Singapore Tourism Board sparks revival of Japanese interest in Singapore

"In the 1990s, Japan was the number one market for Singapore but over the next 10 to 15 years, the interest level declined as Japanese have many other destinations to go to," Mr Chang Chee Pey, assistant chief executive of STB's international group, told ST. "This is why the reinvention of the Singapore experience has been so important."

"[There were 472,742] Japanese arrivals in Singapore from January to July this year, a 7.3 per cent surge compared to the same period last year."

This revival coincides with the Singapore Tourism Board's (STB) launch of the Passion Made Possible campaign in Tokyo in August 2017. In that same year, Japanese visitor arrivals climbed 1.1 per cent to 792,829. This was followed by a 4.6 per cent jump last year to 829,676 visitors, as spending surged 10 per cent to $1.1 billion.

(Source: The Straits Times)

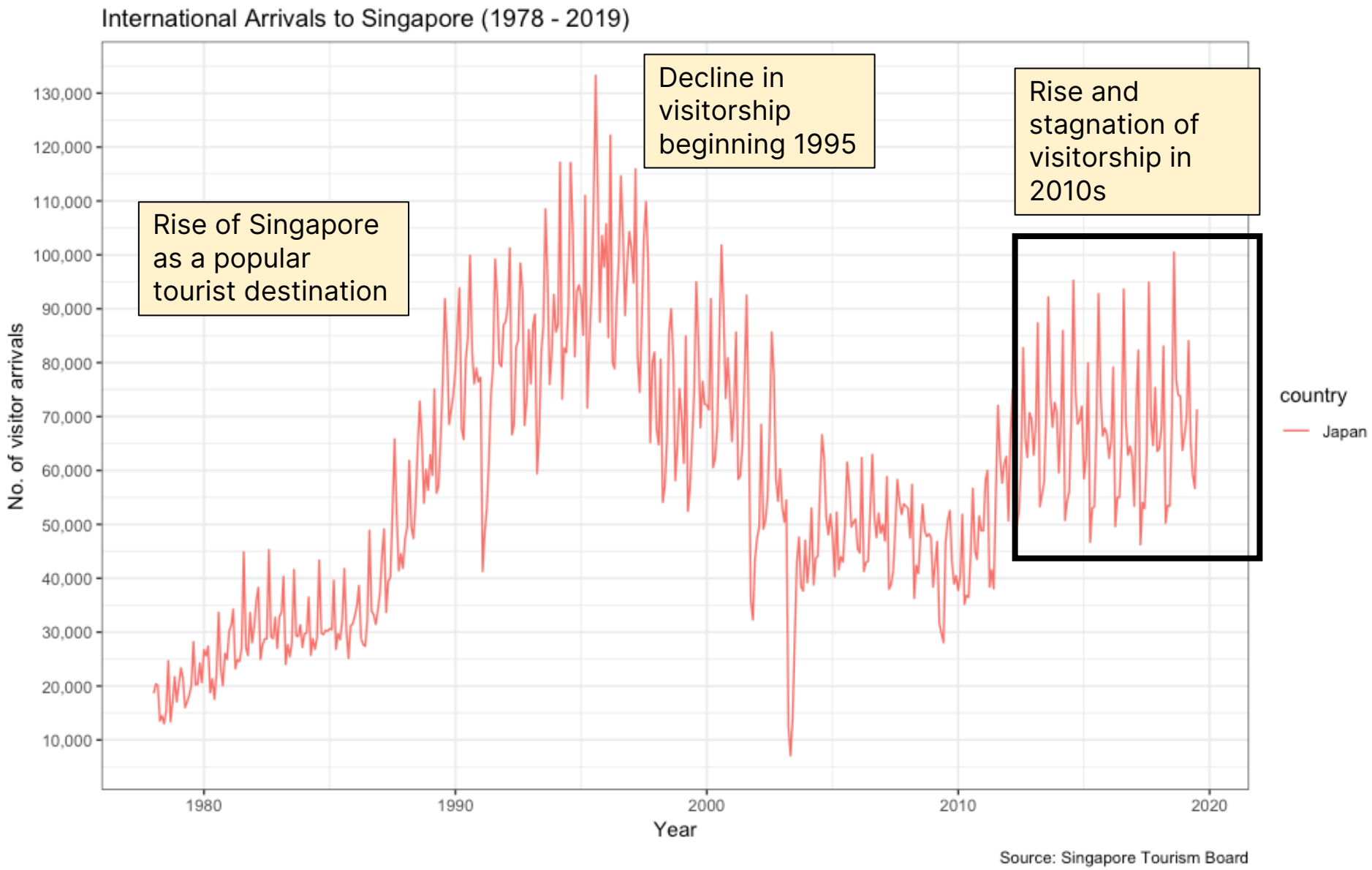
VisitSingapore

Original

シンガポール政府観光局

Localization for the Japanese market

Exploratory data analysis (EDA)



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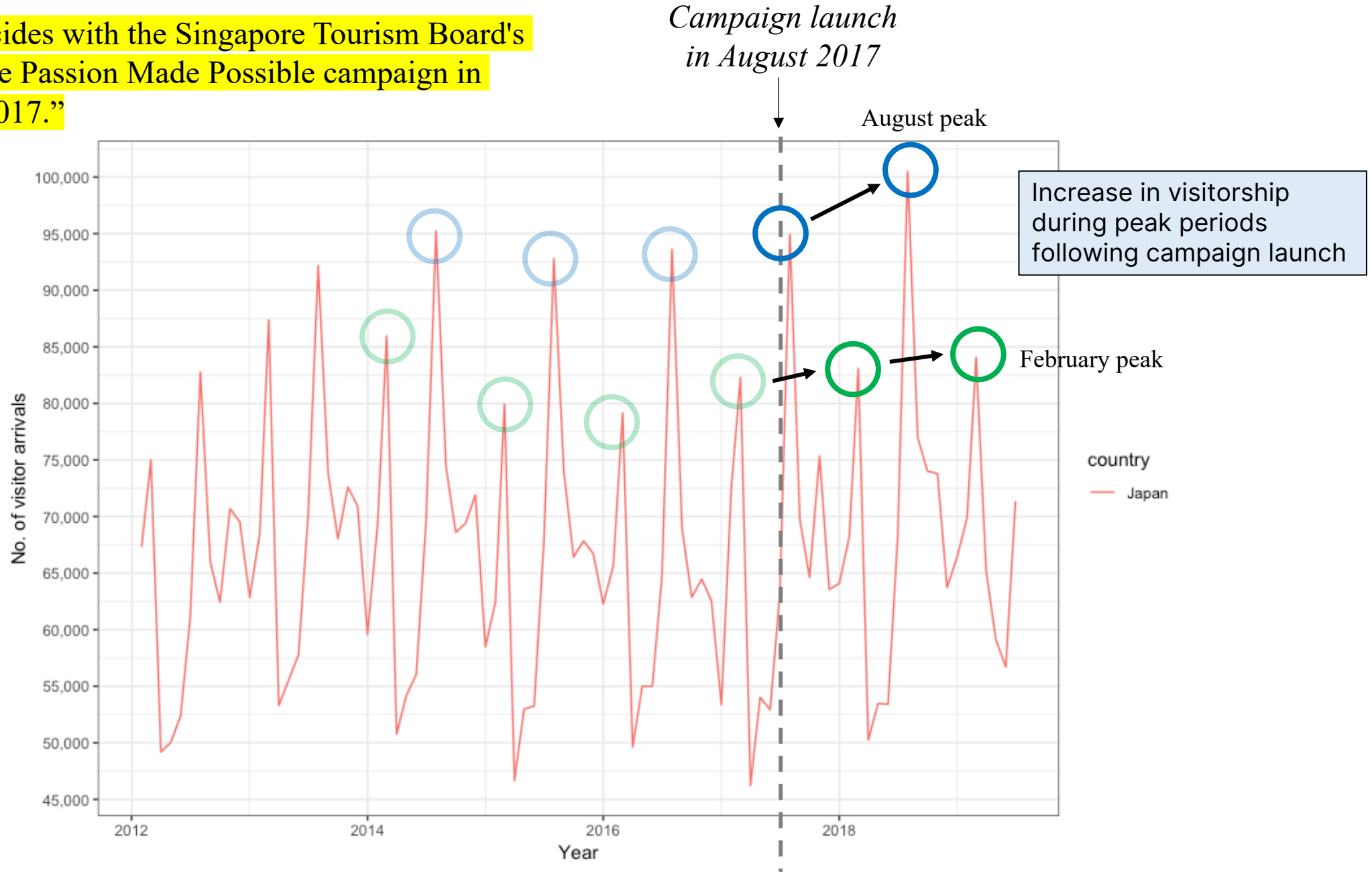
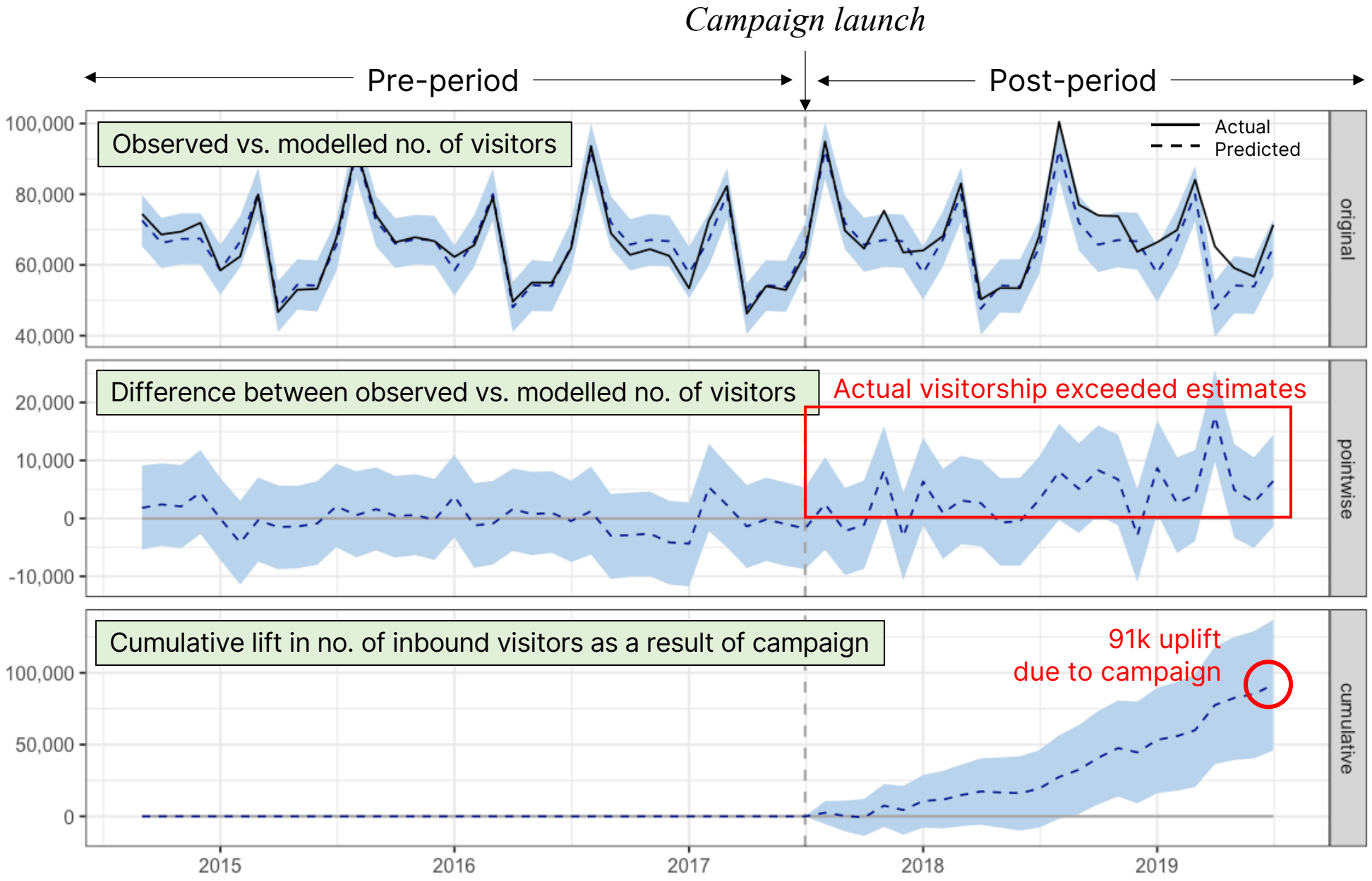


Causal effect of campaign on visitorship

Setup
- Using R's *CausalImpact* package to evaluate campaign effectiveness
- No access to randomized experiment data
- Implementation of a/b test not possible

Results (post-period)
- Model predicted an average monthly visitorship of 65.78k during post-period
- Actual, observed visitorship during post-period was 69.61k on average
- Results are statistically significant (p=0.0004)

Conclusion
- Campaign delivered net uplift of 91k visitors over the course of 2 years (post-period)



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> summary(japan_causal)

Posterior inference {CausalImpact}

                         Average          Cumulative
Actual                   69607            1670561
Prediction (s.d.)        65785 (973)      1578832 (23341)
95% CI                   [63878, 67699]   [1533071, 1624772]

Absolute effect (s.d.)   3822 (973)       91729 (23341)
95% CI                   [1908, 5729]     [45789, 137490]

Relative effect (s.d.)   5.8% (1.5%)      5.8% (1.5%)
95% CI                   [2.9%, 8.7%]     [2.9%, 8.7%]

Posterior tail-area probability p:   0.0004
Posterior prob. of a causal effect:  99.96%
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> summary(japan_causal, "report")

Analysis report {CausalImpact}

During the post-intervention period, the response variable had an average value of approx. 69.61K. By contrast, in the absence of an intervention, we would have expected an average response of 65.78K. The 95% interval of this counterfactual prediction is [63.88K, 67.70K]. Subtracting this prediction from the observed response yields an estimate of the causal effect the intervention had on the response variable. This effect is 3.82K with a 95% interval of [1.91K, 5.73K]. For a discussion of the significance of this effect, see below.

Summing up the individual data points during the post-intervention period (which can only sometimes be meaningfully interpreted), the response variable had an overall value of 1.67M. By contrast, had the intervention not taken place, we would have expected a sum of 1.58M. The 95% interval of this prediction is [1.53M, 1.62M].

The above results are given in terms of absolute numbers. In relative terms, the response variable showed an increase of +6%. The 95% interval of this percentage is [+3%, +9%].

This means that the positive effect observed during the intervention period is statistically significant and unlikely to be due to random fluctuations. It should be noted, however, that the question of whether this increase also bears substantive significance can only be answered by comparing the absolute effect (3.82K) to the original goal of the underlying intervention.

The probability of obtaining this effect by chance is very small (Bayesian one-sided tail-area probability p = 0). This means the causal effect can be considered statistically significant.
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