

Copyright Enforcement in the Digital Age: Empirical Economic Evidence and Conclusions

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Primary Impacts of Digitization on Entertainment

- Lowered costs of production in media industries
 - Created new opportunities for distribution and promotion
 - Eroded the effective strength of copyright
 - Filesharing/piracy
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Three Empirical Questions About Internet Piracy

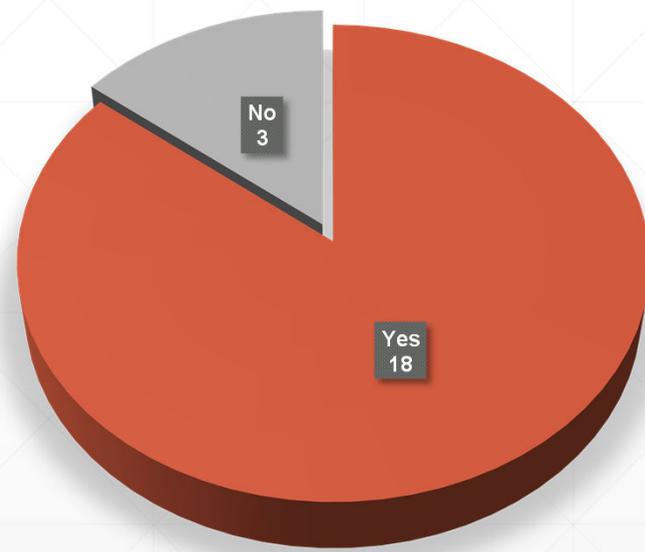
- Has Internet filesharing displaced sales and revenues in the media industries?
 - Do revenues lost to filesharing reduce incentives to create new artistic works?
 - What strategies or policies are effective in mitigating the effect of filesharing on revenues?
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Three Empirical Questions About Internet Piracy

- Has Internet filesharing displaced sales and revenues in the media industries? **YES**
 - Do revenues lost to filesharing reduce incentives to create new artistic works? **STILL IN QUESTION**
 - What strategies or policies are effective in mitigating the effect of filesharing on revenues? **TODAY'S FOCUS**
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Does Piracy Displace Media Sales?

Number of Peer Reviewed
Published Studies



Source: Danaher, Smith, and Telang 2014. "Piracy and Copyright Enforcement Mechanisms"

Do Lower Revenues Reduce Creative Incentives?

Modern Digitization of Media

Reduced revenues from piracy

+

Cost saving digital technologies

=

No decline in # or quality of music and movies

Sources: Waldfogel (2012), Aguiar and Waldfogel (2015)

VHS Piracy in Bollywood 1985-2000

Reduced revenues from VHS piracy

+

Weak IP enforcement

+

No reduction in production costs

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Significant decline in # and quality of films made

Source: Telang and Waldfogel (2014)

How to Mitigate the Impact of Piracy

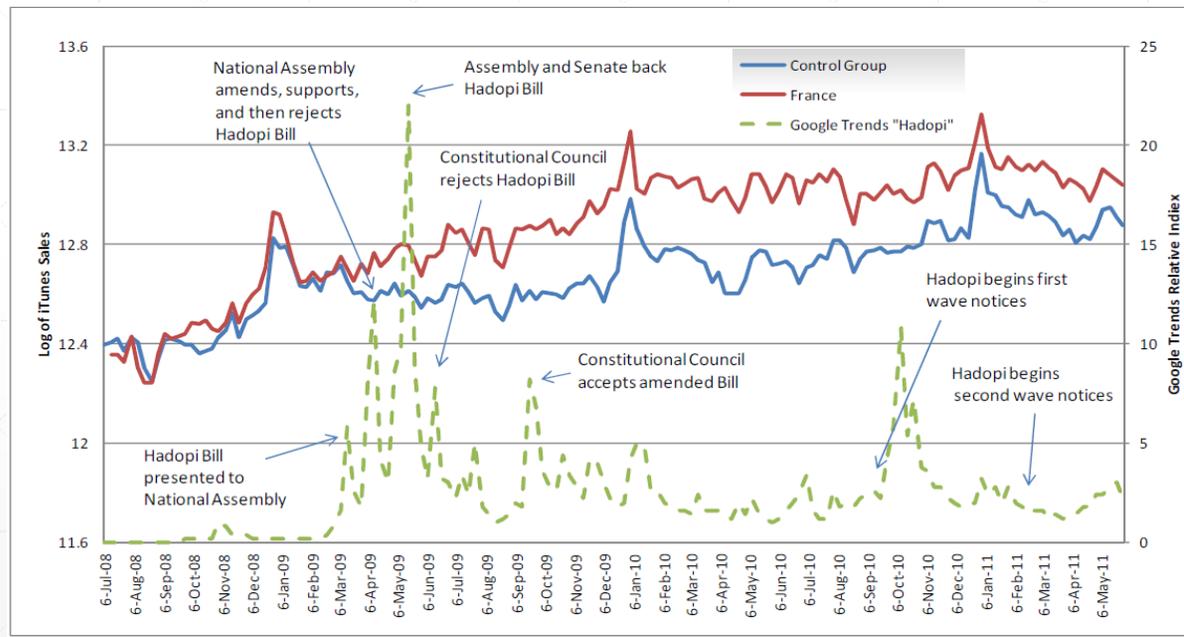
- Strategies that make legal content more attractive, for example:
 - Availability and convenience of legal alternatives
 - Timing of legal alternatives (shorter windows / delays)
 - Pricing of legal alternatives
 - Policies that make illegal content less attractive, i.e. enforcement:
 - Piracy site shutdowns
 - Blocking of piracy sites
 - Increasing threat of piracy detection and penalties
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Antipiracy Enforcement Can Influence Consumers

- Demand-side policies can be effective
 - HADOPI in France caused digital music sales to increase by 25%
 - IPRED in Sweden increased caused music sales to increase by 36% for six months, after which lax enforcement led to a return to pre-IPRED sales levels

Antipiracy Enforcement Can Influence Consumers

The Effect of HADOPI on French Digital Music



Source: Danaher et al (2014) "The Effect of Graduated Response Antipiracy Laws on Music Sales: Evidence from an Event Study in France"

Antipiracy Enforcement Can Influence Consumers

- Supply side policies can be effective, depending...
 - Shutdown of Megaupload caused a 6.5-8.5% increase in digital movie revenues
 - UK blocking of The Pirate Bay dispersed piracy to other sites, no increase in paid legal streaming
 - UK blocking of 19 piracy sites in November 2013 significantly reduced piracy, increased usage of paid legal streaming by 12%
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Antipiracy Enforcement Can Influence Consumers

Summary

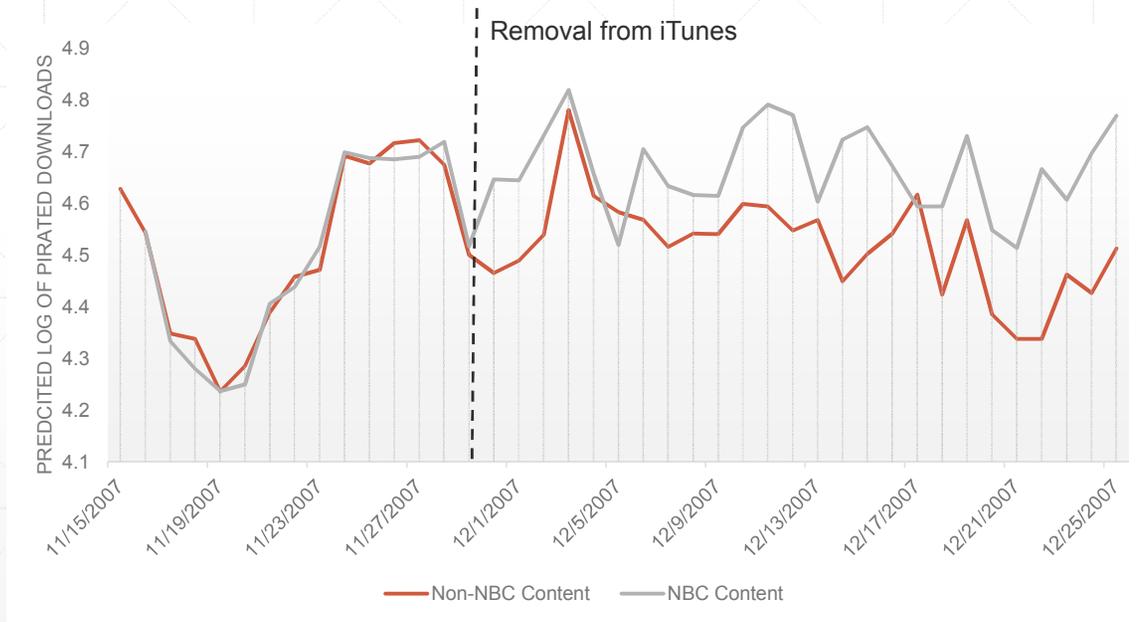
- Demand side policies targeting consumers are effective when consumers perceive penalties will be enforced
 - Supply side policies targeting sites are effective when content is fully removed (Megaupload) or when enough sites are blocked to make piracy inconvenient
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Firm Strategies Also Influence Consumers

- Availability / convenience of legal content reduces piracy
 - Removal of NBC tv shows from iTunes increases piracy of those shows
 - Addition of ABC shows to Hulu also reduced piracy of those shows
- Shorter international DVD windows (time between US and foreign DVD release) reduces piracy, increases sales
- Demoting piracy links in search engine results shifts consumer behavior toward legal channels

Firm Strategies Also Influence Consumers

Piracy of NBC Content Before and After Removal from iTunes



Source: Danaher et al (2010) "Converting Pirates Without Cannibalizing Purchasers: The Impact of Digital Distribution on Physical Sales and Internet Piracy"

Firm Strategies Also Influence Consumers

Field Experiment Manipulating Search Results

	n	# Legal option	% Legal option	Average price (conditional on legal copy)
Condition 1: No manipulation	60	48	80.0%	\$9.80
Condition 2: Legal manipulation	71	67	94.4%	\$9.89
Condition 3: Infringing manipulation	65	37	56.9%	\$9.93

Source: Sivan et al (2014) "Do Search Engine Results Influence Media Piracy? Evidence from a Randomized Field Study"

Strategy and Policy Together Are Optimal

Carrot



Stick



Strategy and Policy Are Optimal Together

- Firm strategies to make content more attractive are less meaningful if copyright is not enforced
 - It's hard to “*compete with free*”
 - Antipiracy enforcement will be less effective if content is not available, not convenient, delayed, or prohibitively priced
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