Piracy could be a blessing in disguise for content supply chains

"He intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for society that it was no part of his intention". — Adam Smith, Wealth of Nations, p. 477

Manufacturers of information goods — music, movies, TV shows, video games, e-books, and software — often see piracy as a pesky issue. And understandably so. Piracy gives consumers an alternative to purchasing the legal version and thus, to a manufacturer, it presents a shadow competition. The manufacturer facing piracy loses some of its pricing power and is forced to cede a portion of the market to piracy. Therefore, the common wisdom is that the manufacturer is better off with stricter anti-piracy enforcement and lesser piracy.

What makes the situation even grimmer is that, often, the manufacturer itself does not get to set the retail price; instead, a downstream firm — a retailer — does. A large variety of information goods, sold in multiple formats — ranging from shrink-wrapped CDs and DVDs all the way to cable TV content — are brought to market following this wholesale model. When the manufacturer sells to the retailer, and the retailer resells to consumers, the supply chain faces a well-known vertical externality, also called double marginalisation. Essentially, absent prior coordination, the manufacturer decides on its margin, and the retailer adds its own margin on top of that, hence the name *double* marginalisation.

The vertical externality manifests itself in a higher retail price and a reduced output, when compared to a vertically integrated channel where the manufacturer and the retailer are owned by the same firm. This externality adds to the downward pressure on profit, on top of what is already exerted by piracy. The case of cable TV is instructive. The cable network (e.g., HBO) charges the local cable operator (e.g., Comcast) a per-subscriber fee akin to the wholesale price, and the cable operator then decides on its own margin, which writes the final retail price tag. As Caves writes in his book, "*the cable operator enjoys a local monopoly, and the cable network offers a product differentiated from its rivals', so double marginalization is indeed a hazard*."

Interestingly enough, piracy must also be a big issue for the cable TV industry, especially the content producers. All types of cable TV content — ranging from original TV series and sitcoms, all the way to sporting events, concerts, and shows — happen to be quite a popular target for digital pirates. Consider HBO's popular TV series "Game of Thrones." Within just 12 hours of its original broadcasting, the season four finale was downloaded 1.5 million times, which was close to 2 petabytes transferred in just half a day. And, the trend continues unabated with all the subsequent seasons; see here, here, and here.

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At the same time, though, despite having declared war on piracy last year, HBO has done little to combat it effectively. It seems strange that, even when facing such a high piracy rate — one billion illegal downloads of season seven of Game of Thrones, compared to only 16.1 million of its legal views — HBO chooses to not take stricter actions or measures. So far, it has no real plans to counter the illegal streaming services, and it lets off illegal downloaders with only a slap on the wrist. Perhaps, HBO does not really care.

It is only natural to ask then: facing the twin threat of piracy and double marginalisation, why do manufacturers (such as HBO) not take stricter anti-piracy measures? At the same time as well, why does HBO not take steps towards better channel coordination, for example, through a more efficient contracting mechanism with Comcast? Could this perhaps be the case where two wrongs actually make a right? A case where a dose of piracy eases the pain of vertical externality? And, if indeed so, what policy implications does it have for a government in terms of its overall anti-piracy efforts?

Our analysis reveals that a *moderate* level of piracy — not too much or not too little — can certainly have a positive impact on the profits of the manufacturer and retailer, both at the same time. Interestingly, this gain in their profits need not come at the expense of the consumers, and piracy may actually lead to a socially desirable *win-win-win* situation. Even when every player acts in his or her own self-interest—the manufacturer and retailer maximising their respective profits and consumers their own utility — the 'invisible hand' of piracy somehow makes every selfish actor richer, resulting in the ultimate benevolent outcome. Here is how.

Piracy has an impact on both parties in the supply chain. When the retailer loses a consumer to piracy, so does the manufacturer. This way, piracy limits the pricing power of not just the manufacturer but also of the retailer. Even though a limitation on its own pricing power — the first order effect — is not good for the manufacturer, the limitation on the retailer's power — the second order effect — surely is, because a reduction in the retailer's power means less of an adverse impact from double marginalisation. An analogous logic applies to the retailer as well. At a moderate dose of piracy, the second order effect dominates the first, making both parties better off. In the midst of all this, consumers always benefit from the lower retail price guaranteed by piracy.

Now, here is what makes piracy special. Neither up- nor down-stream competition can accomplish alone what piracy can. More competition is always bad for the party facing it, but is certainly good for the other party. Piracy, however, presents a shadow competition not just to the manufacturer or the retailer, but to both. A moderate dose of piracy can limit the pricing power of both, and limit them just enough where both parties are better off. Naturally, there is no win-win-win situation with either up- or down-stream competition, though such a situation is evidently possible within the context of piracy.

Of course, the benevolent effect of piracy that we identify should not be misinterpreted as if firms should suddenly start endorsing piracy. In fact, when piracy is rampant, its negative effect dominates, and the firms are worse off as one might expect. However, anti-piracy measures are often expensive, so before going gung-ho against piracy, one must pause to ponder whether doing so would be a worthy investment. To that calculus, we simply offer another important variable to consider.

Notes:

- *This blog post is based on the authors' paper The 'Invisible Hand' of Piracy: An Economic Analysis of the Information Goods Supply Chain. MIS Quarterly, Forthcoming December 2018.*
- *The post gives the views of its authors, not the position of the institutions they represent, The LSE Business Review or the London School of Economics.*
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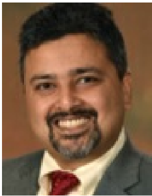

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