

Regulating Digital Advertising: Self-Preferencing in the Ad Tech Stack

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- ▶ FCA Investigation Scope:
 - the two key ad techs (server and SSP) used by publishers
 - ad techs used by advertisers are not covered
- ▶ Key Findings:
 - Google practice reciprocal self-preferencing across the two technology layers
 - limiting interoperability with others
 - restricting rival access to auction data
 - employing competitor's information unfairly

FCA Regulation and Its Importance

FCA's regulation includes:

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Additional facts:

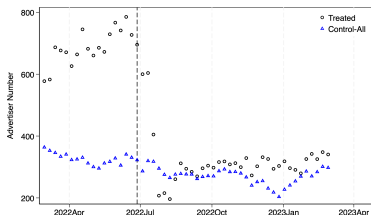
- ongoing cases DoJ and EC
- prevalence in digital market (Amazon and Apple)

Data

- ▶ Similarweb: popular website list in the EEA and OECD countries
- ▶ Semrush: advertising performance
 - Number of Advertisers
 - Advertising Revenue
- ▶ Time span: February 28, 2022, and March 5, 2023, resulting in over 15,000 observations

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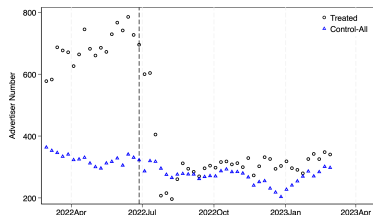
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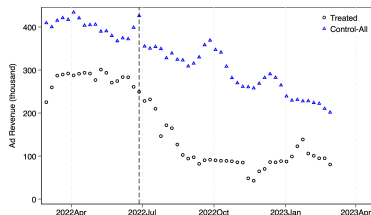
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(a) Number of Advertisers



(b) Publisher Revenue

Reduced-Form Evidence

Baseline specification: difference-in-differences (DiD) model

$$Y_{cdt} = \alpha + \beta(Treated_c \times Post_t) + \lambda_c + \gamma_t + \theta_d + \varepsilon_{cdt}$$

Key Findings:

A substantial reduction of over 300 advertisers on popular French websites and a weekly revenue loss exceeding \$95,000 for publishers.

◀ Advertiser

◀ Publisher

DoJ and EC

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Can this be the reason? A simple two-sided model provides lessons!

A Simple Model

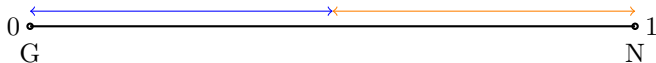
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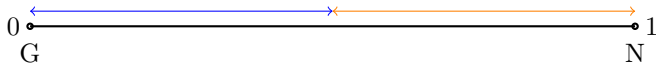
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- vertical differentiation: network effect e_j
- adtech price p_j
- firm location $\theta_j \in \{0, 1\}$

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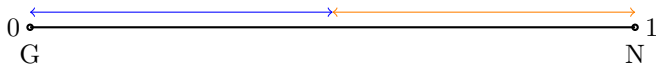


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- ▶ group k user i 's surplus/profit from ad tech j :

$$U_{ij}^k = e_j^k * (q_j^{-k}) - p_j^k - |x_i^k - \theta_j|$$

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- ▶ FCA regulation: increase non-google ad tech's performance for publisher ($e_n^p \uparrow$).

Welfare Implication

Findings

Following the FCA regulation,

- ▶ advertiser surplus decreases unless they derive higher value from interacting with non-google ad tech;
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- ▶ Publishers
 - benefit from non-google adtech improvement
 - may harm from reduction in advertiser participation
 - overall effect is negative when negative network effect is large and positive otherwise

Conclusion

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- ▶ First empirical estimation of self-preferencing regulation in ad tech markets
- ▶ Impact of self-preferencing in ad tech stack is complex and determined by varied factors
- ▶ Network effects and interoperability across two-sided market play key roles.

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Next Steps:

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Next Steps:

- ▶ Longer time horizon to investigate other commitment
- ▶ Additional data about ad tech usage (singlehoming vs multihoming)

Thank you!

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FCA Remedy: Advertisers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Advertisers	Advertisers	Advertisers	Advertisers	Advertisers	Advertisers	Advertisers	Advertisers
France × Post 06/2022 (DD)	-322.436*** (14.518)	-302.129*** (17.658)	-318.066*** (12.996)	-304.588*** (15.641)	-375.010*** (32.902)	-370.767*** (29.924)	-295.680*** (14.755)	-291.412*** (13.219)
DD × Computers and Technology					68.176 (49.563)	68.176 (45.246)		
DD × Ecommerce and Shopping					978.548*** (72.553)	978.548*** (66.234)		
DD × News and Media					-70.209* (38.391)	-70.209** (35.048)		
DD × Sports					-469.879*** (72.553)	-469.879*** (66.234)		
DD × Top 5							-588.636*** (65.012)	-588.636*** (59.213)
Week FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Domain FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Category	No	No	No	No	Yes	Yes	No	No
Top 5	No	No	No	No	No	No	Yes	Yes
R-squared	0.764	0.804	0.774	0.814	0.775	0.784	0.766	0.776
Observations	9576	5594	12864	7496	8569	11486	9576	12864

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

◀ Back

FCA Remedy: Publishers

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	Revenue	Revenue	Revenue	Revenue	Revenue	Revenue	Revenue	Revenue
France × Post 06/2022 (DD)	-118.531*** (20.730)	-104.272*** (26.043)	-100.839*** (19.245)	-96.133*** (23.832)	-41.126 (46.930)	-21.124 (43.823)	-78.521*** (21.059)	-61.007*** (19.571)
DD × Computers and Technology					-248.625*** (70.693)	-248.625*** (66.262)		
DD × Ecommerce and Shopping					502.434*** (103.484)	502.434*** (96.998)		
DD × News and Media					-153.376*** (54.759)	-153.376*** (51.327)		
DD × Sports					-216.183** (103.484)	-216.183** (96.998)		
DD × Top 5							-880.237*** (92.790)	-880.237*** (87.667)
Week FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Domain FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Category	No	No	No	No	Yes	Yes	No	No
Top 5	No	No	No	No	No	No	Yes	Yes
R-squared	0.720	0.757	0.734	0.775	0.729	0.747	0.723	0.736
Observations	9576	5594	12864	7496	8569	11486	9576	12864

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