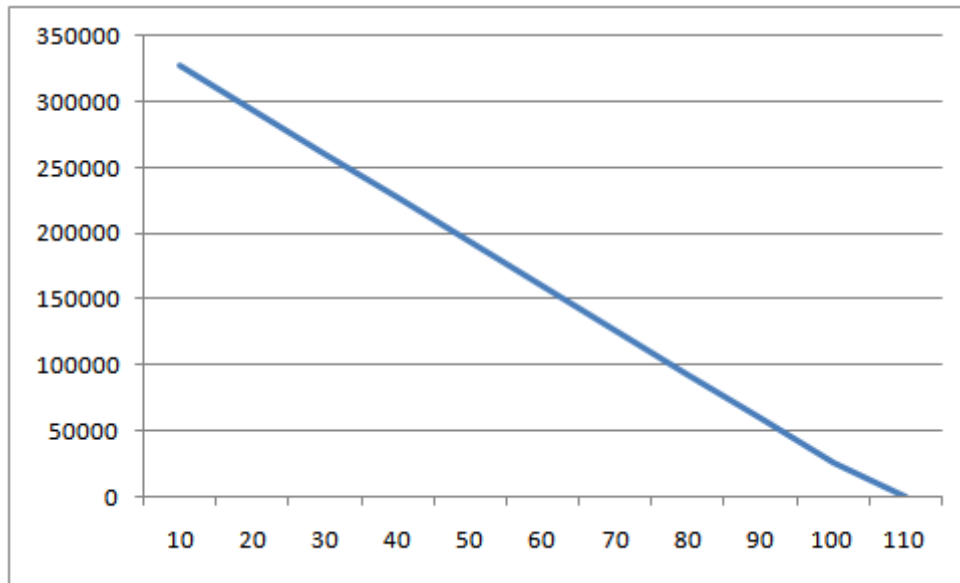
This gives the second point on the demand curve — 327027 visits at an entry fee of \$10. In the same way, the number of visits for increasing entry fees can be calculated, to get:

Table 17. Function for visits to the site

Entry fee, \$	Total visits
20	293547
30	260068
40	226588
50	193108
60	159628
70	126149
80	92669
90	59189
100	25709
110	0

Source: own processing

Figure 6. Demand curve for trips to the site



Source: own processing

The final step is to estimate the total economic benefit of the site to visitors by calculating the consumer surplus, or the area under the demand curve. This results in a total estimate of economic benefits from recreational uses of the site of around \$300,000 per year, or around \$17.28 per visit.

Table 18. Zones for TCM

Zone	Mean
Zone 1	Park
Zone 2	State
Zone 3	Other states of USA
Zone 4	Foreigners

Source: own processing

Table 19. Data for TCM of TOP-10 national parks according to zones

No.		Total Visitors, person	Zone 1	Zone 2	Zone 3	Zone 4
1	Zion NP	3648846	1386561	985188	912212	364885
2	Acadia NP	2811184	1068250	759020	702796	281118
3	Independence NHP	4311583	1638402	1164127	1077896	431158
4	Olympic NP	3263761	1240229	881215	815940	326376
5	Rocky Mountain NP	4155917	1579248	1122098	1038979	415592
6	Yosemite NP	4150218	1577083	1120559	1037555	415022
7	Yellowstone NP	4097709	1557129	1106381	1024427	409771
8	Grand Teton NP	3149920	1196970	850478	787480	314992
9	Grand Canyon NP	5520736	2097880	1490599	1380184	552074
10	Great Smoky Mountains NP	10712673	4070816	2892422	2678168	1071267
	Average travel cost, \$		50	150	300	500

Source: own processing

Next step is to estimate, using regression analysis, the equation that relates visits per capita to travel costs and other important variables. From this, the researcher can estimate the demand function for the average visitor. Data for TCM and function for visits to the site of TOP-10 national parks can be found in the Appendices 2 and 3.

This results in a total estimate of economic benefits from recreational uses of the site of around \$49.75 per visit.

The most promising types of tourism in the region will be long-term vacation and sanatorium-resort therapy; the ethno-tourism, sports tourism, cultural-cognitive (including visits to theatres, museums, sports and festival events, festive holidays, etc.), religious, green, and eco-tourism. In terms of structural transformation of the tourism sector in the future should focus on the development of zones of rest and recovery of the population and area of natural recreational landscapes of regional significance where it should develop all the infrastructure elements that contribute to the protection and rational use of nature reserve and natural recreational areas of the national parks. This requires closer inter-regional and international linkages with the aim of not only providing recreation and tourism services to residents of other regions and countries or interchange recreantly, but

also attracting funds of domestic and foreign investors on a mutually beneficial basis, exchange of experience etc.

Among the negative factors that hinder further development of tourism and turning national parks into tourist and excursion center, include:

- slow growth of investments in development of material base of tourism in individual States;

- the imbalance of social and economic efficiency of use of recreational resources and the need for their conservation;

- the lack of a sufficient number of innovative projects and scientific research on tourism development and national parks;

- inadequate database on objects of tourist sphere;

- insufficient implementation of the existing recreational, historical and cultural potential;

- low pace of attracting investment in tourism infrastructure;

- low level of marketing research in the sphere of tourist and recreational activities, the weakness of the information-advertising support on internal and especially external markets, the shortcomings of the territorial organization of tourist routes and information infrastructure.

National parks as tourist sites is offered the best option, which provides sustainable tourism development by establishing and maintaining a balance between preserving the natural, historical and cultural resources, economic interests and social needs and development of tourism and creation of favorable conditions for the formation of high-quality tourist product. Effective use of available resource potential is provided through implementation of the integrated management of tourism resources, tourism zoning, the establishment of a system of priorities by type of tourism and territorial, the maximum level of tourism development within the limits of the territory through the analysis of their bearing capacity, maximum allowable loads on the tourist visits and evaluation of the impact of tourism activities on the environment. The protection of the social interests of the population in the tourism sector and activities of the national parks is provided through the introduction of minimum social standards in tourism. Infrastructure the character of

tourism and its direct impact on a significant number of economic activities and the quality of life of the population necessitates the establishment of such standards. However, the presence of minimum social standards in tourism creates favorable preconditions for development of social tourism, thus attracting to visit national parks all segments of the population. Implementation of the optimal variant creates favorable preconditions for a concentration of available organizational, financial, logistical and other resources on solving the most acute problems in the sphere of tourism and operations of resorts, development of valuable natural areas and cultural heritage sites ensuring the protection of economic interests of the state from real and potential threats in the sphere of tourism domestic and international tourism markets.

5. Results and discussion

The following problems were researched and solved:

- 1) The theoretical basis for the development of tourist infrastructure is to define some concepts in the field of tourism and tourist services. In many countries tourism plays a significant role in the formation of gross domestic product, involved in activation of the foreign trade balance, creation of additional workplaces and employment of the population. According to its separate elements form a common tourist attraction an individual object or the whole country.
- 2) Tourism infrastructure defined as component of touristic product includes basic buildings, devices and service institutions, which are crucial to proper operating of society and economy. Tourism infrastructure is a set of institutions and devices, which constituting organizational and material basis for tourism development.
- 3) National parks as tourism destinations in different countries are environmental, recreational, cultural, educational, scientific-research institutions of national importance established for the conservation, reproduction and effective use of natural complexes and objects of special environmental, recreational, historical, cultural, scientific, educational and aesthetic value.
- 4) Methodology of research of national parks activity is a set of research methods used in science in accordance with the specific object of its cognition, which include a set of specific techniques, approaches, methods, activities aimed at obtaining new scientific results, achieving goals and performing scheduled tasks. The methodology is considered as the doctrine of the structure, logical organization, methods and means of activity.
- 5) National parks as tourism destination in the United States of America united in a common system named The National Park System, which consist of 409 areas (over 84 million acres) in 50 States, American Samoa, the District of Columbia, Puerto Rico, Guam, the Virgin Islands and Saipan. The titles of parks include such designations as national preserve, national park, national memorial, national monument, national seashore, national historic site, and national battlefield park. Areas which added to the National Park System may be classified for their natural values, features of water or land, of great scientific and scenic quality and are designated as national parks, preserves, monuments, etc.

6) Meaning of national parks in tourist infrastructure of United States of America consist of forming tourist flow and generate revenue in the national budget. National parks generate more than four dollars in value to the public for every tax dollar invested and support \$13.3 billion of local private-sector economic activity and 267,000 private-sector jobs. The benefits of national parks are many and extend well beyond economic values.

7) Cost-benefit and travel costs method of national parks activity is showed that revenues parks depend primarily on the number of visitors, as well as the remoteness of the Park, its size and the availability of additional services and entertainment. Economic contributions are estimated by multiplying total visitor spending by park-level economic multipliers. Maximum profit is generated for spending per visitor about \$106. By results of the conducted SWOT-analysis established that national parks activity has a number of strengths and opportunities in the relevant market. For national parks it is possible to offer a specific strategy for the potentiating of the parties and possibilities of the subject and limit the impact of weaknesses and threats that provide the firm a competitive advantage.

8) The economic effectiveness of national parks as a tourism destination is the facts what NPS visitor spending supported a total of 295 thousand jobs, \$11.1 billion in labor income, \$18.4 billion in value added, and \$32.0 billion in economic output in the national economy. Travel cost method showed that the most optimal for domestic tourists is the cost of visiting around of \$17.28, and for external visitors - \$49.75 per visit. To create a highly profitable tourism and resort industries of the US, which have to satisfy the needs of the population, on this basis, the integrated development of the sector while maintaining the natural recreational, medicinal resources, territories of natural reserve fund of monuments of history and culture developed a Program of development of the industry in the tourism sector, which is designed to stimulate effective use of available tourist and recreational resources of the US, increasing levels of cross-sectoral cooperation, promotion of development of market relations in the tourism sector, definition of prospects of further development of recreational and resort complex on the basis of analysis of its current state. In terms of structural transformation of the tourism sector in the future should focus on the development of zones of rest and recovery of the population and area of natural recreational landscapes of regional and state significance where is should develop all the infrastructure elements that contribute to the protection and rational use of nature reserve and natural recreational areas of the national park

6. Conclusion

National parks are huge economic generators for their local gateway communities and the nation as a whole. Though the number of park units varies from state to state, the positive impacts can be substantial for local areas in each state.

Recreation area in the United States is a complex intersectional economic mechanism, the structure of which (administrative, functional, economic) should be reformed and transferred to market mechanisms of economic management and integrated management of this sector at the regional level, combined with the Convention of nature that's forming in the country. To create a highly profitable tourism and resort industries of the region, which have to satisfy the needs of the population, on this basis, the integrated development of the region while maintaining the natural recreational, medicinal resources, territories of natural reserve fund of monuments of history and culture developed a Program of development of the industry in the region, which is designed to stimulate effective use of available tourist and recreational resources of the region, increasing levels of cross-sectoral cooperation, promotion of development of market relations in the tourism sector, definition of prospects of further development of recreational and resort complex on the basis of analysis of its current state. With the aim of achieving the main goals of the work the main directions of development of recreational-resort complex and tourism in the area:

- a) improving the system of management of the industry;
- b) the improvement of the material base of the resort and recreational and tourist sector;
- c) increasing the efficiency of use of natural medical and recreational resources;
- d) information and advertising and marketing support sectors.

The main tasks of development of recreational-resort complex of national parks are:

- 1) state support of the tourism industry and resorts, involvement in development of local executive bodies of state authorities, enterprises of different ownership forms, as well as individual citizens, increasing their share in the total production of the region;
- 2) improving the organizational structure of industries, their leadership and their regulation;

3) encourage the development of tourism infrastructure and resorts with the involvement of companies, foreign and domestic investors;

4) ensuring the effective use of natural recreational and therapeutic resources in compliance with the requirements of environmental protection;

5) the development of new recreational and resort areas and areas that have tourism potential;

6) encourage the development of promising thematic areas of tourism, in particular hunting, cultural, educational, environmental, fishing, agriculture and other;

7) the creation of additional jobs.

The implementation of the optimal variant of development of tourism and national parks in the United States will provide:

- promoting health and improving quality of life of the population, implementation of social tourism, the improvement of social stability and social security;

- safety of tourists, travelers, protection of their rights, lawful interests and safety of their property;

- assistance to revival of national culture and crafts, the formation of national consciousness;

- preservation and restoration of the unique natural and historical-cultural resources, historic sites, attraction of investments in development of engineering, transport and communal infrastructures;

- rational use of financial and material resources, filling of budgets of all levels;

- create new and save existing jobs, the development of entrepreneurship in the service sector of tourist facilities;

- creation of equal possibilities for the subjects of tourist activity, the formation of the prerequisites for the development of efficient and transparent organized tourism market, a single regulatory space;

- the creation of modern tourism infrastructure in the territories with high concentration of valuable natural, historical and cultural tourism resources in areas of national network of international transport corridors and major highways;

- improving the system of information support of the sphere, creation of favorable

conditions for ensuring equal access to information;

- essential increase of efficiency of state policy in tourism activities and resorts, the state's performance of functions for the coordination, planning, regulation, promotion, protection of interests of tourists, the development of social tourism, marketing the national tourism product standardization and certification, etc.;

- improvement of existing and introduction of new effective mechanisms of interaction of central and local executive authorities, local self-government bodies, public associations, enterprises, scientific and educational institutions of tourism in sustainable tourism development;

- development of investment project of development of tourism and resorts in the region in programs for socio-economic development of territories;

- development of international cooperation processes in tourism activities and resorts, improvement of the tourist image of the national parks.

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10. Appendices

Appendix 1. Economic contribution of National Park System visitor spending

National park	Total Visitors, person	Total Visitor Spending, USD ths.	Contribution of all Visitor Spending			
			Staff, person	Labor Income, USD ths.	Value Added, USD ths.	Economic output
Acadia NP	2,811,184	\$247,910.8	3,878	\$102,112.7	\$172,526.1	\$304,623.5
Arches NP	1,399,247	\$162,718.2	2,711	\$67,949.5	\$122,729.0	\$216,319.6
Boston NHP	2,262,840	\$129,573.0	1,917	\$72,823.2	\$114,669.8	\$183,121.1
Chesapeake & Ohio Canal NHP	4,798,312	\$88,998.0	1,329	\$49,333.7	\$78,548.1	\$126,688.6
Colonial NHP	3,343,909	\$191,476.4	3,173	\$90,552.1	\$148,928.7	\$261,274.5
Cuyahoga Valley NP	2,284,612	\$144,710.3	2,415	\$71,441.7	\$114,672.2	\$203,002.9
Death Valley NP	1,154,843	\$95,036.9	1,336	\$47,073.2	\$76,298.4	\$124,098.2
Everglades NP	1,077,427	\$103,392.6	1,521	\$60,129.1	\$95,467.1	\$154,124.5
Glacier NP	2,366,057	\$198,966.0	3,474	\$93,528.8	\$143,420.8	\$268,619.6
Grand Canyon NP	5,520,736	\$584,890.9	8,897	\$301,914.6	\$502,940.4	\$813,705.8
Grand Teton NP	3,149,920	\$560,394.4	8,862	\$258,250.2	\$412,894.3	\$728,987.8
Great Smoky Mountains NP	10,712,673	\$873,886.5	13,709	\$396,249.7	\$692,101.0	\$1,181,331.9
Haleakala NP	1,216,772	\$76,462.5	905	\$35,009.5	\$59,315.9	\$91,758.7
Hawaii Volcanoes NP	1,832,660	\$151,246.2	1,834	\$70,723.6	\$122,863.0	\$189,391.1
Hot Springs NP	1,418,163	\$88,953.7	1,433	\$37,014.6	\$62,800.4	\$113,410.8
Independence NHP	4,311,583	\$246,886.7	3,853	\$144,980.4	\$225,187.1	\$365,285.2
Joshua Tree NP	2,025,755	\$96,741.3	1,341	\$49,858.5	\$78,826.5	\$128,226.7
Kennesaw Mountain NBP	2,174,870	\$124,535.8	2,089	\$70,678.4	\$109,394.8	\$186,916.5
Mount Rainier NP	1,237,232	\$45,741.3	596	\$21,018.2	\$36,426.8	\$58,341.2

Olympic NP	3,263,761	\$270,618.6	3,654	\$131,171.6	\$232,596.4	\$375,500.8
Rocky Mountain NP	4,155,917	\$268,391.4	4,144	\$152,167.6	\$246,198.3	\$408,311.0
San Antonio Missions NHP	1,322,155	\$75,708.3	1,217	\$36,803.4	\$60,873.7	\$105,145.7
San Francisco Maritime NHP	4,173,014	\$101,389.3	1,248	\$49,580.0	\$72,890.0	\$117,012.8
Sequoia NP	1,097,464	\$82,611.7	1,172	\$33,549.5	\$57,563.0	\$98,961.8
Shenandoah NP	1,321,873	\$87,870.2	1,179	\$45,851.3	\$72,593.9	\$115,205.8
Valley Forge NHP	2,143,965	\$26,550.6	471	\$15,928.9	\$24,418.0	\$40,138.0
Yellowstone NP	4,097,709	\$493,620.9	7,737	\$224,826.5	\$361,876.3	\$638,574.7
Yosemite NP	4,150,218	\$449,080.8	6,887	\$207,730.7	\$348,826.2	\$593,693.7
Zion NP	3,648,846	\$202,198.4	2,823	\$104,418.6	\$172,318.2	\$274,562.8

Source: <https://www.nps.gov/subjects/socialscience/vse.htm>

Appendix 2. Data for TCM of TOP-10 national parks

TC	1		2		3		4		5		6		7		8		9		10	
	%	Visit	%	Visit	%	Visit	%	Visit	%	Visit	%	Visit	%	Visit	%	Visit	%	Visit	%	Visit
50	38	1386561	38,5	1082306	38	1638402	43	1403417	40	1662367	36	1494078	33	1352244	34	1070973	40	2208294	47	5034956
150	27	985188	28	787132	29	1250359	24	783303	28	1163657	29	1203563	25	1024427	31	976475	37	2042672	32	3428055
300	25	912212	22	618460	25	1077896	21	685390	24	997420	21	871546	23	942473	23	724482	16	883318	13	1392647
500	10	364885	11,5	323286	8	344927	12	391651	8	332473	14	581031	19	778565	12	377990	7	386452	8	857014
	Y=-0,06x +39,33		Y=-0,06x +39,5		Y=-0,06x +40,57		Y=-0,06x +41,00		Y=-0,07x +41,67		Y=-0,05x +37,33		Y=-0,03x +32,33		Y=-0,05x +37,33		Y=-0,08x +45,00		Y=-0,09x +47,67	

Source: own processing

Appendix 3. Function for visits to the site of TOP-10 national parks

Entry fee, \$	1	2	3	4	5	6	7	8	9	10
0	3551057	2754960	4409887	3394311	4017941	4150218	4097709	3149920	5520736	10712673
50	3113195	2417618	3892497	3002660	3436112	3740730	3857310	2839128	4637418	8770108
100	2675334	2080276	3375107	2611009	2854284	3331242	3616911	2528336	3754100	6827544
150	2237472	1742934	2857717	2219357	2272455	2921753	3376512	2217544	2870783	4884979
200	1799611	1405592	2340327	1827706	1690627	2512265	3136113	1906752	1987465	2942414
250	1361749	1068250	1822937	1436055	1108799	2102777	2895714	1595959	1104147	999849
300	923888	730908	1305547	1044404	526970	1693289	2655315	1285167	220829	0
350	486026	393566	788157	652752	0	1283801	2414917	974375	0	0
400	48165	56224	270767	261101	0	874313	2174518	663583	0	0
450	0	0	0	0	0	464824	1934119	352791	0	0
500	0	0	0	0	0	55336	1693720	41999	0	0
550	0	0	0	0	0	0	1453321	0	0	0
Average per visit	48,66	49,00	51,14	52,00	48,34	48,66	49,66	49,67	50,00	50,34

Source: own processing