

The Impact of GDPR on Ad-Supported Content Providers

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The Potential Impact of GDPR on Ad-Supported Online Content

GDPR Opt-In Impacts Ability to Collect Personal Data

Fewer Targeted Ads Make Online Advertising Less Profitable¹

Revenues of Online Content Providers May Be Affected²

Reduction in Quantity and Quality of Free Online Content³

1 Goldfarb and Tucker (2011), 2 Lambrecht et al. (2014), 3 Downes (2018)

Focus of the Study

- We focus on both technical and “downstream” economic variables
- We study how content providers implemented GDPR and if/how GDPR affected their ability to provide content
- We analyze a sample of 6,000+ websites based in the EU and the US
- We started collecting information before GDPR was implemented and continue to collect data

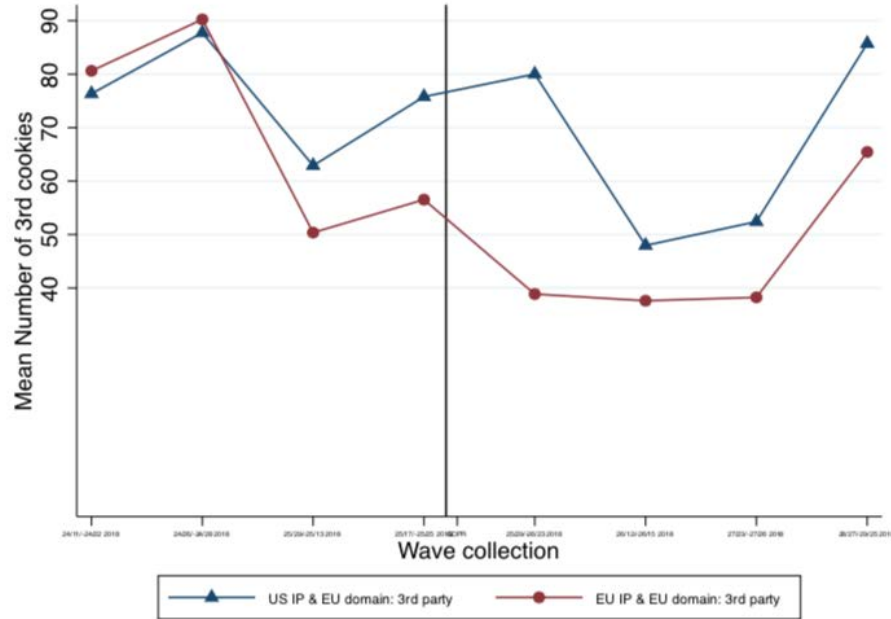
Technical Approach

- We visit periodically each site in our sample from both EU and US locations and collect data on:
 - Number of cookies (1st and 3rd party)
 - Size and type of cookies (1st and 3rd party)
 - Number of HTTP requests (1st and 3rd party)
 - Content size of HTTP requests (1st and 3rd party)

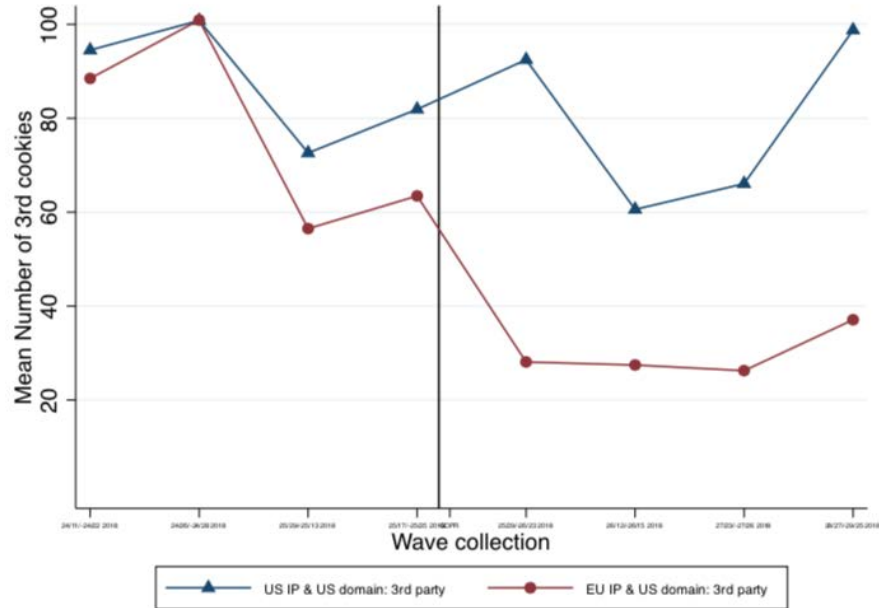
Economic Analysis

- For each site in the sample we track information on quantity and quality of content:
 - Traffic rank
 - Website's reach
 - Page views per visitor
 - Amount of new content posted (new URLs)
 - Language characteristics of content

Number 3rd Party Cookies – EU Sites



Number 3rd Party Cookies – US Sites



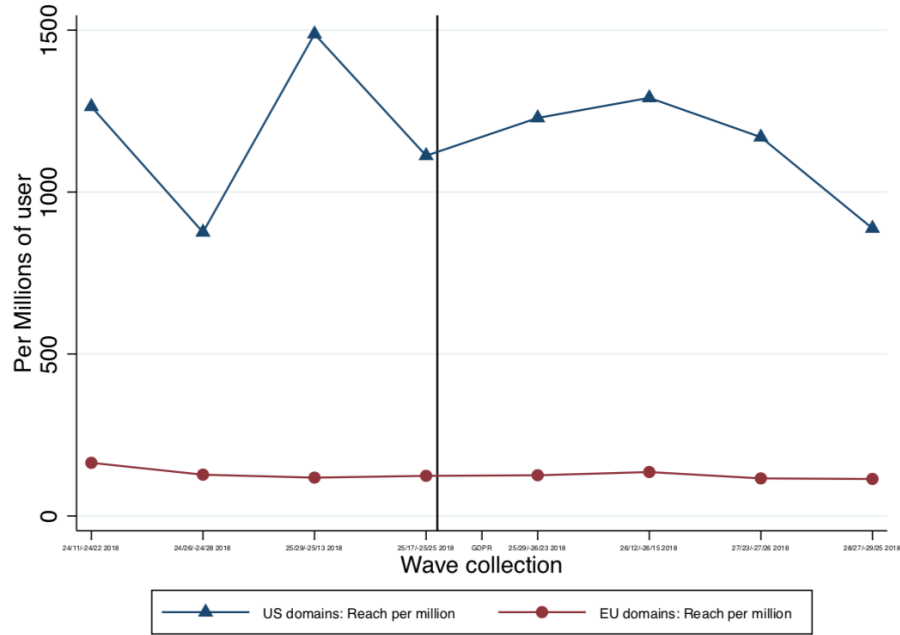
US Websites Response to GDPR

- A category of sites that is particularly vulnerable to the impact are News and Media sites
- Our sample contains 1060 of these sites (46% in EU, 43% US, 11% other regions)
- Of US based sites, 18% are blocking EU visitors:
 - Sites that block EU: 89% of visitors from US (before GDPR)
 - Sites that don't block EU: 73% of visitors from US (before GDPR)

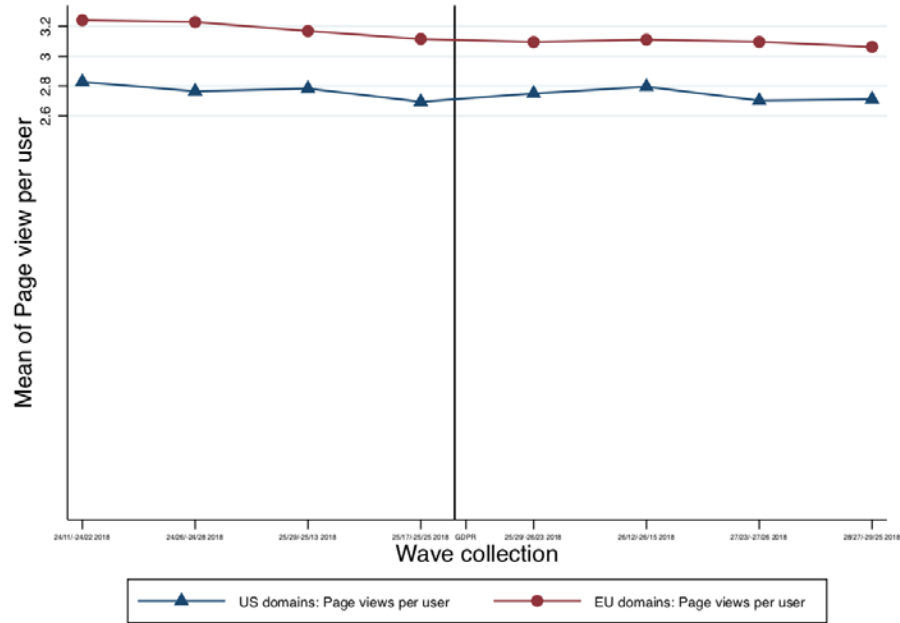
Technical Variables

- There is a sharp reduction in the number of 3rd party cookies and http requests after GDPR
- There is a recovery after sometime. However:
 - Reduction is more pronounced when visiting websites using EU IPs
 - Decrease is more persistent when US websites are visited from EU IPs

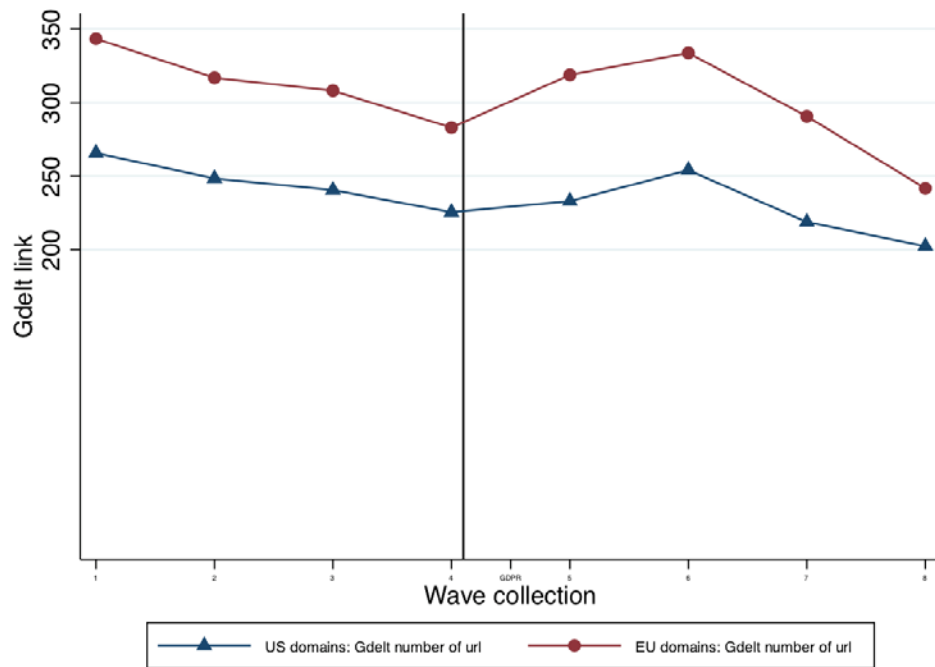
Website Reach



Page Views per Visitor



Number of New Pages (URLs)



Economic Analysis

- There are no significant differences in terms of quantity and quality of content between EU/US sites after GDPR
- Rank of US sites has increased
- US sites reach has decreased, but page views per user has increased (relative to EU sites)
- If anything, it seems that the quantity of content posted by EU sites has increased (relative to US sites)

Limitations

- Only one year has passed since GDPR. Downstream effects may take time to materialize
- It is still uncertain how GDPR should (and will) be implemented. Different countries have taken different positions
- Our analysis is based in only a subset of sites and a subsample of metrics
- Our metrics may not capture the complexity of the technical changes being implemented

Conclusions

- We observe technical changes being implemented after GDPR: Fewer third party cookies and requests
- There is a bounce-back after some time, but still:
 - When browsing from EU IPs, there is a significant negative effect
 - Effect is stronger when browsing US based websites
 - ~20% of US News and Media sites in our sample have restricted access to EU visitors
- Little evidence content quantity and quality has been affected
- If anything, quantity at EU sites has increased (relative to US sites)