



Globox Analysis

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Project Context/Test Design

- This was an A/B test in order to test the efficacy of a food and drinks banner on mobile devices. The control group consisted of 24,343 randomly assigned individuals that did not see the banner, but the treatment group consisted of 24,600 randomly assigned people that did see the banner.

Success Criteria

- If both the difference of means and the difference of conversion rates are strongly significant, are in ranges with only negative values, and are in ranges that exclude zero, this will confirm that the treatment group spends more money on average and has a higher conversion rate.

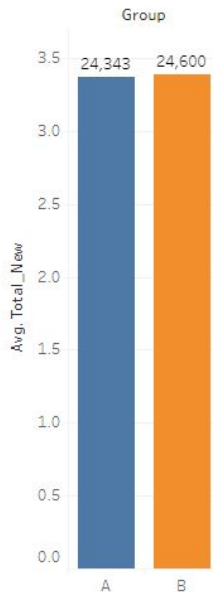
Conversion Rates Have Strong Evidence

- There was no strong evidence to show the difference of means was significant, but there was strong evidence to show the difference of conversion rates was significant.
- The difference of the conversion rates is between the estimate range of $-.0106$ and $-.0034$, which suggests the treatment group had a higher conversion rate.

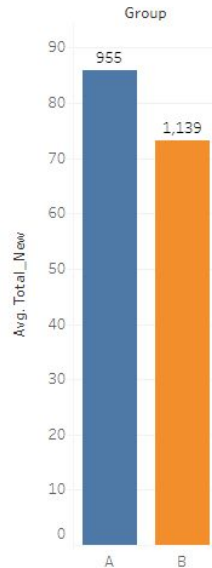
Treatment Group Spent More Money

- The control group had an average of \$3.37, but the treatment group had an average of \$3.39.
- The treatment group's conversion rate is higher than the control group's conversion rate (4.63% to 3.92% respectively).

Group Statistics



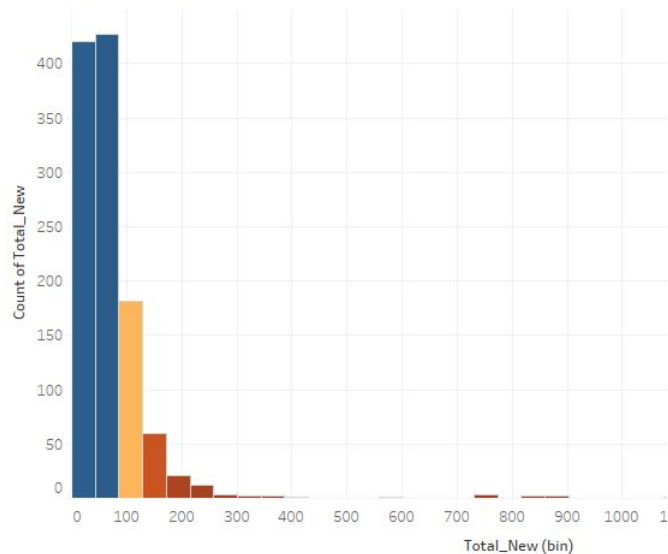
Group Statistics



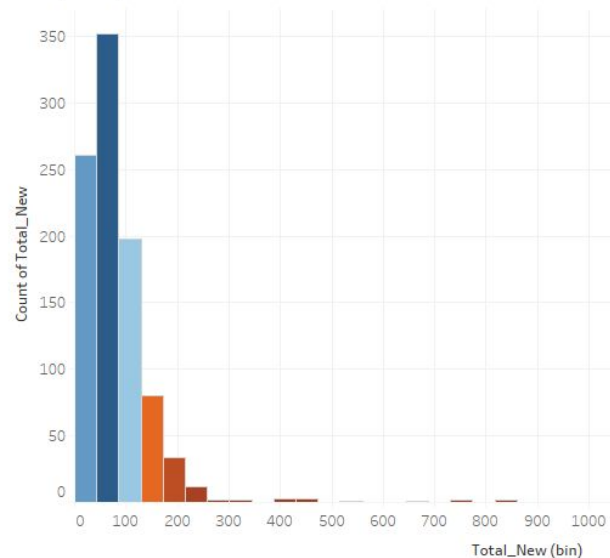
Treatment Group Spent More Money (cont.)

- The Treatment group spent more money in the range of \$0 to \$86 as compared to the control group.

Group B Spent More



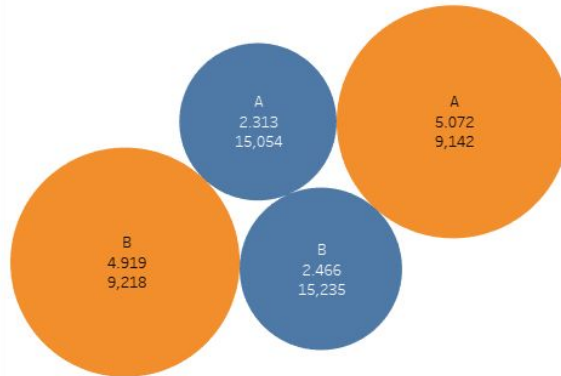
Group B Spent More



I-Phones Beats Android

- In both the control group and treatment groups, I-Phone users outspent Android users on average.
- There were 9,218 I-Phone users in the treatment group but only 9,142 in the control group.

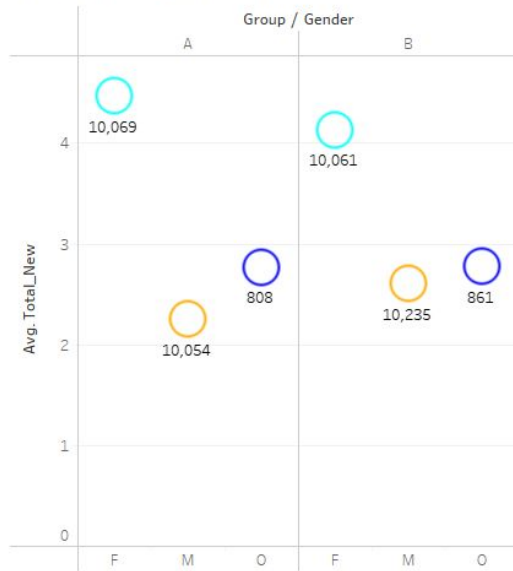
I-Phones Beat Out Androids



Women Are The Answer!

- Women outspent men on average.
- Women spent had a higher conversion rate than men (5.29% to 3.21%, respectively).

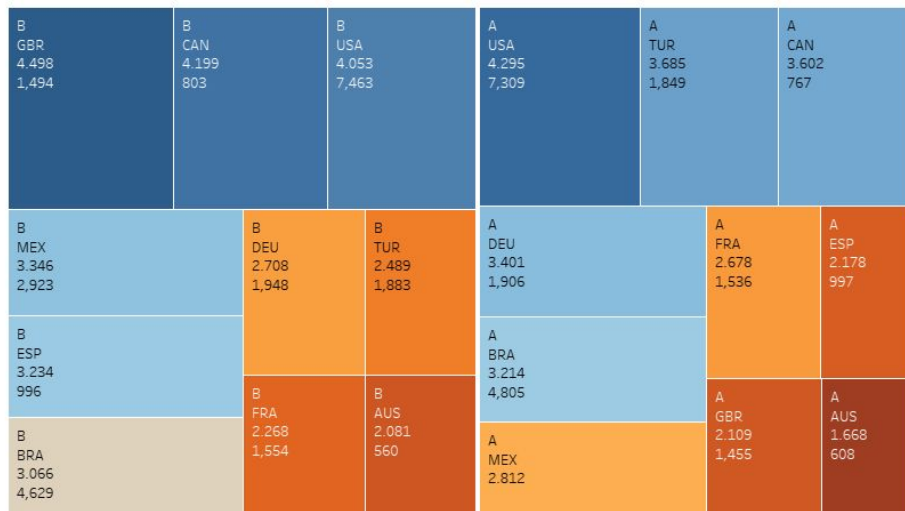
Females Lead Men In Sales



International Markets Matter!

- Even though the United States had higher conversion rates in both the control and treatments, users in other countries spent more money on average (In the treatment group, the GBR spent \$4.49 compared to United States' \$4.05).

Foreign Markets Are In Front



Novelty Effect Is Present

- The Novelty Effect is present, but it is more present in the difference of means than in the difference of the conversion rates.

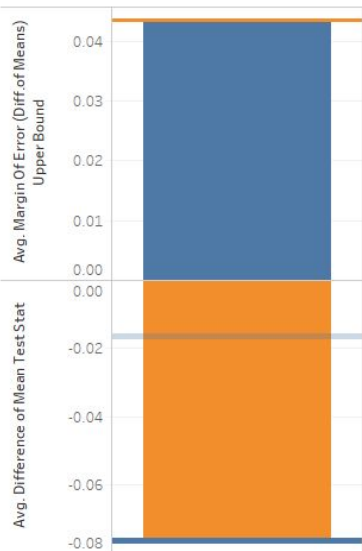
Novelty Effect Is Present!



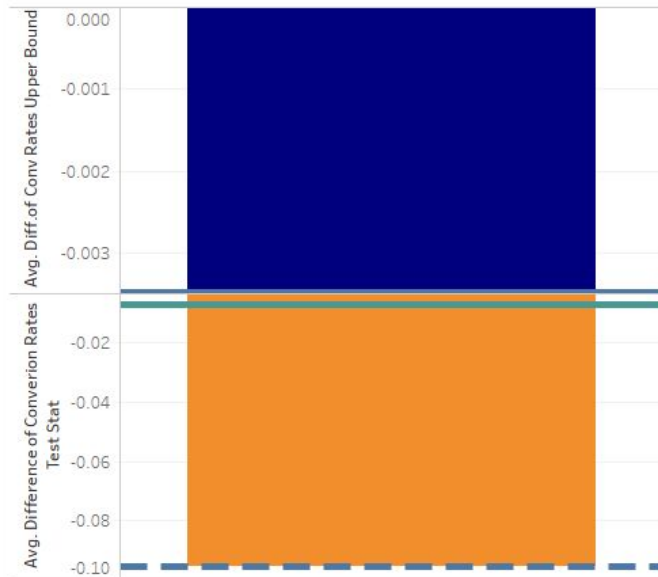
Uncertainty Is In The Data!

- The true difference of the average amount money spent between the control group and the treatment group might be non-existent since 0 is a possible value for the metric.

Difference of Mean's Uncertainty



Difference of Conv. Rate's Uncertainty



Recommendation

- Globox should redo the experiment because the difference of the conversion rates is statistically significant, but this statistic is in a nonzero, positive range. In order for Globox to see that its banner is working, we need both of the key statistics to be statistically significant within negative ranges that exclude zero.

General Q & A