

Exploratory Analysis of Hotel Booking and Marketing Data

Analysis and presentation: Roland Nagy

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01. Goals

01. Goals



Processing and analysis of marketing and booking data from **MORGENS** for various hotels, with a view to optimising hotel booking opportunities.

01. Goals



Interpreting results:

The observation presented is generally true for all three hotels, if no further separation is made

02. Analysis results

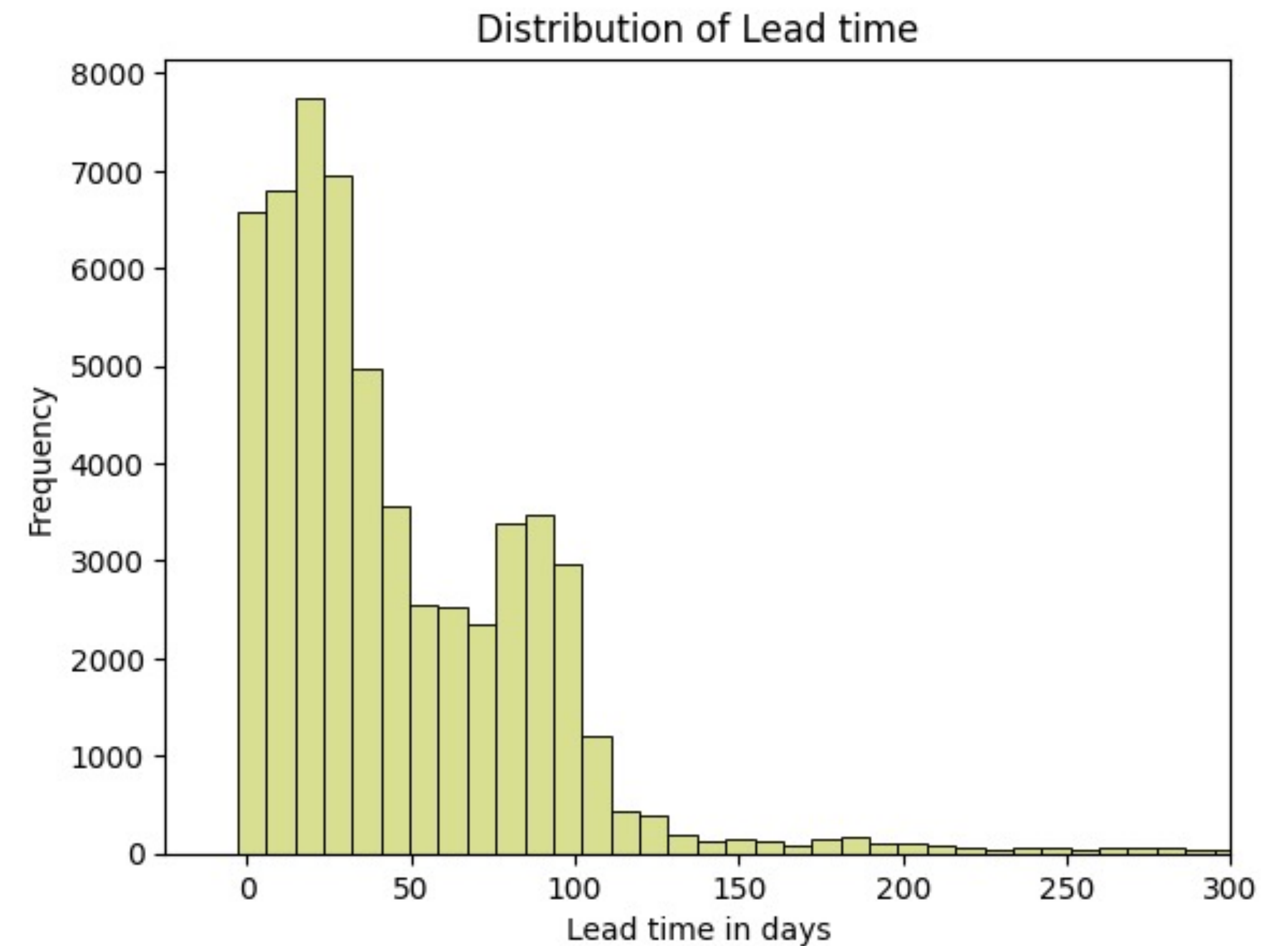
02. Funnel analysis

- Normal funnel behaviour for each hotel
- The worst final conversion is for Hotel 3



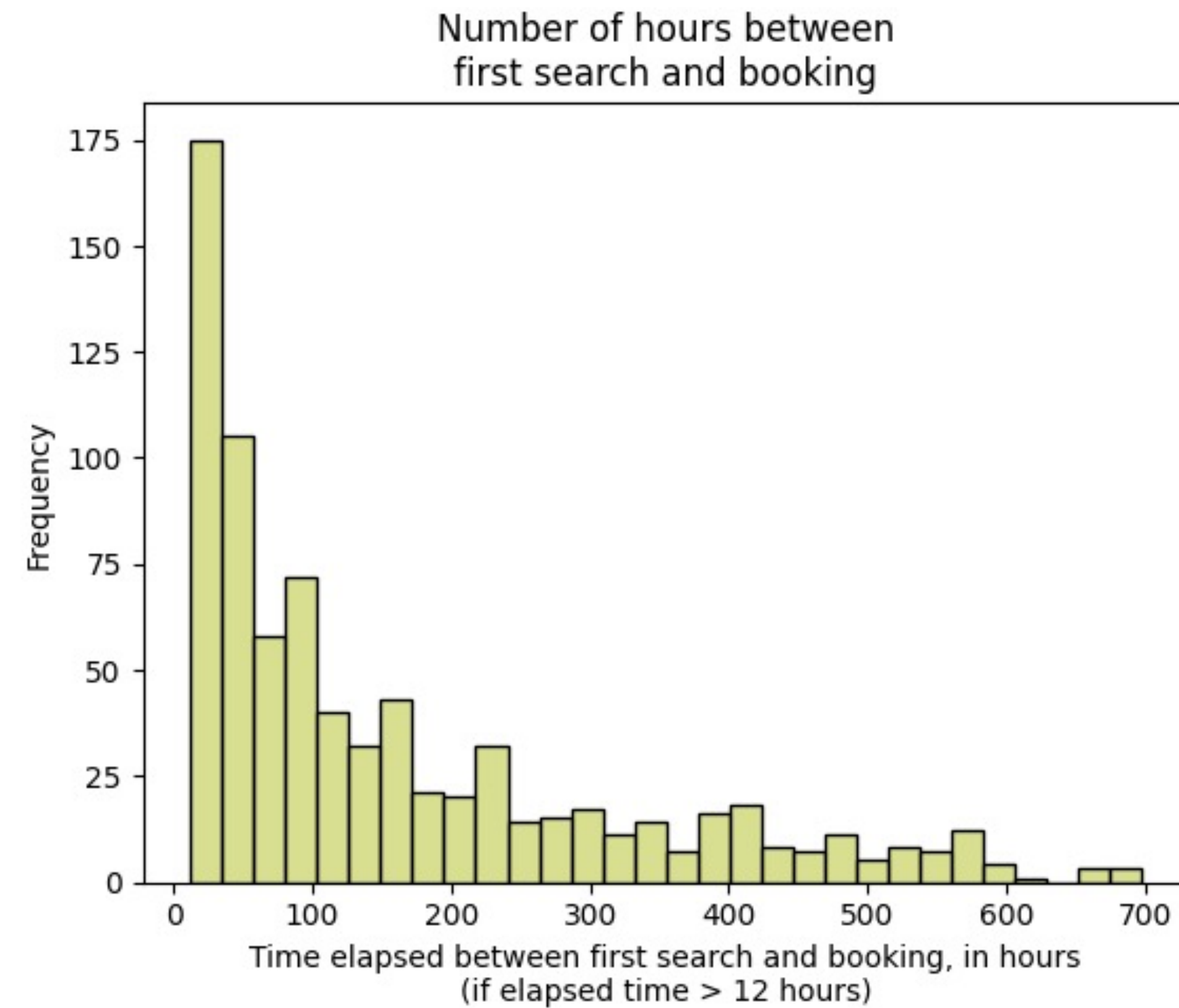
02. Search trends

- On average, bookings are made up to 100 days in advance.
- Arrivals most often fall on Thursday or Friday.
- Longer vacations are booked earlier.

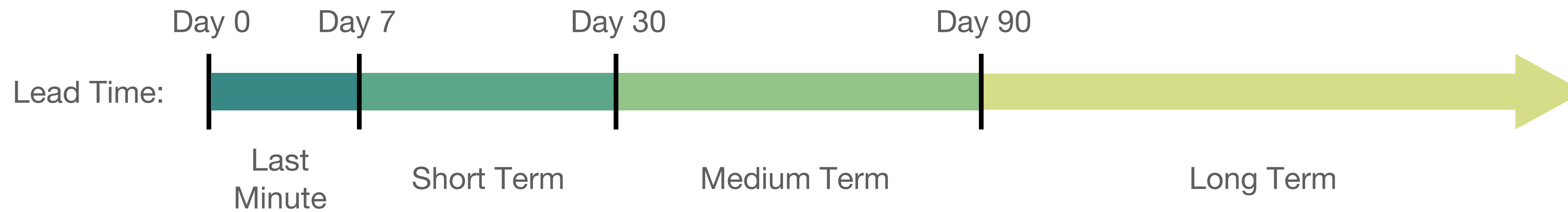


02. Search trends

- Many users return to the booking site days later to finalize their reservations.

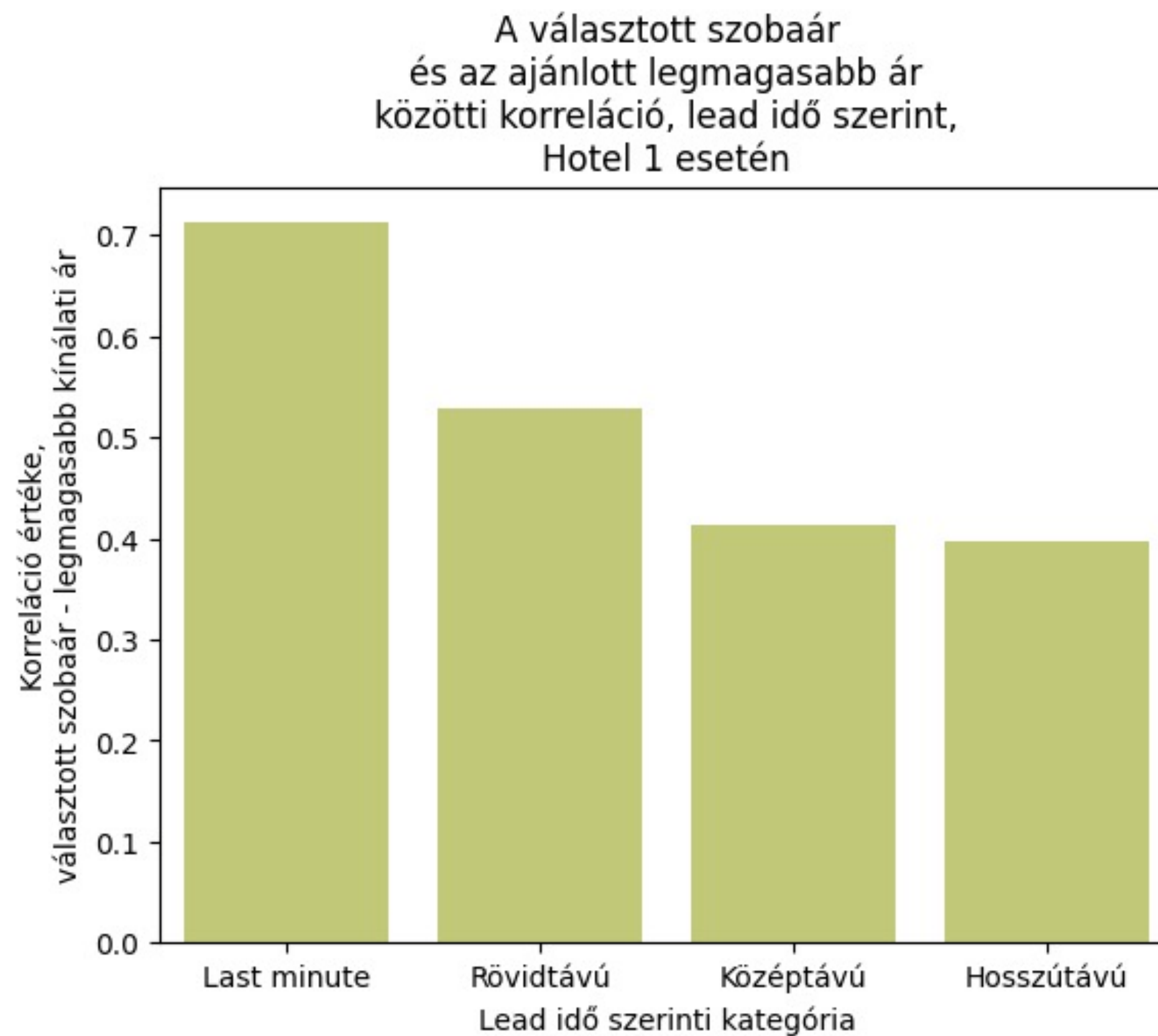


02. Lead Time-Based Segmentation



02. Lead Time-Based Segmentation

- Correlation of the selected room price with the highest available price
- For hotel 1, book first for low rates with long lead times



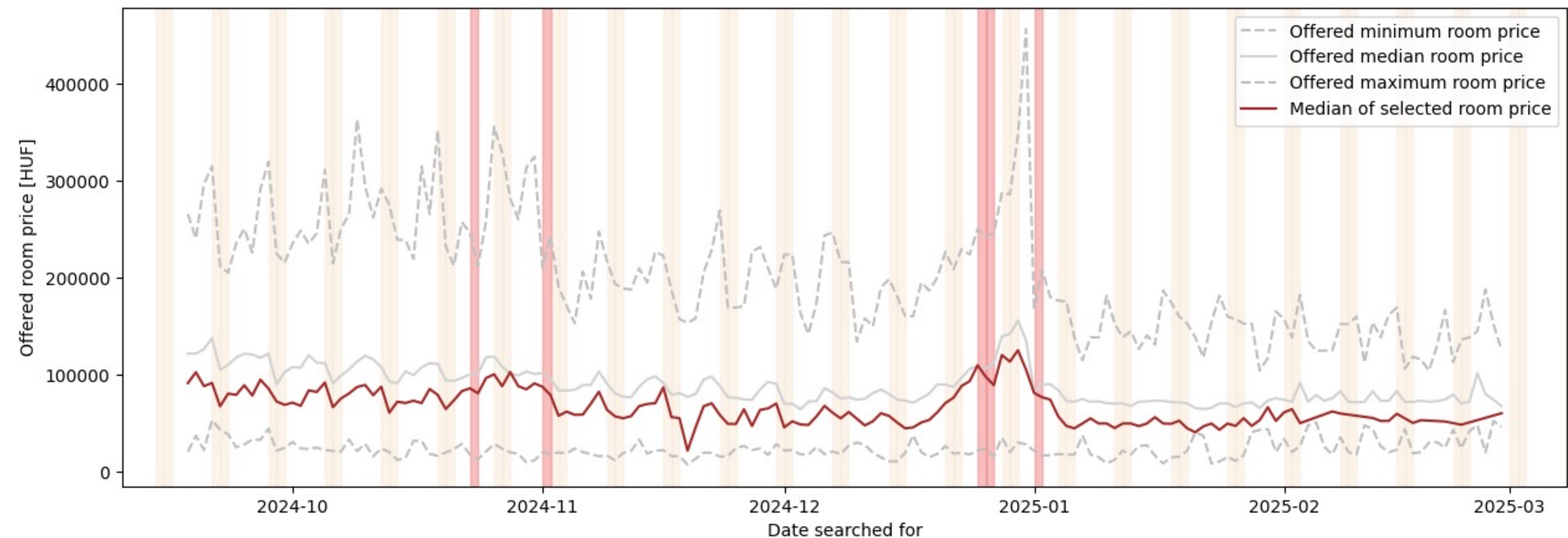
02. Lead Time-Based Segmentation

- The longer the booking period, the earlier the reservation is made.
- Last-minute bookings have a low probability of including children.
 - Families with children generally book earlier.
- Conversion rates improve the earlier a booking is made.
 - Last minute keresés esetén a legrosszabb

Hotel ID	Lead time category	Number of nights	Probability of having a child	Average conversion [%]
Hotel 1	Last minute	2,0	0,2	6
	Short term	2,5	0,4	5
	Medium term	2,5	0,4	8
	Long term	2,9	0,4	13
Hotel 2	Last minute	1,7	0,2	4
	Short term	2,4	0,4	5
	Medium term	2,6	0,3	9
	Long term	2,9	0,3	8
Hotel 3	Last minute	1,9	0,1	2
	Short term	2,4	0,3	4
	Medium term	2,6	0,2	6
	Long term	2,8	0,2	8

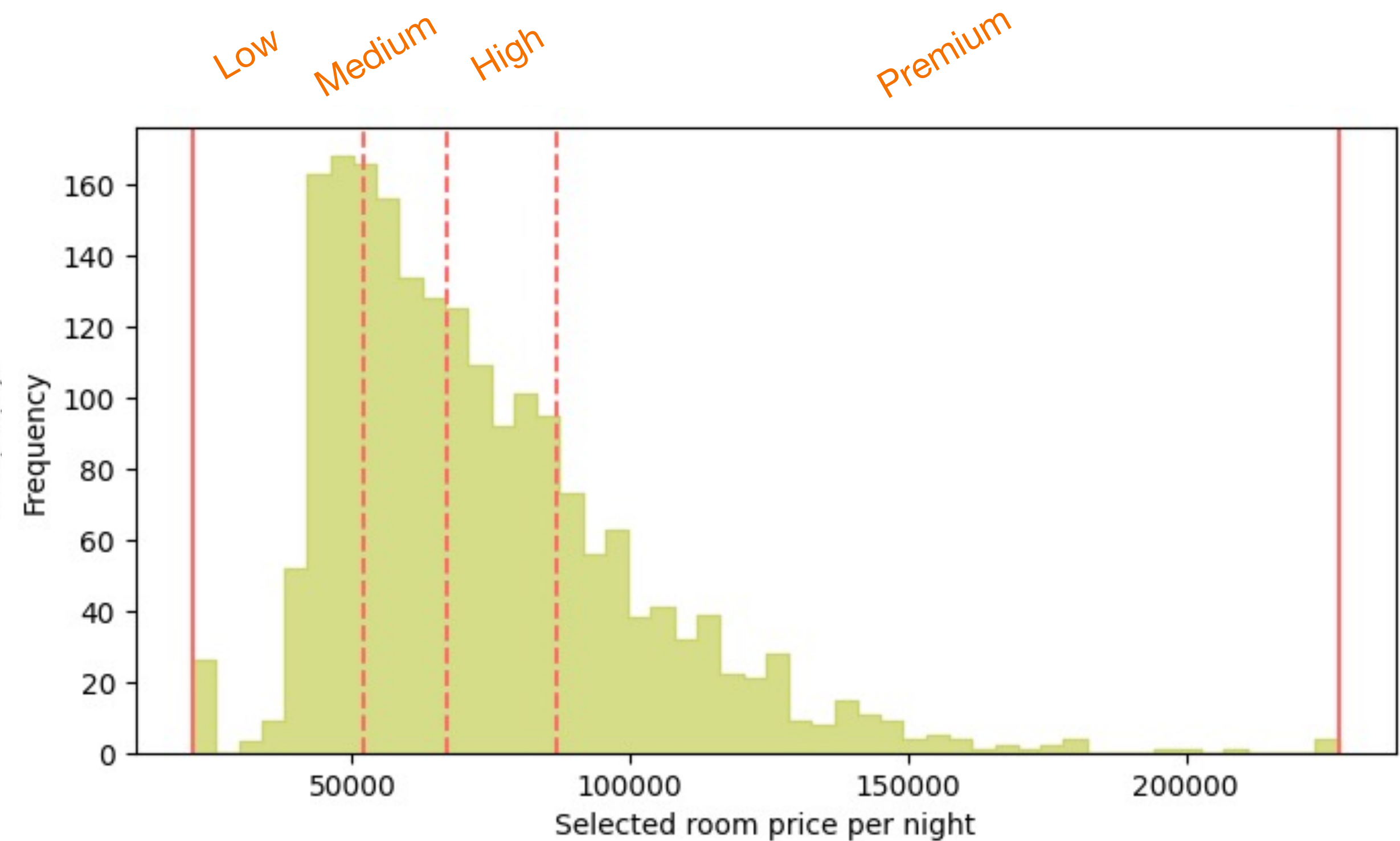
02. Choice between offers

- The median price per night of the selected room is usually lower than the median offer price
- What influences the booking price and the choice between offers?



02. Monetary segmentation

- Monetary segmentation:
 - Selected based on average room price per night:
 - By quartile, into 4 parts

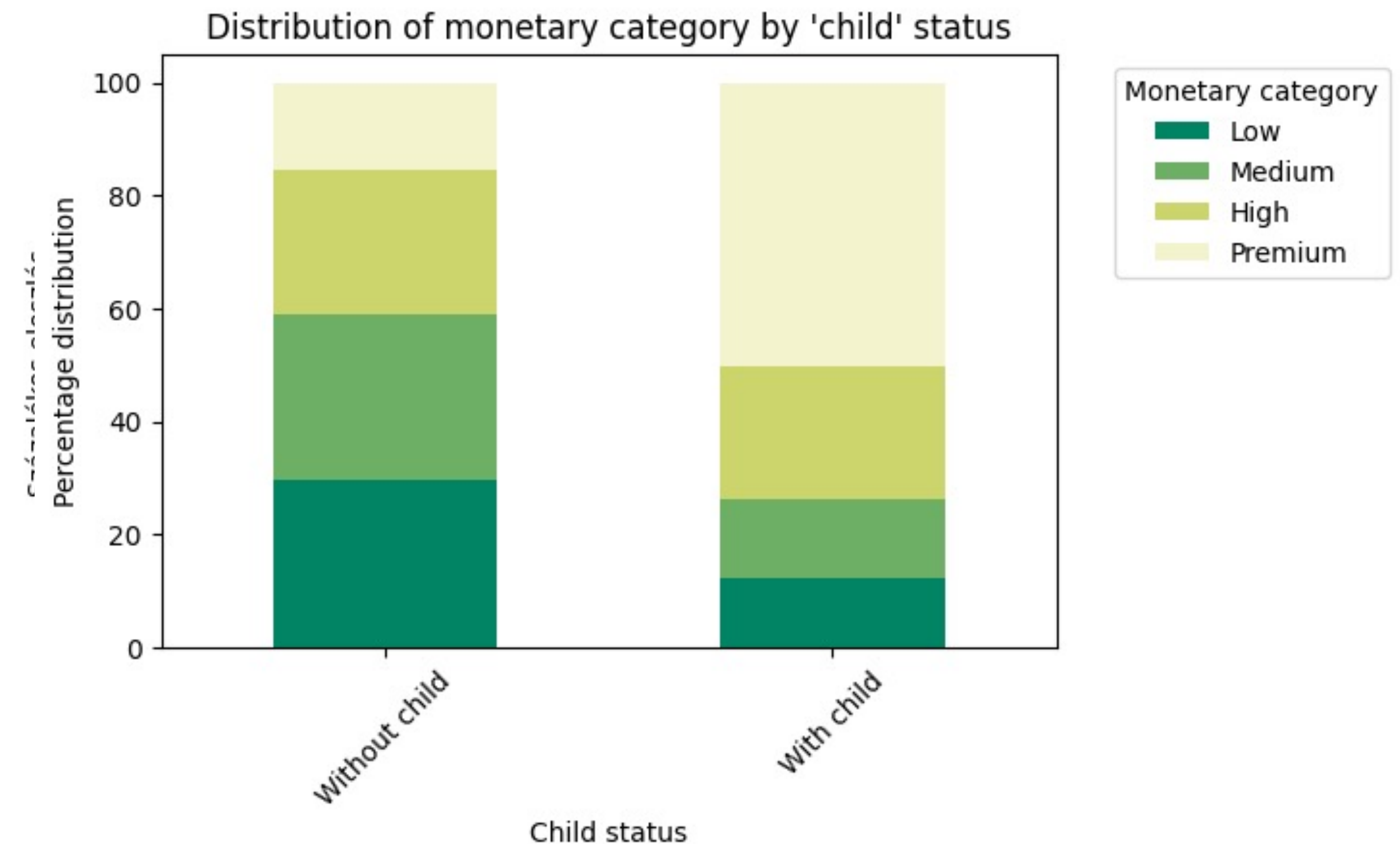


02. Monetary segmentation

- The monetary category of the reservation depends mainly on the number of children
 - If you have at least 1 child, the chances of choosing a room in the top category increase significantly
 - This is a common phenomenon, but mostly for hotel 1

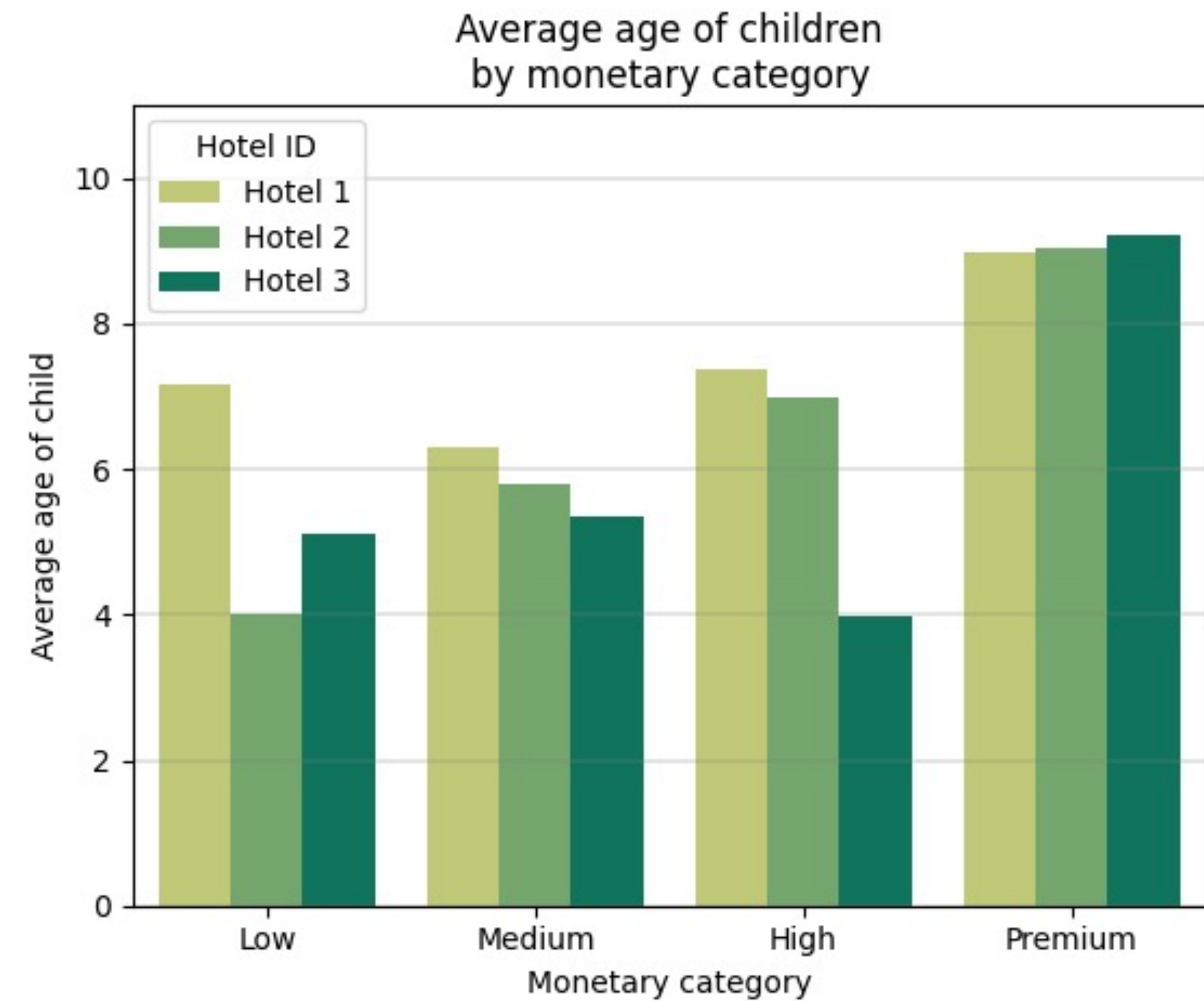


Children make the difference when booking



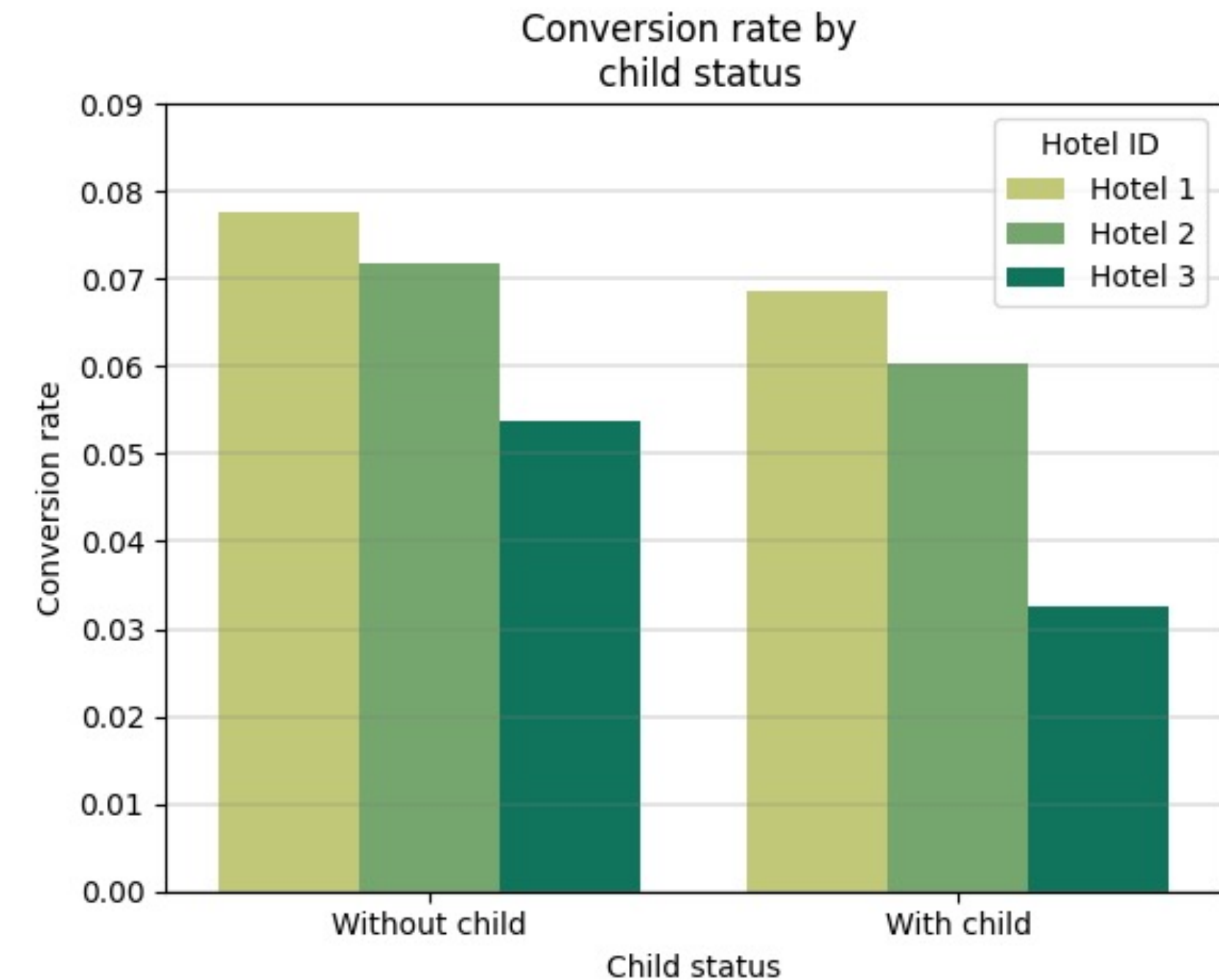
02. Bookings with children

- The older the child, the more likely a high-value booking is.



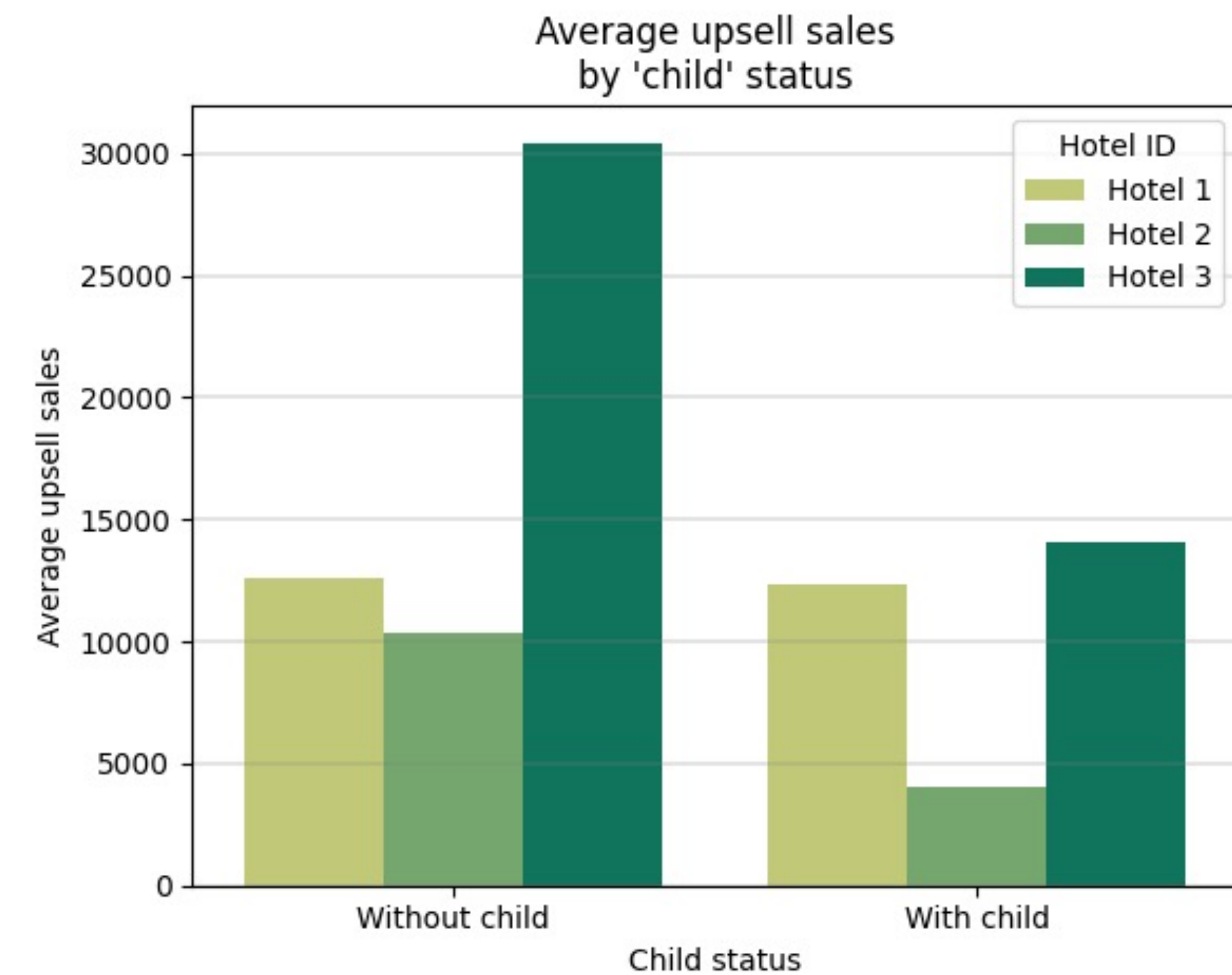
02. Bookings with children

- The older the child, the more likely a high-value booking is.
- Conversion rates are higher without children.



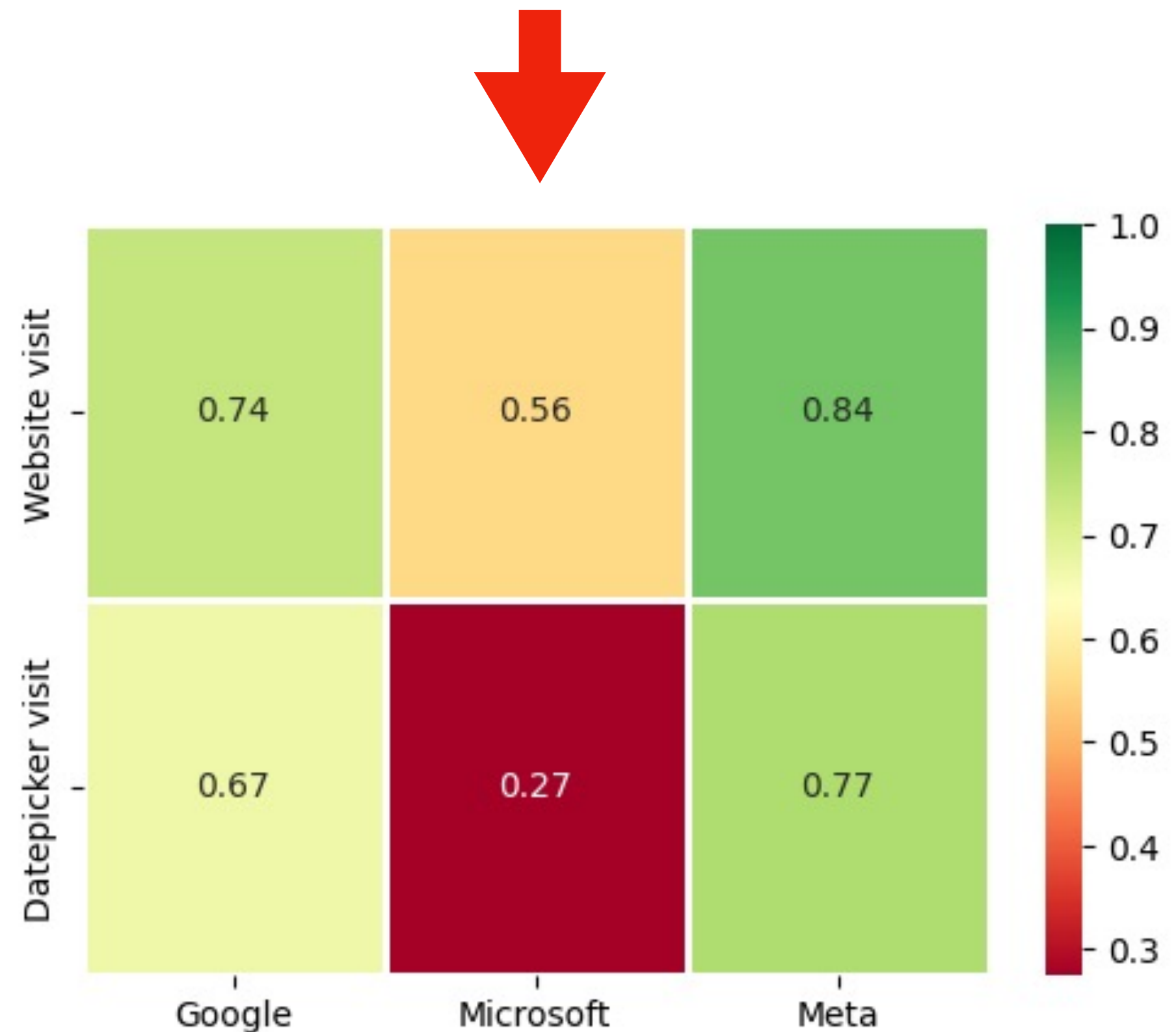
02. Bookings with children

- The older the child, the more likely a high-value booking is.
- Conversion rates are higher without children.
- The average upsell rate is also higher without children.
 - The difference is more than double for hotels 2 and 3



02. PPC Advertising Costs – Visitors

- Correlation between PPC spending and access to date picker interface
- The best correlation between PPC spend and reach rate of date selection platform is Meta, followed by Google, then Microsoft
- Microsoft significantly differs from the others in the correlation between CPC spending and the number of visitors
 - p-value < 0.001



02. PPC Advertising Costs – Conversion

- In terms of conversion rates, Meta performs exceptionally poorly.
- Additionally, the PPC cost per conversion is extremely high for Meta.

Hotel ID	UTM source	Average conversion [%]	PPC spend per conversion [HUF]
Hotel 1	Google	6,7	13 085
	Meta	0,6	373 032
	Microsoft	10,1	29 909
Hotel 2	Google	5,8	15 581
	Meta	0,5	482 741
	Microsoft	9,3	18 735
Hotel 3	Google	3,8	15 588
	Meta	0,6	235 354
	Microsoft	3,2	91 901



02. PPC Advertising Costs – Conversion

- Guests from Meta UTM sources have higher average booking prices, but this does not offset the higher PPC costs.

Hotel ID	UTM source	Average final booking price [HUF]
Hotel 1	Google	161 158
	Meta	243 574
	Microsoft	113 912
Hotel 2	Google	170 883
	Meta	185 734
	Microsoft	168 323
Hotel 3	Google	157 867
	Meta	175 604
	Microsoft	110 283

03. PROPOSALS

03. Main proposal 1

1

Regarding to
PPC Advertising

- **When not to advertise** – As the rooms will fill up automatically in high demand periods
- **Advertise** between **10 and 50 days in lead time**
- Meta is an informing and demand generator site, where the PPC costs can be much higher
- However, the **optimization of Meta and Microsoft advertisements** are recommended

03. Main proposal 2



Regarding to booking
with children

- Encourage **higher-priced room offers** for guests **without children**
- **Improve conversion rates** for families **with children**
- **Develop upsell products** tailored to the needs **of families with children** (Hotel 2 and 3)

Thank you for your attention!