*Copyright Complements and Piracy-Induced Deadweight Loss*

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Most of the alternative revenue streams proposed by commentators (including touring, adverting and merchandizing) had been feasible and actually in existence long before the advent of the digital age. But they used to play more of a secondary role in music businesses until uncontrolled online piracy recently started to undermine music sales. This fact suggests a straightforward yet undervalued point that alternative revenue streams are not without their own costs, which in some market settings could be rather substantial.

This paper, applying the modern theories of complementary goods, explores the social costs of alternative revenue streams, and meanwhile provides new insights on the controversial issue – how relevant copyright law is actually in the digital age. First, although online music and video game markets both involve hardware/software complementary goods e.g. iPod/iTunes and Xbox-console/Xbox-game, firms generally engage in opposite pricing strategies: Apple offers iTunes music downloads (software) at a low price while earning most revenues from iPod sales (hardware), but Xbox offers game consoles (hardware) at a low price while earning most revenues from video games (software). The difference in pricing practices mostly lies in the fact that copyright piracy is much more prevalent in music markets than in video game markets. More importantly, such findings reveal that copyright piracy, widely believed to decrease the deadweight loss for music consumption, could simultaneously increase the deadweight loss in hardware consumption. The deadweight loss in hardware could become dominant if the hardware market involves monopoly and the music market however involves oligopoly.

Second, musicians were traditionally found underpricing tickets for their concerts even with the presence of ticket scalping, in order to promote their album sales. In recent years, many musicians however have been forced to rapidly increase concert ticket prices in the wake of widespread copyright piracy that makes it much harder to recoup investment from albums sales. This new trend while having limited effects on superstars with strong fan base and large repertoire may end up pricing some of the most loyal music fans out of the performance market. It could also increase entry barriers to emerging and alternative artists. Akin to the iPod/iTunes case, copyright piracy once again causes deadweight loss in ancillary markets.

Third, this paper compares several recent initiatives in copyright regimes, including public levy and private ordering, based on the theories of complementary goods. It shows that public levy, as other proposals solely relying on alternative revenue streams, may create significant deadweight loss causing underconsumption by non-infringing and low-volume infringing users or entirely pricing them out of the market. Such drastic changes appear to be unjustified especially given the emergence of private ordering initiatives that have effectively improved copyright enforcement and generated mutual benefits for content providers and service providers. The theories of complementary goods (particularly "double marginalization" and "indirect network effects") confirm that there is indeed an inherent incentive for content providers and service providers to cooperate or integrate in online markets.

This paper is for the most part positive explaining the market dynamics between copyrighted works and ancillary markets, but it does contain a somewhat normative implication. In most areas of industrial studies, scholars generally believe greed outsmarts the best economists so that scholars are more ready to interpret than predict. The research question is often "why and how did they do that?" However when it comes to the music industry, many people believe greed causes stupidity and musicians (or music companies) are the last to grasp the reality in the digital age. So the research question is "what did they do wrong and what should they do differently?" In the face of rapid changes in digital market landscapes, we need to constantly resist the urge to overact, hurriedly expanding or narrowing the traditional boundaries of property rights. Instead, we could achieve a lot more by doing little things, e.g. preserving the basic contours for the music market, facilitating voluntary transactions between market players and eventually allowing market players to discover on their own what combination of music licensing and alternative revenue streams is most effective.

Simply put, the normative message in the article is to be positive in every sense.