

MSI Webinar: Regulating Privacy Online: The Economic Impact of the GDPR

June 27, 2023 | Virtual | 12:00 pm – 12:30 pm EDT

Speaker:

Samuel Goldberg - *Assistant Professor of Marketing, Stanford University, Stanford Graduate School of Business.*

Overview:

In this MSI Webinar, Samuel Goldberg (Stanford University) examined academic studies he and others conducted on the effects of the General Data Protection Regulation (GDPR) and its unintended impact on firms online. Goldberg opened his discussion by providing key findings from the results of research he conducted with his colleagues Garret Johnson (Boston University) and Scott K. Shriver (University of Colorado). He then provided a brief background of the purpose of the GDPR, which is to regulate access to unique individual information online. This regulation is specific to firms both within and outside the EU that target residents of the EU, with the “cornerstone of the GDPR” being the consent to access unique individual data. He noted a variety of challenges in doing the research given the interpretive nature of the regulation, global implications and direct impact on the data. Overall Goldberg found a variety of intended and unintended consequences from the GDPR. In particular, Goldberg found that the GDPR harms smaller firms as well as creates an increased concentration in the web vendor market. He recognized that there is a great deal of research regarding the unintended consequences of the GDPR but more needs to be done in terms of the intended consequences such as the benefits to consumers and the increase in data security. Goldberg expects to see an increase in regulations in both the US and the EU, in addition to already existing self-regulation coming from Apple and Google.

Takeaways:

Key Findings

- **Key finding #1:** After the implementation of GDPR, firms record less data and real web traffic falls. Recorded traffic falls approximately 10%, with an estimated real decline in traffic of 5%. Display and email channels suffer the most.
- **Key Finding #2:** Larger firms are less harmed by GDPR. Larger firms have the ability to collect more data, leading to larger technology firms being more likely to maintain market share.

***View the [MSI Working Paper](#).**

Background and Key Features of the GDPR

- The "very ambitious large-scale privacy policy was passed in 2016" and came into enforcement on May 25, 2018. The purpose was to **regulate access to unique individual information online** (e.g. IP addresses, emails, cookie identifiers, etc.).
- The GDPR regulates firms in the EU and firms that target residents in the EU.
- **The "cornerstone of the GDPR is consent."** EU firms must obtain consent for individual data collected by firms from website visitors for web technology purposes.

Challenges in the Research

- The GDPR tends to have **global implications** since it applies to firms both inside and outside the EU that target EU residents.
- Complications can stem from **the differences in firms interpreting compliance** with this regulation in ways that are not observable.
- Privacy regulations **directly impact the data observed** (e.g., what and how much and when we record data online).

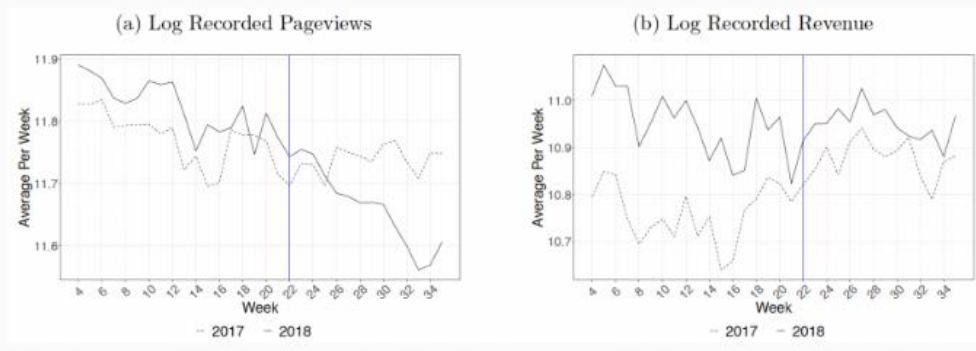
Key Findings in the Literature

- GDPR in Practice:
 - **There is a great deal of heterogeneity** in how firms comply with the GDPR.
 - **Different countries have made differential investments in terms of their compliance** leading to inconsistent application of the regulation.
 - **GDPR spills over internationally**, so non-EU users will see fewer third-party interactions on EU sites, as well as non-EU sites, posing challenges to finding a control group.
- Firms:
 - In terms of **negative effects on firms, profits and revenue have fallen, accounting and employee costs have increased.**
 - Positive effects from GDPR can be seen in the investment in new employees leading to **improved operational efficiency** and information controls.
- Data & the Web:
 - **Firms are collecting less data**, due to reductions in 3rd party vendors and cookie usage, along with, large reductions in recorded data.
 - **Pre-GDPR recorded outcomes** of consent would **equal 100%**. **Post-GDPR** real outcomes and consent rate may **go lower than 100%**.
 - Research from [Goldberg et al.](#) supports these findings based on data from over 1000 firms that use Adobe Analytics (See also the [MSI Working Paper](#)).

Spotlight: Goldberg, Johnson and Shriver 2023

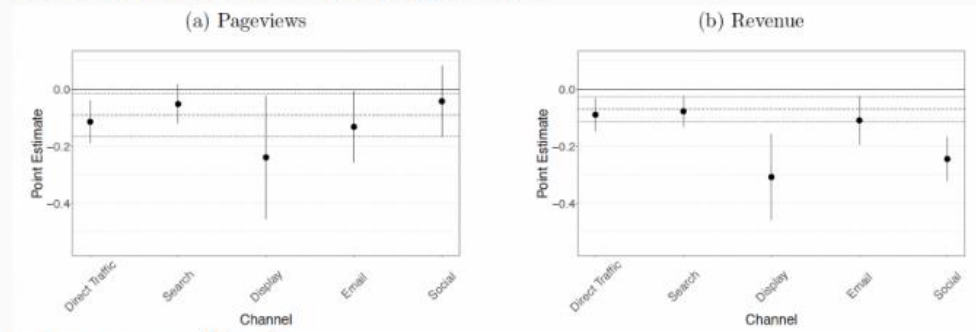
Data from over 1000 firms that use Adobe Analytics

Recorded Outcomes = Real Outcomes × Consent rate

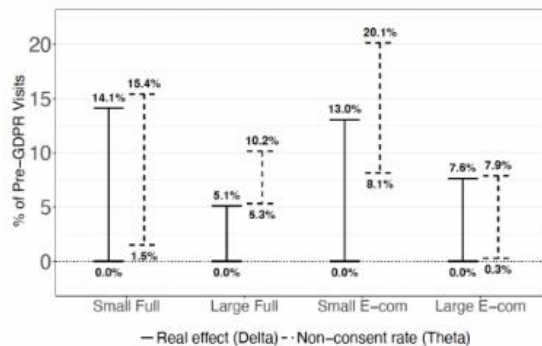


Spotlight: Goldberg, Johnson and Shriver 2023

Where are declines coming from?



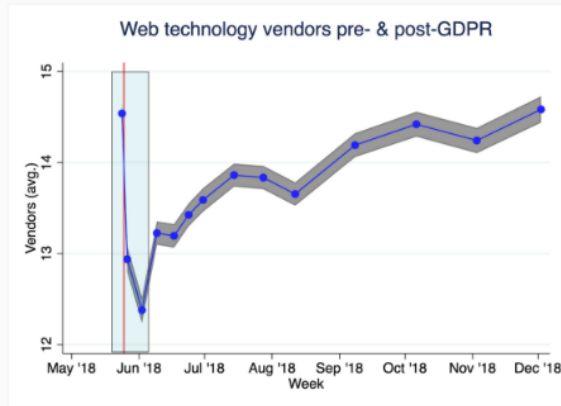
Real or recording?



- Competition:
 - **GDPR harms smaller firms** as well as creates an **increased concentration in the web vendor market**. As a result, Google and Facebook increase their market share post-GDPR.

Spotlight: Johnson, Shriver and Goldberg 2023

Top 27k sites online we collect all 3rd party interactions



- Initial decline (15%) followed by gradual increase
- Increase seems likely due to lack of enforcement

Personal data becomes more concentrated

Data samples	HHI Pre	HHI Post	Diff.	Diff. (%)
<i>Role of personal data</i>				
Likely personal data	185.9	221.7	35.8	19.3%
Unlikely personal data	487.4	515	27.5	5.6%

Future Regulation

- Consistent enforcement and unifying frameworks will lead to more and cheaper compliance.

Major Trends

- There is a great deal of research on the unintended consequences of the GDPR (e.g. hurt firms, concentrated markets, inefficiencies) but very little evidence on intended consequences (e.g. consumer benefits, consumer data security).
- There is an increase in regulations in both the US and the EU. Additionally, there is a technological evolution and self-regulation coming from Apple and Google (e.g. Apple's App tracking transparency and Google's privacy sandbox).

Sources:**Privacy and Market Concentration: Intended and Unintended Consequences of the GDPR.**

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Regulating Privacy Online: An Economic Evaluation of the GDPR.

Source: Goldberg, S., Johnson, G., & Shriver, S. (2022). MSI Working Paper - [MSI](#).

The Short-Run Effects of GDPR on Technology Venture Investment.

Source: Jia, J., Jin, G. Z., & Wagman, L. (2019). [SSRN Scholarly Paper No. 3278912](#).

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Regulatory Spillovers and Data Governance: Evidence from the GDPR.

Source: Peukert, C., Bechtold, S., Batikas, M., & Kretschmer, T. (2022). [Marketing Science](#), 41(4), 746–768.

Privacy and Market Concentration: Intended and Unintended Consequences of the GDPR.

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Privacy Regulation and Firm Performance: Estimating the GDPR Effect Globally.

Source: Chen, C., Frey, C. B., & Presidente, G. (2022). Working Paper No. 2022-1. [Oxford Martin School, University of Oxford](#).

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Source: Bessen, J. E., Impink, S. M., Reichensperger, L., & Seamans, R. (2020). [SSRN Scholarly Paper No. 3576714](#).

Modern Privacy Regulation, Internal Information Quality, and Operating Efficiency: Evidence from the General Data Protection Regulation.

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Source: Aridor, G., Che, Y.-K., & Salz, T. (2020). Working Paper No. 26900. National [Bureau of Economic Research](#).

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