

# A Case-Based Analysis of the Effect of Offline Media on Online Conversion Actions

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## INTRODUCTION



How does offline advertising affect online conversion actions?

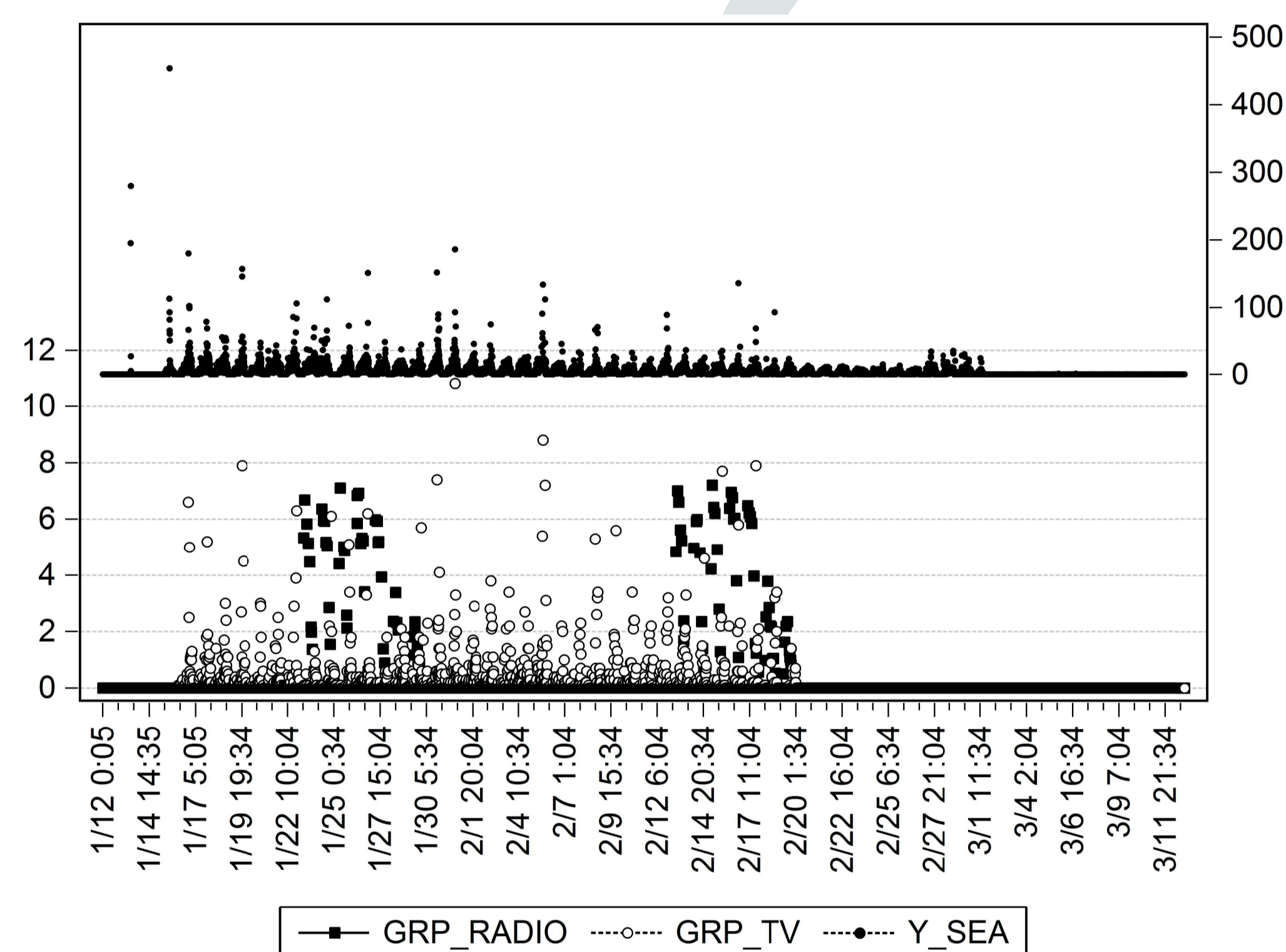
- Lay's "Do Us a Flavor" campaign
- involved TV & online advertising
- main goal: increase brand preference



## DATA & APPROACH

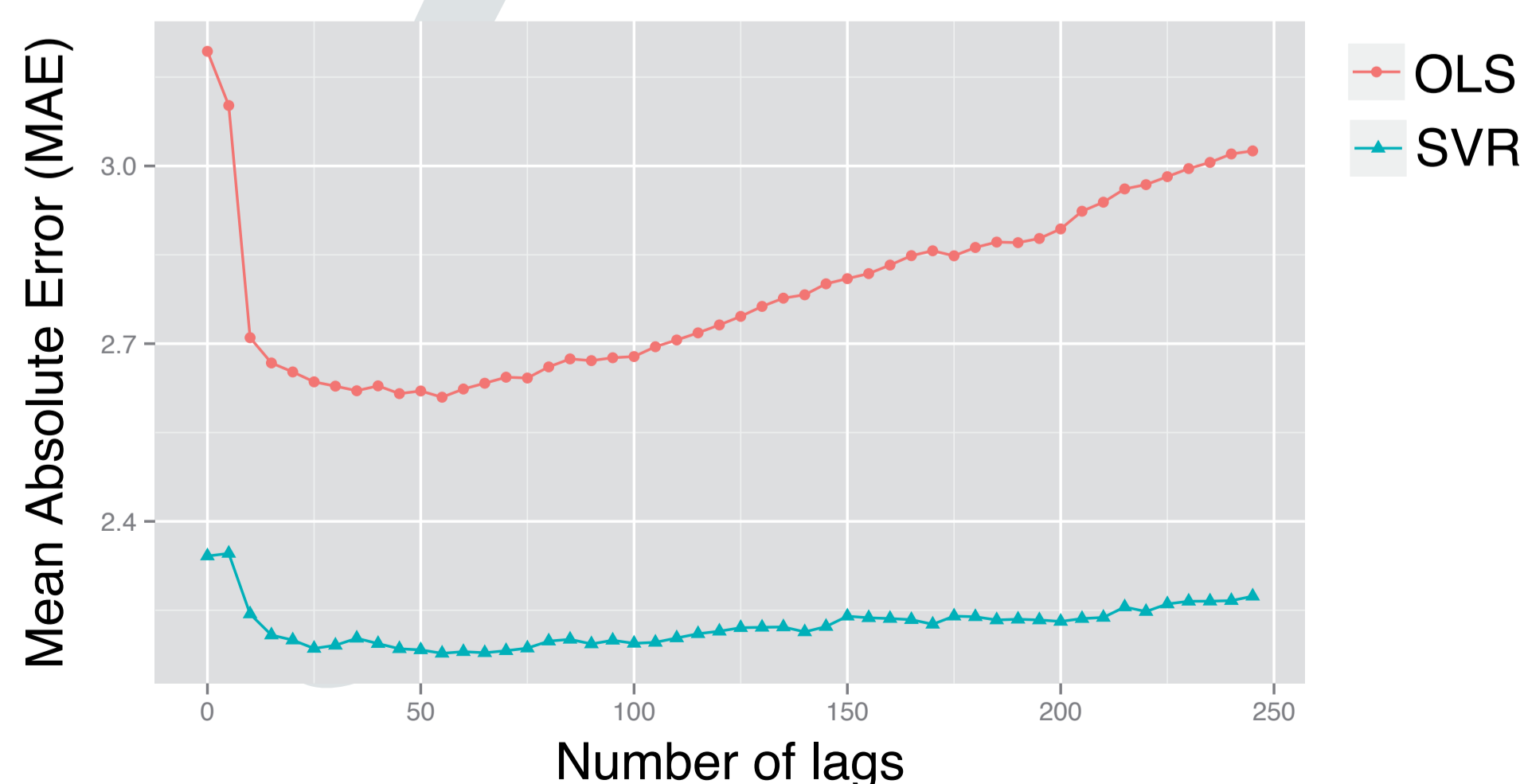
Data set contains

- 600,000 unique conversion paths
- precise TV & radio commercial information



Forecasting models

- Ordinary Least Squares (OLS)
- Support Vector Regression (SVR)
- Distributed Lag Models



## RESULTS

**OLS results**

- Diebold-Mariano test indicates that MAE is lower for 'offline model'
- Zarnowitz regression test confirms that the 'offline model' is more efficient than the 'online model'

**SVR results**

- MAE is also lower for 'offline model', but less certain
- 'online model' is slightly more efficient than 'offline model'

We also notice that:

- SVR models fit the data better than OLS models
- Models that have included 10 lags can achieve maximum fit/performance

## CONCLUSIONS & FUTURE WORK

- Offline media has positive effect on online conversion actions
- Effect lasts for 50 minutes after broadcast
- Future work includes:
  - including the audience characteristics
  - investigate optimal allocation w.r.t. costs