

## **WILL THE NEW BRIDGE OVER DANUBE CREATE A TOURISM SUSTAINABLE HUB IN THE URBAN AREA OF BRĂILA-GALAȚI-MĂCIN?**

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### **Abstract**

The biggest infrastructure project which Romania has seen in the last 3 decades, a project of an EU-approved budget of EUR 435 million: a new suspension bridge of 2 km long over the Danube is estimated to be build up by an Italian - Japanese joint venture within the next 4 years. The cities situated near the bridge, Brăila and Galați on the left side and Măcin on the right side of the river, will be the biggest beneficiaries of the investment, but development opportunities and the environmental impact on this area can only be estimated. The aim of this paper is to analyse, starting from the historical development of these cities, their actual socio-economic situation and their tourism capacity and potential, the chances for creating a tourism sustainable hub. The overall evaluation indicates that the creation of a tourism sustainable hub in the urban area of Brăila - Galați - Măcin can be a realistic approach if the tourism development is targeted as the main goal by the local authorities and an adequate strategy is elaborated and applied for all these cities and the surrounding area, as long as the bridge is only a part of the infrastructure that need to be created in the region.

### **Keywords**

urban tourism, sustainable hub, port cities, bridge

### **JEL Classification**

Z32; O18

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### **Introduction**

The international literature concerning sustainable development has few references related to the tourism hub and to the benefits that building strategic bridges generates over a city or a region. The sustainable development has for the first time in the cases of the cities, the first standalone goal, which is “to make cities and human settlements inclusive, safe, resilient, and sustainable” (Klopp & Petretta, 2017). While many authors focused on the idea that cities are the engine of sustainable development, we developed the paper around the idea that the tourism sustainable development can be in the case of harbour neighbour cities with a tumultuous history, the factor of relaunch of their prosperity in the context of major political changes that created a new socio-economic reality. The notion of tourism hub was defined by Yeoh and Chang and highlighted by Tan et al. as a “primal node” that generates but also benefits from the tourism flow. (Yeoh & Chang, 2001; Tan et. al, 2001). A tourism sustainable hub is in our acceptation one which combines and capitalizes the tourism opportunities offered by a group of neighbour cities that targets the tourism as the

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main economic sector and develops its infrastructure in a manner in which makes optimal use of the hub area environmental resources, promotes but also protects its socio-cultural identity and generates economic prosperity.

This paper presupposes that the impact of building a strategic bridge over Danube, near Brăila will emerge a tourism sustainable hub, using several arguments: the existence of a “symbiotic relationship” (Ajagunna et al., 2017), between tourism development and logistic development; as most port cities (Girard, 2013), Brăila, Galați and Măcin have a particular development potential based on their historic urban landscape; the development of the tourism infrastructure in the area will create the conditions to increase the internal and international tourism flow; Galați and Brăila are the last maritime cities on the Danube and the sustainable development of these cities will include them in the maritime and fluvial tourism routes; for tourists, the bridge will be the best road connection between the mountain and hill part of the North and the South East Romanian Regions of Development with the Danube Delta and the Black Sea, and the best option for a short city break accommodation.

This paper aims to be a starting point for the analysis of this investment impact in the region and a support for the local and national authorities in developing an urban tourism policy for this area. It starts with a review (Section 1) of the different theories related with urban sustainable tourism development and the key pillars of it. Section 2 is a description of the methodology used in order to formulate the results from the Sections 3, and to generate the discussions from the Section 4. The results and discussions targets the tourism sustainable development of the urban area of Brăila-Galați-Măcin, starting with the evaluation of the current tourism capacity and ending with the prospects related with future of the urban tourism in the context of the bridge construction. The last section is dedicated to the final conclusions.

## **2. Materials and Methods**

### *2.1. Study Area*

Brăila is a port city located in a high terrace, of over 200,000 inhabitants. Brăila's Centre was built in the late 19th and early 20th century and is declared historic monument, since it contains invaluable architectural buildings situated on streets arranged in the form of concentric semicircles starting and ending at the Danube. The city went through different stages of development. The modern period of the city started with the treaty of Adrianople of 14 September 1829, which put an end to the Russian - Turkish war of 1828-1829 and made possible the return of this fortress from the direct administration of the Ottoman Empire as a *Raya*, to the Romanian territories after 289 years (Pricop, 2006). The status of free trade port gained in 1836 (Ardeleanu, 2008) made possible the development of the harbour and the multiplying of the number of commercial vessels from hundreds to thousands per year. At the end of the 19th century, one third of the all Romanian exports went through this port. Houses of the Jewish, Greek, Bulgarian, Italian or Armenian merchants flourished in the city of the time. The socialist regime installed in 1944 has meant powerful industrialization of the city with thousands of people working in the chemical and machine building industry. These industries gradually disappeared after 1990, and the city life started to depend on public jobs and the foods and incomes seasonal gained from agriculture.

Galați is a port situated in the north of Brăila, at a distance of 22 km, with a population of over 300,000 inhabitants. Similar to Brăila, Galați is the capital city of a county with the same name: Galați County. The city has a strategic position on the Danube, located close to the Romanian border with Moldova and Ukraine. If in Brăila the number of the workers involved in the production of excavators has decreased from 13,000 (before 1990) to around 500 in 2016, in Galați the steel mill still involved around 6,000 workers in 2016 (Romanian

Ministry of Finance), from around 17,000 in 2005 and over 40,000 before 1990, when the Galați Steel Plant was the biggest enterprise in Europa (Anonymous, 2011). Galați has a well-developed economic and cultural life and the migration of the population is not as high as it is in Brăila. Galați has the advantage of belonging to the private and public university network. Even if cruise ships pass through Galați from Vienna to Constanța, the actual tourism infrastructure is not attractive enough for the Danube tourism operators and the tourists spend only several hours in the port area.

Măcin is the smallest city of this triangle, with less than 11,000 inhabitants, situated in the Tulcea County. The town is the only one of the three that is not a county capital. It emerged on an ancient Celtic settlement, Arrubium (Town Hall of Măcin). The mining of granite rocks from the Măcin Mountains has a long tradition in the neighbourhoods of the city. The industrial activity in the town is related to textile and clothing manufacturing. Even if the town and its suburbs have beautiful visiting places of interest, the tourism is almost inexistent, due to the isolation of the city. The daily connection over the Danube with Brăila and Galați is done by ferry and it is often hampered in the winter by the weather conditions.

### 2.2. Data Collection

In this paper we use data related with the bridge construction provided by the (Romanian) National Company for Administration of Road Infrastructure, data related to the tourism evolution for the cities Brăila and Galați, as well as the town of Măcin provided by the (Romanian) National Institute of Statistics. We choose some key years, in order to show the evolution of the main tourist accommodation sector indicators for these cities. The first available data (1990) after the change of the political system in December 1989, the year of Romania's accession to the EU (2007), and the last year of available data (2016).

### 2.3. Methodology

The tourism dynamic can be evaluated using quantitative analysis and quantitative methods. For this study we use basic quantitative analysis, since the tourism flux in the Brăila-Galați-Măcin area has been low in the last decades, well below the potential of the area. The analysis of the socio-economic development of these localities, included in the section Study Area, is in fact a history transposition of these cities to their modern period, including the main changes that affected the life in the harbours.

In this paper we calculated some of the main indicators used for making an image of tourism market (Manole et al., 2012):

#### Index of global demand variation:

$$IGD_{0-i} = \frac{GTD_i}{GTD_0} * 100,$$

where:

(1)

$IGD_{0-i}$  = index of the global demand variation from 0 to i;

$GTD_i$  = global tourism demand of the year i;

$GTD_0$  = global tourism demand of the year 0.

#### The average number of overnight stays:

$$ANOS = \frac{\sum TD}{\sum T},$$

where:

(2)

$ANOS$  = the average number of overnight stays;

$\sum TD$  = total tourism days;

$\sum T$  = total number of tourists.

The paper proposes also a quantitative analysis, in order to evaluate the effect of shorten the distances between the cities by bridge construction, in which we applied a distance matrix

between the main cities that gain from the bridge construction, made for the actual distances and for the future distances.

### 3. Results

The tourist accommodation sector has developed differently in these cities. The trend was positive in Galați and Brăila, while Măcin paid the cost of isolation, and the only tourist accommodation establishment can be found in the rural area, at least 10 km away from the city.

If we look at the distribution by type of accommodation (Table no. 1), the hotels and similar accommodations are the most numerous.

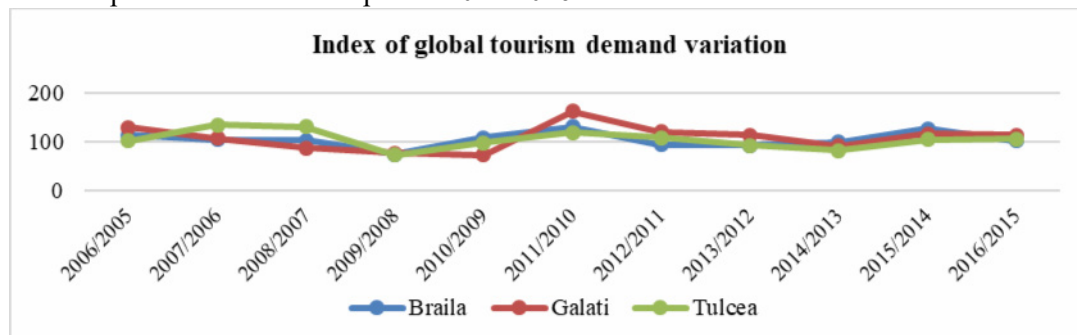
The official statistic is not including the apartments, furnished and used by locals as guest apartments and listed on tourism specialized web sites, but for which no documentation for tourism classification has been submitted by the owners. This type of accommodation was highly developed in the last years, especially in Galați.

**Table no. 1 The evolution of the tourist accommodation units**

Types of tourist accommodation	Brăila			Galați			Măcin		
	1990	2007	2016	1990	2007	2016	1997	2007	2016
<b>Total</b>	<b>24</b>	<b>30</b>	<b>30</b>	<b>12</b>	<b>19</b>	<b>30</b>	<b>2</b>	-	-
Hotels	11	13	16	7	9	13	1	-	-
Hostels	-	-	1	-	1	4	-	-	-
Guest apartments	-	-	1	-	-	-	-	-	-
Inns	2	-	-	-	-	-	-	-	-
Motels	-	2	1	-	-	1	-	-	-
Villas	9	1	2	2	8	5	-	-	-
Chalets	-	-	-	1	-	-	-	-	-
Campings	2	-	-	2	-	-	1	-	-
Tourist stops	-	1	1	-	-	-	-	-	-
Tourist cottages	-	1	-	-	-	1	-	-	-
Camps for schoolchildren and preschoolers	-	1	1	-	1	-	-	-	-
Tourist boarding houses	-	1	7	-	-	6	-	-	-

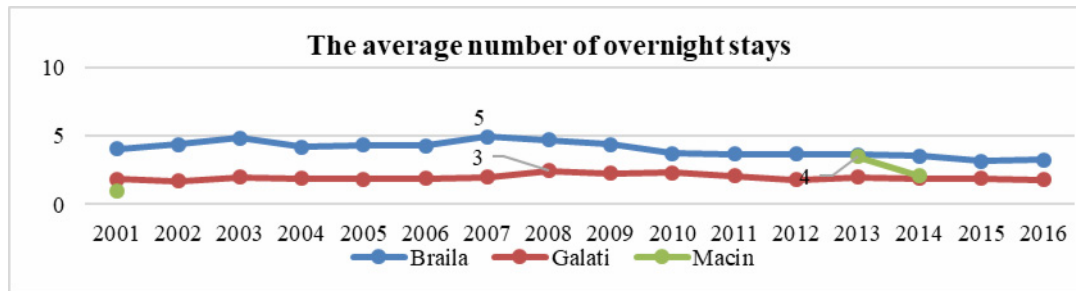
Source: INSS Romania

The index of global tourism demand variation (fig. no. 1) was calculated at county level and shows a positive trend for the period 2014-2016.



**Fig. no. 1 The evolution of the global tourism demand variation in Brăila, Galați and Tulcea in the interval 2005-2016**

Source: Author's own calculation, based on INNSE's data



**Fig. no. 2 The average number of overnight stays in Brăila, Galați and Măcin for the period 2001-2016**

Source: Author's own calculation, based on INNSE's data

For Brăila and Galați the index of global tourism demand change reached the highest values in 2011, as compared with 2010, of 130 %, respectively 162 %.

Brăila is the city which offers the best options for long accommodations and is suitable for holidays, while Galați seems to be a good option as a transit city (fig. no. 2).

By performing a distance matrix, before (table no. 2) and after the construction of the bridge (table no. 3) we could highlight that the bridge will considerably shorten the distances between the cities advantaged by the bridge construction.

**Table no. 2 Distance matrix, without building the bridge (avoiding transport by ferry)**

	Iași	Botoșani	Suceava	Vaslui	Piatra Neamț	Bacău	Brăila	Galați
Tulcea	447	528	531	382	442	380	197	227
Constanța	452	541	535	387	446	384	202	221
Măcin	439	520	523	374	433	372	189	218

Source: Google Maps, Suggested routes

**Table no. 3 Distance matrix with bridge construction**

	Iași	Botoșani	Suceava	Vaslui	Piatra Neamț	Bacău	Brăila	Galați
Tulcea	303	412	415	238	326	264	95	109
Constanța	416	536	522	358	434	379	190	202
Măcin	254	367	362	189	272	210	20	32

Source: Google Maps, Suggested routes

#### 4. Discussions

##### *What does the construction of the bridge over the Danube mean?*

The bridge will considerably shorten the distances between the cities situated on the left and right side of the Danube, as long as most of the people avoid using the ferry and prefer to follow detour roads to cross the Danube on the Cernavodă Bridge, the only Romanian bridge over the Danube in the Eastern part of the country. As it can be seen in the Table no. 2 and no. 3, Tulcea will considerably gain, by shortening of all its road connection with the cities situated in the North East Region of Development.

The bridge will also increase the tourism traffic from the mountain areas of Romania to the Black Sea during the summer, and the tourism traffic from the cities situated near the Black Sea to the mountain areas in the summer. The Brăila-Galați-Măcin area will be a perfect option for a short term rest as long as these cities are located in the middle distance between these tourism attraction centres.

The harbour area can be the main attraction for this tourism hub. The Danube Esplanade is a generous promenade for the inhabitants of Brăila and Galați, as well as for the passing

tourists who wish to admire the Danube River. Along the Esplanade in both cities there are food and drink terraces and in proximity were built modern hotels. Măcin is situated on an ancient branch of Danube, and its harbour lays on the foot of the hill where the city is spread. The connection of this city with the new bridge will be made by means of a modern road, which is included in the bridge project budget. The construction of the bridge will develop the tourism river cruise and boat tour on the Danube from Brăila and Galați to Măcin. The area Brăila-Galați-Măcin has also a great potential for tourism fishing: the Danube, Siret and Prut rivers and Brates Lake provide the main fishing spots.

The Brăila Danube Bridge will be the third bridge over the Danube in Romania, with a length of 1.97 km, a height of 47m and a maritime clearing of 38 m. This bridge, which will be built by an Italian-Japanese joint venture, is estimated to be the biggest infrastructure project which Romania has seen in the last 3 decades, of a EUR 435 million, EU-approved budget. The bridge is also estimated to have a span of 1.1 km., the 5th longest span in Europe. The length of the project is about 23.413 km and includes a main road Brăila – Jijila (a village situated on the same side of the Danube as Măcin – fig. no. 3) of approximate 19 km and a connection road with the route between Smârdan and Măcin of about 4.3 km.

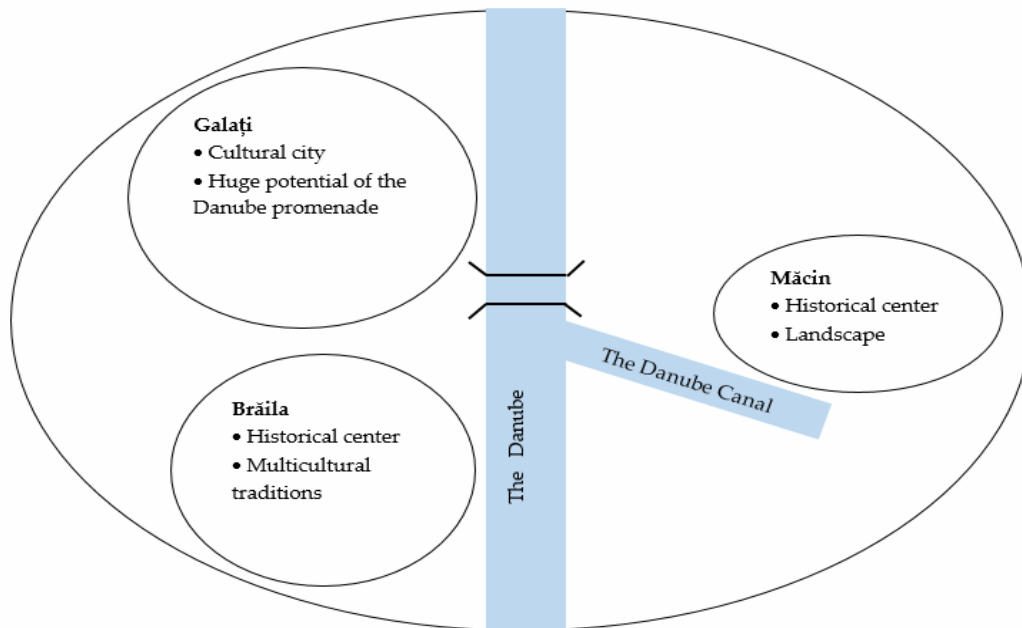


**Fig.no. 3 The area Brăila-Galați-Măcin**

*Source: Google Maps*

### ***How it can be created a sustainable tourism hub in the urban area of Brăila-Galați-Măcin?***

This tourism hub can be created only by developing an overall strategy for all whole area. The local authorities of these cities must develop a common strategy that should be implemented simultaneously in these cities and in the surrounding area. Since the tourism of this area is not enough developed at this moment, the bridge construction will not be enough to lead to tourism sector growth in the region.



**Fig. no. 4 The main strengths for the cities Brăila, Galați, Măcin in creating a sustainable hub**

*Source: Author's own picture*

While Brăila and Galați have the capacity to increase the tourism capacities by a certain degree, in the case of Măcin the granting of governmental and local facilities for developing SMEs sector related with tourism is a must.

The strategy should include, besides the development objectives for the tourism infrastructure, a plan with the main existing and future tourist attractions, which are to be allocated a local budget and attract extra funding sources. The strategy should target the development of tourism around the main strengths of each city. (fig. no. 4)

Fundamental for this strategy is to develop the major tourist routes for which operators can promote tourist packages for short and long stays. The strategy should also consider the tourism potential of neighbouring area, which is essential for long-time accommodations, in which the tourists' options should be variate: the spa resort Salt Lake, famous for the salt therapeutic potential of water and sludge, located at approximately 5 km from Brăila; the Small Pond Natural Park of Brăila, rich in landscapes and bird species; the Lake Brateș, the largest meadow lake in Romania, the Buciumeni Forest, situated north of Galați, which is one of the most beautiful beech forests in the hilly area, containing secular specimens; the Măcin Mountain, one of the oldest mountains in Romania and a nesting place for many birds species.

### Conclusions

The Danube crossing in the area Brăila – Galați – Măcin is possible nowadays only by ferry. This aspect generates major disadvantages for the area's inhabitants who have the jobs on the other side of the river and also economic losses. In this context the Măcin city was isolated and its social and economic development stagnated. The Măcin area which provide a beautiful environment can't be valorised in this context. A study of the area indicates that the cities situated in the bridge area have a great touristic potential and an adequate strategy, adopted by the local authorities can lead to significant increase of the tourism flux. Each of the analysed cities have particularities that can attract different categories of national and international tourists.

The socio-cultural environment, based on a multi-ethnic tradition, is favourable for the tourism development, while the funds needed for a sustainable approach can be attracted through projects funded within local, national and EU supporting programs.

The number of the accommodation units is low in the present and the local authorities should offer financial facilities for the investors, in order to increase the SMEs number in the tourism services.

The bridge construction will significantly reduce the distances between the main cities from the North - East Region and the cities situated in the South - East Region, near Danube and Black Sea. The bridge is only a part of the infrastructure that needs to be created in the region for creating a tourism significant flux.

Also, the bridge construction will create new jobs in the area but the environmental issues have to be in the centre of concern for the local authorities. Considering the human resources and the level of tourism knowledge which is appreciable in this area, a fact illustrated by the impressions shared by the tourists who used the local tourist accommodation units of Brăila and Galați, a competitive tourism microenvironment of this hub needs to be created and the new tourism product must be promoted within the internal and international macroenvironment, involving all the stakeholders of the public and private sectors which can contribute to this aim.

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