SOPA, Internet Regulation and the Economics of Piracy

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Earlier this month, I detailed at some length why claims about the purported economic harms of piracy, offered by supporters of the Stop Online Piracy Act (SOPA) and PROTECT-IP Act (PIPA), ought to be treated with much more skepticism than they generally get from journalists and policymakers.

My own view is that this ought to be rather secondary to the policy discussion: SOPA and PIPA would be ineffective mechanisms for addressing the problem, and a terrible idea for many other reasons, even if the numbers were exactly right. No matter how bad last season's crops were, witch burnings are a poor policy response. Fortunately, legislators finally seem to be cottoning on to this: SOPA now appears to be on ice for the time being, and PIPA's own sponsors are having second thoughts about mucking with the Internet's Domain Name System.

That said, I remain a bit amazed that it's become an indisputable premise in Washington that there's an enormous piracy problem, that it's having a devastating impact on US content industries, and that *some*kind of aggressive new legislation is needed *tout suite* to stanch the bleeding. Despite the fact that the Government Accountability Office recently concluded that it is "difficult, if not impossible, to quantify the net effect of counterfeiting and piracy on the economy as a whole," our legislative class has somehow determined that—among all the dire challenges now facing the United States—*this* is an urgent priority. Obviously, there's quite a lot of copyrighted material circulating on the Internet without authorization, and other things equal, one would like to see less of it.

But does the best available evidence show that this is inflicting such catastrophic economic harm—that it is depressing so much output, and destroying so many jobs—that Congress has no option but to Do Something immediately? Bearing the GAO's warning in mind, the data we *do* have doesn't remotely seem to justify the DEFCON One rhetoric that now appears to be obligatory on the Hill.

The International Intellectual Property Alliance—a kind of meta-trade association for all the content industries, and a zealous prophet of the piracy apocalypse, released a report back in November meant to establish that copyright industries are so economically valuable that they merit more vigorous government protection. But it actually paints a picture of industries that, far from being "killed" by piracy, are *already* weathering a harsh economic climate better than most, and have far outperformed the overall US economy through the current recession. The "core copyright industries" have, unsurprisingly, shed some jobs over the past few years, but again, compared with the rest of the economy, employment seems to have held relatively stable at a time when you might expect cash-strapped consumers to be turning to piracy to save money.

Decreasing creative output?

Since the core function of copyright is to incentivize the production of creative works, it's also worth looking for signs of declining output associated with filesharing. Empirically, it's surprisingly hard to find an effect. Rather, a recent survey study by Felix Oberholzer-Gee of the Harvard Business School concluded that "data on the supply of new works are consistent with the argument that file sharing did not discourage authors and publishers" from producing more works, at least in the US market.

So, for instance, Nielsen SoundScan data shows new album releases stood at 35,516 in 2000, peaked at 106,000 in 2008, and (amidst a general recession) fell back to mid-decade levels of about 75,000 for 2010. That's against a general background of falling sales since 2004—mostly explained by factors unrelated to piracy—which finally seems to have reversed in 2011. The actual picture is probably somewhat better than that, because SoundScan data is markedly incomplete when it comes to the releases by indie artists who have benefited most from the rise of digital distribution.

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If we look at movies, the numbers compiled by the industry statistics site Box Office Mojo show an average of 558 releases from American studios over the past decade, which rises to 578 if you focus on just the past five years. The average for the *previous* decade—before illicit movie downloads were even an option on most people's radar—is 472 releases per year. (As we learn from a recent Congressional Research Service report, it's weirdly hard to detect a strong overall correlation between output and employment in the motion picture industry, which actually fell slightly from 1998 to 2008, even as profits and CEO pay soared.

One reason is the growing trend in recent decades for "Hollywood" features to actually be produced in Canada or Australia.)

That's all very nice, one might object, but wouldn't these heartening numbers be *even higher* if labels and studios could recapture some of the revenue lost to illicit downloads? Well, they surely *might*—but it's not nearly as clear as you'd think.

One reason is that they already *are* recapturing much of that revenue through "complementary" purchases. As Oberholzer-Gee observes, recording industry numbers show large increases in concert revenues corresponding to the drop in recorded music sales. That suggests that, as people discover new artists by sampling downloaded albums online, they're shifting consumption *within* the sector to live performances. In other words, people have a roughly constant "music budget," and what they don't spend on the albums they've downloaded gets spent on seeing that new band they discovered. For the firms that specifically make their money from the sale of recordings, that may seem like cold comfort, but if we're concerned with the *music* industry as a whole, it's a wash. Something similar might occur with respect to purchases of merchandise based on licensed film properties.

Another factor is that, notwithstanding projections of a "long tail" effect resulting from lower search and distribution costs in the digital era, most entertainment industries continue to operate on a "tournament" or "lottery" model, where a few hits generate jackpot revenues, sufficient to make up for losses on the majority of new products. Unsurprisingly, the most heavily pirated movies each year tend to be the ones that are also highly successful at the box office and in DVD sales, with similar patterns in album downloads. In other words, bleeding revenue to piracy is going to be a problem to the extent that your product is a hit, in a market where the core uncertainty about this crucial fact (at the time when the decision whether to greenlight production is made) looms a lot larger than the marginal loss from illicit downloads if you *are* successful.

It's a tricky but more or less tractable problem to estimate roughly how many full-time jobs you'll need regionally to support one additional $150 million movie production next year. It's a totally different question how aggregate sectoral employment in a volatile and evolving industry changes based on investor responses to a $150 million across-the-board drop in the size of the total film jackpot, especially given that arcane financial arrangements are one place Hollywood does show a genius for constantly adapting its business model. If you want to know how many people are getting laid off when McDonald's revenues drop, it makes a difference whether it's each of 13,000 franchises earning $100 less per year, or one franchise earning $1.3 million less, even though the total reduction is the same.

Finally, *more demand for content* being captured by the content industries is not always the same thing as *demand for more content*, in the sense of "a greater variety of output." I noted earlier that the past few years have seen a significant spike in the number of movie titles released annually. But as the *Los Angeles Times* reported in 2008, studio executives soon began complaining about a "glut" of new movies, many of which were targeted at the same demographics, and therefore cannibalizing their own audiences. As one executive suggested, that meant that (at least in a market dominated by a few huge distributors) releasing *fewer* titles could yield higher profits—and, indeed, the number of titles released in the following two years dropped back to mid-decade levels.

The key point here is that shifting some portion of the pirate audience to some form of legal viewing doesn't necessarily change this basic calculus, because there's an upper bound to the number of hours most people are going to spend watching (say) racing movies, whether they're paying for the privilege or not. Rising demand can just as easily, for instance, bid up star salaries for a fixed number of films.

Still seeking a real, quantifiable link

The point here isn't that piracy by American consumers is somehow completely independent from output or employment rates in the content industries—though, again, that's not at all the same thing as the *overall US employment rate*. Obviously, at *some* level it has to have some effect. But the link is, to use the technical economic term, *weirder* than in many other sectors of the economy. In many industries, the relationship between consumer spending and job creation is *relatively* straightforward. If demand for widgets or restaurant meals rises, satisfying that demand requires a roughly linear increase in widget factories and restaurants, in hiring of widget-makers and cooks and waiters, and in purchases of the raw material inputs for those goods. Distribution of copyrighted content—and in particular digital distribution over the Internet—is a bit more complicated, for precisely the same reason piracy is an issue: once the first copy of a work has been created, an unlimited number of additional units (of the digital product) can be produced at effectively zero cost.

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Let's imagine, implausibly, that a measure like SOPA *did* manage to reduce online piracy by US consumers by some meaningful amount. A small portion of that reduction, the minority of downloads representing legal purchases displaced by file sharing, would translate into sales for the content industries. What form would these take? It seems reasonable to suppose that the majority of people who were previously getting their music and movies from The Pirate Bay are not typically lining up to buy shiny plastic discs at Wal-Mart. Rather, they're probably disproportionately displacing *legal digital downloads* from venues like iTunes and Amazon, or subscription services like Netflix and Spotify, which are pretty clearly where the overall market is quickly going anyway. (Apparently, literal thieves don't even bother stealing physical media anymore.) For movies, there's probably also some displacement of theatrical ticket sales, though as the theatrical experience is in many ways a distinct good, it's hard to say how much substitution it's reasonable to expect.

In the very short term, increased legal purchases of digital content wouldn't seem likely to generate many additional jobs. If spending in the physical retail sector jumps 20 percent, shops need to hire more clerks, and their suppliers more manufacturing workers, to meet the increased demand. If spending in the iTunes store jumps 20 percent, Apple probably needs to pay a few bucks more for bandwidth and electricity, but basically everyone just gets to smile and pocket the extra profit. The jobs effects estimates we're seeing tossed around, however, are coming from a 2007 study that would have had to employ, at the most recent, adjustments made several years before *that* to the benchmark multipliers the Bureau of Economic Analysis developed in 2002.

Even leaving aside its many other problems, then, the job impact estimates in that study would have been largely based on legacy assumptions from a brick-and-mortar economy. (The loss estimates relied on would also, necessarily, fail to account for the recent rise of popular, legal streaming services that have likely lured many consumers back from the pirate market. There is, alas, no very good data here, but I'd wager Hulu and Netflix have done exponentially more to reduce piracy losses than enforcement crackdowns ever will.) In any event, you'd expect the most *immediate* effect of consumer spending shifts from widgets and restaurants to digital downloads would be, if anything, fewer *net* jobs. The output and employment effects, rather, would show up in the longer term as lower returns reduce incentives to produce new content—and hire the workers needed to support that production. For some of the reasons discussed above, though, empirically there's just not much evidence for a dramatic effect of this kind.

No doubt piracy is costing the content industries *something*—or they wouldn't be throwing so much money at Congress in support of this kind of legislation. If we could wave a magic wand and have less piracy, obviously that would be good. But in the real world, where enforcement has direct costs to the taxpayer, regulation has costs on the industries it burdens, and the reduction in piracy they're likely to produce is very small, it seems important to point out that the credible evidence for the *magnitude* of the harm is fairly thin. As a rough analogy, since anti-piracy crusaders are fond of equating filesharing with shoplifting: suppose the CEO of Wal-Mart came to Congress demanding a $50 million program to deploy FBI agents to frisk suspicious-looking teens in towns near Wal-Marts. A lawmaker might, without for one instant doubting that shoplifting is a bad thing, question whether this is really the optimal use of federal law enforcement resources. The CEO indignantly points out that shoplifting *kills one million adorable towheaded orphans*each year. The proof is right here in this study by the Wal-Mart Institute for Anti-Shoplifting Studies. The study sources this dramatic claim to a newspaper article, which quotes the CEO of Wal-Mart asserting (on the basis of private data you can't see) that shoplifting kills hundreds of orphans annually. And as a footnote explains, it seemed prudent to round up to a million. I wish this were *just* a joke, but as readers of my previous post will recognize, that's literally about the level of evidence we're dealing with here.

In short, piracy is certainly one problem in a world filled with problems. But politicians and journalists seem to have been persuaded to take it largely on faith that it's a uniquely dire and pressing problem that demands dramatic remedies with little time for deliberation. On the data available so far, though, reports of the death of the industry seem much exaggerated.

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