



Participant Behavior in TARGET 2

Stability and Anomalies – *Discussion*

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[payments.ca](https://www.payments.ca)



Related literature

- Analyzing participant behavior (e.g. payment timing and funding decisions) from transaction-level data
 - Identify patterns in participant behavior
 - Develop indicators to detect deviations from normal behavior – identify operational outages, monitor system performance, etc.
 - Better understand participant behavior



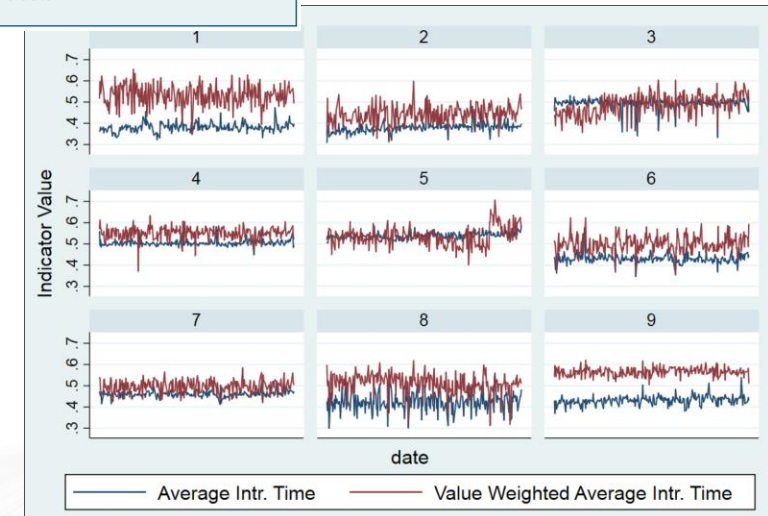
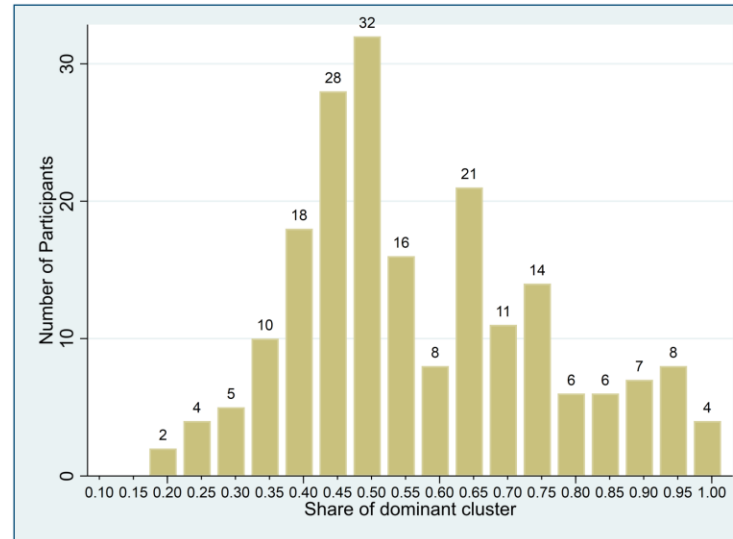
Presentation summary – methodology

- Reduce complexity of individual behavior by condensing into one figure representing participant behavior on a given day
- Explore different indicators – impact of average vs. median, value weights
- Apply different statistical measures to assess the behavior – define stability, in order to define anomalies
- Cluster analysis to group different participants



Presentation summary – results

- Partial evidence for stability
 - Persistence of time series and low auto-regressive behavior, high diversity of results, cluster analysis help to generalize and define participant behavior





Moving forward

- What type of participant behavior are we looking for?



"I'm behaving well. Are you sure you wouldn't like to positively reinforce it?"



Moving forward

- Longer time series may help identify trends and establish participant behavior, help with issue of structural breaks
- Incorporate external information, e.g. institutional features, to enhance stability and anomaly definitions
- Implications for modeling and simulation work/literature
- Operationalizing any indicator can benefit from a better understanding of participant behavior