

# Coastal Tourism, Part of the Maritime Local Spatial Planning, and Its Impact on the Development of Constanta County

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**ABSTRACT.** Competition for maritime space highlighted the need for its effective management in order to avoid potential conflicts and trigger synergies between different activities. Comprehensive approach to spatial development requires that all stakeholders influence the spatial development of a specific territory - natural factors, investment activities, social behaviors, as well as public policies in various fields. In this paper we propose to analyze the impact of seaside tourism on the turnover and investments in Constanta county, analyzing evolutions of these indicators and possibility of a link between their performances. A link between these indicators is a starting point in achieving a cohesive public policy in different areas regarding the optimal allocation of resources in order to avoid impacts that oppose to the territorial desired spatial evolution.

**KEYWORDS.** Spatial development; tourism; investments; turnover.

## I. INTRODUCTION

Competition for maritime space – for renewable energy equipment, aquaculture and other uses – has highlighted the need to manage our waters more coherently. Maritime spatial planning (MSP) works across borders and sectors to ensure that human activities at sea take place in an efficient, safe and sustainable way.

What are the benefits of maritime spatial planning [1]?

- Reduce conflicts between sectors and create synergies between different activities.
- Encourage investment – by creating predictability, transparency and clearer rules.
- Increase cross-border cooperation – between EU countries to develop energy grids, shipping lanes, pipelines, submarine cables and other activities, but also to develop coherent networks of protected areas.
- Protect the environment – through early identification of impact and opportunities for multiple use of space.

Competition for maritime space highlighted the need for its effective management in order to avoid potential conflicts and trigger synergies between different activities.

Comprehensive approach to spatial development requires that all stakeholders influence the spatial development of a specific territory - natural factors, investment activities, social behaviors, as well as public policies in various fields.

In this paper we propose to analyze the impact of seaside tourism on the turnover and investments in Constanta county, analyzing evolutions of these indicators and possibility of a link between their performances.

A link between these indicators is a starting point in achieving a cohesive public policy in different areas regarding the optimal allocation of resources in order to avoid impacts that oppose to the territorial desired spatial evolution.

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## II. THE EVOLUTION OF THE ANALYZED INDICATORS

Next, we present the evolution of the three indicators analyzed [2] - number of tourists, turnover and gross investments in Constanta County (Table I).

Table I

ANALYZED INDICATORS BETWEEN 2003-2015.

Year	Arrivals (no.pers)	Investments (Mil.)	Turnover (Mil.)
2003	788763	2509	16155
2004	845478	3211	21303
2005	821349	3446	25160
2006	806858	4547	28698
2007	926204	4787	33924
2008	977975	5826	46222
2009	897677	4079	38916
2010	803096	6142	43051
2011	844802	5825	47660
2012	953008	4648	56129
2013	859634	6130	51702
2014	883947	4480	50768
2015	1021475	4467	50452

The number of tourists registered an increase over the period under review, gross investments as well increased but had large fluctuations from year to year. Of the three indicators, the turnover had the most spectacular growth, showing a development of the business environment in the county.

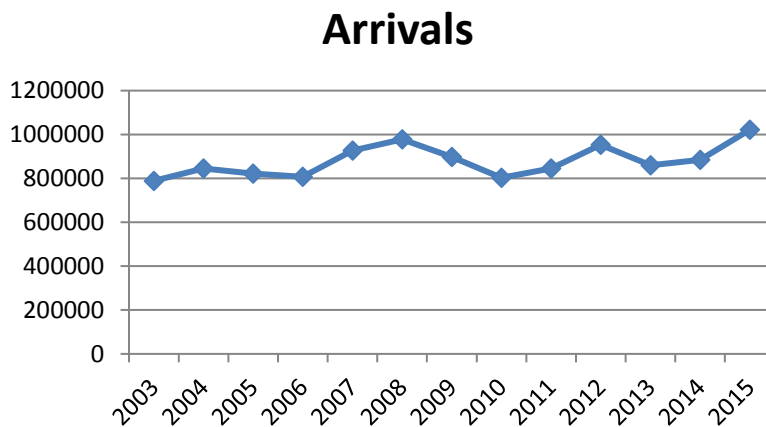


Fig. 1. Arrivals' evolution during 2003-2015.

## Investments

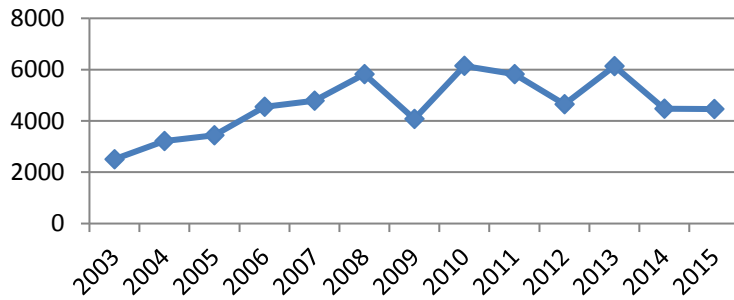


Fig. 2. Investments' evolution during 2003-2015.

## Turnover

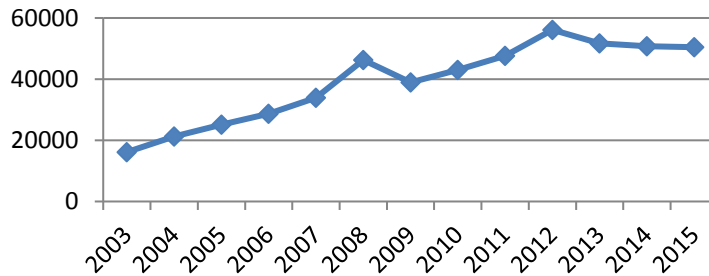


Fig. 3. Turnover's evolution during 2003-2015.

### III. STATISTICAL ANALYSIS OF INDICATORS

In this respect, we analyzed the existence of a linear relationship between the Turnover and No. of tourists, respectively between investments and the number of tourists.

For this we first checked the normality of the variables [3].

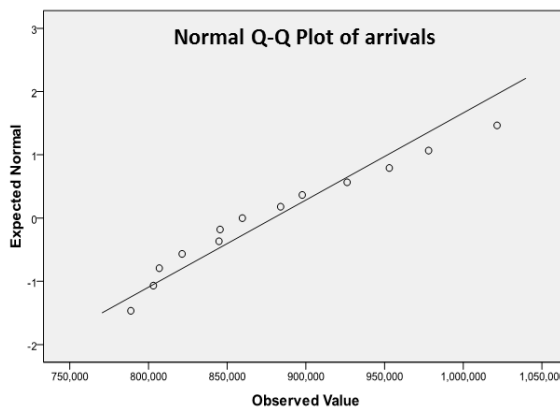


Fig. 4. Arrivals' distribution.

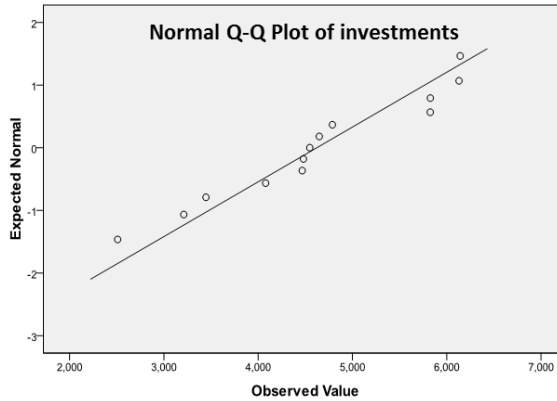


Fig. 5. Investments' distribution.

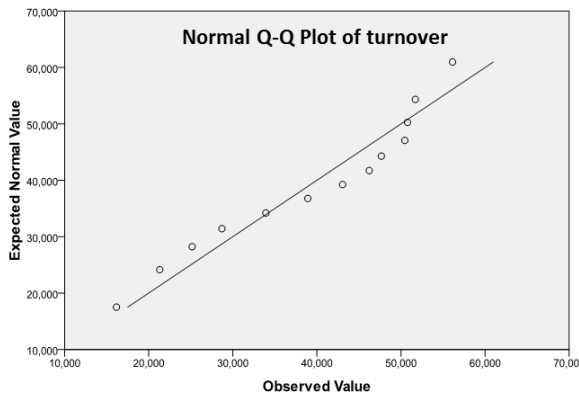


Fig. 6. Turnover's distribution.

At first sight, analyzing the graphs, the variables appear to be Normally Distributed.

To strengthen this statement, we applied the Shapiro-Wilks test (because the sample size is small, <50) (Table II). The significance level is  $> 0.05$ , so we can conclude that the normality hypothesis is not rejected for all three variables.

The level of significance for the turnover is 0.307, for Gross Investments - 0.413, and for the number of tourists 0.457.

Table II

TESTS OF NORMALITY

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
<b>Turnover</b>	.166	13	.200*	.927	13	.307
<b>Investments</b>	.161	13	.200*	.936	13	.413
<b>Arrivals</b>	.145	13	.200*	.940	13	.457

a. Lilliefors Significance Correction

\*. This is a lower bound of the true significance.

We further analyze the existence of a linear relationship between the variables.

First, we studied the relationship between Turnover and Number of tourists (Table III).

The PEARSON linear correlation coefficient is 0.599, so the variables are correlated positively, the correlation being strong. Spearman's nonparametric correlation coefficient is also significant, revealing a positive correlation (0.571).

Table III

CORRELATIONS BETWEEN TURNOVER AND ARRIVALS

			<b>Turnover</b>	<b>Arrivals</b>
<b>Turnover</b>		Pearson Correlation	1	.599*
		Sig. (2-tailed)		.031
		N	13	13
<b>Arrivals</b>		Pearson Correlation	.599*	1
		Sig. (2-tailed)	.031	
		N	13	13
<b>Kendall's tau_b</b>	<b>Turnover</b>	Correlation Coefficient	1.000	.385
		Sig. (2-tailed)	.	.067
		N	13	13
	<b>Arrivals</b>	Correlation Coefficient	.385	1.000
		Sig. (2-tailed)	.067	.
		N	13	13
<b>Spearman's rho</b>	<b>Turnover</b>	Correlation Coefficient	1.000	.571*
		Sig. (2-tailed)	.	.041
		N	13	13
	<b>Arrivals</b>	Correlation Coefficient	.571*	1.000
		Sig. (2-tailed)	.041	.
		N	13	13

\*. Correlation is significant at the 0.05 level (2-tailed).

Next, we investigate the existence of a relationship between the value of the investments and the number of tourists (Table IV). The Pearson correlation coefficient is 0.222, the Kendall correlation coefficient is 0.103, and the Spearman correlation coefficient is 0.154.

We can conclude that there is no strong correlation between the value of gross investments and the number of tourists.

#### IV. CONCLUSIONS

In this paper we wanted to see if the tourism activity in the constant county expressed by the number of arrived tourists had an impact on the turnover and the gross investments on the whole sector. As observed, between the number of tourists and the turnover there is a positive correlation, but there is no significant correlation between the number of tourists and the gross investments, which means that the increase in number of tourists was not reflected in the increase of the gross investments in Constanta.

Intelligent use of the resources of an area involves major investments including for marine spatial planning, geological research, exploitation conditions, technological endowment, economic efficiency in the use of resources, environmental protection.

Table IV

CORRELATIONS BETWEEN INVESTMENTS AND ARRIVALS

			<b>Investments</b>	<b>Arrivals</b>
<b>Investments</b>		Pearson Correlation	1	.222
		Sig. (2-tailed)		.466
		N	13	13
<b>Arrivals</b>		Pearson Correlation	.222	1
		Sig. (2-tailed)	.466	
		N	13	13
<b>Kendall's tau_b</b>	Investments	Correlation Coefficient	1.000	.103
		Sig. (2-tailed)	.	.625
		N	13	13
	Arrivals	Correlation Coefficient	.103	1.000
		Sig. (2-tailed)	.625	.
		N	13	13
<b>Spearman's rho</b>	Investments	Correlation Coefficient	1.000	.154
		Sig. (2-tailed)	.	.616
		N	13	13
	Arrivals	Correlation Coefficient	.154	1.000
		Sig. (2-tailed)	.616	.
		N	13	13

Policies aimed at achieving sustainable spatial development have to fulfill a number of different tasks, such as supporting balanced polycentric development, protecting and improving the natural environment, striking a balance between preserving existing natural heritage, attracting new investment, and supporting existing communities living and work in urban and rural areas and increase the participation of the population in the spatial development approach [4].

Cities need to promote their competitiveness and image in order to be able to perform functions with high added economic value and to attract investment.

Territorial resources must be used efficiently and effectively, with a positive impact on the development of the county as a whole.

A link between these indicator - arrivals, investments, and turnover, is a starting point in achieving a cohesive public policy in different areas regarding the optimal allocation of resources in order to avoid impacts that oppose to the territorial desired spatial evolution.

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 [2] <http://statistici.insse.ro/shop/>

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