

Document audited: The iPhone Was Not Yet the Ecosystem: A Mechanism Audit and Falsification Comment on Myers and Hooper (2026).

Audit date: June 9, 2026.

Scope: source existence, source relevance, and claim-to-source support for the mechanism extension. This audit does not independently replicate Myers and Hooper's econometric estimates.

Myers and Hooper (2026), NBER Working Paper 35310

Claim supported: Target paper, headline effect sizes, AT&T-monopoly design, and authors' own mechanism discussion.

Audit disposition: NBER working-paper landing page and DOI are included. Local PDF text was used for detailed mechanism passages; public NBER search result confirms the paper and headline estimates.

URLs: <https://doi.org/10.3386/w35310>; <https://www.nber.org/papers/w35310>;
https://www.nber.org/system/files/working_papers/w35310/w35310.pdf

Apple product and platform timing

Claim supported: Original iPhone, iPod touch, iPhone 3G, App Store launch/scale, push notifications, 100,000 apps, iMessage/iOS 5, Verizon iPhone.

Audit disposition: Official Apple Newsroom sources retained. Exact URL capitalization/slugs checked where earlier drafts had mismatches.

URLs: <https://www.apple.com/newsroom/2007/06/28iPhone-Premieres-This-Friday-Night-at-Apple-Retail-Stores/>;
<https://www.apple.com/newsroom/2007/09/05Apple-Unveils-iPod-touch/>;
<https://www.apple.com/newsroom/2008/06/09AT-T-and-Apple-to-Launch-iPhone-3G-in-the-US-on-July-11/>;
<https://www.apple.com/newsroom/2018/07/app-store-turns-10/>; <https://www.apple.com/newsroom/2011/01/11Verizon-Wireless-Apple-Team-Up-to-Deliver-iPhone-4-on-Verizon/>

Pew teen mobile and SMS evidence

Claim supported: 75% teen cell-phone ownership in 2009; 72% of all teens texted; 54% texted daily; 23% teen smartphone ownership in the 2011 teen survey.

Audit disposition: Pew pages checked and retained as primary evidence for the dumb-phone/SMS mechanism.

URLs: <https://www.pewresearch.org/internet/2010/04/20/teens-and-mobile-phones/>;
<https://www.pewresearch.org/internet/2012/03/19/teens-smartphones-texting/>

Pew social-networking evidence

Claim supported: 73% of online teens used social-networking websites in September 2009.

Audit disposition: Current Pew URL and specific Part 3 social-media page retained.

URLs: <https://www.pewresearch.org/internet/2010/02/03/social-media-and-young-adults/>;
<https://www.pewresearch.org/internet/2010/02/03/part-3-social-media/>

Pew adult smartphone evidence

Claim supported: 35% adult smartphone ownership in 2011, with higher adoption among ages 18-24 and 25-34 and socioeconomic gradients.

Audit disposition: Pew smartphone adoption report retained.

URLs: <https://www.pewresearch.org/internet/2011/07/11/smartphone-adoption-and-usage/>

Comscore smartphone platform and mobile use

Claim supported: Apple share of smartphone subscribers, Android/RIM context, texting/browsing/apps/social mobile content use, mobile-social audience scale.

Audit disposition: Comscore official pages retained; PRNewswire mirrors used only as backup if official pages move.

URLs: <https://www.comscore.com/Insights/Press-Releases/2011/2/comScore-Reports-December-2010-US-Mobile-Subscriber-Market-Share>; <https://www.comscore.com/Insights/Press-Releases/2011/8/comScore-Reports-June-2011-US-Mobile-Subscriber-Market-Share>; <https://ir.comscore.com/news-releases/news-release-details/social-networking-go-us-mobile-social-media-audience-grows-37>

Nielsen 2010 mobile app report

Claim supported: Games/Facebook/maps/weather as leading 2010 app categories; cross-platform Facebook use.

Audit disposition: Nielsen source retained; used for mechanism classification, not causal inference.

URLs: <https://www.nielsen.com/insights/2010/the-state-of-mobile-apps-2/>

Dating-app timing

Claim supported: Tinder launched in 2012; Hinge mobile in 2013; mobile dating-app use was small in 2013.

Audit disposition: Official Tinder/Hinge pages plus Pew and contemporaneous TechCrunch retained. Dating-app mechanism classified as post-window.

URLs: <https://www.tinderpressroom.com/about>; <https://hinge.co/our-story>; <https://techcrunch.com/2013/01/03/tinder-finding-traction-on-campuses-hatch-labs-new-dating-app-makes-it-easy-to-break-the-ice/>; <https://www.pewresearch.org/internet/2013/10/21/part-2-dating-apps-and-online-dating-sites/>

Instagram/Snapchat timing

Claim supported: Instagram launch in 2010; Instagram Direct in 2013; Snapchat/Picaboo and Stories timing.

Audit disposition: Sources retained only for timing. Modern image-social mechanism classified as mostly post-window.

URLs: <https://techcrunch.com/2010/10/06/instagram-launch/>; <https://techcrunch.com/2013/12/12/instagram-messaging/>; <https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm>; <https://www.latimes.com/business/technology/la-fi-tn-snapchat-stories-feature-20131003-story.html>

Contraception and adolescent pregnancy risk

Claim supported: Improved contraceptive use accounts for adolescent pregnancy-risk declines; sexual activity did not change significantly; contraceptive use at last sex rose 78% to 88% in 2007-2014.

Audit disposition: Journal of Adolescent Health DOI/PubMed and Guttmacher summaries retained. This is the strongest rival mechanism evidence.

URLs: <https://doi.org/10.1016/j.jadohealth.2016.06.024>; <https://www.gutmacher.org/news-release/2016/declines-teen-pregnancy-risk-entirely-driven-improved-contraceptive-use>; <https://doi.org/10.1016/j.jadohealth.2018.05.017>; <https://pubmed.ncbi.nlm.nih.gov/30149926/>

CDC YRBS sexual-activity figures

Claim supported: 2007 high-school sexual activity: 47.8% ever sex, 35.0% currently sexually active; 2011: 47.4% ever sex, 33.7% currently sexually active.

Audit disposition: CDC MMWR URLs and PubMed records retained. Browser open can fail on older CDC pages, so PubMed landing pages included as secondary audit paths.

URLs: <https://www.cdc.gov/mmwr/preview/mmwrhtml/ss5704a1.htm>; <https://pubmed.ncbi.nlm.nih.gov/18528314/>; <https://www.cdc.gov/mmwr/preview/mmwrhtml/ss6104a1.htm>; <https://pubmed.ncbi.nlm.nih.gov/22673000/>

CDC teen-birth decline

Claim supported: Teen birth-rate decline 2007-2011 and Hispanic teen-birth decline.

Audit disposition: CDC QuickStats page retained.

URLs: <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6142a8.htm>

CDC abortion surveillance

Claim supported: Reported abortions, abortion rate, and abortion ratio trends during 2007-2011.

Audit disposition: CDC MMWR and PubMed landing page retained.

URLs: <https://www.cdc.gov/mmwr/preview/mmwrhtml/ss6311a1.htm>; <https://pubmed.ncbi.nlm.nih.gov/25426741/>

CDC STI surveillance

Claim supported: Chlamydia/gonorrhea context and surveillance caveats for outcome-triangulation section.

Audit disposition: CDC PDF retained. Used cautiously because STI rates are affected by screening/testing/reporting.

URLs: <https://www.cdc.gov/sti-statistics/media/pdfs/2024/07/Surv2011.pdf>

Kearney and Levine (2015)

Claim supported: 16 and Pregnant reduced teen births 4.3% and increased contraception/abortion information-seeking.

Audit disposition: AEA publisher page and DOI retained.

URLs: <https://doi.org/10.1257/aer.20140012>; <https://www.aeaweb.org/articles?id=10.1257/aer.20140012>

Buckles, Guldi, and Schmidt (2025)

Claim supported: Unintended births declined more than intended births in the post-2007 period.

Audit disposition: JHR DOI and RePEc metadata retained; used as background mechanism context.

URLs: <https://doi.org/10.3368/jhr.1220-11395R3>; <https://ideas.repec.org/a/uwp/jhriss/v60y2025i1p224-258.html>

Additional robustness-module source audit

Audit date: June 9, 2026. Scope: added first-stage calibration table, teen-channel benchmark figure, ecosystem/gestation timeline, mechanism-test matrix, and public-data roadmap. This audit verifies source existence and claim support, not econometric replication.

| New material | Claim support | Audited source family | Disposition |
|------------------------------|--|---|--|
| Calibration table | Uses Myers and Hooper reduced-form estimates: 4.5-8.0% for ages 15-19 and 3.2-6.6% for ages 20-24. Treatment-on-treated entries are arithmetic: RF / assumed first-stage exposure increase. | Myers and Hooper (2026) NBER page/PDF; manuscript formula. | Retained; presented as sensitivity calibration, not estimated first stage. |
| Teen digital-channel figure | Pew: 75% teen cell-phone ownership, 72% all teens texting, 54% daily texting; 83% of cell-owning teens take pictures; Pew: 23% teen smartphone ownership in 2011; Comscore: Apple 25.0% smartphone share in Dec. 2010. | Pew 2010 Teens and Mobile Phones; Pew 2012 Teens, Smartphones & Texting; Comscore Dec. 2010 mobile subscriber report. | Retained; final bar explicitly labeled a calculated national benchmark, not county first stage. |
| Ecosystem/gestation timeline | Product/app dates: iPhone, iPod touch, App Store, 3,000 apps, push notifications, 100,000 apps, Instagram, Verizon iPhone, iOS/iMessage, Tinder, Instagram Direct/Snap Stories. Birth effects shifted by nine months as an assumption for timing discipline. | Apple Newsroom; TechCrunch; Tinder/Hinge official pages; Snap SEC S-1; LA Times Snapchat Stories source. | Retained; figure is a timing/falsification device, not causal estimate. |
| Public-data roadmap | CDC WONDER supports natality counts by geography and demographics; AtlasPlus supports HIV/hepatitis/STD/TB tables/maps/charts and downloads; NSFG/RDC supports restricted geography requests; ACS/BLS/BEA/FHFA/NTIA provide local demographic/economic/housing/broadband data. | CDC WONDER; CDC AtlasPlus; CDC NSFG/RDC; Census ACS; BLS LAUS/ATUS; BEA county income; FHFA HPI; NTIA broadband datasets. | Retained; roadmap separates public, restricted-public, commercial, and platform-data requirements. |

Additional auditable URLs:

BLS. n.d. 'American Time Use Survey.' U.S. Bureau of Labor Statistics. Accessed June 9, 2026. <https://www.bls.gov/tus/>

BLS. n.d. 'Local Area Unemployment Statistics: Tables and Maps.' U.S. Bureau of Labor Statistics. Accessed June 9, 2026. <https://www.bls.gov/lau/tables.htm>

CDC. n.d. 'Natality Information.' CDC WONDER. Accessed June 9, 2026. <https://wonder.cdc.gov/natality.html>

CDC. n.d. 'About AtlasPlus.' National Center for HIV, Viral Hepatitis, STD, and TB Prevention. Accessed June 9, 2026. <https://www.cdc.gov/nchhstp/about/atlasplus.html>

CDC. n.d. 'National Survey of Family Growth.' National Center for Health Statistics. Accessed June 9, 2026. <https://www.cdc.gov/nchs/nsfg/index.htm>

CDC. n.d. 'Restricted Data: National Survey of Family Growth.' Research Data Center. Accessed June 9, 2026. <https://www.cdc.gov/rdc/b1datatype/Dt1226.htm>

CDC. n.d. 'Youth Risk Behavior Surveillance System.' Accessed June 9, 2026. <https://www.cdc.gov/yrbs/index.html>

Federal Housing Finance Agency. n.d. 'FHFA House Price Index.' Accessed June 9, 2026. <https://www.fhfa.gov/data/hpi>

NTIA. n.d. 'June 30, 2010 National Broadband Map Datasets.' State Broadband Initiative archive. Accessed June 9, 2026. <https://www2.ntia.gov/June-2010-datasets>

NTIA. n.d. 'June 30, 2011 National Broadband Map Datasets.' State Broadband Initiative archive. Accessed June 9, 2026. <https://www2.ntia.gov/Jun-2011-datasets>

U.S. Bureau of Economic Analysis. n.d. 'Personal Income by County.' Accessed June 9, 2026. <https://www.bea.gov/data/income-saving/personal-income-by-county>

U.S. Census Bureau. n.d. 'American Community Survey 5-Year Data (2009-2024).' Accessed June 9, 2026. <https://www.census.gov/data/developers/data-sets/acs-5year.html>