

DETERMINATION OF FACTORS INFLUENCING THE DEVELOPMENT OF TOURIST TRANSPORT

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According to the experts of the World Tourism Organization, the proportion, in which one foreign tourist coming from abroad and four people traveling along the territory of the country are accounted for by one tourist traveling abroad, is considered optimal. For implementation of this proportion the possibilities of railway transport can be fully used almost in all types of tourism.

The demand for tourist traffic will be significantly increased in the presence of comfortable modern rolling stock, since now we have a narrow-gauge rolling stock for passenger transportations, but it is in neglected state and hardly suitable for tourist travels. The Transcarpathia has a positive attempt to use the old rolling stock for organization of excursion tourist travels, but it does not have any comfortable conditions and can make only short journeys. There is a demand for such transportations, but it is insignificant and irregular.

On the basis of above mentioned one can conclude that the main role for the development of tourist traffic play the following factors:

1. The presence of existing infrastructure of railway tracks that is reconstructed or rebuilt and corresponds to the established standards of safety, motion speed, travel comfort and is properly maintained.
2. The presence of the developed tourist infrastructure (hotels, apartments, restaurants, cafes, tourist agencies, recreation camps and etc.) around the narrow-gauge railway.

3. The presence of beautiful nature, places for active recreation (ski resorts, routes for bicycle travels, etc.), places for quiet rest (lakes and rivers), thermal waters for therapeutic tourism, resorts, local national characteristics (bathing in tanks, wine festivals, fishing, etc.) and nature reserves.

4. The presence of tourists in local hotels that are potential clients of travel company.

5. The presence of demand for these types of railway services from domestic and foreign tourists.

6. The availability of modern comfortable narrow-gauge rolling stock for different kinds of travel services depending on the travel period.

7. Conducting efficient promotional campaign to attract the tourists to railway transportations.

8. High level of tourist services during the train travel, accommodation in hotels and apartments, meals in restaurants and cafes, transfer and excursion services, high level of camps for active and quiet recreation, etc.

9. The attractiveness of tourist routes to suit any taste, which make it possible to attract the maximum number of customers.

10. Pricing and tariff policy of tourism companies and their contractors, which should take into account the cost of tourist services of the companies that use automobile transport for tourist transportations.

One can propose several variants for tourist traffic organization depending on the flow of tourists, term of travel and the destination of tourist travel:

- Small transfer. Transportation of small number of tourists by the special railcar from the broad gauge station to the wellness center, hotel or any tourist facility;

- Small tourist transfer. Transportation of small number of tourists by the special railcar from the hotel to any tourist facility and between them;

- Large transfer by railway rolling stock. Transportation of large number of passengers by the narrow-gauge train from the broad gauge station to the wellness center, hotel or any tourist facility;

- Large tourist transfer by railway rolling stock. Transportation of large number of individual tourists by the narrow-gauge train from the hotel to any tourist facility and between them with open-date railway ticket;

- Tourist travel with small transfer. Transportation of small number of unorganized tourists by the special railcar on certain tourist routes for no more than one day;

- One-day tourist travel by railway rolling stock. Transportation of certain number of organized tourists by train on the certain tourist routes with the term up to five days;

- Long-term tourist travel by railway rolling stock. Transportation of organized tourists by the train on the certain tourist routes and the tourist routes of the neighboring countries for a period up to fourteen days.

Small transfer can be used for transportation of all the passengers who arrived by railway transport for recreation in sanatoria, rest houses, mountain resorts and other tourist facilities, if their number does not exceed the capacity of the special railcar, and the above mentioned facilities are located in the district served by the narrow-gauge railway. These transfer transportations by the railcar are much more comfortable than the transportations by usual route taxis (minibuses) and safe, as the railway operates properly throughout the year.

Small tourist transfer. At the same time, the railcars can be used for transportations of unorganized tourists and small tourist groups on the certain routes of line with bringing the passengers directly to any tourist facility, because this transport mode can travel both by railway and by road. The cost of the railcar travel is lower than that in the usual buses, as the railway line always has smaller vertical slopes and curves in plan, which requires less fuel.

Large transfer by railway rolling stock can be used for transportations of all the passengers, who arrived by railway transport with wide track 1520 mm for recreation in sanatoria, rest houses, mountain resorts and other tourist facilities, if their number exceeds the capacity of special railcar, and the above mentioned facilities are located in the district served by the railway. But in this case, the usual buses for passenger transportation from the train to the recreation facilities should be used. Such transfer transportations are much more comfortable than the transportations by small and big buses and they are safe, as the railway operates properly throughout the year.

Large tourist transfer by railway rolling stock. Such railway transportations can be used for transportation of unorganized tourists and small tourist groups on the certain directions of the line with bringing the passengers to any tourist facility by railway with open-date railway ticket. Such form of transfer transportations makes it possible for tourists to visit several tourist attractions independently for a particular period of time without a schedule. In addition, these trains may be used by the residents of the region and the staff working in these tourist attractions. The travel cost in these trains will be lower than in usual buses.

Tourist travel by small transfer. This type of tourist traffic by the special railcar on the certain tourist routes with the term up to one day can be proposed to unorganized tourists, who want to visit certain places at their will. This type of tourist transportations is cheaper than the transportations by the train.

One-day or two-day tourist travel by the rolling stock occurs only according to the predetermined route in the presence of certain number of organized tourists with the term no more than one or two days. The structure of the train is determined by the number of tourists who want to travel on a specific route, including certain tourist sites. As a rule, such travel involves several stops to view the local sights, tourist attractions, stay in the hotel (in case of two-day travel) and meals at the restaurant or local cafes.

Short-term tourist travel by the railway rolling stock occurs only according to the predetermined route in the presence of certain number of organized tourists with the term no more than five days. The structure of the train is determined by the number of tourists, who want to travel on a specific route, including certain tourist sites. As a rule, such travel involves every day several stops to view the local sights, tourist attractions, rest and meals at the restaurant or local cafes. In addition, at night it is provided the rest in local hotels or apartments, which determines the price of travel.

Long-term tourist travel by the railway rolling stock occurs only according to the predetermined route in the presence of certain number of organized tourists with the term no more than fourteen days. The structure of the train is determined by the number of tourists, who want to travel on a specific route, including certain tourist sites.. Sometimes tourists can travel in the other regions by sea and rivers. As a rule, such travel involves every day several stops to view the local sights, tourist attractions, rest and meals at the restaurant or local cafes. In addition, at night it is provided the rest in local hotels or apartments, which determines the price of travel.

For economic justification of building new or reconstructing the existing railways in order to transport tourists one should determine the amount of future tourist routes, their duration, the number of journeys and the structure of rolling stock during the year and the presence of tourist infrastructure and historical monuments in the district served by the narrow-gauge railway.

The article proposes a methodological approach that is based on the principle of determining the actual number of passengers and revenues from tourist transportations on the certain routes. It was taken into account the attractiveness of the route, price for tourist vouchers or travel tickets, minimization of the rolling stock number and the cost of construction and income of the company. The Table 1 represents the real data concerning the development of tourism and recreation in Transcarpathian region for 2015. It should be said that they are greatly underestimated because they do not take into account a significant share of tourists staying in the apartments.

Table 1. The basic indicators of tourist and recreational activities in Transcarpathian region

No.	Name of the district or town	The number of tourists and vacationers, thous.	The number of travel days, thous.	The volume of provided tourist and recreational services, thous. UAH
1	Berehove district	85 293	203 835	3 527.6
2	Velykobereznianskyi district	no data available		
3	Vynohradiv district	2 268	3 491	1 004.1
4	Volovets district	3 327	7 544	793.7
5	Irshava district	2 118	16 627	641.7
6	Mizhhirya district	13 771	57 041	9 567.6
7	Mukachevo district	26 677	291 118	96 586.7
8	Perechyn district	4 739	76 474	7 001.6
9	Rakhiv district	26 550	73 122	13 571.7
10	Svalyava district	25 229	317 696	140 348.7
11	Tyachiv district	32 595	66 567	7 490.0
12	Uzhhorod district	9 955	26 416	6 287.7
13	Khust district	63 478	172 089	36 989.7
14	Uzhhorod	22 532	36 867	14 659.7
15	Mukachevo	8 753	10 351	1 684.4
16	Khust	5 433	19 506	2 748.3
17	Berehove	5 817	12 518	1 527.9
Total		338 535	1 391 262	344 431.1

If we analyze the initial data from the Table 1, we can conclude that at the first stage of construction the tourist railway line (launch area no. 1) should be laid on the route: Berehove-Khmelnik-Vynohradiv-Khust-Mizhhirya-Lysychovo-Svalyava. At the second launch area of construction one should extend the line on the route Svalyava-Mukachevo-Irshava and therefore to make the ring railway line. One can also complete the construction of the line in the area Irshava-Lysychovo that will enable the development of this region.

It should be said that tourism and recreational activities in the Transcarpathian region for the previous reporting years several times exceeded the volumes presented in the Table 1. Therefore, further research will take into account all the tourists, living in private hotels and apartments, as well as the additional flow of potential passengers, who will come to Transcarpathia to travel the new railway. The number of these potential tourists can be up to 2 million people.

Some demand for the railway transportation already exists, but one should conduct the basic marketing research to identify this demand. The Table 2 presents the estimated indicators of demand for transfer and tourist transportations by the narrow-gauge lines.

Table 2. Estimated indicators of the tourism and recreational activities in the Transcarpathian region at the 1st stage of construction

No.	Name of the district or town	The number of tourists and vacationers, thous.
	Estimated number of tourists and vacationers who are the potential customers of narrow-gauge railway	
1	Berehove district	255
2	Velykobereznianskyi district	20
3	Vynohradiv district	7
4	Volovets district	11
5	Irshava district	7
6	Mizhhirya district	45
7	Mukachevo district	78
8	Perechyn district	15
9	Rakhiv district	79
10	Svalyava district	90
11	Tyachiv district	99
12	Uzhhorod district	35
13	Khust district	170
14	Uzhhorod	69
15	Mukachevo	32
16	Khust	17
17	Berehove	21
	Total number of tourists and vacationers	1 050
	The estimated number of tourists who will use the narrow-gauge railway	63
	The tourists who will use the narrow-gauge railway	
1	Pupils of Ukrainian schools	3
2	Students	4
3	Residents of Ukraine	20
4	Representatives of neighboring European countries	6
	Total estimated number of tourists who will use the narrow-gauge railway	96

The Table 2 presents the estimated number of tourists who have the opportunity to travel by narrow-gauge lines. But if one calculates the rolling stock for this number of potential customers, it will need large investments. Therefore, for the first stage of construction it is proposed to purchase only 6 railcars and 5 tourist trains, which will consist of 2 cars of the second class, 1 car of the first class, dining car, maintenance car and the train locomotive. It is proposed to determine the possible number of transported tourists on the basis of the total capacity of these cars, their travel term, the number of journeys per year and average annual train occupancy (Table. 3).

Table 3. Calculation of the estimated number of tourists who will have the opportunity to travel by the narrow-gauge lines upon the condition of using the capacity of the available rolling stock, provided certain traffic management

Name of the route	Number of seats in rolling stock	The type of rolling stock	The number of journeys per day, units	The number of journeys per year, units	Fill factor of the rolling stock	Total number of tourists, units
Svaliava-Lysychovo-Mizhhirya	24	Railcar	3	175	1	12 600
Transfer transportations of passengers between stations and hotels including the workers and local population	24	Railcar	6	300	0,7	30 240
Svalyava-Mukachevo-Irshava-Berehove	64	Train with 2 cars of the second class and 1 car of the first class	1	300	0,8	15 360
Berehove-Khmelnik-Vynohradiv-Khust-Mizhhirya-Lysychovo-Svalyava	64	Train with 2 cars of the second class and 1 car of the first class	1	450	0,8	23 040
Total						81 240

At this it is proposed the following movement organization of rolling stock on the narrow gauges:

On the route Svaliava- Lysychovo-Mizhhirya will be organized three journeys of the railcars per day with capacity 24 seats in each. It is expected 525 such excursions per year. The railcars are also supposed to be used for transfer transportations of the tourists who came by the broad gauge from the stations Svaliava and Mukachevo to tourist sites and, in addition, for transportation of tourists, residents of cities and villages, and of hotels and restaurant employees that have access to the narrow-gauge railway.

For the two-day route Svaliava-Mukachevo-Irshava-Khmelnik-Berehove and backwards it is supposed to use the narrow-gauge train with five cars (2 cars of the second class, 1 car of the first class, dining car and the special car) having 64 seats. For this route there will be involved two rolling stocks running every other day.

The route Berehove-Khmelnik-Vynohradiv-Khust-Mizhhirya-Lysychovo-Svaliava is intended for 3 days. This direction also provides the use of the narrow-gauge train of five cars (2 cars of the second class, 1 car of the first class, dining car and the special car) having 64 seats.

But firstly one should determine the most attractive routes for tourist travels by railway. On the basis of the above mentioned at the first stage of construction of the narrow-gauge railway the following routes can be proposed: Svaliava, Lysychovo (length 30 km), Lysychovo–Mizhhirya (24 km), Mizhhirya–Khust (60 km), Khust–Vinohradiv (25 km), Vinohradiv–Khmilnyk (19.6 km), Khmilnyk–Berehove (25 km), Khmilnyk–Irshava (15 km), Irshava–Mukachevo (33 km), Mukachevo-Svalyava (26 km). In these towns the stop of tourist trains or railcars is provided.

Tourist train stops at the stations for landing the tourists who transfer to the minibuses or the ordinary buses, the capacity of which corresponds to the number of tourists who want to continue the tour. After each tour, a group of tourists boards the bus and goes to the restaurant or to the railway station and then travels by train. At the

end of the day the train brings tourists to the hotel (apartments) for the rest and meals. The price includes accommodation in a hotel and morning breakfast. After that tourists go to the city excursions, and then buses bring them to the railway station.

For tourist meals during the travel the train additionally includes a dining car, or the buffet car depending on the length of the route and class of the train. After the tour buses bring the tourists from the terminal station to the hotel. Thus, throughout the tour buses carry out the transfer transportations of tourists from the trains to tourist sites, restaurant, hotel and backward.

On the route Svaliava-Lysychovo-Mizhhirya the railcars can perform the tourist transportations by small groups of 16 or 24 people. They transport tourists by both the railway and the road that is very convenient because there is no need to change the train for minibuses. If the number of tourists will increase, on the given route can be introduced the running of tourist trains of three cars (including two cars of the second class).

Taking into account the mentioned estimated flow of tourists the revenue of the railway company from tourist and transfer transportations can be calculated (Table. 4).

Table 4. Calculation of the total revenue of tourism company from transfer and tourist transportations by the narrow-gauge railways

Name of the route	Total number of tourists (according to the data from the Tab. 5.2)	The average cost of the ticket or transfer, UAH	Total revenue on the route, UAH	Total revenue on the route, USD
Svaliava-Lysychovo-Mizhhirya	12 600	400	5 040 000	201 600
Transfer transportations of passengers between stations and hotels including the workers and local population	30 240	70	2 116 800	84 672
Svalyava-Mukachevo-Irshava-Berehove	15 360	1 400	21 504 000	860 160
Berehove-Khmelnik-Vynohradiv-Khust-Mizhhirya-Lysychovo-Svalyava	23 040	2 000	46 080 000	1 843 200
Total	81 240		74 740 800	2 989 632

Conclusions. The principles of the tourist routes organization: *small transfer* (transportation of small number of tourists by the special railcar from the broad gauge station to the wellness center, hotel or any tourist facility); *small tourist transfer* (transportation of small number of tourists by the special railcar from the hotel to any tourist facility and between them); *large transfer by railway rolling stock* (transportation of large number of passengers by the narrow-gauge train from the broad gauge station to the wellness center, hotel or any tourist facility); *large tourist transfer by railway rolling stock* (transportation of large number of individual tourists by the narrow-gauge train from the hotel to any tourist facility and between them with open-date railway ticket); *tourist travel with small transfer* (transportation of small number of unorganized tourists by the special railcar on certain tourist routes for no more than one day); *one-day tourist travel by railway rolling stock* (transportation of certain number of organized tourists by the narrow-gauge train on the certain tourist routes with the term up to five days); *long-term tourist travel by railway rolling stock* (transportation of organized tourists by the narrow-gauge train on the certain tourist routes of Ukraine and the tourist routes of the neighboring countries for a period up to fourteen days).

Factors influencing the development of tourist transport:

1. The presence of existing infrastructure of railway tracks that is reconstructed or rebuilt and corresponds to the established standards of safety, motion speed, travel comfort and is properly maintained.
2. The presence of beautiful nature, places for active recreation, places for quiet rest, thermal waters for therapeutic tourism, resorts, local national characteristics and nature reserves.
3. The presence of tourists in local hotels that are potential clients of travel company.
4. The presence of demand for these types of railway services from domestic and foreign tourists.
5. Conducting efficient promotional campaign to attract the tourists to railway transportations.
6. High level of tourist services during the train travel, accommodation in hotels and apartments, meals in restaurants and cafes, transfer and excursion services, high level of camps for active and quiet recreation, etc.
7. The attractiveness of tourist routes to suit any taste, which make it possible to attract the maximum number of customers.
8. Pricing and tariff policy of tourism companies and their contractors, which should take into account the cost of tourist services of the companies that use automobile transport for tourist transportations.

References

1. Alieshuhina N.O. Transportna infrastruktura yak skladova turystychnoho potentsialu Ukrainy [Transport infrastructure as the component of tourist potential of Ukraine]. *Efektivna ekonomika. Visnyk Dnipropetrovskoho derzhavnoho ahrarno-ekonomichnoho universytetu. – Efficient economics. Bulletin of Dnipropetrovsk State Agrarian and Economic University*, 2009, no. 3. Available at <http://www.economy.nayka.com.ua/?op=1&z=62> (Accessed 28 April 2016).
2. Khaustova V.Ye., Horbatova Ye.F. Problemy rozvytku turystychnoi haluzi v Ukraini [Development problems of tourism industry in Ukraine]. *Problemy ekonomiky – Economics Problem*, 2010, no. 2, pp. 28-33.
3. Poliuha V.O. *Ekonomichni i orhanizatsiini vazheli rehuliatornoj polityky rozvytku turyzmu. Orhanizatsiia upravlinnia, planuvannia i rehuliuвання ekonomikoju*. [Economic and organizational levers of regulatory policy of the tourism development. Management, planning and regulation of economy.] Author's abstract. Uzhgorod, 2005, 27 p.
4. Nilnoppakun, A. & Ampavat, K. Integrating Cultural and Nostalgia Tourism to Initiate a Quality Tourism Experiences at Chiangkan, Leuy Province, Thailand. In: *2nd global conference on business, economics, management and tourism*. Prague. 2015.
5. Juan Carlos García-Palomares & Javier Gutierrez & Carmen Mínguez. Identification of tourist hot spots based on social networks: A comparative analysis of European metropolises using photo-sharing services and GIS. *Applied Geography*. 2015.