

A/B test results

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Overview

- A/B test conducted during the month January, 2019
- Data are aggregated by treatment (2), days (31), and device (3)
- Total sample size 3.681.827 sessions (50/50 split)
- Results suggest:
 - ▶ Small + effect on conversion rate (n.s.)
 - ▶ Small – effect on revenues
 - ▶ Suggests increase CR is result of cheaper purchases
 - ▶ Effects are most visible on mobile users

Looking at the data

Q: Why do revenues have decimal places? Is this in thousands?

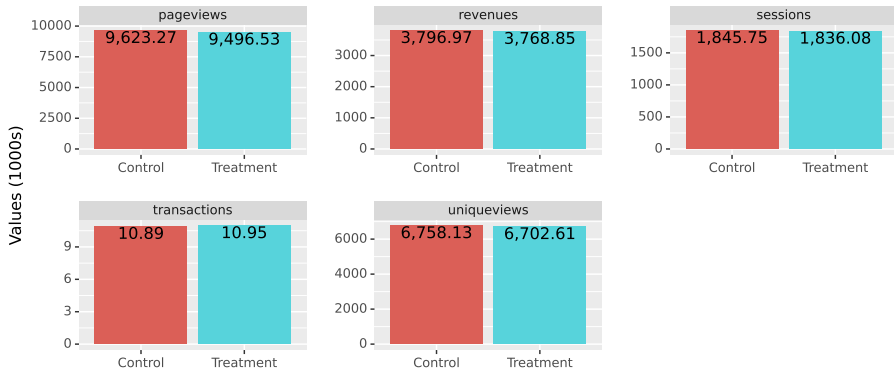
Table 1:

	treat	device	date	pageviews	uniqueviews	sessions	revenues	transactions
0	Control	desktop	20190101	90133.000000	65953	15615.000000	26516.199499	72.000000
1	Control	desktop	20190102	149878.000000	108909	23030.000000	41575.678145	165.000000
2	Control	desktop	20190103	153829.000000	112185	24470.000000	61002.022101	205.000000
3	Control	desktop	20190104	154991.000000	111211	23480.000000	31768.423188	118.000000
4	Control	desktop	20190105	119705.000000	87056	19381.000000	78505.386880	260.000000
5	Control	desktop	20190106	134276.000000	96717	21133.000000	152900.387205	292.000000
6	Control	desktop	20190107	113061.000000	83652	20294.000000	37037.681401	172.000000
7	Control	desktop	20190108	103357.000000	77011	18123.000000	54678.632706	157.000000
8	Control	desktop	20190109	102414.000000	76301	18984.000000	54674.876374	181.000000
9	Control	desktop	20190110	93329.000000	70155	16927.000000	70416.784190	236.000000

Aggregate totals by treatment group

Values look similar by treatment group

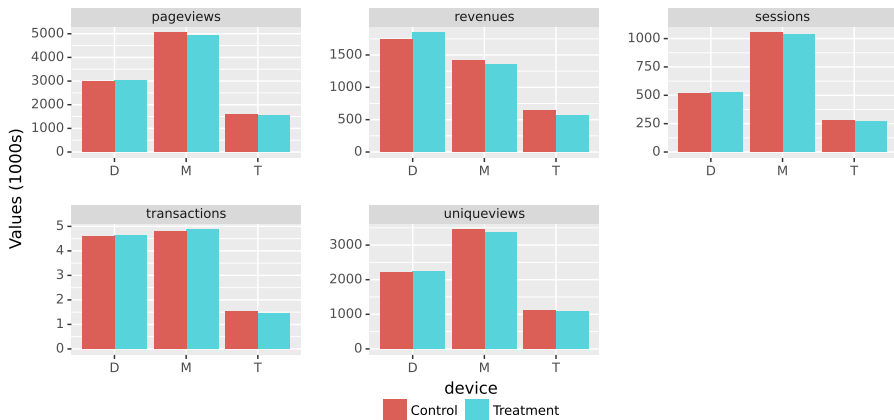
Figure 1:



Aggregate totals by treatment group and device

Small differences are visible in revenues and transactions, by device category

Figure 2:

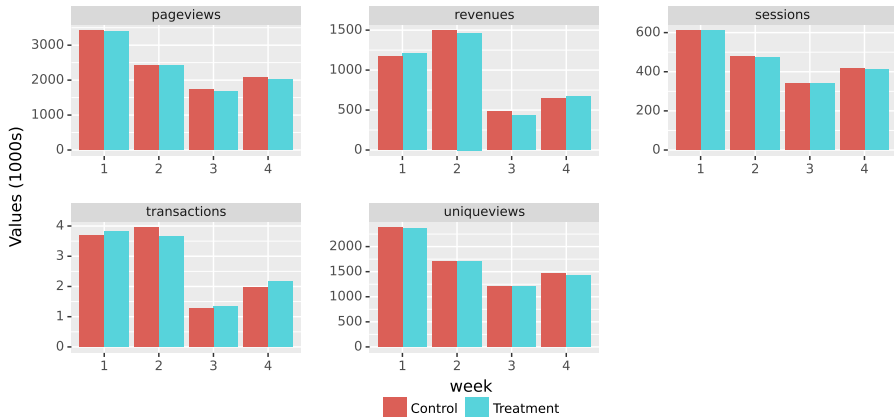


Aggregate totals by treatment group and time

General decline over time (as expected after December highs)

Small differences are visible in revenues and transactions

Figure 3:

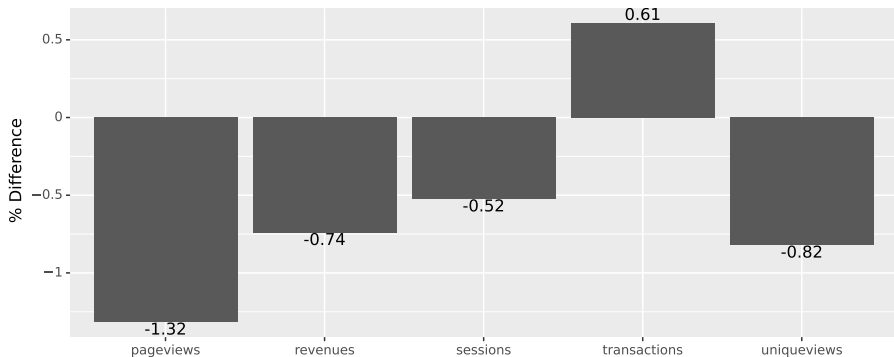


Effect of treatment group

+ 0.61% on transactions

Decline in all other variables

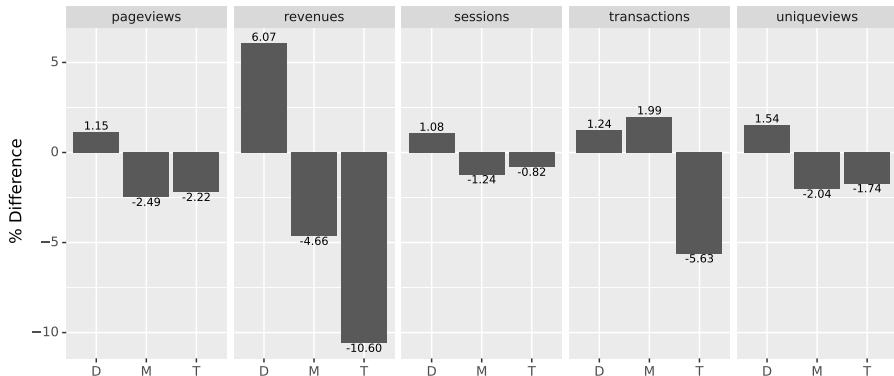
Figure 4:



Understanding differences by treatment group and device

Effect is always positive among desktop users
Among mobile users, transactions are higher (but revenues lower)

Figure 5:



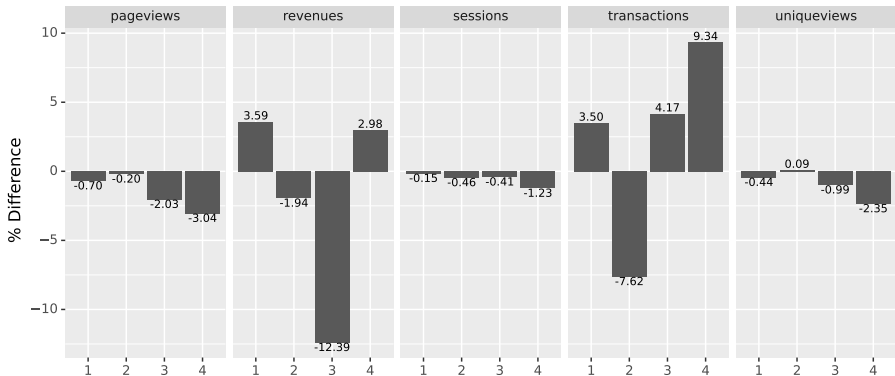
Understanding differences by treatment group and time

Mixed effect of treatment over time

Transactions are positive (except week 2)

In week 3, revenues are really negative

Figure 6:



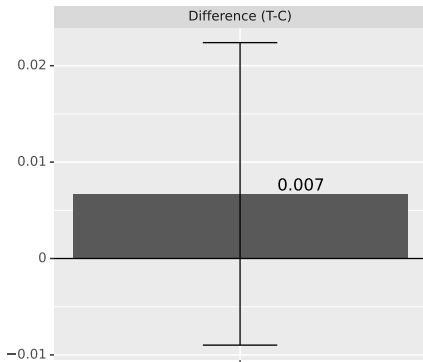
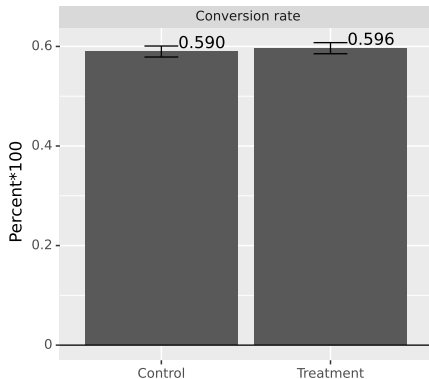
Effect of treatment on conversion rate (CR)

conversion rate (CR) = transactions/sessions

Small positive effect (+0.007 or 1.4%), but not significant

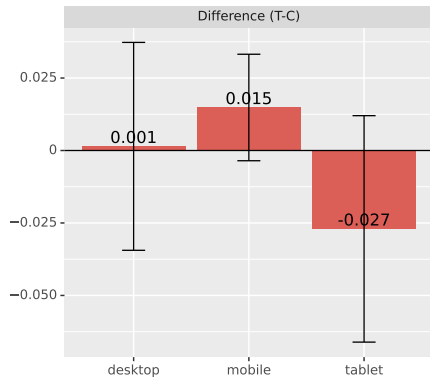
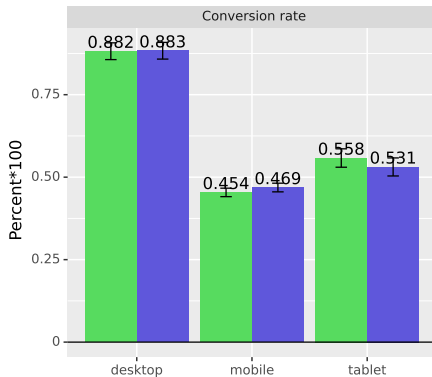
To achieve significance, we need 9.284.592 sessions (i.e. 4 more months)

Figure 7:



Conversion rate by device

In mobile users, small positive effect (+0.015 or 3.3%), but not significant
To achieve significance, we would need 1.796.940 mobile sessions (< 1 more month)



■ Difference (T-C) ■ Control ■ Treatment

Conclusions

- Effect of test on CR is positive, but not significant
 - ▶ Total effect could be significant with more time (4 more months)
 - ▶ Effect is most positive on mobile users
- But don't forget about revenues
 - ▶ Treatment group has 30.000 or 0.5% lower revenues
 - ▶ If we extended the test, revenues could decline by 150.000
 - ▶ In mobile users, treatment reduces revenues by 4.6%
- Recommendation
 - ▶ Look for other treatments that are more effective
 - ▶ Focus on effect of treatment on mobile users

Thank you