# How Internet Platforms Intermediaries Affect Competition and Consumers

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*This paper examines how Internet ventures operate as intermediaries serving both upstream sources of content and applications as well as downstream consumers. It considers how governments can respond to the onset of price and quality of service discrimination within the Internet ecosystem. The paper concludes that most governments have failed to revise and recalibrate tools that examine potential marketplace distortions and the potential for harm to competition and consumers. Regulatory agencies and courts have generated false positives, resulting in market intervention where no major problem exists, but also false negatives, where undetected major problems cause harm without remedy. The paper recommends a recalibration of market definition and analysis, including examination of both downstream and upstream impacts.*

## I. Introduction

Several segments of the Information, Communications and Entertainment (ICE) marketplace have dominant intermediaries that operate a platform needed by both upstream sources of content and downstream consumers. These ventures can achieve market dominance in a 'winner take all' (Malik 2015) competition by creating the dominant platform standing between upstream content sources and downstream consumers (Schumpeter 2017). In the markets for broadband carriage and many Internet service segments, such as social networking, winning ventures quickly can accrue scale and efficiency advantages as more and more consumers join the bandwagon and subscribe (Gal and Elkin-Koren 2017).

Successful insertion of an intermediary platform has generated both positive and negative impacts on consumer welfare, competition, the rate of innovation, employment and other key factors. On the positive side, intermediaries can promote efficiency and positive network externalities (Katz and Shapiro 1985; Moffatt 2016) where the overall value of a network and its ability to generate consumer benefits grows as more users participate. On the negative side, intermediaries, operating without significant competition, can extract high prices from both upstream and downstream participants, erect strong barriers to market entry, acquire competitors and use comparative advantages to dominate in both core and related markets such as the collection, processing and sale of 'Big Data' (Helveston 2016) about subscriber behavior.

Economists use the term two-sided markets to identify platform functions where transactions occur both upstream and downstream from the intermediary (Rochet and Tirole 2003, 2006; Armstrong 2006; Filstrucchi, Geradin, van Damme and Affeldt 2014). The business models used by intermediaries often rely on a strategic calibration of prices, often appearing to provide 'free' , or subsidized services to users on one side of the platform, typically downstream consumers. Consumers can access valuable services with zero financial payments, but they do have to pay by permitting intermediaries to compile information about their wants, needs, desires, Internet uses, searches and other behavior that can be processed and marketed to advertisers for better targeting of their commercial pitches. Privacy intrusions (Pasquale 2013) and the commodification of consumer behavior generate significant value that a platform operator can accrue often without subscribers fully understanding and quantifying the potential for reduced benefits.

This paper identifies defects in the ways most government currently respond to allegations of harm to consumers and competition. Governments can refrain from regulating access and tolerate market concentration as the proper reward for ventures offering desirable content and carriage services. Alternatively, they can impose ex ante safeguards to remedy anticipated harms to competition and consumers such as market concentration, price discrimination, reduced consumer welfare and captured consumer surpluses. Between these poles, governments can rely on courts or an expert regulatory agency to evaluate complaints and offer calibrated remedies.

The paper recommends that courts and government agencies should address marketplace distortions by recalibrating existing tools to examine the competitive and consumer impacts on both sides of an intermediary's platform.

## II. Consumer Benefits from Two-Sided Markets

Intermediaries have operated in many marketplaces for centuries (Cohen 2018). Emerging broadband, digital platforms radically enhance the power and impact of such ventures resulting in vast changes to "the traditional equi-

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libria of supply and demand, blurring the lines between owners and users, producers and consumers, workers and contractors, and transcending the spatial divides of personal and professional, business and home, market and leisure, friend and client, acquaintances and stranger, public and private." (Lobel 2016: 90) Digital broadband platform operators can accrue substantial consumer benefits even as they increase market shares. A 'win-win' scenario combines ample benefits for platform operators and consumers by enhancing the value proposition in commercial transactions.

Digital broadband platform operators can quickly acquire scale economies (Peritt 2017) and efficiency gains by attracting growing numbers of users and spreading costs over a large population of users. The incremental cost to add an additional participant approaches zero, because many Internet-mediated markets have high initial, investment costs, but very low incremental costs incurred when adding users. Additionally, these platforms can accrue positive networking externalities (Lemley and McGowan 1998; Newman 2012) as subscribership grows. When intermediaries reach a critical mass of popularity, non-users see the advantages in joining the bandwagon which further enhances the comparative attractiveness of a specific platform operator vis a vis other competitors and options.

Platform intermediaries must deliver a compelling value proposition to generate consumer use, particularly when alternatives exist, with low entry barriers and switching costs. The combination of competitive necessity and more efficient operations can readily translate into the offering of lower priced products and services to consumers, particularly because two-sided platform operators can calibrate how much to charge each side:"[P]rofit-maximizing prices may require charging one side less than the marginal cost of serving that side. Empirical surveys of industries based on . . .[two-sided platforms] find many examples of prices that are low, or even negative, so that customers on one side are incentivized to participate in the platform" (Evans and Noel 2005:668).

### III. Consumer Costs from Two-Sided Markets

Immediate and longer-term costs offset readily identifiable benefits from two-sided platforms. In the short term, ventures like Amazon enhance consumer welfare by offering a growing inventory of products and services at lower prices, the product of operational efficiencies and the willingness to eschew profits in exchange for increasing market share and scope. However, in the longer term, consumers may suffer from the loss of competition from 'bricks and mortar', local vendors as well as from the consequences of ever more accurate assessment of consumer price sensitivity and increasingly invasive collection of subscribers' consumption behavior and the brokering of such data by largely unregulated ventures (Kuempel 2016). At some point, online platform operators may consider their market position sufficiently impenetrable so that they can refrain from aggressive price cutting and forgoing near term profitability.

Additionally, these operators may have so developed data analytics that they can quite accurately set and frequently modify prices with an eye toward maximising profits (Fleming 2015). Dynamic pricing refers to the ability of product and service vendors to change prices quickly by collecting and analysing data about current consumer demand (Calo 2014; Adame 2016). Rather than set a fixed price, only occasionally raised or lowered, vendors can make frequent pricing changes based on current marketplace conditions. While such dynamic pricing arguably represents an efficiency enhancing, fine-tuning of price setting, consumers may consider it unfair and discriminatory.

### IV. Subscriber Data Value and Lock-in Cost Missing in the Cost/Benefit Analysis

One can readily assess the benefits of access to intermediary platforms, but the costs are not as readily determined. Consumers may wrongly assume that they have free access, because no subscription payment occurs except to the carrier providing the broadband link. The free access conclusion fails to consider two somewhat hidden and not easily quantifiable costs: 1) the increase in the price of advertised goods and services, possibly better calibrated through data mining and 2) the monetary value accruing to intermediaries when they acquire, collate, analyse and sell consumer data, as well as auction advertising placements on their web sites (Bodie, Cherry, McCormick and Tang 2017; Woodcock 2017; Hacker and Petkova 2017).

Broadband intermediaries have achieved remarkable success in developing techniques to monitor, surveil, collect and sell subscriber data. This reduces the value position of what the intermediary offers because the ability to 'mine' subscriber data has value that can provide a substantial, new revenue stream from freely collected consumer data.

### V. Deficiencies in Existing Government Oversight Models

Outside the European Union, (European Parliament 2016) most governments have failed to revise existing legal, regulatory and jurisprudential models and frameworks for application to issues raised by the onset of digital broad-

band intermediary platforms. This section addresses how traditional governmental strategies ignore fundamental differences between bricks and mortar and Internet-mediated transactions.

As a threshold matter, governments decide whether and how to intervene in a specific industry sector. They may opt to rely entirely on marketplace forces, confident that competition will force stakeholders to operate in ways that deliver a compelling value proposition for consumers without anticompetitive practices. Other governments may pursue the opposite: an interventionist approach, imposing ex ante rules and regulations, such as network neutrality (Frieden 2015) and common carrier regulation. Between these polar opposites, two alternative, possibly complementary, ex post strategies exist: 1) apply antitrust, consumer protection and prohibitions on unfair trade practices to remedy proven harms and 2) use dispute resolution through litigation and complaint filing procedures to fashion remedies that typically impose monetary fines and compulsory modification of business practices.

Each of the legacy models fails to achieve an ideal balance between governmental regulatory forbearance and intervention, primarily because the assumptions, strategies and tactics applied do not make essential adjustments reflecting the difference between digital, broadband networking and preexisting channels of commerce. Without modification of market definition and impact assessment, governments risk false positives, which trigger unnecessary marketplace intervention, or by reaching false negatives, which fail to trigger important safeguards based on an incorrect determination that no harm to consumers or competition has, or will occur.

## VI. A Realistic Assessment of Platform Costs and Benefits

Consumers and governments may not fully understand the tradeoffs when digital, broadband intermediaries dominate many ICE market segments. One can readily appreciate the upside consumer benefits in having access to advertiser-supported content and Internet markets subsidised by ventures willing to forego short term profits for longer term market share and product diversification. A more difficult undertaking calculates what direct and indirect costs consumers incur, presently and in the future, for the opportunity to participate in 'winner take all' two-sided markets.

Prevailing economic doctrine, widely embraced by government legislators, judges and regulators, favors an inclination not to intervene in the marketplace, when identifiable, near term cost savings and other welfare enhancements flow to consumers. Much revered, so-called Chicago School marketplace assumptions (Bork 1978; Posner 1979; Crane 2014) and antitrust prescriptions may not make sense for digital, platform markets including the view that rational commercial actors (such as Amazon) never would pursue below market pricing given the unlikely opportunity to recoup current losses in the future. Likewise, a laser focus on efficiency and consumer welfare, as espoused by Robert Bork, may require a longer timespan that considers whether immediate and easily measured, short-term consumer welfare enhancements partially or completely offset in the longer-term. Such analysis requires scrutiny of both downstream and upstream market effects.

At the very least, it has become increasingly clear that consumers must contribute more value, than what they might infer from widespread promotion of 'free' and subsidised access.

Even in the short run, the value proposition from participating in two-sided markets may decline as consumers begin to understand the monetary value of the network usage data they generate and consent to having platform operators use for dynamic pricing of their goods and services and as a marketable commodity for sale to upstream advertisers.

In the longer term, the commodification of consumer data may accrue the greatest strategic and financial advantages for ventures that already have successfully exploited positive network externalities and have acquired large market shares. This advantage stifles innovation and competition if consumers cannot freely change their platform subscription and take their business to another platform. In the Internet ecosystem, consumers often lack complete information about what they must pay and what they lose in exchange for the opportunity to become a subscriber. Few consumers may have the disposition and wherewithal to undertake regular cost/benefit analyses as well as a determination whether to stick with the status quo, or to seek better terms and conditions. Such inertia enhances the ability of incumbent unicorn firms to maintain their market dominance.

Simply put, digital broadband consumers may likely suffer more significant, but not readily quantifiable harms, as digital, broadband intermediaries find new and more precise ways to maximize revenues from both upstream and downstream sources. Real or perceived lock-in by incumbent firms help maintain their market dominance.

Government agencies with jurisdiction to monitor such actions appear ill-equipped to provide effective oversight based on their fealty to now questionable economic and

antitrust theory, the inability or unwillingness to consider costs and benefits on both sides of the two-sided market and their emphasis on short term consumer benefits that may not seem as generous as initially estimated.

**The Way Forward**

Regulatory agencies with jurisdiction to safeguard consumers and reviewing courts should better calibrate the tools they use to investigate the potentially harmful effects of platform intermediaries on competition and consumers, with emphasis on the potential for privacy intrusions, unfair trade practices, market concentration and anticompetitive tactics. The goals for recalibration should focus on acquiring a better understanding of platform operator practices and their impacts rather than serve as a justification for more intrusive government oversight. Such a holistic approach can better assess the costs and benefits generated by platform intermediaries.

**1) Assess Impacts on Both Sides of a Platform**

To achieve greater clarity on the potential for beneficial and harm impact, courts and government agencies should examine platform operations on both upstream and downstream market sides. Using a cost benefit analysis, they may determine that harmful impacts on one side are offset by benefits on the other side. In other instances, they may identify greater harms or benefits when examining both sides.

By examining both sides of a digital, broadband platform market, courts and regulatory agencies can enhance the accuracy of their assessment of competition and whether consumers benefit or suffer from doing business with intermediaries having significant market share. In turn, they can better calibrate a remedy, or reach an empirically supported conclusion that no market intervention is necessary.

**2) Consider Whether and How Lock-In Exists**

Courts and regulatory agencies should consider the service options available to digital, broadband subscribers. In some instances, they have ample choices that prevent lock-in and evidence a competitive marketplace. However, in other instances, lock-in occurs, because consumers have few alternatives, or they incur costs, inconvenience, or reduced benefits if they leave the dominant platform.

Lock-in can occur even when alternative options exist. For example, an electronic commerce site, like eBay, may steer subscribers to a former affiliated electronic funds transfer platform operated by PayPal, even though alternative payment systems exist. Consumers have incentives to use PayPal, because the eBay site appears to favor and expedite such transactions and most vendors prefer to receive payment via PayPal. The preference for PayPal and the greater ease consumers have in using the preferred payment system generate substantial motivations to take the promoted and preferred path of least resistance.

Courts and regulatory agencies should consider the potential for lock-in beyond simply assessing whether a specific market segment has multiple platform operators. The existence of alternatives, by itself, does not evidence a competitive marketplace which can self-regulate. In the absence of viable service alternatives, courts and regulators should consider downstream consumers' quality of experience to ensure that the apparent preference for a single platform option promotes convenience and enhances consumer welfare.

**3) Assess Market Impacts, Rather Than Simply Calculate Market Share**

As noted, courts and regulators generally refrain from reaching conclusions about market competitiveness based solely on calculations showing a concentrated market, or one dominated by a single venture. Large firms having high market share may evidence a firm's superior business acumen, or the need for ventures to accrue economies of scale to thrive in a specific market segment.

On the other hand, market dominance may have significant and potentially adverse impacts on consumers and the potential for competition. Significant harm may arise because a firm can leverage dominance in one market to dominate other market segments. For example, Google dominates the market for Internet search and advertising, despite ample alternatives. Regulatory or judicial intervention is not warranted simply because Google has acquired substantial market share in Internet search. However, the company's success in dominating the search market also translates into substantial market share in the auctioning of advertising opportunities to search consumers (Newman 2014), making it possible for the company to impose anticompetitive terms and conditions.

Courts and regulators may need to consider the inter-relationship between a venture's successes in two or more markets, because dominance in combined, or interdependent markets, may trigger new or greater risks for consumers. Just as platform intermediary operation affects both downstream and upstream users, so too can market success in one market generate uncontested opportunities to extend market power elsewhere. Such leverage may have adverse impacts on the potential for new competition, even from innovative ventures.

## VII. Conclusion

Digital broadband technologies and markets have reached a critical mass of market penetration and efficiency enhancements highlighted by embedded platforms. The Internet ecosystem has many market segments predominated by single ventures that have acquired dominance in 'winner take all' competition that rewards ventures best able to exploit positive network externalities. Intermediaries have conferred significant, identifiable benefits to consumers, who also incur offsetting costs, not all of which can be easily quantified or measured.

Intermediary platforms operators can calibrate cost recovery from both upstream and downstream users. In many instances, downstream consumers have benefitted from subsidies and pricing strategies that reduce, or eliminate direct, out of pocket costs. However, subsidy payers, such as advertisers, eventually recoup their costs through higher charges for goods and services. In light of enhancements in the acquisition, analysis and marketing of consumer behavior data, both vendors and platform intermediaries now have more diversified and extensive ways to recoup costs and to improve prospects for generating more revenues. Such data mining can impose new costs on consumers who must tolerate ever more extensive privacy intrusions in exchange for access to so-called free services. Enhanced consumer surveillance can impose lower or higher costs as exemplified by dynamic pricing that frequently changes rates through algorithmic analysis of overall demand, as well as a prediction of a prospective customer's intensity of preference for a particular good, or service.

Considering the mixed impacts of embedded intermediaries on competition and consumers, legislatures, courts and regulators should apply new tools for assessing current and prospective impacts. Unfortunately, the speed of innovation and the convergence of technologies and markets have exceeded the ability of governments to stay current. Accordingly, the tools used to assess market impacts have become ill-suited and poorly calibrated to meet new challenges (Brandenburger, Breed and Schoning 2017). Conventional competition policy and economic theories lack an emphasis on identifying both short term and longer-term consequences of platform operations. While immediate consumer welfare enhancement supports regulatory forbearance, governments need to consider whether and how longer-term impacts will remain benign or favorable.

In too many instances, governments have overstated consumer benefits and the absence of competitive harm. Most courts and regulatory agencies have not considered an intermediary's impact on both upstream and downstream markets, failed to consider fully whether and how subscriber lock-in has occurred and generated rationales excusing substantial market concentration based on short term consumer benefits that may not be as generous if offsetting privacy intrusions are considered.

Going forward, governments should appreciate that platform intermediaries do not operate as charities and that the conferral of benefits to consumers may be offset by negative impacts on both consumers and competition, even in the short term. A more holistic examination of impacts, without placing a premium on short term consumer benefits, would generate a more accurate assessment of the mixed impacts generated by platform intermediaries.

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