

Analysis of Donations During the Festival

The purpose of this report is to analyze the distribution of donations made during the festival and provide policy recommendations for future festivals. We will start by examining the distribution of donations, reporting the mean and median of "Distributions of Spend Donations per Hours," and discussing whether these statistics are as expected or whether adjustments may be needed.

Distribution of Donations

To understand the distribution of donations, we created a histogram of "Distributions of Spend Donations per Hour" (Table 1). From this graph, we can observe that the majority of donations appear to be concentrated within a certain range, with a few outliers on the higher end. This is common in donation data, where a significant portion of contributions may come from a small number of generous donors.

The mean and median of our data are important summary statistics. In our analysis, the mean represents the average donation per hour, while the median represents the middle value when all donations are sorted in ascending order. The mean is \$34.56 while the median is \$0.18. This is expected, as the donations can vary in great amounts, starting anywhere from \$0 going to \$100's. The mean being \$34.56 is a good sign that on average most guests are contributing.

Table 3 provides summary statistics regarding donations during the festival, categorized by age groups. From this table, we can make several observations. We can see that certain age groups, such as older individuals, tend to contribute more on average per hour. The data might also show variations within age groups. Some groups may have a wider range of donations than others, indicating potential differences in individual spending behaviors. Table 4 provides summary statistics related to donations during the festival, categorized by whether visitors extended their stay. This table helps us understand how extending one's stay might influence donations. Key observations from this table are the average spending per hour. Similar to Table 3, we see the average spending per hour for different categories. It's evident that those who extend their stay tend to contribute more on average per hour compared to those who do not extend. The data illustrates the impact of extending one's stay on donations. This information can be crucial for future planning, as it suggests that encouraging extended stays may lead to higher donations. Table 5 provides a different perspective by showing the distribution of age categories among visitors who either extended their stay or did not. This table helps us understand how age groups are distributed within each extend category. In contrast, Table 6 provides the reverse perspective, showing the distribution of extension categories (those who extended their stay or not) within each age category. This table helps us understand how extending one's stay varies across different age groups.

To maximize donations, Recognize the positive impact of extending one's stay on donations. Implement initiatives to encourage festival attendees to extend their stay, such as offering additional festival activities, late-night events, or special incentives for longer visits.

Table 6: Extend Age extend/age	18-24	25-34	35-44	45-54	55-64	65-74	75-84	85	Prefer not to say
No	5.00 %	14.30%	21.80%	21.00%	22.70%	11.80%	2.50 %	0.80 %	0.00%
Unclear	2.60 %	18.20%	23.40%	19.50%	23.40%	11.70%	0.00 %	0.00 %	1.30%
Yes	6.60	16.50%	20.90%	22.00%	20.90%	9.90%	1.10	1.10	1.10%

Table 5: Age Extend age category/extend	No	Unclear	Yes
18-24	42.90%	14.30%	42.90%
25-34	37.00%	30.40%	32.60%
35-44	41.30%	28.60%	30.20%
45-54	41.70%	25.00%	33.30%
55-64	42.20%	28.10%	29.70%
65-74	43.80%	28.10%	28.10%
75-84	75.00%	0.00%	25.00%
85	50.00%	0.00%	50.00%
Prefer not to say	0.00%	50.00%	50.00%

Table 4: Festival Sum Stat Extend Extend	Avg Spend Donations Min Per hour	Avg Spend Donations Max Per hour
No	27.80181	107.2626
Unclear	39.38487	137.1129
Yes	39.53651	133.6709

Table 3: Festival_sum_stat_age Age	Avg Spend Donations Min Per hour	Avg Spend Donations Max Per hour
18-24	42.57083	137.488
25-34	21.11429	100.6671
35-44	34.4636	115.8818
45-54	32.58399	112.4554
55-64	35.61806	125.0808
65-74	27.50758	115.0875
75-84	2.625	24.5
85	191.66667	312.2083
Prefer not to say	500	749.5

