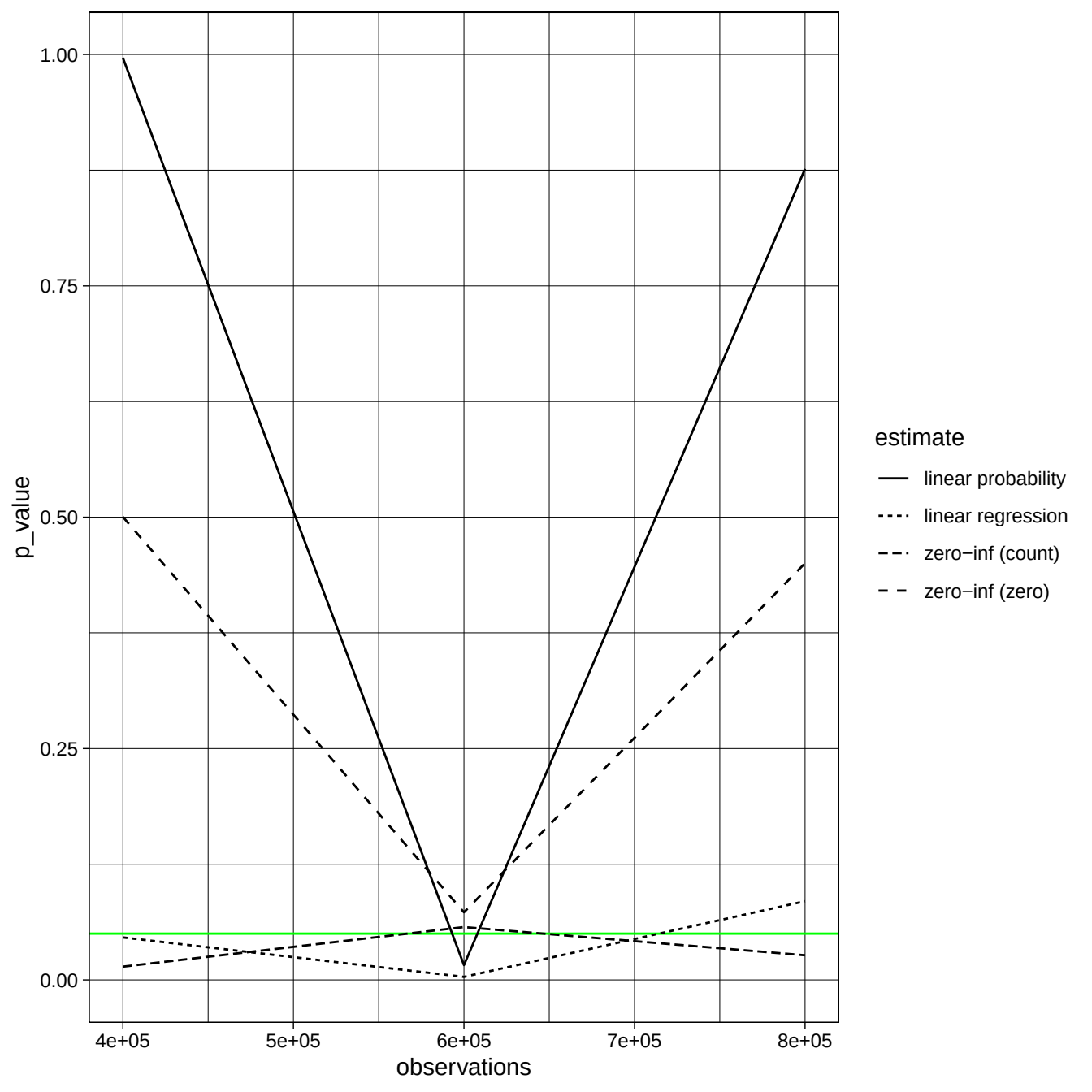
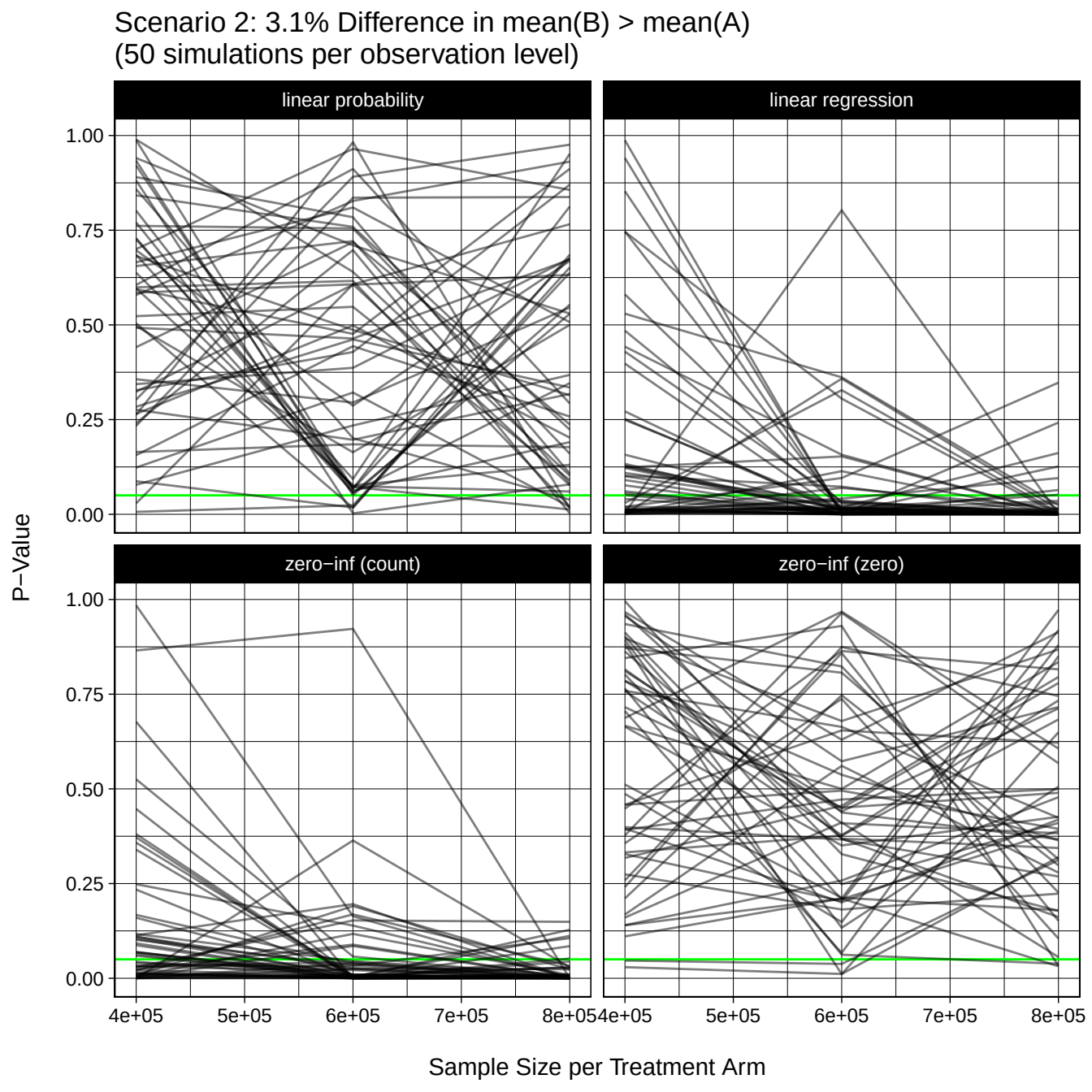
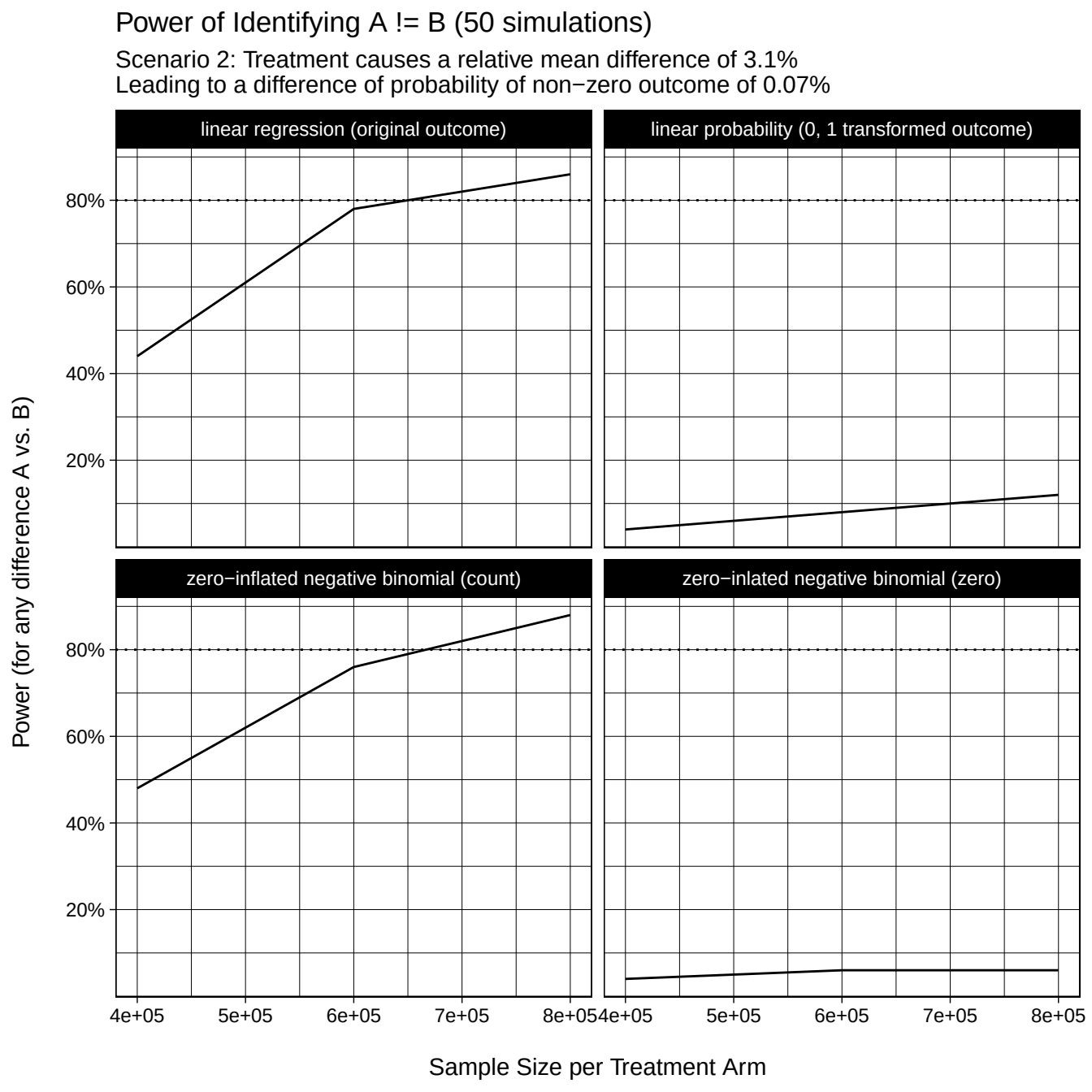

1.00
0.75
0.50
0.25
0.00
p_value
4e+05
5e+05
6e+05
7e+05
8e+05
observations
estimate
linear probability
linear regression
zero−inf (count)
zero−inf (zero)


Scenario 2: 3.1% Difference in mean(B) > mean(A)
(50 simulations per observation level)
linear probability
linear regression
zero−inf (count)
zero−inf (zero)
P−Value
1.00
0.75
0.50
0.25
0.00
4e+05
5e+05
6e+05
7e+05
8e+05
Sample Size per Treatment Arm


Power of Identifying A != B (50 simulations)
Scenario 2: Treatment causes a relative mean difference of 3.1%
Leading to a difference of probability of non−zero outcome of 0.07%
linear regression (original outcome)
linear probability (0, 1 transformed outcome)
zero−inflated negative binomial (count)
zero−inlated negative binomial (zero)
Power (for any difference A vs. B)
80%
60%
40%
20%
4e+05
5e+05
6e+05
7e+05
8e+05
Sample Size per Treatment Arm