

ZACHARY NOLAN

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EDUCATION

Ph.D. Economics, Duke University, 2020 (expected).

Committee: Allan Collard-Wexler (chair), Carl Mela, James Roberts, Curtis Taylor, Jonathan Williams

B.A. Economics, *Summa Cum Laude*, University of Florida, 2014.

B.S. Mathematics, University of Florida, 2014.

RESEARCH INTERESTS

Industrial Organization, Applied Microeconomics, Applied Econometrics

WORKING PAPERS

1. Optimal Assortment on an Integrated Platform (JOB MARKET PAPER).

Abstract: Consumers rely on platforms to access goods and services in many industries. Platform firms are often integrated, including their own goods in the menu of products offered to consumers. With the ability to impact both pricing and product assortment, these integrated firms face a trade-off between foreclosing third-party competitors to promote their integrated products and maintaining the value of the platform as a whole. This paper studies the pricing and assortment decisions of internet service providers (ISPs), which sell broadband internet access and TV packages. The ISP's network connects consumers to third-party online video, which increases the value of internet access, but also competes with the ISP's TV packages. I develop a model of consumer choice over ISP and third-party subscriptions and estimate the model using a novel household-level dataset of ISP subscriptions and usage. Next, I use a model of bundle pricing to study alternative pricing strategies in which internet prices vary with access to online video. I find that a strategy of blocking access to online video is not profitable due to an imbalance in the profit margins on TV and internet access. Restricting online video usage leads to increased TV market share, but is offset by lower willingness-to-pay for internet access. When the ISP sets an additional access charge for online video, additional surplus is generated, benefiting both the firm and consumers.

2. Steering Incentives on Platforms: Evidence from the Telecommunications Industry (with Brian McManus, Aviv Nevo, and Jonathan W. Williams).

Abstract: Internet Service Providers (ISPs) offer both TV packages and access to the internet, which allows customers to view streaming video that competes with TV and can increase ISPs' network costs. This provides ISPs with an incentive to steer its customers toward more profitable subscriptions and viewing choices. We study these incentives using a unique dataset that documents individual consumers' internet usage choices and TV subscriptions, all in a setting where an ISP introduced a new policy of internet usage allowances and overage charges. We extend the textbook monopoly bundling model to describe the policy's main effects, including how ISPs' incentives to encourage or discourage streaming video varies with its ability to steer consumers. We then analyze empirically the price policy's impact on consumers' choices. Consistent with our theoretical model, the new policy steered internet-only consumers into bundled TV and internet subscriptions; this effect was greatest for heavy users of streaming services most similar to conventional TV. Internet usage growth was curtailed for consumers of all types, regardless of choices about subscriptions, and it reduced usage of and subscriptions to third-party streaming video services. Finally, we discuss

the implications of these findings for antitrust and regulatory issues in the telecommunications industry, including net neutrality.

3. The Unbundling of the Telecommunications Industry: Evidence from Cord-cutting (with Jacob Malone, Aviv Nevo, and Jonathan W. Williams).

CONFERENCE PRESENTATIONS

2019: ASSA Annual Meeting (Atlanta), IIOC (Boston), SEA Annual Meeting (Fort Lauderdale)

2018: SEA Annual Meeting (Washington D.C.), NET Institute Conference (NYU Stern)

2017: CableLabs Smaller Market Conference (Keystone)

TEACHING

Duke University

ECON 205 - Intermediate Microeconomics: Fall 2015, teaching assistant for Curtis Taylor

ECON 208 - Econometrics: Spring 2016, teaching assistant for James Roberts

University of Florida

UF Teaching Center, Mathematics Tutor, 2012-2014

Courses: Multivariate Calculus, Linear Algebra, Differential Equations, Real Analysis

RESEARCH AND PROFESSIONAL EXPERIENCE

University of North Carolina at Chapel Hill, Department of Economics, research assistant for Jonathan Williams (2016-2019)

CableLabs, Summer Internship - Strategy (2017)

HONORS, SCHOLARSHIPS, & AWARDS

NET Institute Summer Research Grant, 2019

NET Institute Summer Research Grant, 2018

Summer Research Fellowship, Duke University, 2015, 2016

Graduate Tuition Scholarship, Duke University, 2015, 2016

Graduate First-year Fellowship, Duke University, 2014

Anderson Scholar, University of Florida, 2012

Phi Beta Kappa, University of Florida, 2012

REFERENCES

Allan Collard-Wexler, allan.collard.wexler@duke.edu

James Roberts, j.roberts@duke.edu

Jonathan Williams, jonwms@unc.edu

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