



公正取引委員会
Japan Fair Trade Commission

Presentations on Trials and Natural Experiments in Competition and Regulation

Working Party No. 2 on Competition and Regulation

Shungo Omiya

Japan Fair Trade Commission

Monday 12 June 2023

Randomized Controlled Trials

- No or very little experience.

Natural Experiments

- Several experiences.
- Mainly in merger review.

What types of event is appropriate?

- It depends on research question / the availability of events.

Typical events

- Entry / Exit / Mergers
- Policy / Regulation changes
- New product launch / Campaign.
- Accidents
- Revelation of firms' illegal activity

Purpose

- Market definition
- Competitive assessment

Gathering information about industry history



Talking with market participants and industry experts

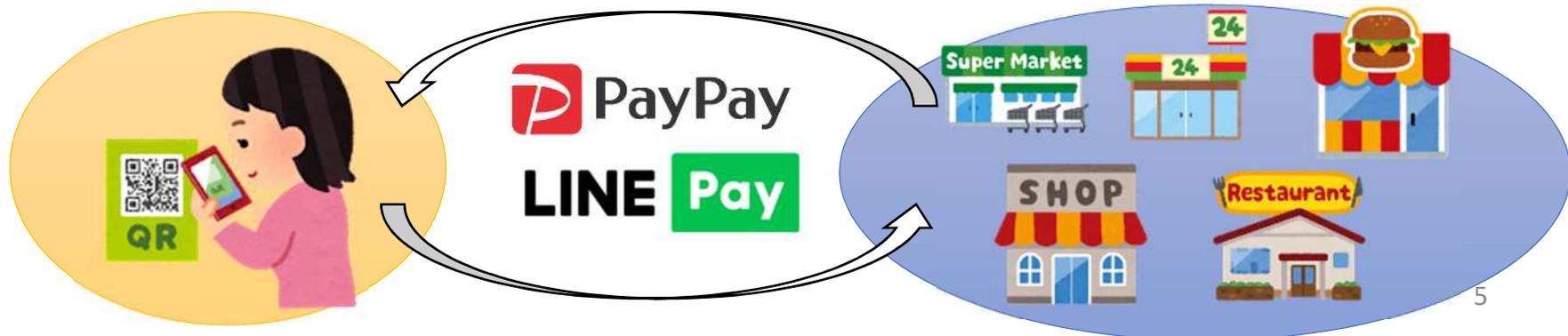


Searching online such as news and press release



Reading books and reports

- ZHD (Yahoo! Japan) operates news portal, e-commerce, etc.
- LINE operates messenger apps, advertising, etc.
- **Code Payment Service** was one of the problematic markets.
 - This market is two-sided: consumer-side and store-side. Indirect network effect works.
 - PayPay offered by ZHD had top market share about 50%.
 - LINE Pay is ranked 5th in early 2020, but 2nd in early 2019.



- To discuss the closeness of competition in the consumer-side, the parties submitted economic analysis using natural experiments.

Event: “1-day limited cash back campaign” offered by PayPay on Oct 5, 2019.

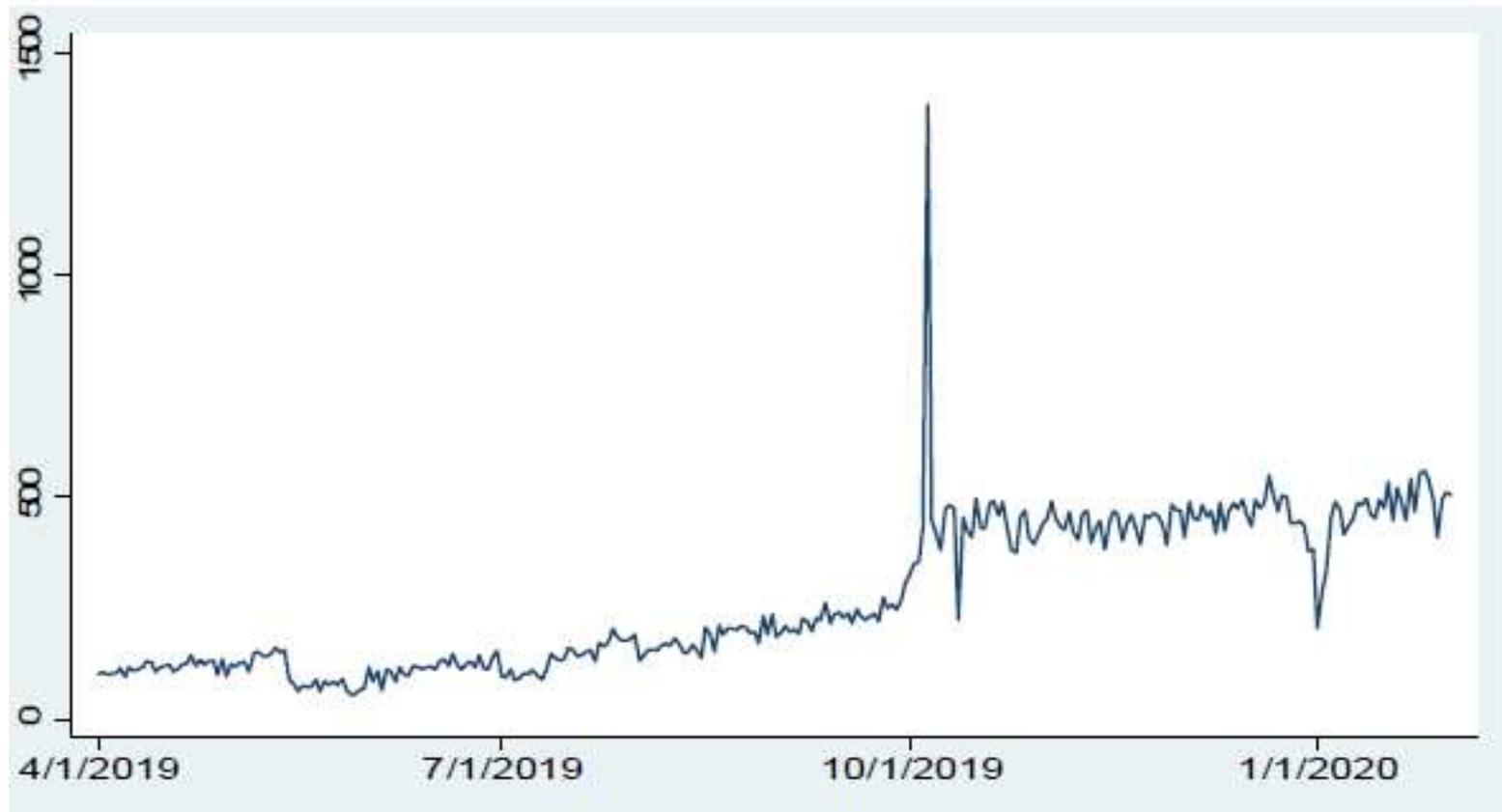
- The campaign offers a maximum of 20% of the amount spent to all users.
- There is a 1 in 50 chance that the entire amount will be returned.

Data: Monitor panel containing each monitor’s daily consumption records.

- Store/restaurant names where he/she spent money
- Payment amounts.
- Payment method.

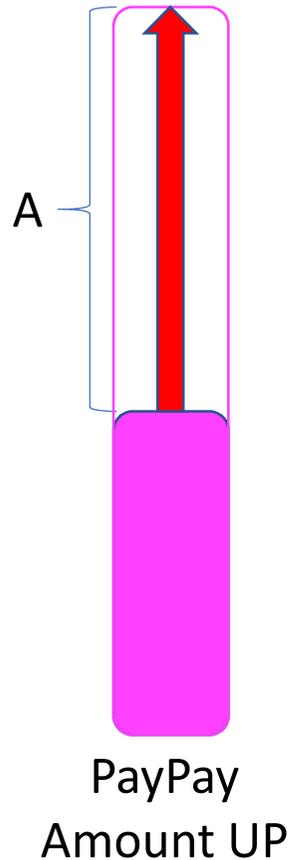
The sum of “small amount payment” in each day of the monitor panel data.

(thousand yen)



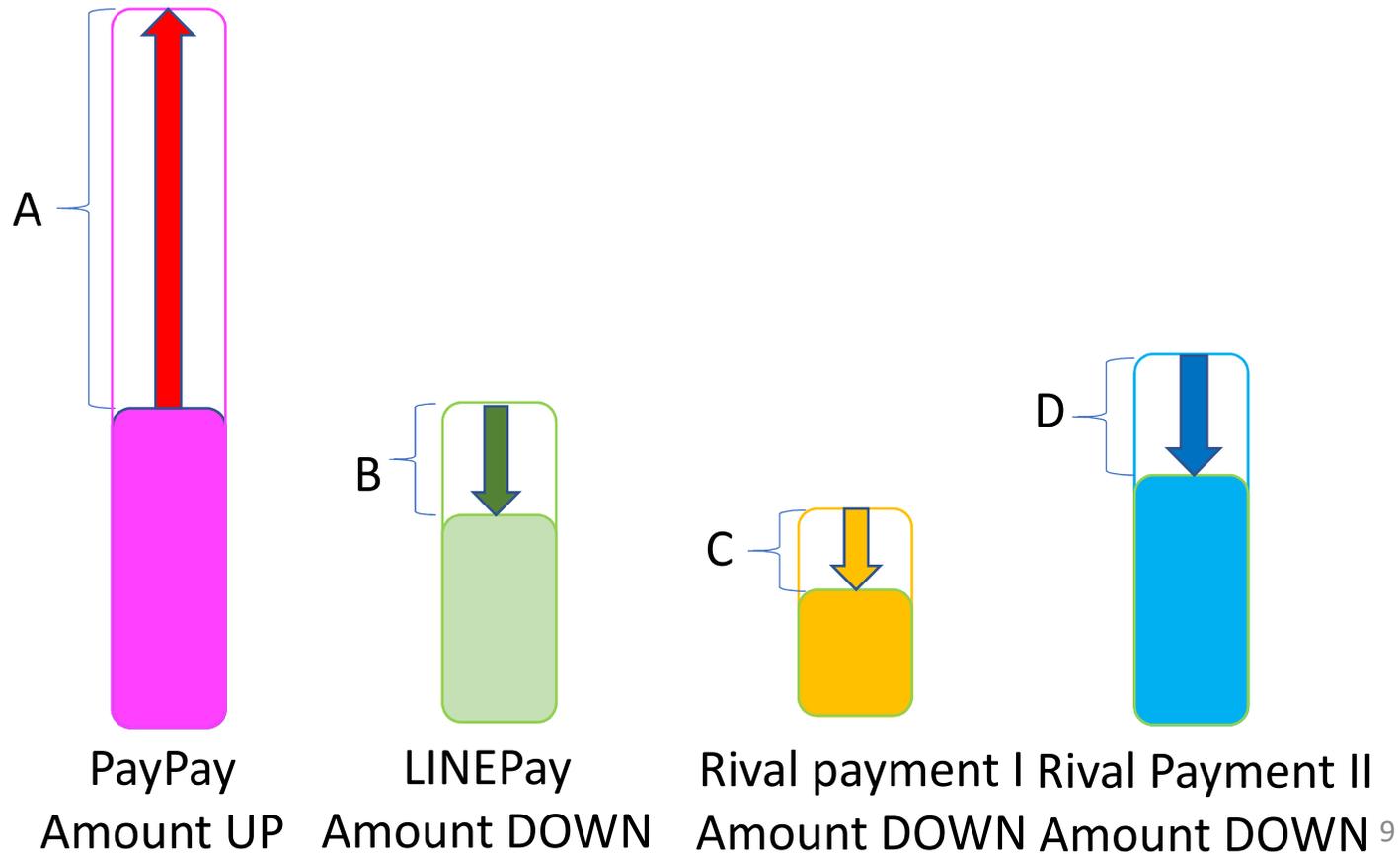


The parties estimate diversion ratio by the change of daily usage amount of the service by cash-back campaign.



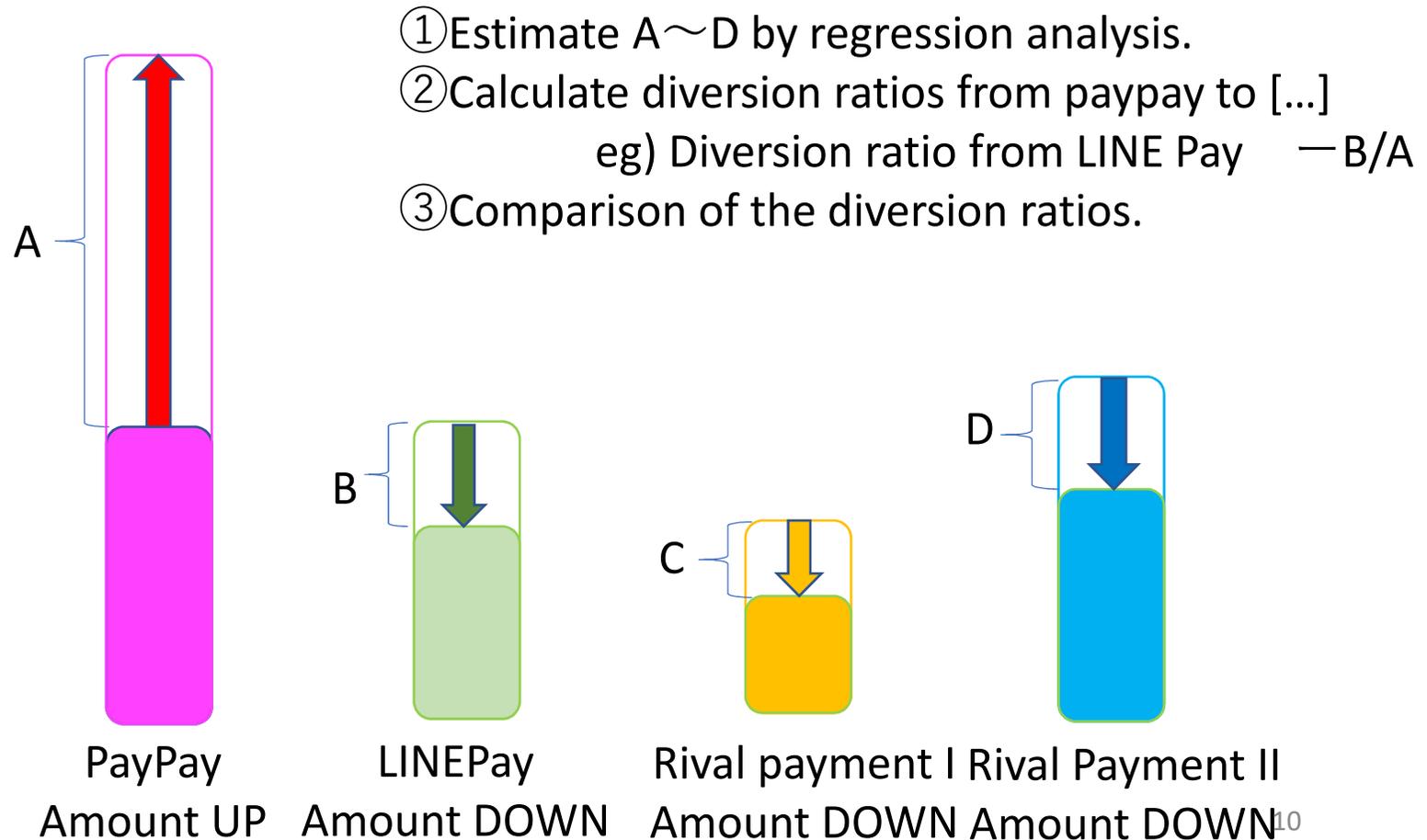


The parties estimate diversion ratio by the change of daily usage amount of the service by cash-back campaign.





The parties estimate diversion ratio by the change of daily usage amount of the service by cash-back campaign.



- When using natural experiments, we should be careful about

whether the effect of the event is similar to SSNIP or other criteria.

- In Z Holdings/Line, the campaign offers more than 20% cash back in expectation.
- The consumer behavior in SSNIP may be different.

whether the event affects homogeneously.

- If the event affects heterogeneously, evaluating the average effects may be inappropriate.

whether the assumptions of the analysis are satisfied.

- For example, when conducting DID, it is very important to check whether the parallel trend assumption is satisfied.

Conclusion

- I talked about an example of natural experiments in digital merger review in Japan FTC.
- I believe both RCTs and natural experiments will play more important roles in Japan in the coming years.
 - Market studies and advocacy.
 - Remedy evaluation.
 - Ex-post reviews.