

Discussion of "Yifei Wang - Competition and Privacy"

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- Impact of competition on privacy intrusion by firms.
- Context: 2017 China banning VPNs, reducing competition in censored app markets (shopping, video, chat,..), not in uncensored (learning, office,...).
- Synthetic differences-in-differences (SDID) on apps
- Key Findings:
 - Increase in app permissions requested.
 - Mechanism: Increased efforts to monetize consumer attention and improve engagement.

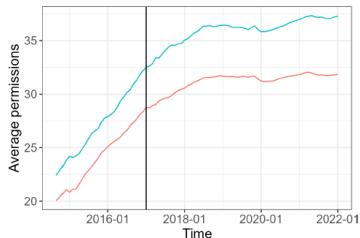
Strengths of the Paper

- Novel empirical evidence on competition's impact on privacy practices.
- SDID to weaken reliance on parallel trend assumption.
- Very elaborate data collection and analysis.
- Many mechanisms tested.

Comments: validity (S)DID?

- SDID avoids by construction deviating pre-trends.. but that makes it more difficult to see suggestive evidence for the identifying assumptions
- The pure DID doesn't look that convincing
 - Already some divergence the year before
 - From a steeply increasing trend to a flat one for all: a more structural change happening that makes pre-treatment weights less reliable?
- Some tests?
 - Would the SDID survive a Placebo treatment test in 2016?
- Some apps probably hardly used.. can you weigh them?

Figure 4 Average number of permissions, raw pattern



Comments: privacy or ads?

- The paper focuses on privacy, but its proxy used here, permissions, is not always about privacy
- In particular, the most important "permission" is about sending push notifications which I interpret as advertising
- "Sensitive" permissions are looked at separately but this is also still defined more broadly: "a higher-risk permission that would give a requesting application access to private user data **or control over the device** that can negatively impact the user"
- Table 6 is more specific but is difficult to read, are all considered sensitive?
 - Also: these are 150 tests with significance defined at 10% level... multiple testing problem?

- More consumers could simply lead to apps doing more and therefore the welfare impact is ambiguous
- 2 arguments are used to reject this story
 - Not so convincing: unlikely to change over time
 - Better: less "activities"
- Still, these activities are measured with a proxy. It is surprising large effects are coming from microphone or camera use if they are not needed at all. Do you have examples on how they are used if not for more functionality?

Future research?

- Download data available?
- Discrete choice model could reveal how much consumers value privacy vs. ads vs. product variety
- Would allow for welfare analysis