

MISQ Archivist

Digitization of Music: Consumer Adoption Amidst Piracy, Unbundling, and Rebundling

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Abstract

Digital music formats and the Internet as a distribution mechanism have fundamentally disrupted the music industry by altering the way music is packaged, distributed, and consumed. This disruptive innovation has come in two stages. First, it enabled music to be purchased as an individual song (digital single) or as an album (digital album) or to be enjoyed without paying for it (unlicensed digital music). More recently, music has become available as a streaming service (streaming music). Prior to these innovations, music was primarily distributed as an album using a physical medium such as the CD. Building on multigeneration diffusion models, we identify and quantify different types of concurrent demand migration in the music industry such as generational substitution, unbundling, and piracy effects in the first stage and streaming effects in the subsequent stage. Measuring the relative contributions of factors that drive each of these different migration types, we find that the introduction of licensed digital downloads (digital single and digital album) has weakened the piracy effect. Since the introduction of licensed digital downloads, the piracy effect on the demand for CDs has decreased about 15 percent every year. At the same time, unbundling, rather than piracy, has become the dominant factor in the decline of industry revenue. More recently, streaming music services such as Pandora have moved demand from digital albums to streaming music. However, demand has not yet migrated from digital single to streaming music. The introduction of streaming music has further weakened the piracy effect by about 7 percent every year.

Keywords: Disruptive innovation, demand migration, generational substitution, unbundling, attrition of demand, multigeneration diffusion, music sales, digital music, piracy, streaming music