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# SOCIO-ECONOMIC EFFICIENCY ANALYSIS OF THE SKI RESORT PROJECT «KOK-ZHAILAU»

**Abstract.** In this article is shown the natural and climatic peculiarities of Almaty, which has a positive impact on the formation of tourist and recreational complex and especially on the creation of the ski resort "Kok-Zhailau".

The organization of the resort will contribute to the tourist and recreational development of the territory and provide employment of the local population. There was investigated the analysis of development factors of the ski resort complex "Kok-Zhailau" and made the justification of the priority directions, which are necessary for realization of the concept of the region's tourism development. It is shown that the natural and climatic peculiarity has a positive impact on the formation of the tourist and recreational complex of the region, and especially on the creation of the ski resort "Kok-Zhailau". The organization of the complex will contribute to the tourist and recreational development of the territory and employment of the local population.

**Key words:** tourism, tourist and recreational complex, project efficiency.

### Introduction

The tourist-recreational industry has a positive impact on the social sphere, providing recreation and health of the people also on the socio-economic development of the country as a whole. Therefore, the development of recreation means not only the growth of the tourism industry itself, but also many other sectors of the region's economy, which also require their development [1]. They are such industries as transportation, communications, agriculture, trade, construction and local crafts. In addition, the development of recreation into the least extent (compared to other sectors of the economy) pollutes the environment. Accordingly, the overall effect on the region's economy from the development of tourism can be compared with the benefits from oil production and the development of the port economy.

According to the calculations of WTO experts, in average, income is generated from one foreign tourist is equivalent to export of about 9 tons of coal, or 15 tons of oil, or 2 tons of high-grade wheat to the world market. At the same time, the sale of raw materials exhaust the country's energy resources and the tourism industry operates on renewable resources. 100,000 tourists, spending an average of two hours in the city, spend at least \$350,000, or \$ 17.5 per person, every hour. Tourism revenues are steadily in third place-after revenues from exports of oil, petroleum products and cars. As for the prospects for the development of the industry, according to WTO forecasts, the growth of tourism should occur mainly due to the emergence of new visited territories, since traditional areas of the world tourism market which have almost reached the limit of recreational capacity [2].

### Main part

The ski resort industry is developing rapidly. Last year, the 21st New ClubMed resort in the Alps, ClubMed Grand Massif Samoens Morillon was opened in Switzerland. In winter 2019, a new resort IdreHimmelfjäll will be opened with the construction of a hotel for 10,000 seats In Sweden. The implementation of a large-scale project to build a ski resort called "Akdag" in 35 kilometers from Alanya (Antalya, Turkey) is in realization. Its opening is scheduled for this year. The total area of Alanya ski resort will be more than 300 hectares [3].

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In the neighboring countries in recent years there has also been an intensive development of tourism, in particular the ski industry. This year, Uzbekistan plans to open a large resort with a planned investment of \$ US100 million. The construction of 2 large resort areas in the area of "Karakol" has begun in Kyrgyzstan. A new modern resort with a gondola road was built in Tajikistan 2 years ago. A new resort with a total investment of \$ US 250 million was launched in Azerbaijan last year, which has been visited by 100 thousand people. Georgia has a state program for the development of the ski industry: the state invests in the development of three resort areas [4]. Russia has implemented the largest ski cluster "Krasnaya Polyana-Sochi", today it is visited by about 4 million people a year and now the government is working on the implementation of the project "Resorts of the North Caucasus" with a projected investment of \$ US 7.5 billion.

In the People's Republic of China, more than 100 ski resorts are currently united in 10 clusters. There is being implemented a state program to attract 300 million people to winter sports, and dozens of cable cars are being built [5].

Almaty city authorities decided to implement a project to build a sports and entertainment complex on the plateau "Kok-Zhailau" in 2011, which will include: a ski resort, hotels, restaurants, an ice rink and dance floors. The master plan envisages the development of 470 kilometers of mountain trails, 85 kilometers of bike trails, 45 kilometers of horse trails and 250 kilometers of ski trails, which is six times more the current length of the trails. In the framework of the project Kok-Zhailau, it will be divided into two parts – the Valley and Kumbel. The Valley will host all major activities. There will be a hotel with 100-250 beds, a restaurant, a ski school, entertainment for children and much more. Kumbel will become a nature Park. It is also planned to create an artificial lake with a capacity of not more than 100 cubic meters. It is planned that the design and estimation documents will be ready by 2019, and construction will begin in 2020 and it will be completed in 2022.

The plateau "Kok-Zhailau" until 2014 was part of the Ile-Alatau national Park. The Ile-Alatau national park was created in 1996 to preserve the unique ecosystems and landscapes of the TRANS-ili Alatau.

The flora of the plateau has 811 species of plants, 17 of which are listed in the Red book of Kazakhstan.

The fauna is represented by more than 1700 species of animals, 13 species of birds and 8 species of mammals are listed in the Red book [6].

In total, the project is planned to spend \$ 200 million, including the construction of cable cars and all infrastructure

The construction of a new ski resort in Almaty and the development of tourism in Kazakhstan, in our opinion will have positive influence on the national economy development. It will allow increasing of the new job places and to reduce the level of social tension in the region, increase the tax base, create a favorable investment climate thereby it helps in the creation of a positive image of the Republic.

Today, project management is a multi-level, multi-stage process. Operational project management consists of a very wide range of functions (construction works; financing in accordance with monthly plans; operation of commissioned facilities; implementation of operational activities).

The project aims are [7]:

- 1. Creating a business in the perspective tourism industry of the Republic of Kazakhstan.
- 2. Payback incurred investment costs and profit, incl. from development.
- 3. The development of the region's economy in a specialized industry.
- 4. Construction of infrastructure for the development of tourism in the region.
- 5. An increase in tax revenues, the formation of a non-subsidized budget of the Republic of Kazakhstan
  - 6. Increasing activity in the labor market, creating new jobs.
  - 7. Raising the average wage for workers in the tourism industry.
  - 8. Improving the welfare of citizens living in the republic.

The goal of the implementation of this project is to develop the tourism industry in the territory of Kazakhstan. With the successful outcome of the plans for the development of the tourism industry, the task is to make the region's budget in surplus. Thus, it is planned to solve the social, economic and infrastructure problems are existing in the region. Taking into account the capital-intensive nature of the

costs, the construction of a ski resort is extremely important that the resort was cost-effective and had the optimal scale according to its characteristics. Financial and economic evaluation of investment projects is Central to the process of justification and selection of possible options for investing in transactions with real assets.

Determining the reality of achieving such results of investment activity is the key task for assessing the financial and economic parameters of any project of investing in real assets [8].

Conducting such assessment is always challenging due to a number of factors: first, investment costs can be either one-time or repeatedly over a sufficiently long period of time; second, the lengthy and the process of obtaining results from the implementation of investment projects (in any case, it exceeds one year); third, the implementation of long transactions leads to an increase of uncertainty in the evaluation of all aspects of the investment and the risk of error. Existence of these factors are the reasons of the need to create special methods for evaluating investment projects, allowing to make sufficiently informed decisions with the lowest possible level of error (although absolutely reliable decisions in the evaluation of investment projects, of course, cannot be).

Financing in this project is considered in terms of determining the necessary funds for the construction of the ski resort. The development concept foresees the construction of targeted ski facilities linked to the resort centre, which could attract skiers and visitors from local, regional or target markets.

The established capital expenditures were divided into project accounts, generally accepted in the ski industry. Within each of the main accounts, the subproject accounts were split into lump sums or, if it is necessary, per unit. The decision about the established capital expenditures are based on construction and / or installation costs incurred in the development of other ski resorts, like in the United States, Canada and Europe, taking into account local conditions and the regulatory legal norms of the Republic of Kazakhstan [9].

Budget funds are considered as a source for financing of investment costs for the construction of the ski infrastructure of the resort. For the implementing of this project the following financing conditions were adopted, which means allocations of money from the national budget, at a zero rate.

Working capital financing for the first year of the ski resort's functioning the project provides working capital to pay workers wages and other operating costs. The calculation of the working capital requirement is given in table 1.

№	Name of the expenditure items	Annual demand million tenge	One- day stock costs	Norm of stock, in days	The amount of working capital for the first year of projects million, tenge	The amount of working capital for the future functioning of the project million tenge
1	Electricity	42,06	115,2300	30	42,06	3,46
2	Water	4,47	12,25	30	4,47	0,37
3	Sewerage	1,55	4,25	30	1,55	0,13
4	Hard domestic wastes	7,76	21,26	30	7,76	0,64
5	Petroleum products	42,03	115,15	30	42,03	3,45
6	Wage fund	831,36	2277,70	45	831,36	102,50
Total		929,23	2545,84	195	929,23	110,54

Each part of the ski resort has its own performance characteristics, which are largely influenced by the location of the site and the geographical location of the site, as well as the proximity of the main settlements. The territory is considered as an international mountain resort, as well as a place for short - term and medium-term recreation of residents of Almaty and its suburban area.

The following performance characteristics were adopted for the project:

- Duration of winter walking season-164 days
- Duration of winter ski season-130 days
- Duration of the summer walking season-185 days

For the forecast of ski visits it is necessary to take into account the number of skiers staying overnight, winter tourists, as well as summer tourists who will visit the mountain resort.

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The following assumptions were made to prepare the preliminary income statement:

a) The number of skiers staying overnight will make up 10 per cent of the projected number of ski visits to the resort during the day;

- b) The number of summer tourists will be equal to 50 percent of the projected visits in winter;
- c) The number of summer tourists will be equal to 70 percent of the projected number of skiers visiting the resort in the winter.

Parameters of income from the operation of ski lifts are: during the 2016/17 season, the maximum cost of a lift ticket for adults at the existing mountain resort was 6474 tenge, with the effective share of the ski lift cost is 60.6 percent of the cost of the day ticket.

Since in Phase 1a the resort will have more ski facilities than the existing resort, it is assumed that the maximum cost of an adult lift ticket to the resort will be 7,500 tenge.

The total income from the ski lifts will be on average 50-60% of the cost of a lift ticket for adults. This discount is used to include in the cost of children's tickets, off-season tickets, and tickets for several days and in the cost of other incentive tickets that can be used during the season. This lift ticket revenue margin is in line with the mid-range adopted by the ski industry.

In Phase 1b, the ticket price increases to 8250 tenge with the installation of 4 new large lifts. It is proposed to set the cost of a ticket for skiing at night in the amount of 4050 tenge with 80 percent net income from the sale, based on the results of discussions with the senior Executive management of the existing resort. The resort offered lift tickets to tourists visiting the resort in the summer at a price of 2988 tenge with a valid ticket price of 64.2 percent of the maximum daily cost during the 2016/17 season. In the summer season of 2018, the cost was increased by 339 tenge. The project proposes to set the ticket price for tourists visiting the resort in the summer, in the amount of 3600 tenge with the current ticket rate, which is 56 percent of the maximum daily cost [10].

The total income from the activities of the ski school is set at 456 tenge per ski visit. This is slightly higher compared to the existing mountain resort, where the cost per ski visit is 429 tenge for the 2016/17 ski season. Since the ski school offers services, the cost of goods sold (COGS) does not apply.

Labor resources and costs are estimated at 70 percent of gross sales. The income margin of the ski school is set at 30 percent. This contributes to an additional 136.5 tenge of revenue from ski visits compared to the margin at a functioning resort. This margin was 20.7 percent during the 2016/17 ski season [11].

During the ski season 2016/17, the total income from the activities of the objects of sale of food and drinks in the resort amounted to 522 tenge per visit. Revenues from the sale of food and beverages in the project are determined in the amount of 600 tenge per visit. These revenues can only be generated at food and beverage outlets in mountain areas and ski bases, and not at restaurants located at different ends of the resort center. The value of goods sold (COGS) is estimated at 30 percent of sales. The labor resources and costs of the ski resort's food and beverage sales activities are estimated at 45 percent of total sales, provides a profit of 25 percent or Tg 150 per visit.

Revenues from ski rental at the existing resort amounted to 261 tenge per ski visit for the 2016/17 season. Income from ski rental at the projected resort will be in the amount of 300 tenge per ski visit. Such revenues could only be generated from ski rental outlets operating in mountainous areas. It is assumed that the rental of ski equipment will be located throughout the resort center, as they bring a little more profit in the ski industry. The cost of sales (COS) of rental items as a rule is a very low across the industry. It is estimated at 10 percent. The labor resources and costs for the rental activity are estimated at up to 30 percent of total sales based on industry standards, resulting in a profit of 60 percent or 180 tenge per ski visit.

In the existing resort, limited retail trade was carried out only through information and reference centers for guests. Over the next few years, it is planned to expand opportunities for this type of service. Total revenues for the retail/accessories store at the projected resort are estimated at 450 tenge per visit. These revenues can only be generated in retail outlets located in mountain areas and ski bases, and not in other retail outlets and commercial stores located in different parts of the resort center.

The cost of goods sold (COGS) is estimated at 50 percent of sales, which is the relative norm for the retail industry. The labor payments and operating costs of the ski resort's retail stores are estimated at 20 percent of total sales. The profit from the operation of retail stores / sale of accessories can be 30 percent,

i.e. 135 tenge. The operating costs include material costs, fuel costs for own needs, energy costs, maintenance costs, staff salaries and deductions for social tax and social insurance, depreciation charges [12]. Depreciation charges for tax purposes are determined by fixed assets, according to the Tax Code of the Republic of Kazakhstan. The direct costs of paying the workers and employees servicing the ski lifts, the wage rates for working on the lifts, the activities of the ski patrol, clearing the slopes, maintenance and repair, ticket sales and other rates are set depending on the size of the ski resort, taking into account the capacity of the ski arena (constant factor) and the number of ski visits (variable factor). Other direct costs include engineering support, fuel, consumables, spare parts and materials for repair and maintenance, uniforms, ski safety equipment, lift tickets and any other costs directly related to the ski resort maintenance service [13]. These costs can be between 10 and 15 percent of the total income from the operation of the lifts.

Activities to maintain real estate in proper operational condition are: The costs of maintaining the properties in good condition include the costs of operating and maintaining the ski resort, which are not directly related to the service of the operations Department. These costs, on average, account for 2 and 4 percent of income from the ski industry. The operating costs associated with the properties were set at around 2 percent and further decreased by 0.3 percent each year until they were reduced to 0.

General and administrative expenses of the project are referred to as "General expenses" and they include salaries, remuneration and payments to management, Finance and accounting services and all other employees of these departments. This account also includes clerical, postal, telephone, computer, office expenses, Director's or Trustee's fees, fees and dues, travel expenses, etc. Marketing expenses are set before the start of the ski season as a percentage of the planned income. Marketing expenses include salaries, remuneration and payments to all employees working in this Department. All operating expenses, postage, telephone, travel, entertainment, specialized exhibitions and other sales expenses incurred by the marketing Department are expenses included in this category. Expenses for advertising, in the form of outdoor billboards or other signs, media, radio and television, exchange of goods or services (Vice versa) refer to marketing expenses. Marketing expenses also include all costs related to the production of promotional materials, payments and rewards to advertising agencies, etc. marketing Expenses for ski resorts usually vary between 6 and 10 percent of total income from activities. Introducing new products to the market at the outset may require significant marketing efforts. Given the fact that the project will be a new ski resort in the Kazakh market, as well as in connection with its plans to enter the international market, the volume of marketing costs is set at 10 percent of total revenue for the first year to reach the level of 2.0 million us dollars annually [14]. Insurance costs are divided into two main groups: liability insurance and property insurance. Liability insurance covers the costs of visitors suing the ski resort as a result of injury. Liability insurance usually depends on ski visits or total revenues [15]. The project sets the cost of expenses for liability insurance at \$ 0.50 per ski visit. Property insurance costs are set at 0.08 percent of the original cost of fixed assets. Snowmaking costs are mainly fixed costs as snowmaking work is done before the start of the ski season. Operating costs include the cost of electricity, labor and maintenance of the snowmaking system. The cost of operating costs is expressed in US dollars per hectare - hour of operation. Based on data from SMI, the cost is set at \$ 7.50 per hectare per hour.

Snow clearance costs.

Snow removal costs include the cost of snow removal from the main driveways and the Parking lot. As the number of ski visits to the resort increases, the need to clear a large number of Parking spaces from snow increases. The natural snowfall rate in the region is very low, but it is possible that periodic snow removal or sanding of the car Park area may be required, and snow removal costs of us \$ 0.05 per ski visit have been set.

The obtained results (conclusions). Tourist zones, in particular, the implementation of this project could give a serious stimulus to the development of the respective regions and in times of crisis is a real opportunity to "ride the horse of economic growth". However, the implementation of the tourist and recreational potential of the region is currently restrained by the protests of Kazakh citizens and foreign experts against the construction. The development of the leisure and tourism industry can and should be the most important regional growth point.

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# АНАЛИЗ СОЦИАЛЬНО-ЭКОНОМИЧЕСКОЙ ЭФФЕКТИВНОСТИ ГОРНОЛЫЖНОГО КУРОРТА КОК-ЖАЙЛАУ

**Аннотация.** В данной статье показано, что природно-климатическое своеобразие г. Алматы положительно влияет на формирование туристско-рекреационного комплекса и в особенности на создание горнолыжного курорта «Кок-жайлау».

Организация курорта будет способствовать туристско-рекреационному освоению территории и занятости местного населения. Проведен анализ факторов развития горнолыжный комплекса «Кок-жайлау» и обоснование приоритетных направлений, необходимых для реализации концепции туристского развития региона. Показано, что природно-климатическое своеобразие положительно влияет на формирование туристско-рекреационного комплекса, и в особенности на создание горнолыжного курорта «Кок-жайлау».

Ключевые слова: туризм, туристско-рекреационный комплекс, проект эффективность.

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### КӨК-ЖАЙЛАУ ТАУ ШАҢҒЫСЫ КУРОРТЫНЫҢ ӘЛЕУМЕТТІК-ЭКОНОМИКАЛЫҚ ТИІМДІЛІКТІ ТАЛДАУ

**Аннотация.** Курортты ұйымдастыру аумақтың туристік-рекреациялық дамуына және жергілікті тұрғындардың жұмыспен қамтылуына ықпал етеді.

Түйін сөздер: туризм, туристік-рекреациялық кешен, жобаның тиімділігі.

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