

## Supplementary Material

### Addressing the phenomenon of overtourism in Budapest from multiple angles using unconventional methodologies and data

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**Table S1.** Tourism density and intensity in Budapest and its districts, 2019. Source: HCSO, calculations by authors.

Region	Bed-nights	Estimated area (km2)	Estimated number of residents	Tourism density (Bed-nights/km2)	Tourism intensity (Bed-nights/resident)
<b>Budapest</b>	<b>14,055,480</b>	<b>525.14</b>	<b>1,751,251</b>	<b>26,765.2</b>	<b>8.0</b>
District I	837,986	3.41	25,181	245,743.7	33.3
District II	443,508	36.34	89,520	12,204.4	5.0
District III	332,614	39.7	130,809	8,378.2	2.5
District IV	241,339	18.82	99,854	12,823.5	2.4
District V	2,688,192	2.59	25,975	1,037,912.0	103.5
District VI	2,050,451	2.38	38,670	861,534.0	53.0
District VII	2,758,598	2.09	51,896	1,319,903.3	53.2
District VIII	1,240,092	6.85	76,784	181,035.3	16.2
District IX	928,597	12.53	59,950	74,109.9	15.5
District X	211,707	32.49	77,897	6,516.1	2.7
District XI	602,234	33.49	148,496	17,982.5	4.1
District XII	228,391	26.67	57,640	8,563.6	4.0
District XIII	823,157	13.44	121,970	61,246.8	6.7
District XIV	448,278	18.13	124,199	24,725.8	3.6
District XV	25,501	26.94	79,354	946.6	0.3
District XVI	14,357	33.51	74,604	428.4	0.2
District XVII	3,579	54.82	87,530	65.3	0.0
District XVIII	21,282	38.6	102,280	551.3	0.2
District XIX	50,626	9.38	59,514	5,397.2	0.9
District XX	31,631	12.19	65,079	2,594.8	0.5
District XXI	13,637	25.75	75,790	529.6	0.2
District XXII	12,559	34.25	55,353	366.7	0.2
District XXIII	47,164	40.77	22,906	1,156.8	2.1
Descriptive statistics:			Minimum	65.3	0.0
			Average	168,900.7	13.5
			Maximum	1,319,903.3	103.5
			Range	1,319,838.0	103.5

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## Questionnaire S1: Survey for experts.

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Kedves Kollégák!

A Tématerületi Kiválósági Programunk (TKP) egyik alprojektjéhez kérünk szépen egy 5 perces közreműködést. Mindössze annyi lenne a teendő, hogy a mellékelt, 4 kérdésből álló szakértői kérdőívben minimum, közép és maximum értékekre vonatkoztatva becsléseket adjatok. Megnyitás és kitöltés után egyszerűen mentsétek el és mellékletként küldjétek nekem postafordultával vissza. Természetesen az eredményeket teljes mértékben összesítetten, anonim módon közöljük.

Előre is Köszönöm.

Dear colleagues!

For one of the sub-projects of our Thematic Program of Excellence (TKP), we kindly ask for a 5-minute contribution. All you need to do is provide estimates for the minimum, central and maximum value of the 4 attached questions. After opening and filling it out, save it and send it back to me as an attachment. Of course, the results are reported in an aggregated, anonymous manner.

Thank you in advance.

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## Survey

Based on a survey conducted in 2017 in District VII (see) [1] the **main motivations for visiting Budapest** were visiting...

- Cultural and heritage attractions. **42.7%** of respondents chose this option
- Ruin pubs. **31.0%** of respondents chose this option
- Thermal baths and spas. **29.3%** of respondents chose this option
- Cheap bars and pubs. **29.1%** of respondents chose this option

## Questions

**Question 1.** Considering the previous survey [1], the option **cultural and heritage attractions** was selected by **42.7%** of respondents. In your opinion, what approximate range of values may be associated with the following types of tourists? Example: Min: 0.35, Center: 0.4, Max: 0.45.

	Minimum	Center	Maximum
Tourists staying in commercial accommodation - hotels			
Tourists staying in commercial accommodation (excluding hotels)			
Tourists staying in private accommodation			

**Question 2.** Considering again the previous survey [1], the option **thermal baths and spas** was selected by **23.9%** of respondents. In your opinion, what approximate range of values may be associated with the following types of tourists?

	Minimum	Center	Maximum
Tourists staying in commercial accommodation - hotels			
Tourists staying in commercial accommodation (excluding hotels)			
Tourists staying in private accommodation			

**Question 3.** According to the information collected from the HCSO, the estimated amount of waste generated by a single resident in Budapest during 2019 was **0.75 kg/per day**. In your opinion, what approximate range of values may be associated with the following types of tourists?

	Minimum	Center	Maximum
Tourists staying in commercial accommodation - hotels			
Tourists staying in commercial accommodation (excluding hotels)			
Tourists staying in private accommodation			

**Question 4.** According to the information provided by BKV Zrt., in Budapest (2019), the estimated daily maximum capacity of buses, trams, trolleybuses and the metro was **3,898,800 persons/day**. In your opinion, and based on this value, what would the ideal range of public transportation that is dedicated to tourists be from a sustainability perspective? Please provide your values in percentage form.

	Minimum	Center	Maximum
All types of tourists			

## References

1. Pinke-Sziva, I.; Smith, M.; Olt, G.; Berezvai, Z. Overtourism and the Night-Time Economy: A Case Study of Budapest. *Int. J. Tour. Cities* **2019**, *5*, 1–16, doi:10.1108/IJTC-04-2018-0028.